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# **Appendix M-1**

## Traffic Analysis







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# Meridian D-1 Gateway Aviation Center

## TRAFFIC ANALYSIS

### MARCH JOINT POWERS AUTHORITY MARCH JPA

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## **LIST OF ABBREVIATED TERMS**

(1)	Reference
ADT	Average Daily Traffic
CA MUTCD	California Manual on Uniform Traffic Control Devices
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
CMP	Congestion Management Program
DIF	Development Impact Fee
E+P	Existing Plus Project
FAA	Federal Aviation Administration
HCM	Highway Capacity Manual
ITE	Institute of Transportation Engineers
LOS	Level of Service
March ARB	March Air Reserve Base
March JPA	March Joint Powers Authority
NCHRP	National Cooperative Highway Research Program
NOP	Notice of Preparation
PHF	Peak Hour Factor
Project	Meridian D-1 Gateway Aviation Center
RCTC	Riverside County Transportation Commission
RivTAM	Riverside Transportation Analysis Model
RTA	Riverside Transit Agency
RTP	Regional Transportation Plan
SCAG	Southern California Association of Governments
SCS	Sustainable Communities Strategy
TA	Traffic Analysis
TUMF	Transportation Uniform Mitigation Fee
v/c	Volume to Capacity
vphgpl	Vehicles per Hour Green per Lane
WRCOG	Western Riverside Council of Governments

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# 1 SUMMARY OF FINDINGS

This report presents the results of the traffic analysis (TA) for the proposed Meridian D-1 Gateway Aviation Center (Project), which is located in the southeastern portion of the March Air Reserve Base, west of Heacock Street and south of Krameria Avenue in the jurisdiction in the March Joint Powers Authority (March JPA), as shown on Exhibit 1-1.

The purpose of this TA is to evaluate the potential circulation system deficiencies that may result from the development of the proposed Project, and where necessary recommend improvements to achieve acceptable operations consistent with General Plan level of service goals and policies. This traffic study has been prepared in accordance with the March JPA's Final Traffic Impact Study Preparation Guide (February 2020), the California Department of Transportation (Caltrans) Evaluating Transportation Impacts and State Highway System Projects, the City of Moreno Valley Transportation Engineering Division's Transportation Impact Analysis Preparation Guide for Vehicle Miles Traveled and Level and Service Assessment (June 2020), and through consultation with March JPA staff during the scoping process. (1) (2) The Project Traffic Study Scoping agreement is provided in Appendix 1.1 of this TA.

## 1.1 SUMMARY OF FINDINGS

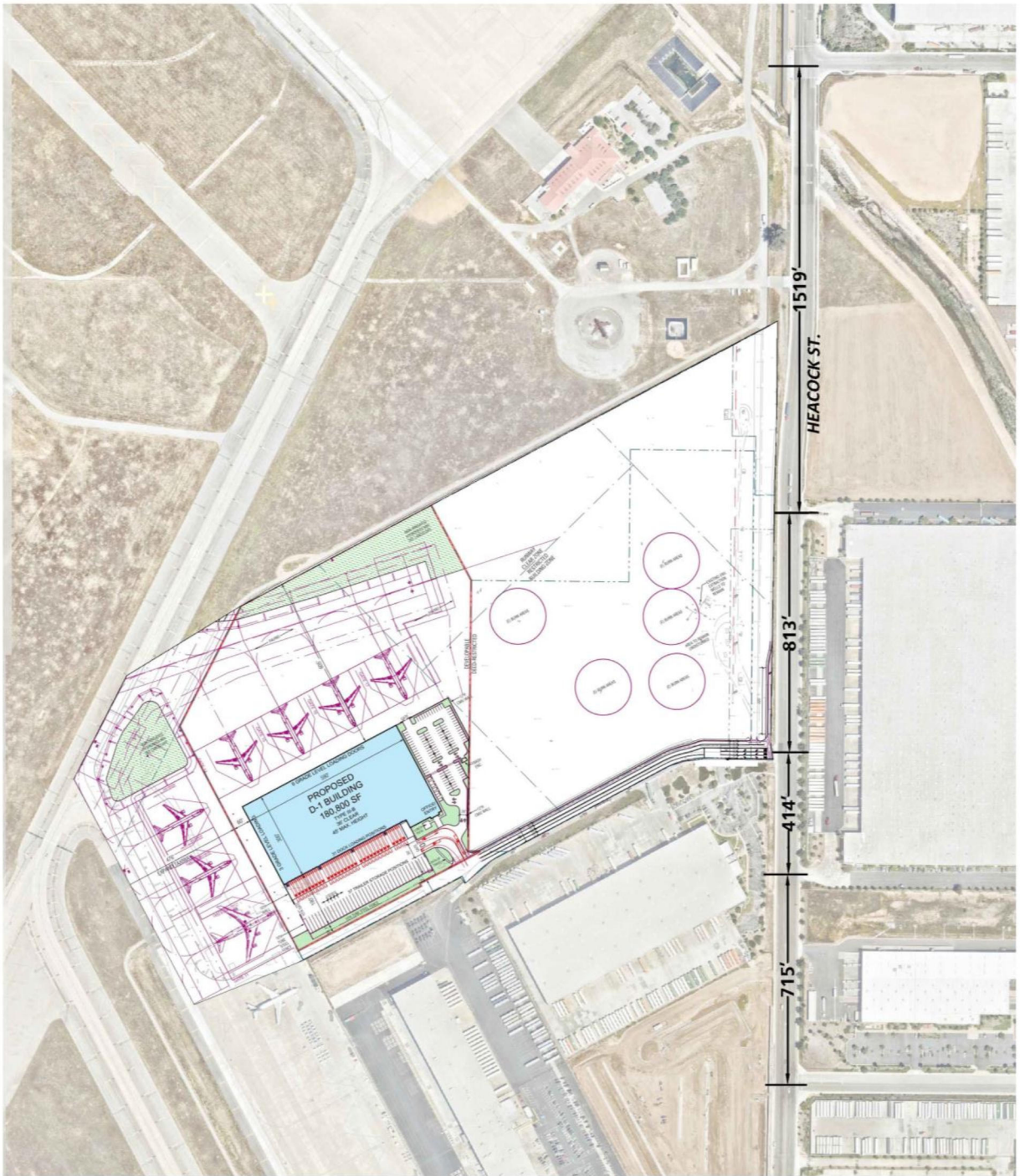
The Project is to construct the following improvements as design features in conjunction with development of the site:

- Project to install a traffic signal at the intersection of Heacock Street & the existing access roadway south of the Project site.
- Heacock Street is currently built out to its ultimate roadway half-section. As such, there are no additional roadway improvement recommendations.

Additional details and intersection lane geometrics are provided in Section 1.6 *Recommendations* of this report.

The development of the proposed Project is not anticipated to require the construction of any off-site improvements, however, there are improvement needs identified at off-site intersections for future traffic analysis scenarios where the Project would contribute traffic (as measured by 50 or more peak hour trips). As such, the Project Applicant's responsibility for the Project's contributions towards off-site intersection deficiencies is fulfilled through payment of fair share or participation in the pre-existing fee programs that would be assigned to construction of the identified recommended improvements (see Section 8 *Local and Regional Funding Mechanisms*).

**EXHIBIT 1-1: PRELIMINARY SITE PLAN**



**LEGEND:**

- FULL** = FULL ACCESS
- EVA** = EMERGENCY VEHICLE ACCESS ONLY



## 1.2 PROJECT OVERVIEW

The proposed Project consists of two components: Air Cargo Center Component and the Off-Site Component. The Air Cargo Center Component would be constructed within approximately 24-acres under the March JPA's jurisdiction of the overall 56-acre site. The Off-Site Component would be constructed within approximately 16-acres and would include taxiway construction/realignment, storm drain extensions, and access roadway construction within the March Air Reserve Base (March ARB).

The Air Cargo Center Component of the Project includes the development of a gateway air freight cargo center, which consists of construction of a 180,800 square foot cargo building with 9 at-grade (ground level) loading doors, 31 dock-high door positions, and 37 trailer storage positions. The cargo building would contain approximately 9,000 square feet of office space. The cargo building would be constructed to a maximum height of 45-feet. The Project would also construct a tarmac and parking apron sized to accommodate commercial cargo airplanes, allowing for aircraft to access 4 proposed parking gates along the northern side of the cargo building (see Exhibit 1-1). The tarmac/parking apron would be paved to meet Federal Aviation Administration (FAA) standards. The construction of a new taxiway (Taxilane J) would provide aircraft access to the existing Taxiway A within March ARB. In addition, the existing Taxiway G is proposed to be expanded with the construction of a parking apron adjacent to the western boundary of the cargo building, within the March JPA and would allow for aircraft to access 3 proposed aircraft parking gates along the western side of the cargo building. The proposed tarmac expansion, Taxilane J, and parking aprons would be sized to accommodate commercial cargo airplanes and would be paved to meet FAA standards. Parking aprons would connect with existing Taxiways A and G, which would be used by aircraft to access the March Inland Port Airport runway. Construction and development activities within the public right-of-way along Heacock Street would include construction of a 225-foot right-turn pocket into the project site along the southbound side of Heacock Street, and installation of a traffic signal at the existing access roadway (Access Road).

Vehicular access to the Project site would occur at a new signalized entrance onto Heacock Street, expanding the existing Access Road to the facilities south of the Project site. At the intersection, the Access Road will be expanded to 60 feet with 5 lanes. Access to the Project site will be provided via dual lanes in, with one southbound right turn lane on the west side of Heacock Street. For exiting, the Access Road would have dual left lanes and a single right turn lane. The remainder of the Access Road to the Project site driveway will be expanded to 48 feet, with two lanes in each direction. The access driveway onto the site would be constructed to a width of 50 feet to accommodate large trucks and trailers.

The Off-site Component of the Project would include construction of Project features on land owned by March ARB. Development occurring on March ARB would require easements from the United States Air Force within 5 work areas as identified below:

- **Work Area 1:** Construction of a 50-foot-wide perimeter patrol road running along the northern and northwestern boundaries of the Project site that would connect with the existing patrol road on the eastern and western ends of the constructed patrol road; replacement of an existing chain-link fence with a security fence.



- **Work Area 2:** Construction of a headwall and inlet apron for a storm drain culvert; extension of a dual 36-inch-diameter storm drain backbone via jack and bore under Taxiway A to replace the existing silt-filled culvert; connection of the culvert to the storm drain extension.
- **Work Area 3:** Reconfiguration of the Taxiway A to Taxilane J transition to allow for aircraft access to the proposed cargo building. Portions of Taxiway A would be demolished and reconstructed to allow for the taxiway to connect with the proposed Taxilane J within the proposed Project.
- **Work Area 4:** Removal of an existing inverted culvert apron outlet; cleaning of the existing 36-inch-diameter culvert; extension of the existing single 36-inch diameter storm drain under Taxiway A via jack and bore to connect the culvert.
- **Work Area 5:** Reconstruction and realignment of the intersection of Taxiway A and taxiway G. This would result in widened entryway for aircraft to turn from Taxiway A to Taxiway G, and to accommodate aircraft access to the aircraft parking stations along the western boundary of the cargo building.

The proposed Project will be developed in a single phase with an anticipated Opening Year of 2026. Regional access to the Project site will be available from the I-215 Freeway via Cactus Avenue and Harley Knox Boulevard.

The Institute of Transportation Engineers (ITE) Trip Generation Manual (10<sup>th</sup> Edition, 2017) does not currently have any trip generation rates for an air freight cargo center. As such, trip generation estimates for the proposed Project have been developed using data collected at a similar facility with operations similar to those proposed. The proposed Project trip generation is based on the anticipated operations for the site. Specifically, it has been assumed that the building can accommodate 7 aircraft parking positions with approximately 17 flights per day occurring during the typical Non-Peak season. The Project is anticipated to generate a total of 1,276 trip-ends per day with 178 AM peak hour trips and 98 PM peak hour trips on a typical Non-Peak season day. During the Peak season, with approximately 23 flights per day (anticipated to occur only 4 weeks in the year), the Project is anticipated to generate a total of 1,880 trip-ends per day with 262 AM peak hour trips and 144 PM peak hour trips. Both the Non-Peak and Peak seasons have been evaluated for the purposes of the traffic study (however, the study area is based on the trip generation for the Peak season). The assumptions and methods used to estimate the Project's trip generation characteristics are discussed in greater detail in Section 4.1 *Project Trip Generation* of this report.

### 1.3 ANALYSIS SCENARIOS

For the purposes of this TA, potential deficiencies to traffic and circulation have been assessed for each of the following conditions:

- Existing (2020)
- Existing plus Project (E+P) (Non-Peak) Conditions
- E+P (Peak) Conditions
- Opening Year Cumulative (2026) Without Project Conditions
- Opening Year Cumulative (2026) With Project (Non-Peak) Conditions
- Opening Year Cumulative (2026) With Project (Peak) Conditions

- Horizon Year (2045) Without Project, Without Heacock Street Extension Conditions
- Horizon Year (2045) With Project (Non-Peak), Without Heacock Street Extension Conditions
- Horizon Year (2045) With Project (Peak), Without Heacock Street Extension Conditions
- Horizon Year (2045) Without Project, With Heacock Street Extension Conditions
- Horizon Year (2045) With Project (Non-Peak), With Heacock Street Extension Conditions
- Horizon Year (2045) With Project (Peak), With Heacock Street Extension Conditions

The future extension of Heacock Street from its existing terminus to Harley Knox Boulevard is a long-range planned connection (where it would connect with the existing roundabout at Webster Avenue and Harley Knox Boulevard). However, Horizon Year (2045) traffic conditions have been evaluated both without and with the extension in the event that the connection is not in place by Year 2045. As such, the Heacock Street Extension, from Nandina Avenue to Harley Knox Boulevard, is assumed to be in place for Horizon Year (2045) With Heacock Street Extension conditions only.

### **1.3.1 EXISTING (2020) CONDITIONS**

Information for Existing (2020) conditions is disclosed to represent the baseline traffic conditions as they existed at the time this report was prepared. Due to the currently ongoing COVID-19 pandemic, schools and businesses within the study area were closed or operating at less than full capacity at the time this study was prepared. As such, historic (2015, 2018, and 2019) traffic counts were utilized in conjunction with a 2.0% per year annual growth rate (compounded annually) to reflect 2020 conditions.

### **1.3.2 EXISTING PLUS PROJECT CONDITIONS**

The E+P analysis determines traffic deficiencies that would occur on the existing roadway system with the addition of Project traffic. E+P conditions have been evaluated for both the Non-Peak and Peak conditions.

### **1.3.3 OPENING YEAR CUMULATIVE (2026) CONDITIONS**

The Opening Year Cumulative (2026) conditions analysis determines the potential near-term cumulative circulation system deficiencies. To account for background traffic growth, traffic associated with other known cumulative development projects in conjunction with an ambient growth from Existing (2020) conditions of 12.62% is included for Opening Year Cumulative (2026) traffic conditions (2.0% per year compounded annually over 6 years). This comprehensive list was compiled from information provided by the March JPA and is consistent with other recent studies in the study area. Relevant projects from other nearby agencies (including Moreno Valley and Perris) have also been included for the purposes of this TA. Opening Year Cumulative (2026) conditions have been evaluated for both the Non-Peak and Peak conditions.

### **1.3.4 HORIZON YEAR (2045) CONDITIONS**

Traffic projections for Horizon Year (2045) with Project conditions were derived from the latest Riverside Transportation Analysis Model (RIVCOM). The Horizon Year (2045) conditions analysis has been utilized to determine if improvements funded through regional transportation fee programs, such as the Development Impact Fee (DIF) program or Western Riverside Council of Governments (WRCOG) Transportation Uniform Mitigation Fee (TUMF), or other approved funding mechanisms can accommodate the long-range cumulative traffic at the target level of service (LOS) identified by the March JPA (lead agency). Other improvements needed beyond the “funded” improvements (such as localized improvements to non-DIF facilities) are identified as such.

The future extension of Heacock Street from its existing terminus to Harley Knox Boulevard is a long-range planned connection. However, Horizon Year (2045) traffic conditions have been evaluated both without and with the extension in the event that the connection is not in place by Year 2045. Horizon Year (2045) Without and With Heacock Street Extension conditions have been evaluated for both the Non-Peak and Peak conditions.

## **1.4 STUDY AREA**

To ensure that this TA satisfies the March JPA’s requirements, Urban Crossroads, Inc. prepared a Project TA scoping package for review by March JPA staff prior to the preparation of this report. The Agreement provides an outline of the Project study area, trip generation, trip distribution, and analysis methodology. The agreement is included in Appendix 1.1 of this TA. The scoping agreement was also shared with the City of Moreno Valley for review and comment, and those comments have also been taken into consideration as part of this TA.

### **1.4.1 INTERSECTIONS**

The following 16 study area intersections shown on Exhibit 1-2 and listed in Table 1-1 were selected for this TA based on consultation with March JPA staff. The “50 peak hour trip” criterion generally represents a minimum number of trips at which a typical intersection would have the potential to be affected by a given development proposal. Although each intersection may have unique operating characteristics, this traffic engineering rule of thumb is a widely utilized tool for estimating a potential area of influence (i.e., study area). Other analysis intersections, within the adjacent cities were not selected for evaluation as the Project is anticipated to contribute less than 50 peak hour trips. It should be noted, the study area is based on the trip generation for the peak season. Based on comments received from the City of Moreno Valley on the Notice of Preparation (NOP), Intersections #17 through #20 were also incorporated as intersection analysis locations.

EXHIBIT 1-2: LOCATION MAP



**LEGEND:**

0 = EXISTING INTERSECTION ANALYSIS LOCATION



**TABLE 1-1: INTERSECTION ANALYSIS LOCATIONS**

ID	Intersection Location	Jurisdiction	CMP?
1	I-215 SB Ramps & Harley Knox Bl.	County of Riverside, Caltrans	No
2	I-215 NB Ramps & Harley Knox Bl.	County of Riverside, Caltrans	No
3	Western Wy. & Harley Knox Bl.	Perris	No
4	Patterson Av. & Harley Knox Bl.	Perris	No
5	Heacock St. & Cactus Av.	March JPA, Moreno Valley	No
6	Heacock St. & Meyer Dr./John F. Kennedy Dr.	March JPA, Moreno Valley	No
7	Heacock St. & Gentian Av.	March JPA, Moreno Valley	No
8	Heacock St. & Iris Av.	March JPA, Moreno Valley	No
9	Heacock St. & Krameria Av. (North)	March JPA, Moreno Valley	No
10	Heacock St. & Access Road	March JPA, Moreno Valley	No
11	Heacock St. & Cardinal Av.	March JPA, Moreno Valley	No
12	Heacock St. & San Michele Rd.	March JPA, Moreno Valley	No
13	Webster Av. & Harley Knox Bl.	Perris	No
14	Indian Av. & San Michele Rd.	Moreno Valley	No
15	Indian Av. & Nandina Av.	Moreno Valley	No
16	Indian Av. & Harley Knox Bl.	Perris	No
17	Heacock St. & Nandina Av.	March JPA, Moreno Valley	No
18	Perris Bl. & San Michele Rd.	Moreno Valley	No
19	Perris Bl. & Nandina Av.	Moreno Valley	No
20	Perris Bl. & Harley Knox Bl.	Perris	No

The intent of a Congestion Management Program (CMP) is to more directly link land use, transportation, and air quality, thereby prompting reasonable growth management programs that will effectively utilize new transportation funds, alleviate traffic congestion and related deficiencies, and improve air quality. The County of Riverside CMP became effective with the passage of Proposition 111 in 1990 and most recently updated in 2019 as part of the Riverside County Long Range Transportation Study. The Riverside County Transportation Commission (RCTC) adopted the 2019 CMP for the County of Riverside in December 2019. (3) There are no study area intersections identified as a Riverside County CMP intersection.

#### 1.4.2 ROADWAY SEGMENTS

Based on comments received from the City of Moreno Valley on the NOP, the following study area roadway segments have been evaluated for the purposes of this TA (see Table 1-2):

**TABLE 1-2: ROADWAY SEGMENT ANALYSIS LOCATIONS**

ID	Roadway	Segment Limits	Jurisdiction
1	Heacock St.	Cactus Av. to Iris Av.	Moreno Valley, March JPA
2	Heacock St.	Iris Av. to San Michele Rd.	Moreno Valley, March JPA
3	Heacock St.	San Michele Rd. to Harley Knox Bl.	Moreno Valley, Perris
4	Cactus Av.	West of Heacock St.	Moreno Valley, March JPA
5	Indian Av.	San Michele Rd. to Harley Knox Bl.	Moreno Valley, Perris
6	Perris Bl.	San Michele Rd. to Harley Knox Bl.	Moreno Valley, Perris
7	San Michele Rd.	Heacock St. to Perris Bl.	Moreno Valley
8	Nandina Av.	Heacock St. to Perris Bl.	Moreno Valley

## 1.5 DEFICIENCIES

This section provides a summary of deficiencies by analysis scenario. Section 2 *Methodologies* provides information on the methodologies used in the analysis and Section 5 *E+P Traffic Conditions*, Section 6 *Opening Year Cumulative (2026) Traffic Conditions*, and Section 8 *Horizon Year (2045) Traffic Conditions* includes the detailed analysis. A summary of LOS results for all analysis scenarios is presented on Exhibit 1-3 for study area intersections and Exhibit 1-4 for study area roadway segments. For the purposes of this analysis, the minimum LOS at study area intersections and roadway segments for all applicable agencies is LOS D.

### 1.5.1 E+P CONDITIONS

#### *Intersections*

The study area intersections are currently operating at an acceptable LOS during the peak hours for both E+P (Non-Peak) and E+P (Peak), with the exception of the following intersection, consistent with Existing (2020) conditions:

- I-215 Northbound Ramps & Harley Knox Bl. (#2) – LOS E AM peak hour only

#### *Roadway Segments*

The study area roadway segments are currently operating at an acceptable LOS under both E+P (Non-Peak) and E+P (Peak) traffic conditions, consistent with Existing (2020) conditions.

#### *Off-Ramp Queues*

There are no movements that are anticipated to experience queuing issues during the weekday AM or weekday PM peak 95<sup>th</sup> percentile traffic flows for E+P (Non-Peak) and E+P (Peak) traffic conditions, consistent with Existing (2020) traffic conditions. However, field observations of the I-215 Freeway interchange at Harley Knox Boulevard indicate that there are queues during the peak hours, including at the I-215 Southbound Ramps on Harley Knox Boulevard.



**EXHIBIT 1-3: SUMMARY OF DEFICIENT INTERSECTIONS BY ANALYSIS SCENARIO**

#	Intersection	Existing (2020)	E+P (Non-Peak)	E+P (Peak)	Opening Year Cumulative(2026) Without Project	Opening Year Cumulative(2026) With Project (Non-Peak)	Opening Year Cumulative(2026) With Project (Peak)
1	I-215 SB Ramps & Harley Knox Bl.						
2	I-215 NB Ramps & Harley Knox Bl.						
3	Western Wy. & Harley Knox Bl.						
4	Patterson Av. & Harley Knox Bl.						
5	Heacock St. & Cactus Av.						
6	Heacock St. & Meyer Dr./John F. Kennedy Dr.						
7	Heacock St. & Gentian Av.						
8	Heacock St. & Iris Av.						
9	Heacock St. & Krameria Av. (North)						
10	Heacock St. & Access Road	NA			NA		
11	Heacock St. & Cardinal Av.						
12	Heacock St. & San Michele Rd.						
13	Webster Av. & Harley Knox Bl.						
14	Indian Av. & San Michele Rd.						
15	Indian Av. & Nandina Av.						
16	Indian Av. & Harley Knox Bl.						
17	Heacock St. & Nandina Av.						
18	Perris Bl. & Harley Knox Bl.						
19	Perris Bl. & Nandina Av.						
20	Perris Bl. & Harley Knox Bl.						

**LEGEND:**

- AM PEAK HOUR
- DEFICIENT LOS E
- DEFICIENT LOS F
- PM PEAK HOUR
- NOT AN ANALYSIS LOCATION FOR THIS SCENARIO
- ACCEPTABLE LOS A-E

#	Intersection	Horizon Year (2045) Without Project Without Extension	Horizon Year (2045) With Project Without Extension (Non-Peak)	Horizon Year (2045) With Project Without Extension (Peak)	Horizon Year (2045) Without Project With Extension	Horizon Year (2045) With Project With Extension (Non-Peak)	Horizon Year (2045) With Project With Extension (Peak)
1	I-215 SB Ramps & Harley Knox Bl.	●	●	●	●	●	●
2	I-215 NB Ramps & Harley Knox Bl.	●	●	●	●	●	●
3	Western Wy. & Harley Knox Bl.	●	●	●	●	●	●
4	Patterson Av. & Harley Knox Bl.	●	●	●	●	●	●
5	Heacock St. & Cactus Av.	●	●	●	●	●	●
6	Heacock St. & Meyer Dr./John F. Kennedy Dr.	●	●	●	●	●	●
7	Heacock St. & Gentian Av.	●	●	●	●	●	●
8	Heacock St. & Iris Av.	●	●	●	●	●	●
9	Heacock St. & Krameria Av. (North)	●	●	●	●	●	●
10	Heacock St. & Access Road	NA	●	●	NA	●	●
11	Heacock St. & Cardinal Av.	●	●	●	●	●	●
12	Heacock St. & San Michele Rd.	●	●	●	●	●	●
13	Webster Av. & Harley Knox Bl.	●	●	●	●	●	●
14	Indian Av. & San Michele Rd.	●	●	●	●	●	●
15	Indian Av. & Nandina Av.	●	●	●	●	●	●
16	Indian Av. & Harley Knox Bl.	●	●	●	●	●	●
17	Heacock St. & Nandina Av.	●	●	●	●	●	●
18	Perris Bl. & Harley Knox Bl.	●	●	●	●	●	●
19	Perris Bl. & Nandina Av.	●	●	●	●	●	●
20	Perris Bl. & Harley Knox Bl.	●	●	●	●	●	●

**LEGEND:**

- = AM PEAK HOUR
- = PM PEAK HOUR
- = ACCEPTABLE LOS A-E
- = DEFICIENT LOS E
- = DEFICIENT LOS F
- NA = NOT AN ANALYSIS LOCATION FOR THIS SCENARIO



**EXHIBIT 1-4: SUMMARY OF DEFICIENT ROADWAY SEGMENTS BY ANALYSIS SCENARIO**

#	Roadway	Segment Limits	Existing (2020)	E+P (Non-Peak)	E+P (Peak)	Opening Year Cumulative(2026) Without Project	Opening Year Cumulative(2026) With Project (Non-Peak)	Opening Year Cumulative(2026) With Project (Peak)	Horizon Year (2045) Without Project Without Extension	Horizon Year (2045) With Project Without Extension (Non-Peak)
1	Heacock St		█	█	█	█	█	█	█	█
2		Iris Av. to San Michele Rd.	█	█	█	█	█	█	█	█
3		San Michele Rd. to Harley Knox Bl.	█	█	█	█	█	█	█	█
4	Cactus Av.	West of Heacock St.	█	█	█	█	█	█	█	█
5	Indian Av.	San Michele Rd. to Harley Knox Bl.	█	█	█	█	█	█	█	█
6	Perris Bl.	San Michele Rd. to Harley Knox Bl.	█	█	█	█	█	█	█	█
7	San Michele Rd.	Heacock St. to Perris Bl.	█	█	█	█	█	█	█	█
8	Nandina Av.	Heacock St. to Perris Bl.	█	█	█	█	█	█	█	█

#	Roadway	Segment Limits	Horizon Year (2045) With Project Without Extension (Peak)	Horizon Year (2045) Without Project With Extension	Horizon Year (2045) With Project With Extension (Non-Peak)	Horizon Year (2045) With Project With Extension (Peak)
1	Heacock St		█	█	█	█
2		Iris Av. to San Michele Rd.	█	█	█	█
3		San Michele Rd. to Harley Knox Bl.	█	█	█	█
4	Cactus Av.	West of Heacock St.	█	█	█	█
5	Indian Av.	San Michele Rd. to Harley Knox Bl.	█	█	█	█
6	Perris Bl.	San Michele Rd. to Harley Knox Bl.	█	█	█	█
7	San Michele Rd.	Heacock St. to Perris Bl.	█	█	█	█
8	Nandina Av.	Heacock St. to Perris Bl.	█	█	█	█

**LEGEND:**

- █ = ACCEPTABLE LOS A-C
- █ = DEFICIENT LOS D-E
- █ = DEFICIENT LOS F

## 1.5.2 OPENING YEAR CUMULATIVE (2026) CONDITIONS

### *Intersections*

The following study area intersections are anticipated to continue to operate at an unacceptable LOS during the peak hours under Opening Year Cumulative (2026) Without Project traffic conditions:

- I-215 SB Ramps & Harley Knox Boulevard (#1) – LOS E AM peak hour; LOS F PM peak hour
- I-215 NB Ramps & Harley Knox Boulevard (#2) – LOS F AM and PM peak hours
- Heacock Street & Cactus Avenue (#5) – LOS F AM and PM peak hours
- Heacock Street & Meyer Drive/John F. Kennedy Drive (#6) – LOS E PM peak hour only
- Heacock Street & Cardinal Avenue (#11) – LOS F PM peak hour only
- Heacock Street & San Michele Road (#12) – LOS F AM and PM peak hours
- Indian Avenue & San Michele Road (#14) – LOS F AM and PM peak hours
- Indian Avenue & Nandina Avenue (#15) – LOS F PM peak hour only
- Indian Avenue & Harley Knox Boulevard (#16) – LOS E PM peak hour only
- Perris Boulevard & Harley Knox Boulevard (#20) – LOS E PM peak hour only

With the addition of Project (Non-Peak) and Project (Peak), there are no additional study area intersections anticipated to operate at a deficient LOS during the peak hours although the following locations have LOS changes:

- I-215 SB Ramps & Harley Knox Boulevard (#1) – LOS E to LOS F in the AM peak hour only
- Indian Avenue & Harley Knox Boulevard (#16) – LOS E to LOS F in the PM peak hour only

### *Roadway Segments*

The following study area roadway segments are anticipated to operate at an unacceptable LOS under Opening Year Cumulative (2026) Without Project traffic conditions:

- Cactus Avenue, West of Heacock Street (#4) – LOS E
- Nandina Avenue, Heacock Street to Perris Boulevard (#8) – LOS F

There are no new roadway segment deficiencies anticipated with the addition of Project traffic, however, the following roadway segment LOS worsens with the addition of Project (Peak) traffic only:

- Cactus Avenue, West of Heacock Street (#4) – LOS E to LOS F

### *Off-Ramp Queues*

There are no movements that are anticipated to experience queuing issues during the weekday AM or weekday PM peak 95<sup>th</sup> percentile traffic flows for Opening Year Cumulative (2026) Without Project, With Project (Non-Peak), and With Project (Peak) traffic conditions, consistent with Existing (2020) traffic conditions.

### 1.5.3 HORIZON YEAR (2045) CONDITIONS – WITHOUT HEACOCK STREET EXTENSION

#### *Intersections*

The following study area intersections are anticipated to continue to operate at an unacceptable LOS during the peak hours under Horizon Year (2045) Without Project Without Heacock Street Extension traffic conditions:

- I-215 SB Ramps & Harley Knox Boulevard (#1) – LOS F AM and PM peak hours
- I-215 NB Ramps & Harley Knox Boulevard (#2) – LOS F AM and PM peak hours
- Heacock Street & Cactus Avenue (#5) – LOS F AM and PM peak hours
- Heacock Street & Meyer Drive/John F. Kennedy Drive (#6) – LOS F PM peak hour only
- Heacock Street & Cardinal Avenue (#11) – LOS E PM peak hour only
- Heacock Street & San Michele Road (#12) – LOS F AM and PM peak hours
- Indian Avenue & San Michele Road (#14) – LOS F AM and PM peak hours
- Indian Avenue & Nandina Avenue (#15) – LOS F PM peak hour only
- Indian Avenue & Harley Knox Boulevard (#16) – LOS F AM and PM peak hours
- Perris Boulevard & Harley Knox Boulevard (#20) – LOS E PM peak hour only

With the addition of Project (Non-Peak), Without Heacock Street Extension, there are no additional study area intersections anticipated to operate at a deficient LOS during the peak hours although the following location would have an LOS change:

- Perris Boulevard & Harley Knox Boulevard (#20) – LOS E to LOS F in the AM peak hour only

With the addition of Project (Peak), Without Heacock Street Extension, there are no additional study area intersections anticipated to operate at a deficient LOS during the peak hours although the following locations would have LOS changes:

- Heacock Street & Cardinal Avenue (#11) – LOS D to LOS E AM peak hour; LOS E to LOS F in the PM peak hour
- Perris Boulevard & Harley Knox Boulevard (#20) – LOS E to LOS F in the AM peak hour only

#### *Roadway Segment Capacity Analysis*

The following study area roadway segments are anticipated to operate at an unacceptable LOS under Horizon Year (2045) Without Project, Without Heacock Street Extension, traffic conditions:

- Heacock Street, Cactus Avenue to Iris Avenue (#1) – LOS E
- Cactus Avenue, West of Heacock Street (#4) – LOS F
- Nandina Avenue, Heacock Street to Perris Boulevard (#8) – LOS F

There are no new roadway segment deficiencies anticipated with the addition of Project (Non-Peak) and With Project (Peak) traffic.

### *Off-Ramp Queues*

There are no movements that are anticipated to experience queuing issues during the weekday AM or weekday PM peak 95<sup>th</sup> percentile traffic flows for Horizon Year (2045) Without Project, With Project (Non-Peak), and With Project (Peak) traffic conditions Without the Heacock Street Extension, consistent with Existing (2020) traffic conditions.

### **1.5.4 HORIZON YEAR (2045) CONDITIONS – WITH HEACOCK STREET EXTENSION**

#### *Intersections*

The following study area intersections are anticipated to operate at an unacceptable LOS during the peak hours under Horizon Year (2045) Without Project With Heacock Street Extension traffic conditions:

- I-215 SB Ramps & Harley Knox Boulevard (#1) – LOS F AM and PM peak hours
- I-215 NB Ramps & Harley Knox Boulevard (#2) – LOS F AM and PM peak hours
- Heacock Street & Cactus Avenue (#5) – LOS F AM and PM peak hours
- Heacock Street & Meyer Drive/John F. Kennedy Drive (#6) – LOS E AM peak hour; LOS F PM peak hour
- Heacock Street & Iris Avenue (#8) – LOS F AM peak hour only
- Heacock Street & Cardinal Avenue (#11) – LOS E PM peak hour only
- Heacock Street & San Michele Road (#12) – LOS F AM and PM peak hours
- Webster Avenue & Harley Knox Boulevard (#13) – LOS F AM and PM peak hours
- Indian Avenue & San Michele Road (#14) – LOS F AM peak hour; LOS E PM peak hour
- Indian Avenue & Nandina Avenue (#15) – LOS F AM and PM peak hours
- Indian Avenue & Harley Knox Boulevard (#16) – LOS E AM peak hour; LOS F PM peak hour
- Heacock Street & Nandina Avenue (#17) – LOS F AM and PM peak hours

With the addition of Project (Non-Peak), With Heacock Street Extension, there are no additional study area intersections anticipated to operate at a deficient LOS during the peak hours although the following locations have LOS changes:

- Heacock Street & Meyer Drive/John F. Kennedy Drive (#6) – LOS E to LOS F in the AM peak hour only
- Heacock Street & Cardinal Avenue (#11) – LOS D to LOS E in the AM peak hour

With the addition of Project (Peak), With Heacock Street Extension, there are no additional study area intersections anticipated to operate at a deficient LOS during the peak hours although the following locations would have LOS changes:

- Heacock Street & Meyer Drive/John F. Kennedy Drive (#6) – LOS E to LOS F in the AM peak hour only
- Heacock Street & Cardinal Avenue (#11) – LOS D to LOS E in the AM peak hour; LOS E to LOS F in the PM peak hour

- Indian Avenue & Harley Knox Boulevard (#16) – LOS E to LOS F in the AM peak hour only

*Roadway Segment Capacity Analysis*

The following study area roadway segments are anticipated to operate at an unacceptable LOS under Horizon Year (2045) Without Project, With Heacock Street Extension, traffic conditions:

- Heacock Street, Cactus Avenue to Iris Avenue (#1) – LOS E
- Cactus Avenue, West of Heacock Street (#4) – LOS F
- Nandina Avenue, Heacock Street to Perris Boulevard (#8) – LOS F

There are no new roadway segment deficiencies anticipated with the addition of Project (Non-Peak) and With Project (Peak) traffic.

*Off-Ramp Queues*

There are no movements that are anticipated to experience queuing issues during the weekday AM or weekday PM peak 95<sup>th</sup> percentile traffic flows for Horizon Year (2045) Without Project, With Project (Non-Peak), and With Project (Peak) traffic conditions With the Heacock Street Extension, consistent with Existing (2020) traffic conditions.

**1.5.5 TRAFFIC SIGNAL WARRANT ANALYSIS**

A summary of the results of the traffic signal warrant analysis are provided in Table 1-3. A detailed discussion of the traffic signal warrant analysis is discussed in each subsequent analysis section.

**TABLE 1-3: TRAFFIC SIGNAL WARRANT ANALYSIS SUMMARY**

INTERSECTION		Existing	E+P	2026 Without Project	2026 With Project (Non-Peak)	2026 With Project (Peak)	Without Heacock Street Extension			With Heacock Street Extension		
							Horizon Year Without Project	Horizon Year With Project (Non-Peak)	Horizon Year With Project (Peak)	Horizon Year Without Project	Horizon Year With Project (Non-Peak)	Horizon Year With Project (Peak)
10	Heacock St. & Driveway 1	DNE		DNE			DNE			DNE		
11	Heacock St. & Cardinal Av.				PH							
17	Heacock St. & Nandina Av.									PH		

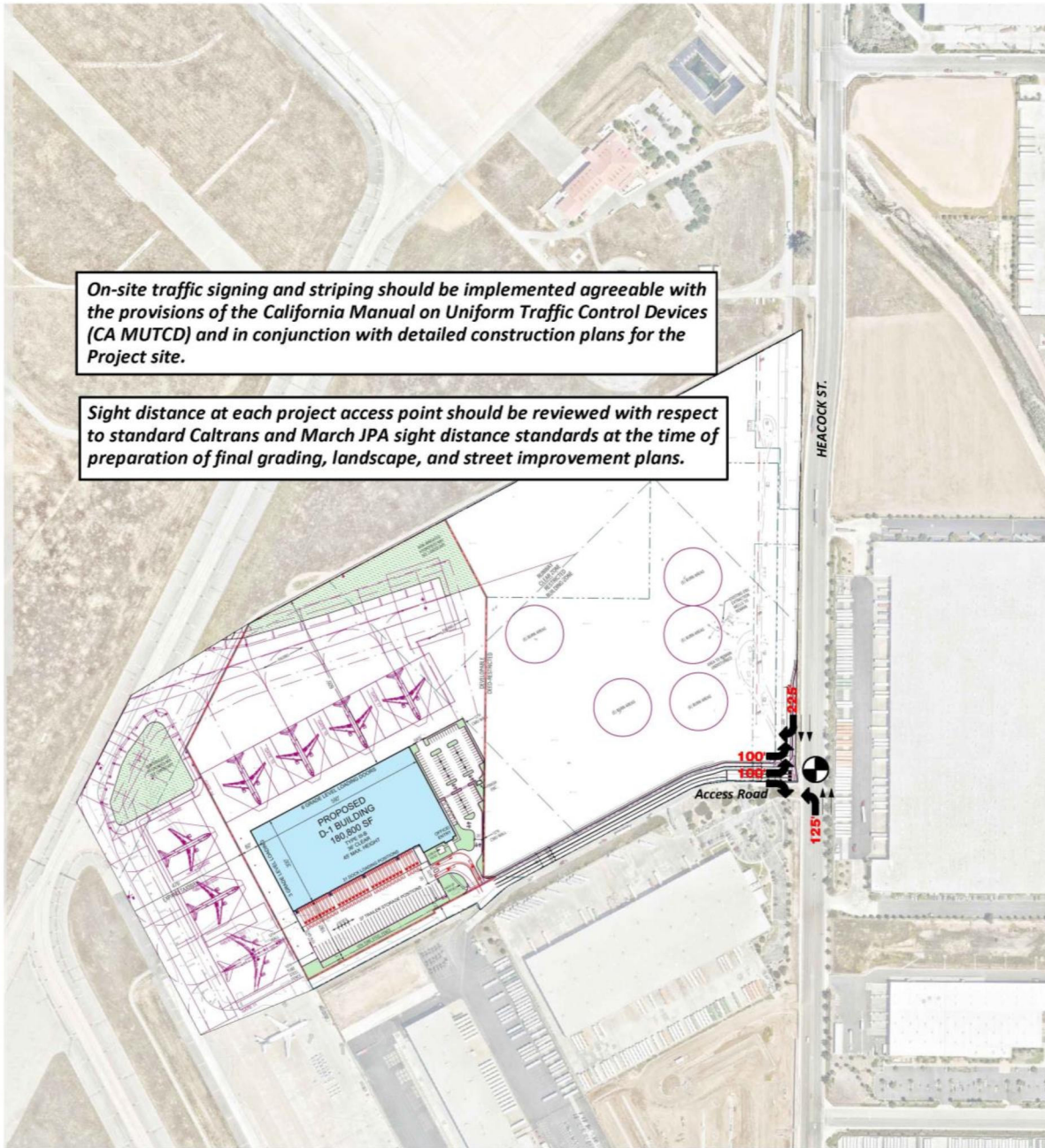
DNE = Does Not Exist

**1.6 RECOMMENDATIONS**




**1.6.1 SITE ADJACENT AND SITE ACCESS RECOMMENDATIONS**

The following recommendations are based on the improvements needed to accommodate site access. The site adjacent recommendations are shown on Exhibit 1-5. Since these improvements are considered Project design features, they are assumed to be constructed and in place under all With Project traffic scenarios.

**EXHIBIT 1-5: SITE ADJACENT ROADWAY AND SITE ACCESS RECOMMENDATIONS**



**LEGEND:**

-  = NEW TRAFFIC SIGNAL
-  = EXISTING LANE
-  = LANE IMPROVEMENT
- 150'** = MINIMUM TURN POCKET LENGTH



**Recommendation 1 – Heacock Street & Access Road (#10)** – The following improvements are necessary to accommodate site access:

- Project to install a traffic signal.
- Project to construct a northbound left turn lane with a minimum of 125-feet of storage.
- Project to construct a southbound right turn lane with a minimum of 225-feet of storage.
- Project to construct an eastbound left turn lane with a minimum of 100-feet of storage, a 2<sup>nd</sup> left turn lane and a dedicated right turn lane.

**Recommendation 2 – Heacock Street** is a north-south oriented roadway located on the Project’s eastern boundary. According to the March JPA General Plan, Heacock Street is currently built out to its ultimate roadway half-section. As such, there are no additional roadway improvement recommendations.



## **1.6.2 OFF-SITE RECOMMENDATIONS**

The improvements needed to address the cumulative deficiencies identified under Existing (2020), E+P, Opening Year Cumulative (2026), and Horizon Year (2045) traffic conditions for Without Heacock Street Extension conditions are summarized in Table 1-6 and in Table 1-7 for With Heacock Street Extension conditions. For those improvements listed in Tables 1-6 and 1-7 and not constructed as part of the Project, the Project Applicant's responsibility for the Project's contributions towards deficient intersections is fulfilled through payment of fair share and/or fees. Tables 1-6 and 1-7 also summarize the applicable cost associated with each of the recommended improvements. It should be noted, the City of Moreno Valley has requested separate costs for improvements for intersections that fall under the jurisdiction of the City of Moreno Valley. As such, separate costs have been identified for Moreno Valley improvements.

## **1.7 TRUCK ACCESS AND CIRCULATION**

Due to the typical wide turning radius of large trucks, a truck turning template has been overlaid on the site plan at the Project driveway anticipated to be utilized by heavy trucks in order to determine appropriate curb radii and to verify that trucks will have sufficient space to execute turning maneuvers (see Exhibit 1-6). As shown on Exhibit 1-6, the intersection of Heacock Street & Access Road is anticipated to accommodate the ingress and egress of heavy trucks as currently designed, with the exception of the southwest corner which should be modified to accommodate a 50-foot radius. The stop bar for the eastbound left turn lanes should be offset by 10-feet to provide sufficient room to accommodate the wide turning radius of trucks.



TABLE 1-4: SUMMARY OF IMPROVEMENTS AND ROUGH ORDER OF MAGNITUDE COSTS – WITHOUT HEACOCK STREET EXTENSION

#	Intersection	Jurisdiction	Existing (2020)	E+P (Non-Peak)	E+P (Peak)	2026 Without Project	2026 With Project (Non-Peak)	2026 With Project (Peak)	2045 Without Project	2045 With Project (Non-Peak)	2045 With Project (Peak)	Improvements in County TUMF? <sup>1</sup>	Project Responsibility <sup>2</sup>	Total Cost <sup>3,4</sup>	Fair Share % <sup>5</sup>	Fair Share Cost <sup>6</sup>
1	I-215 SB Ramps & Harley Knox Bl.	County of Riverside, Caltrans	Restripe the WB approach to provide dual left turn lanes and one shared through-right turn	Same	Same	Same	Same	Same	Same	Same	Same	Yes (TUMF) <sup>7</sup>	Fees	--	--	--
						Add SB left turn lane	Same	Same	Same	Same	Same	Yes (TUMF) <sup>7</sup>	Fees	--	--	--
<b>Total</b>														<b>\$0</b>		<b>\$0</b>
2	I-215 NB Ramps & Harley Knox Bl.	County of Riverside, Caltrans	Add WB free right turn	Same	Same	Same	Same	Same	Same	Same	Same	Yes (TUMF) <sup>7</sup>	Fees	--	--	--
						Add 2nd EB left turn lane	Same	Same	Same	Same	Same	Yes (TUMF) <sup>7</sup>	Fees	--	--	--
<b>Total</b>														<b>\$0</b>		<b>\$0</b>
5	Heacock St. & Cactus Av.	March JPA, Moreno Valley	None	None	None	Add 3rd EB through lane	Same	Same	Same	Same	Same	No	Fair Share	\$318,600	1.9%	\$5,917
						Cactus Channel Improvements Intersection	Same	Same	Same	Same	Same	No	Fair Share	\$500,000		\$9,285
						Improvements including Signal Modification/Bike lanes	Same	Same	Same	Same	Same	No	Fair Share	\$500,000		\$9,285
						EB right turn lane	Same	Same	Same	Same	Same	No	Fair Share	\$200,000		\$3,714
						Right-of-way on southeast corner (towards Unity Court)	Same	Same	Same	Same	Same	No	Fair Share	\$150,000		\$2,786
						Receiving lane on east leg	Same	Same	Same	Same	Same	No	Fair Share	\$250,000		\$4,643
						Juan Bautist de Anza Trail modifications	Same	Same	Same	Same	Same	No	Fair Share	\$100,000		\$1,857
						Add 3rd WB through lane	Same	Same	Same	Same	Same	No	Fair Share	\$318,600		\$5,917
						Right-of-way Intersection	Same	Same	Same	Same	Same	No	Fair Share	\$300,000		\$5,571
						Improvements including Signal Modification/Bike lanes	Same	Same	Same	Same	Same	No	Fair Share	\$500,000		\$9,285
WB approach/receiving lanes	Same	Same	Same	Same	Same	No	Fair Share	\$450,000	\$8,357							
Juan Bautist de Anza Trail modifications	Same	Same	Same	Same	Same	No	Fair Share	\$100,000	\$1,857							
<b>Total</b>														<b>\$3,687,200</b>		<b>\$68,475</b>
6	Heacock St. & Meyer Dr./John F. Kennedy Dr.	March JPA, Moreno Valley	None	None	None	Signal Modification	Same	Same	Same	Same	Same	No	Fair Share	\$150,000	5.4%	\$8,101
						Restripe the SB approach to provide dual left turn lanes, one through lane, and one shared through-right turn lane <sup>11</sup>	Same	Same	Same	Same	Same	No	Fair Share	\$44,250		\$2,390
						Restripe the SB approach to provide dual left turn lanes, one through lane, and one shared through-right turn lane	Same	Same	Same	Same	Same	No	Fair Share	\$50,000		\$2,700
						Restripe and maintain Class II bike lanes along Heacock; East leg improvements to receive two lanes which includes right of way and maintaining the Class II bike lane	Same	Same	Same	Same	Same	No	Fair Share	\$600,000		\$32,405
						Widen the south leg to provide an additional receiving lane	Same	Same	Same	Same	Same	Yes (TUMF) <sup>7</sup>	Fees	--		--
<b>Total</b>														<b>\$844,250</b>		<b>\$45,597</b>

#	Intersection	Jurisdiction	Existing (2020)	E+P (Non-Peak)	E+P (Peak)	2026 Without Project	2026 With Project (Non-Peak)	2026 With Project (Peak)	2045 Without Project	2045 With Project (Non-Peak)	2045 With Project (Peak)	Improvements in County TUMF? <sup>1</sup>	Project Responsibility <sup>2</sup>	Total Cost <sup>3,4</sup>	Fair Share % <sup>5</sup>	Fair Share Cost <sup>6</sup>
11	Heacock St. & Cardinal Av.	March JPA, Moreno Valley	None	None	None	Install a Traffic Signal	Same	Same	Same	Same	Same	No	Fair Share	\$600,000	6.3%	\$37,815
													<b>Total</b>	<b>\$600,000</b>		<b>\$37,815</b>
12	Heacock St. & San Michele Rd.	March JPA, Moreno Valley	None	None	None	Add 2nd SB left turn lane	Same	Same	Same	Same	Same	No	Fair Share	\$100,000	5.2%	\$5,220
						Add 2nd SB left turn lane <sup>11</sup>	Same	Same	Same	Same	Same	No	Fair Share	\$88,500		\$4,620
						Widen the south leg to provide an additional receiving lane	Same	Same	Same	Same	Same	Yes (TUMF) <sup>7</sup>	Fees	--		--
													<b>Total</b>	<b>\$188,500</b>		<b>\$9,840</b>
14	Indian Av. & San Michele Rd.	Moreno Valley	None	None	None	Add 2nd EB right turn lane, right-of-way, and new street lights, signal modifications, and sidewalks	Same	Same	Same	Same	Same	No	Fair Share	\$500,000	2.2%	\$11,128
						Add 2nd WB left turn lane restriping and signal modifications	Same	Same	Same	Same	Same	No	Fair Share	\$250,000		\$5,564
													<b>Total</b>	<b>\$750,000</b>		<b>\$16,692</b>
15	Indian Av. & Nandina Av.	Moreno Valley	None	None	None	Add 2nd NB left turn lane and reconstruction of the north/south legs with signal modification	Same	Same	Same	Same	Same	No	Fair Share	\$1,200,000	2.9%	\$35,322
						Add 2nd WB receiving lane with right-of-way	Same	Same	Same	Same	Same	No	Fair Share	\$500,000		\$14,718
													<b>Total</b>	<b>\$1,700,000</b>		<b>\$50,040</b>
16	Indian Av. & Harley Knox Bl.	Perris	None	None	None	Restripe the WB approach to provide dual left turn lanes, two through lanes, and one shared through-right turn lane	Same	Same	Same	Same	Same	No	Fair Share	\$25,000	4.9%	\$1,237
													<b>Total</b>	<b>\$25,000</b>		<b>\$1,237</b>
20	Perris Bl. & Harley Knox Bl.	Perris	None	None	None	Add 2nd EB left turn lane	Same	Same	Same	Same	Same	No	Fair Share	\$88,500	0.7%	\$638
													<b>Total</b>	<b>\$88,500</b>		<b>\$638</b>
<b>Total Costs for Horizon Year (2040) Improvements</b>														<b>\$7,883,450</b>		<b>\$230,335</b>
<b>Total Project Fair Share Contribution to March JPA (non-TUMF/other)<sup>8</sup></b>																<b>\$11,732</b>
<b>Total Project Fair Share Contribution to the City of Moreno Valley<sup>9</sup></b>																<b>\$182,727</b>
<b>Total Project Fair Share Contribution to the City of Perris<sup>10</sup></b>																<b>\$1,875</b>

<sup>1</sup> Improvements included in County TUMF programs for local and regional components.

<sup>2</sup> Identifies the Project's responsibility to construct an improvement or contribute fair share or fee payment towards the implementation of the improvement shown.

<sup>3</sup> Costs have been estimated using the data provided in Appendix "G" of the CMP (2003 Update) for preliminary construction costs. City of Moreno Valley has provided costs for applicable improvements within the City of Moreno Valley.

<sup>4</sup> Appendix "G" costs escalated by a factor of 1.77 except Traffic Signals.

<sup>5</sup> Program improvements constructed by project may be eligible for fee credit, at discretion of City. See Table 8-1 for Fair Share Calculations.

<sup>6</sup> Rough order of magnitude cost estimate.

<sup>7</sup> Although the interchange is identified as a TUMF interchange, the interchange is not currently identified on the Central Zone 5-Year Transportation Improvement Program Amendment (adopted June 30, 2016).

<sup>8</sup> Total project fair share contribution consists of the improvements which are not already included in a fee program for those intersections wholly or partially within the jurisdiction of March JPA.

<sup>9</sup> Total project fair share contribution consists of the improvements which are not already included in a fee program for those intersections wholly or partially within the City of Moreno Valley.

<sup>10</sup> Total project fair share contribution consists of the improvements which are not already included in a fee program for those intersections wholly or partially within the City of Perris.

<sup>11</sup> Improvement cost utilized for March JPA only. The City of Moreno Valley has provided alternative improvements/costs for the City of Moreno Valley only.

TABLE 1-5: SUMMARY OF IMPROVEMENTS AND ROUGH ORDER OF MAGNITUDE COSTS – WITH HEACOCK STREET EXTENSION

#	Intersection	Jurisdiction	Existing (2020)	E+P (Non-Peak)	E+P (Peak)	2026 Without Project	2026 With Project (Non-Peak)	2026 With Project (Peak)	2045 Without Project	2045 With Project (Non-Peak)	2045 With Project (Peak)	Improvements in County TUMF? <sup>1</sup>	Project Responsibility <sup>2</sup>	Total Cost <sup>3,4</sup>	Fair Share % <sup>5</sup>	Fair Share Cost <sup>6</sup>	
1	I-215 SB Ramps & Harley Knox Bl.	County of Riverside, Caltrans	Restripe the WB approach to provide dual left turn lanes and one shared through-right turn lane	Same	Same	Same	Same	Same	Same	Same	Same	Yes (TUMF) <sup>7</sup>	Fees	--	--	--	
						Add SB left turn lane	Same	Same	Same	Same	Same	Yes (TUMF) <sup>7</sup>	Fees	--	--	--	
													<b>Total</b>		<b>\$0</b>		<b>\$0</b>
2	I-215 NB Ramps & Harley Knox Bl.	County of Riverside, Caltrans	Add WB free right turn	Same	Same	Same	Same	Same	Same	Same	Same	Yes (TUMF) <sup>7</sup>	Fees	--	--	--	
						Add 2nd EB left turn lane	Same	Same	Same	Same	Same	Yes (TUMF) <sup>7</sup>	Fees	--	--	--	
													<b>Total</b>		<b>\$0</b>		<b>\$0</b>
5	Heacock St. & Cactus Av.	March JPA, Moreno Valley	None	None	None	Add 3rd EB through lane	Same	Same	Same	Same	Same	No	Fair Share	\$318,600	1.6%	\$5,081	
						Cactus Channel Improvements	Same	Same	Same	Same	Same	No	Fair Share	\$500,000		\$7,974	
						Intersection Improvements including Signal Modification/Bike lanes	Same	Same	Same	Same	Same	No	Fair Share	\$500,000		\$7,974	
						EB right turn lane	Same	Same	Same	Same	Same	No	Fair Share	\$200,000		\$3,189	
						Right-of-way on southeast corner (towards Unity Court)	Same	Same	Same	Same	Same	No	Fair Share	\$150,000		\$2,392	
						Receiving lane on east leg	Same	Same	Same	Same	Same	No	Fair Share	\$250,000		\$3,987	
						Juan Bautist de Anza Trail modifications	Same	Same	Same	Same	Same	No	Fair Share	\$100,000		\$1,595	
						Add 3rd WB through lane	Same	Same	Same	Same	Same	No	Fair Share	\$318,600		\$5,081	
						Right-of-way	Same	Same	Same	Same	Same	No	Fair Share	\$300,000		\$4,784	
						Intersection Improvements including Signal Modification/Bike lanes	Same	Same	Same	Same	Same	No	Fair Share	\$500,000		\$7,974	
WB approach/receiving lanes	Same	Same	Same	Same	Same	No	Fair Share	\$450,000	\$7,176								
Juan Bautist de Anza Trail modifications	Same	Same	Same	Same	Same	No	Fair Share	\$100,000	\$1,595								
													<b>Total</b>		<b>\$3,687,200</b>		<b>\$58,802</b>
6	Heacock St. & Meyer Dr./John F. Kennedy Dr.	March JPA, Moreno Valley	None	None	None	Signal Modification	Same	Same	Same	Same	Same	No	Fair Share	\$150,000	5.4%	\$8,101	
						Restripe the SB approach to provide dual left turn lanes, one through lane, and one shared through-right turn lane <sup>12</sup>	Same	Same	Same	Same	Same	No	Fair Share	\$44,250		\$2,390	
						Restripe the SB approach to provide dual left turn lanes, one through lane, and one shared through-right turn lane	Same	Same	Same	Same	Same	No	Fair Share	\$50,000		\$2,700	
						Restripe and maintain Class II bike lanes along Heacock; East leg improvements to receive two lanes which includes right of way and maintaining the Class II bike lane	Same	Same	Same	Same	Same	No	Fair Share	\$600,000		\$32,405	
						Widen the south leg to provide an additional receiving lane	Same	Same	Same	Same	Same	Yes (TUMF) <sup>7</sup>	Fees	--		--	
													<b>Total</b>		<b>\$844,250</b>		<b>\$45,597</b>

#	Intersection	Jurisdiction	Existing (2020)	E+P (Non-Peak)	E+P (Peak)	2026 Without Project	2026 With Project (Non-Peak)	2026 With Project (Peak)	2045 Without Project	2045 With Project (Non-Peak)	2045 With Project (Peak)	Improvements in County TUMF? <sup>1</sup>	Project Responsibility <sup>2</sup>	Total Cost <sup>3,4</sup>	Fair Share % <sup>5</sup>	Fair Share Cost <sup>6</sup>
8	Heacock St. & Iris Av.	March JPA, Moreno Valley	None	None	None	None	None	None	Modify the traffic signal to implement overlap phasing for the WB right turn lane	Same	Same	No	Fair Share	\$150,000	3.3%	\$4,900
													<b>Total</b>	<b>\$150,000</b>		<b>\$4,900</b>
11	Heacock St. & Cardinal Av.	March JPA, Moreno Valley	None	None	None	Install a Traffic Signal	Same	Same	Same	Same	Same	No	Fair Share	\$600,000	6.8%	\$40,947
													<b>Total</b>	<b>\$600,000</b>		<b>\$40,947</b>
12	Heacock St. & San Michele Rd.	March JPA, Moreno Valley	None	None	None	Add 2nd SB left turn lane <sup>12</sup>	Same	Same	No Longer Needed <sup>11</sup>	No Longer Needed <sup>11</sup>	No Longer Needed <sup>11</sup>	No	Fair Share	\$88,500	2.8%	\$2,473
						Add 2nd SB left turn lane	Same	Same	No Longer Needed <sup>11</sup>	No Longer Needed <sup>11</sup>	No Longer Needed <sup>11</sup>	No	Fair Share	\$100,000		\$2,794
													<b>Total</b>	<b>\$188,500</b>		<b>\$2,473</b>
13	Webster Av. & Harley Knox Bl.	Perris	None	None	None	None	None	None	Add 3rd NB through lane	Same	Same	No	Fair Share	\$318,600	3.8%	\$12,207
									Add NB free right turn lane	Same	Same	No	Fair Share	\$132,750		\$5,086
									Add 3rd SB through lane	Same	Same	No	Fair Share	\$318,600		\$12,207
									Add SB free right turn lane	Same	Same	No	Fair Share	\$132,750		\$5,086
									Add 3rd EB through lane	Same	Same	No	Fair Share	\$318,600		\$12,207
									Add EB free right turn lane	Same	Same	No	Fair Share	\$132,750		\$5,086
									Add 3rd WB through lane	Same	Same	No	Fair Share	\$318,600		\$12,207
									Add WB free right turn lane	Same	Same	No	Fair Share	\$132,750		\$5,086
													<b>Total</b>	<b>\$1,805,400</b>		<b>\$69,172</b>
15	Indian Av. & Nandina Av.	Moreno Valley	None	None	None	Add 2nd NB left turn lane and reconstruction of the north/south legs with signal modification	Same	Same	No Longer Needed <sup>11</sup>	No Longer Needed <sup>11</sup>	No Longer Needed <sup>11</sup>	No	Fair Share	\$1,200,000	1.1%	\$12,787
						Add 2nd WB receiving lane with right-of-way	Same	Same	No Longer Needed <sup>11</sup>	No Longer Needed <sup>11</sup>	No Longer Needed <sup>11</sup>	No	Fair Share	\$500,000		\$5,328
													<b>Total</b>	<b>\$1,700,000</b>		<b>\$18,115</b>
16	Indian Av. & Harley Knox Bl.	Perris	None	None	None	Restripe the WB approach to provide dual left turn lanes, two through lanes, and one shared through-right turn lane	Same	Same	Same	Same	Same	No	Fair Share	\$25,000	2.3%	\$573
													<b>Total</b>	<b>\$25,000</b>		<b>\$573</b>
17	Heacock St. & Nandina Av.	March JPA, Moreno Valley	None	None	None	None	None	None	Install a Traffic Signal	Same	Same	No	Fair Share	\$600,000	3.2%	\$19,313
									Add 2nd NB through lane	Same	Same	Yes (TUMF)	Fees	--		--
									Add NB right turn lane <sup>12</sup>	Same	Same	No	Fair Share	\$88,500		\$2,849
									Add NB right turn lane, Right-of-way	Same	Same	No	Fair Share	\$300,000		\$9,657
									Add 2nd SB through lane	Same	Same	Yes (TUMF)	Fees	--		--
									Modify the traffic signal to implement overlap phasing for the NB right turn lane <sup>12</sup>	Same	Same	No	Fair Share	\$132,750		\$4,273
									Modify the traffic signal to implement overlap phasing for the NB right turn lane	Same	Same	No	Fair Share	\$150,000		\$4,828
													<b>Total</b>	<b>\$1,271,250</b>		<b>\$40,920</b>

#	Intersection	Jurisdiction	Existing (2020)	E+P (Non-Peak)	E+P (Peak)	2026 Without Project	2026 With Project (Non-Peak)	2026 With Project (Peak)	2045 Without Project	2045 With Project (Non-Peak)	2045 With Project (Peak)	Improvements in County TUMF? <sup>1</sup>	Project Responsibility <sup>2</sup>	Total Cost <sup>3,4</sup>	Fair Share % <sup>5</sup>	Fair Share Cost <sup>6</sup>
20	Perris Bl. & Harley Knox Bl.	Perris	None	None	None	Add 2nd EB left turn lane	Same	Same	Not Applicable	Not Applicable	Not Applicable	No	Fair Share	\$88,500	0.0%	\$0
													<b>Total</b>	<b>\$88,500</b>		<b>\$0</b>
<b>Total Costs for Horizon Year (2040) Improvements</b>														<b>\$9,088,850</b>		<b>\$281,498</b>
<b>Total Project Fair Share Contribution to March JPA (non-TUMF/other)<sup>8</sup></b>																<b>\$12,310</b>
<b>Total Project Fair Share Contribution to the City of Moreno Valley<sup>9</sup></b>																<b>\$166,259</b>
<b>Total Project Fair Share Contribution to the City of Perris<sup>10</sup></b>																<b>\$69,745</b>

<sup>1</sup> Improvements included in County TUMF programs for local and regional components.

<sup>2</sup> Identifies the Project's responsibility to construct an improvement or contribute fair share or fee payment towards the implementation of the improvement shown.

<sup>3</sup> Costs have been estimated using the data provided in Appendix "G" of the CMP (2003 Update) for preliminary construction costs. City of Moreno Valley has provided costs for applicable improvements within the City of Moreno Valley.

<sup>4</sup> Appendix "G" costs escalated by a factor of 1.568 except Traffic Signals.

<sup>5</sup> Program improvements constructed by project may be eligible for fee credit, at discretion of City. See Table 8-2 for Fair Share Calculations.

<sup>6</sup> Rough order of magnitude cost estimate.

<sup>7</sup> Although the interchange is identified as a TUMF interchange, the interchange is not currently identified on the Central Zone 5-Year Transportation Improvement Program Amendment (adopted June 30, 2016).

<sup>8</sup> Total project fair share contribution consists of the improvements which are not already included in a fee program for those intersections wholly or partially within the jurisdiction of March JPA.

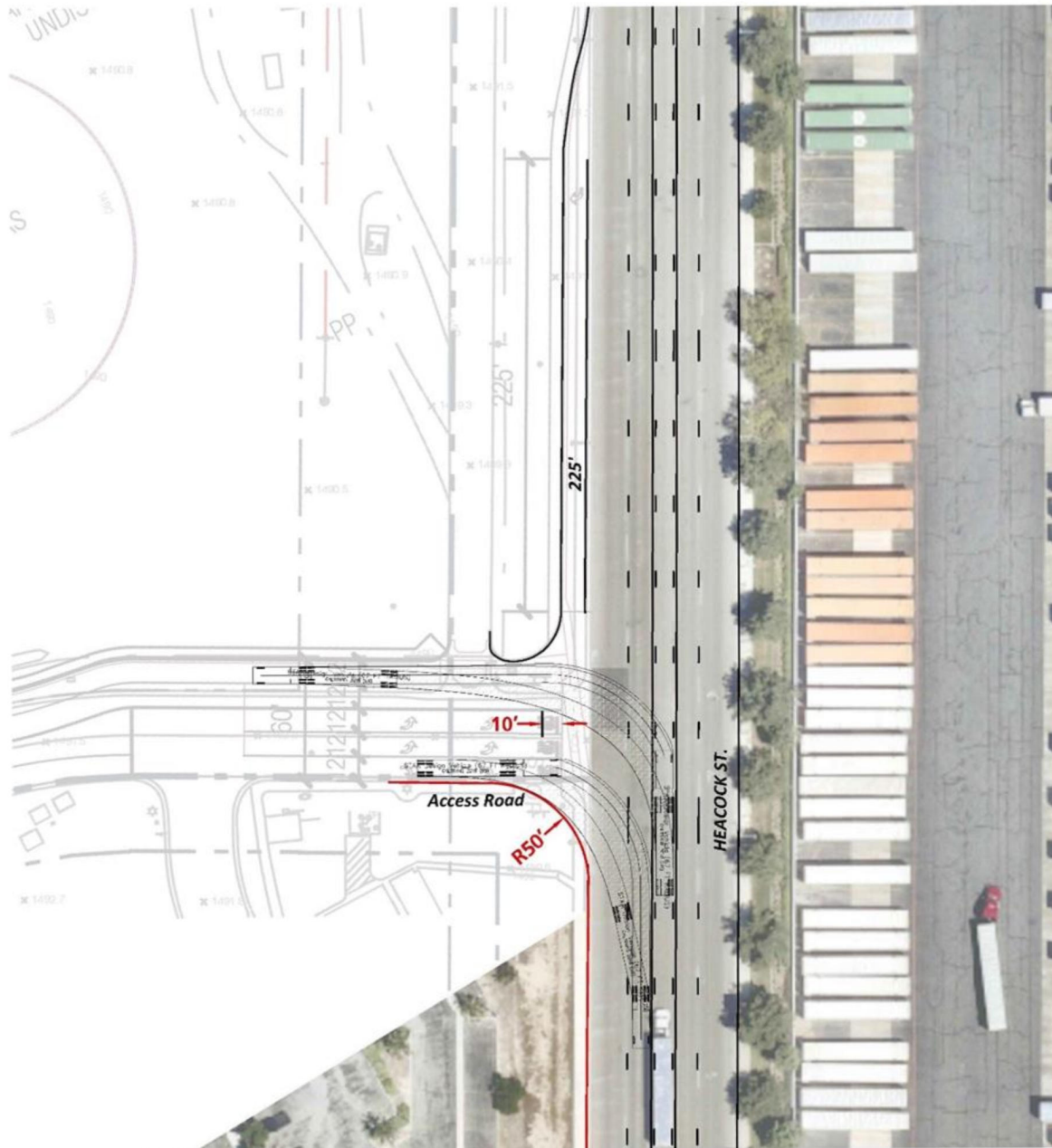
<sup>9</sup> Total project fair share contribution consists of the improvements which are not already included in a fee program for those intersections wholly or partially within the City of Moreno Valley.

<sup>10</sup> Total project fair share contribution consists of the improvements which are not already included in a fee program for those intersections wholly or partially within the City of Perris.

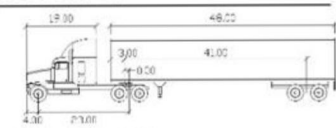
<sup>11</sup> With the Heacock Street extension in place, the intersection is anticipated to improve operations. As such, the identified improvement is no longer needed for acceptable operations.

<sup>12</sup> Improvement cost utilized for March JPA only. The City of Moreno Valley has provided alternative improvements/costs for the City of Moreno Valley only.

**EXHIBIT 1-6: TRUCK ACCESS**

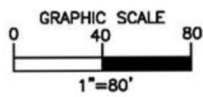


**LEGEND:**



STAA - STANDARD  
Not to Scale

feet	
Tractor Width	1.850
Trailer Width	2.50
Tractor Track	3.50
Trailer Track	3.50
Lock to Lock Line	6.6
Steering Angle	26.3
Articulating Angle	70.0



## 1.8 QUEUING ANALYSIS

At the direction of March JPA staff, a queuing analysis was performed for the study area intersections of Heacock Street & Access Road and Heacock Street & Cardinal Avenue. The traffic modeling and signal timing optimization software package SimTraffic has been utilized to assess the queues. SimTraffic is designed to model networks of signalized and unsignalized intersections, with the primary purpose of checking and fine-tuning signal operations. SimTraffic uses the input parameters from Synchro to generate random simulations. These random simulations generated by SimTraffic have been utilized to determine the 95<sup>th</sup> percentile queue lengths observed for each applicable turn lane. A SimTraffic simulation has been recorded up to 5 times, during the weekday AM and weekday PM peak hours, and has been seeded for 30-minute periods with 60-minute recording intervals. Queuing analysis worksheets for the weekday AM and PM peak hours are provided in Appendix 1.2 of this report.

The results of the queuing analysis for Without Heacock Street conditions are shown in Table 1-6 for Horizon Year (2045) With Project (Non-Peak) and With Project (Peak) traffic conditions. The results of the queuing analysis for With Heacock Street conditions are shown in Table 1-7 for Horizon Year (2045) With Project (Non-Peak) and With Project (Peak) traffic conditions. As shown in Tables 1-6 and 1-7, with the implementation of the Project design features discussed in Section 1.6 *Recommendations*, there are no anticipated queuing issues at the intersections of Heacock Street & Access Road and Heacock Street & Cardinal Avenue under Horizon Year (2045) With Project (Non-Peak) and With Project (Peak), for both Without and With Heacock Street Extension conditions.

**TABLE 1-6: PEAK HOUR QUEUING SUMMARY WITHOUT HEACOCK STREET EXTENSION**

Intersection	Available Stacking Distance (Feet)	Movement <sup>1</sup>	Horizon Year (2040) With Project (Non-Peak)				Horizon Year (2040) With Project (Peak)			
			95th Percentile Queue (Feet)		Acceptable? <sup>2</sup>		95th Percentile Queue (Feet)		Acceptable? <sup>2</sup>	
			AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
Heacock St. & Access Road	<b>125</b>	NBL	73	70	Yes	Yes	96	93	Yes	Yes
	<b>100</b>	SBL	0	0	Yes	Yes	0	0	Yes	Yes
	<b>100</b>	SBR	33	4	Yes	Yes	39	6	Yes	Yes
	<b>100</b>	EBL	45	45	Yes	Yes	53	57	Yes	Yes
Heacock St. & Cardinal Av.	150	SBL	52	35	Yes	Yes	57	36	Yes	Yes
	250	WBL	48	221	Yes	Yes	45	231	Yes	Yes

**BOLD** = 95th percentile queue exceeds the available storage.

<sup>1</sup> NBR = Improvement

<sup>2</sup> Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided. An additional 15 feet of stacking which is assumed to be provided in the transition for turn pockets is reflected in the stacking distance shown on this table, where applicable.

**TABLE 1-7: PEAK HOUR QUEUING SUMMARY WITH HEACOCK STREET EXTENSION**

Intersection	Available Stacking Distance (Feet) <sup>1</sup>	Movement <sup>1</sup>	Horizon Year (2040) With Project (Non-Peak)				Horizon Year (2040) With Project (Peak)			
			95th Percentile Queue (Feet)		Acceptable? <sup>2</sup>		95th Percentile Queue (Feet)		Acceptable? <sup>2</sup>	
			AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
Heacock St. & Access Road	<b>125</b>	NBL	88	79	Yes	Yes	97	91	Yes	Yes
	<b>100</b>	SBL	0	0	Yes	Yes	0	0	Yes	Yes
	<b>100</b>	SBR	31	0	Yes	Yes	38	3	Yes	Yes
	<b>100</b>	EBL	44	39	Yes	Yes	51	53	Yes	Yes
Heacock St. & Cardinal Av.	150	SBL	52	36	Yes	Yes	55	34	Yes	Yes
	250	WBL	44	225	Yes	Yes	52	234	Yes	Yes

**BOLD** = 95th percentile queue exceeds the available storage.

<sup>1</sup> NBR = Improvement

<sup>2</sup> Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided. An additional 15 feet of stacking which is assumed to be provided in the transition for turn pockets is reflected in the stacking distance shown on this table, where applicable.



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## 2 Methodologies

This section of the report presents the methodologies used to perform the traffic analyses summarized in this report. The methodologies described are consistent with March JPA's guidelines.

### 2.1 LEVEL OF SERVICE

Traffic operations of roadway facilities are described using the term "Level of Service" (LOS). LOS is a qualitative description of traffic flow based on several factors such as speed, travel time, delay, and freedom to maneuver. Six levels are typically defined ranging from LOS A, representing completely free-flow conditions, to LOS F, representing breakdown in flow resulting in stop-and-go conditions. LOS E represents operations at or near capacity, an unstable level where vehicles are operating with the minimum spacing for maintaining uniform flow.

### 2.2 INTERSECTION CAPACITY ANALYSIS

The definitions of LOS for interrupted traffic flow (flow restrained by the existence of traffic signals and other traffic control devices) differ slightly depending on the type of traffic control. The LOS is typically dependent on the quality of traffic flow at the intersections along a roadway. The 6<sup>th</sup> Edition Highway Capacity Manual (HCM) methodology expresses the LOS at an intersection in terms of delay time for the various intersection approaches. (4) The HCM uses different procedures depending on the type of intersection control.

#### 2.2.1 SIGNALIZED INTERSECTIONS

The March JPA, City of Moreno Valley, City of Perris, and County of Riverside require signalized intersection operations analysis based on the methodology described in the HCM. (4) Intersection LOS operations are based on an intersection's average control delay. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. For signalized intersections LOS is directly related to the average control delay per vehicle and is correlated to a LOS designation as described in Table 2-1.

The traffic modeling and signal timing optimization software package Synchro (Version 10) is utilized to analyze signalized intersections. Synchro is a macroscopic traffic software program that is based on the signalized intersection capacity analysis as specified in the HCM. Macroscopic level models represent traffic in terms of aggregate measures for each movement at the study intersections. Equations are used to determine measures of effectiveness such as delay and queue length. The level of service and capacity analysis performed by Synchro takes into consideration optimization and coordination of signalized intersections within a network.

**TABLE 2-1: SIGNALIZED INTERSECTION LOS THRESHOLDS**

Description	Average Control Delay (Seconds), V/C ≤ 1.0	Level of Service, V/C ≤ 1.0	Level of Service, V/C > 1.0
Operations with very low delay occurring with favorable progression and/or short cycle length.	0 to 10.00	A	F
Operations with low delay occurring with good progression and/or short cycle lengths.	10.01 to 20.00	B	F
Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.01 to 35.00	C	F
Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	35.01 to 55.00	D	F
Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	55.01 to 80.00	E	F
Operation with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths.	80.01 and up	F	F

Source: HCM (6<sup>th</sup> Edition)

As the March JPA guidelines does not provide saturation flow rates, a saturation flow rate of 1900 vphgpl has been utilized, consistent with County of Riverside guidelines. The peak hour traffic volumes have been adjusted using a peak hour factor (PHF) to reflect peak 15-minute volumes. Common practice for LOS analysis is to use a peak 15-minute rate of flow. However, flow rates are typically expressed in vehicles per hour. The PHF is the relationship between the peak 15-minute flow rate and the full hourly volume (e.g.,  $PHF = [Hourly Volume] / [4 \times Peak\ 15\text{-minute Flow Rate}]$ ). The use of a 15-minute PHF produces a more detailed analysis as compared to analyzing vehicles per hour. Existing PHFs have been used for all analysis scenarios. Per the HCM, PHF values over 0.95 often are indicative of high traffic volumes with capacity constraints on peak hour flows while lower PHF values are indicative of greater variability of flow during the peak hour. (4)

### 2.2.2 UNSIGNALIZED INTERSECTIONS

The March JPA, City of Moreno Valley, City of Perris, and County of Riverside require the operations of unsignalized intersections be evaluated using the methodology described in the HCM. (4) The LOS rating is based on the weighted average control delay expressed in seconds per vehicle (see Table 2-2).

**TABLE 2-2: UNSIGNALIZED INTERSECTION LOS THRESHOLDS**

Description	Average Control Delay Per Vehicle (Seconds)	Level of Service, V/C $\leq 1.0$	Level of Service, V/C $> 1.0$
Little or no delays.	0 to 10.00	A	F
Short traffic delays.	10.01 to 15.00	B	F
Average traffic delays.	15.01 to 25.00	C	F
Long traffic delays.	25.01 to 35.00	D	F
Very long traffic delays.	35.01 to 50.00	E	F
Extreme traffic delays with intersection capacity exceeded.	> 50.00	F	F

Source: HCM (6<sup>th</sup> Edition)

At two-way or side-street stop-controlled intersections, LOS is calculated for each controlled movement and for the left turn movement from the major street, as well as for the intersection as a whole. For approaches composed of a single lane, the delay is computed as the average of all movements in that lane. The worst LOS for any one movement is reported for any two-way or side-street stop-controlled intersection per HCM. For all-way stop controlled intersections, LOS is computed and reported for the intersection as a whole.

### 2.3 ROADWAY SEGMENT CAPACITY ANALYSIS METHODOLOGY

Roadway segment operations have been evaluated using the applicable average daily traffic (ADT) roadway capacity values provided in either the County or City of Moreno Valley's Guidelines. The County guidelines have been used for the roadway segments located within the March JPA. The roadway capacities utilized for the purposes of this analysis are considered "rule of thumb" estimates for planning purposes and are affected by such factors as intersections (spacing, configuration and control features), degree of access control, roadway grades, design geometrics (horizontal and vertical alignment standards), sight distance, vehicle mix (truck and bus traffic) and pedestrian bicycle traffic.

While using ADT for planning purposes is suitable with regards to evaluating potential volume to capacity with future forecasts, it is not suitable for operational analysis because it does not account for the factors listed previously. As such, where the ADT based roadway segment analysis indicates a deficiency (unacceptable LOS), a review of the more detailed peak hour intersection analysis and progression analysis are undertaken. The more detailed peak hour intersection analysis explicitly accounts for factors that affect roadway capacity. Therefore, roadway segment widening is typically only recommended if the peak hour intersection analysis indicates the need for additional through lanes.

The County of Riverside/March JPA and City of Moreno Valley roadway segment capacities are provided on Tables 2-3 and 2-4.

**TABLE 2-3: ROADWAY SEGMENT CAPACITIES FOR COUNTY OF RIVERSIDE/MARCH JPA**

Roadway Classification	Number of Lanes	Maximum Two-Way Traffic Volume (ADT) <sup>2</sup>		
		Service Level C	Service Level D	Service Level E
Collector	2	10,400	11,700	13,000
Secondary	4	20,700	23,300	25,900
Major	4	27,300	30,700	34,100
Arterial	2	14,400	16,200	18,000
Arterial	4	28,700	32,300	35,900
Mountain Arterial <sup>3</sup>	2	12,900	14,500	16,100
Mountain Arterial	3	16,700	18,800	20,900
Mountain Arterial	4	29,800	33,500	37,200
Urban Arterial	4	28,700	32,300	35,900
Urban Arterial	6	43,100	48,500	53,900
Urban Arterial	8	57,400	64,600	71,800
Expressway	4	32,700	36,800	40,900
Expressway	6	49,000	55,200	61,300
Expressway	8	65,400	73,500	81,700
Freeway	4	61,200	68,900	76,500
Freeway	6	94,000	105,800	117,500
Freeway	8	128,400	144,500	160,500
Freeway	10	160,500	180,500	200,600
Ramp <sup>4</sup>	1	16,000	18,000	20,000

**NOTES:**

<sup>1</sup> All capacity figures are based on optimum conditions and are intended as guidelines for planning purposes only.

<sup>2</sup> Maximum two-way ADT values are based on the 1999 Modified Highway Capacity Manual Level of Service Tables as defined in the Riverside County Congestion Management Program.

<sup>3</sup> Two-lane roadways designated as future arterials that conform to arterial design standards for vertical and horizontal alignments are analyzed as arterials.

<sup>4</sup> Ramp capacity is given as a one-way traffic volume.

TABLE 2-4: ROADWAY SEGMENT CAPACITIES FOR CITY OF MORENO VALLEY

Table 1: Roadway Segment Capacities					
Type of Roadway	Level of Service*				
	A	B	C	D	E
6 Lane Divided Arterial	33,900	39,400	45,000	50,600	56,300
4 Lane Divided Arterial	22,500	26,300	30,000	33,800	37,500
4 Lane Undivided Arterial	15,000	17,500	20,000	22,500	25,000
2 Lane Industrial Collector	7,500	8,800	10,000	11,300	12,500
2 Lane undivided Residential	N/A	N/A	N/A	N/A	2,000
<p>* - Maximum Average Daily Traffic (ADT)</p> <p>NOTE: These roadway capacities are "rule of thumb" estimates for planning purposes. The LOS "E" service volumes are estimated maximum daily capacity for respective classifications. Capacity is affected by such factors as intersections (spacing, configuration, and control features), degree of access control, roadway grades, design geometrics (horizontal and vertical alignment standards), sight distance, vehicle mix (truck and bus traffic), and pedestrian and bicycle traffic.</p>					

## 2.4 TRAFFIC SIGNAL WARRANT ANALYSIS METHODOLOGY

The term "signal warrants" refers to the list of established criteria used by Caltrans and other public agencies to quantitatively justify or ascertain the potential need for installation of a traffic signal at an otherwise unsignalized intersection. This TA uses the signal warrant criteria presented in the latest edition of the Caltrans California Manual on Uniform Traffic Control Devices (CA MUTCD). (5)

The signal warrant criteria for Existing study area intersections are based upon several factors, including volume of vehicular and pedestrian traffic, frequency of accidents, and location of school areas. The CA MUTCD indicates that the installation of a traffic signal should be considered if one or more of the signal warrants are met. (5) Specifically, this TA utilizes the Peak Hour Volume-based Warrant 3 as the appropriate representative traffic signal warrant analysis for existing traffic conditions. Warrant 3 is appropriate to use for this TA because it provides specialized warrant criteria for intersections with rural characteristics (e.g., located in communities with populations of less than 10,000 persons or with adjacent major streets operating above 40 miles per hour). For the purposes of this study, the speed limit was the basis for determining whether Urban or Rural warrants were used for a given intersection.

Future intersections that do not currently exist have been assessed regarding the potential need for new traffic signals based on future average daily traffic (ADT) volumes, using the Caltrans planning level ADT-based signal warrant analysis worksheets.

Pursuant to the scoping agreement, traffic signal warrant analysis has been conducted for unsignalized intersections operating at LOS E or F, which consist of the following study area intersections shown in Table 2-5:

**TABLE 2-5: TRAFFIC SIGNAL WARRANT ANALYSIS LOCATIONS**

ID	Intersection Location	Jurisdiction	CMP?
10	Heacock St. & Access Road	March JPA, Moreno Valley	No
11	Heacock St. & Cardinal Av.	March JPA, Moreno Valley	No
17	Heacock St. & Nandina Av.	March JPA, Moreno Valley	No

The Existing conditions traffic signal warrant analysis is presented in the subsequent section, Section 3 *Area Conditions* of this report. The traffic signal warrant analyses for future conditions are presented in Section 5 *E+P Traffic Conditions*, Section 6 *Opening Year Cumulative (2026) Traffic Conditions*, and Section 7 *Horizon Year (2045) Traffic Conditions* of this report. It is important to note that a signal warrant defines the minimum condition under which the installation of a traffic signal might be warranted. Meeting this threshold condition does not require that a traffic control signal be installed at a particular location, but rather, that other traffic factors and conditions be evaluated in order to determine whether the signal is truly justified. It should also be noted that signal warrants do not necessarily correlate with LOS. An intersection may satisfy a signal warrant condition and operate at or above acceptable LOS or operate below acceptable LOS and not meet a signal warrant.

## 2.5 FREEWAY OFF-RAMP QUEUING ANALYSIS

Consistent with Caltrans requirements, the 95<sup>th</sup> percentile queuing of vehicles has been assessed at the off-ramps to determine potential queuing deficiencies at the freeway ramp intersections at the I-215 Freeway at the Harley Knox Boulevard interchange. Specifically, the queuing analysis is utilized to identify any potential queuing and “spill back” onto the I-215 Freeway mainline from the off-ramps.

The traffic progression analysis tool and HCM intersection analysis program, Synchro, has been used to assess the potential deficiencies/needs of the intersections with traffic added from the proposed Project. Storage (turn-pocket) length recommendations at the ramps have been based upon the 95<sup>th</sup> percentile queue resulting from the Synchro progression analysis. The footnote from the Synchro output sheets indicates if the 95<sup>th</sup> percentile cycle exceeds capacity. Traffic is simulated for two complete cycles of the 95<sup>th</sup> percentile traffic in Synchro in order to account for the effects of spillover between cycles. In practice, the 95<sup>th</sup> percentile queue shown will rarely be exceeded and the queues shown with the footnote are acceptable for the design of storage bays.

## 2.6 MINIMUM ACCEPTABLE LEVELS OF SERVICE (LOS)

Minimum Acceptable LOS and associated definitions of intersection deficiencies has been obtained from each of the applicable surrounding jurisdictions.

### 2.6.1 MARCH JPA

Based on the March Joint Powers Authority Traffic Impact Study Preparation Guide (February 10, 2020), all intersections and roadway segments within the March JPA Planning Area shall operate at LOS D or better with limiting circumstances of LOS E to occur. LOS E may also be allowed to the extent that would support transit-oriented development (TOD) and walkable communities. LOS E is also acceptable during peak hours at interchange ramp intersections where ramp metering occurs. The Project is not proposed to be a TOD and the Harley Knox Boulevard on-ramps are not currently metered, as such, the minimum LOS utilized for the purposes of this analysis is LOS D. (1)

### 2.6.2 COUNTY OF RIVERSIDE

The definition of an intersection deficiency has been obtained from the County of Riverside General Plan. Riverside County General Plan Policy C 2.1 states that the County will maintain the following County-wide target LOS:

*The following minimum target levels of service have been designated for the review of development proposals in the unincorporated areas of Riverside County with respect to transportation impacts on roadways designated in the Riverside County Circulation Plan which are currently County maintained, or are intended to be accepted into the County maintained roadway system:*

- *LOS C shall apply to all development proposals in any area of the Riverside County not located within the boundaries of an Area Plan, as well as those areas located within the following Area Plans: REMAP, Eastern Coachella Valley, Desert Center, Palo Verde Valley, and those non-Community Development areas of the Elsinore, Lake Mathews/Woodcrest, Mead Valley and Temescal Canyon Area Plans.*
- *LOS D shall apply to all development proposals located within any of the following Area Plans: Eastvale, Jurupa, Highgrove, Reche Canyon/Badlands, Lakeview/Nuevo, Sun City/Menifee Valley, Harvest Valley/Winchester, Southwest Area, The Pass, San Jacinto Valley, Western Coachella Valley and those Community Development Areas of the Elsinore, Lake Mathews/Woodcrest, Mead Valley and Temescal Canyon Area Plans.*
- *LOS E may be allowed by the Board of Supervisors within designated areas where transit-oriented development and walkable communities are proposed.*

The applicable minimum LOS utilized for the purposes of this analysis is LOS D per the County-wide target LOS for projects located within the Mead Valley Area Plans.



### 2.6.3 CITY OF MORENO VALLEY

The minimum acceptable LOS for the City of Moreno Valley is LOS D for intersections and roadway segments that are adjacent to freeway on/off ramps, and/or adjacent to employment generating land uses. LOS C is applicable to all other intersections and roadway segments. The minimum acceptable LOS for all boundary intersections is LOS D. As such, all study area intersections located partially or wholly within the City of Moreno Valley are assumed to have a minimum acceptable LOS D for the purposes of this traffic study.

### 2.6.4 CITY OF PERRIS

The definition of an intersection deficiency has been obtained from the City of Perris General Plan:

- LOS D along all City maintained roads (including intersections) and LOS D along I-215 and SR-74 (including intersections with local streets and roads). An exception to the local road standard is LOS E, at intersections of any Arterials and Expressways with SR-74, the Ramona-Cajalco Expressway, or at I-215 Freeway ramps.
- LOS E may be allowed within the boundaries of the Downtown Specific Plan Area to the extent that it would support transit-oriented development and walkable communities. Increased congestion in this area will facilitate an increase in transit ridership and encourage development of a complementary mix of land uses within a comfortable walking distance from light rail stations.

As such, the minimum LOS utilized for the purposes of this analysis is LOS D for intersections located partially or wholly within the City of Perris.

### 2.6.5 CALTRANS

Per the Caltrans Evaluating Transportation Impacts and State Highway System Projects, Caltrans no longer utilizes LOS as the criteria for determining transportation impacts under California Environmental Quality Act (CEQA). (2) However, the traffic study will be sent to Caltrans for review.

## 2.7 DEFICIENCY CRITERIA

### 2.7.1 MARCH JPA

March JPA has determined that the effect of project's traffic would result in a deficiency if project traffic (during the AM and/or PM peak hours or during the project's peak hour or period) is 2%, or more, of total peak hour traffic on a roadway segment or at an intersection.

The following is a summary of the criteria:

A project-related traffic deficiency will be designated if both of the following conditions occur:

- Peak hour project traffic plus existing traffic causes a roadway segment or intersection to operate at LOS "E" or "F"; and
- Peak hour project traffic comprises 2% or more of the total peak hour traffic on the roadway segment or intersection for LOS "E" and 2% or more for LOS "F".

A traffic deficiency will be designated if both of the following conditions occur:

- Peak hours project traffic plus existing peak hour traffic and peak hour traffic from other near-term and future projects causes a roadway segment or intersection to operate at LOS "E" or "F"; and
- Peak hour project traffic comprises 2% or more of total peak hour traffic on the roadway segment or intersection for LOS "E" and 2% or more for LOS "F".

### 2.7.2 CITY OF MORENO VALLEY

This section outlines the methodology used in this analysis related to identifying circulation system deficiencies. The following deficiency criteria is utilized for the City per its Guidelines. To determine whether the addition of project-related traffic at a study intersection would result in a deficiency at a signalized intersection, the following will be utilized:

- Any signalized intersection operating at an acceptable LOS without project traffic in which the addition of project traffic causes the intersection to degrade to unacceptable LOS shall identify improvements to provide acceptable LOS.
- Any signalized study intersection that is operating at an unacceptable LOS without project traffic where the project increases delay by 5.0 or more seconds shall identify improvements to offset the increase in delay.

An operational improvement would be required if the study determines that either section a) or both sections b) and c) occur for unsignalized intersections:

- a) The addition of project related traffic causes the intersection to degrade from an acceptable LOS to unacceptable LOS.

OR

- b) The project adds 5.0 seconds or more of delay to an intersection that is already projected to operate without project traffic at unacceptable LOS,
- c) The intersection meets the peak hour traffic signal warrant after the addition of project traffic.

If the conditions above are satisfied, improvement should be identified to achieve LOS D or better for conditions a) above and pre-project LOS and delay for case b) above.

## **2.8 PROJECT FAIR SHARE CALCULATION METHODOLOGY**

Improvements found to be included in the TUMF and/or DIF will be identified as such. For improvements that do not appear to be in either of the pre-existing fee programs, a fair share contribution based on the Project's proportional share may be imposed in order to address the Project's share of deficiencies in lieu of construction. It should be noted that fair share calculations are for informational purposes only and the County Traffic Engineer will determine the appropriate improvements to be implemented by a project (to be identified in the conditions of approval).

If the intersection is currently operating at acceptable LOS under Existing traffic conditions, the Project's fair share cost of improvements would be determined based on the following equation, which is the ratio of Project traffic to new traffic, where new traffic is total future traffic less existing baseline traffic:

$$\text{Project Fair Share \%} = \frac{\text{Project Traffic}}{(\text{Horizon Year (2045) Total Traffic} - \text{Existing (2020) Traffic})}$$

### **3 AREA CONDITIONS**

This section provides a summary of the existing circulation network, the March JPA General Plan Circulation Network, and a review of existing peak hour intersection operations, roadway segment, traffic signal warrant, and off-ramp queuing analyses.

#### **3.1 EXISTING CIRCULATION NETWORK**

Pursuant to the agreement with March JPA staff (Appendix 1.1), the study area includes a total of 16 existing and future intersections as shown previously on Exhibit 1-2. Exhibit 3-1 illustrates the study area intersections located near the proposed Project and identifies the number of through traffic lanes for existing roadways and intersection traffic controls.

#### **3.2 MARCH JPA GENERAL PLAN CIRCULATION ELEMENT**

The roadway classifications and planned (ultimate) roadway cross-sections of the major roadways within the study area, as identified on the March JPA General Plan Circulation Element, are described subsequently. Exhibit 3-2 shows the March JPA General Plan Circulation Element and Exhibit 3-3 illustrates the March JPA General Plan roadway cross-sections.

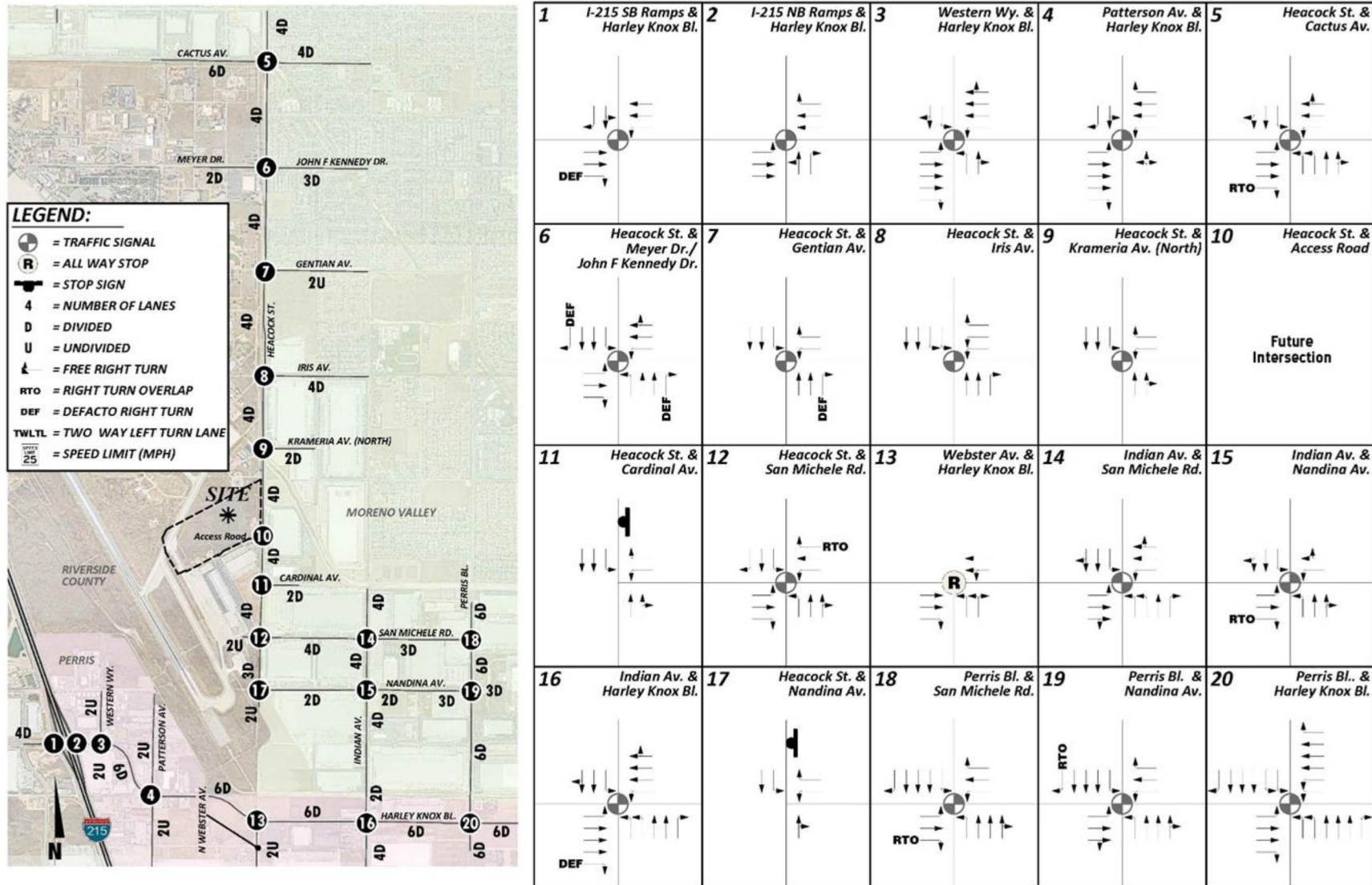
#### **3.3 COUNTY OF RIVERSIDE, CITY OF MORENO VALLEY, AND CITY OF PERRIS GENERAL PLAN CIRCULATION ELEMENT**

Exhibits 3-4 and 3-5 show the County of Riverside's General Plan Circulation Element and roadway cross-sections, respectively. Exhibits 3-6 and 3-7 show the City of Moreno Valley's General Plan Circulation Element and roadway cross-sections, respectively. Exhibits 3-8 and 3-9 show the City of Perris' General Plan Circulation Element and roadway cross-sections, respectively.

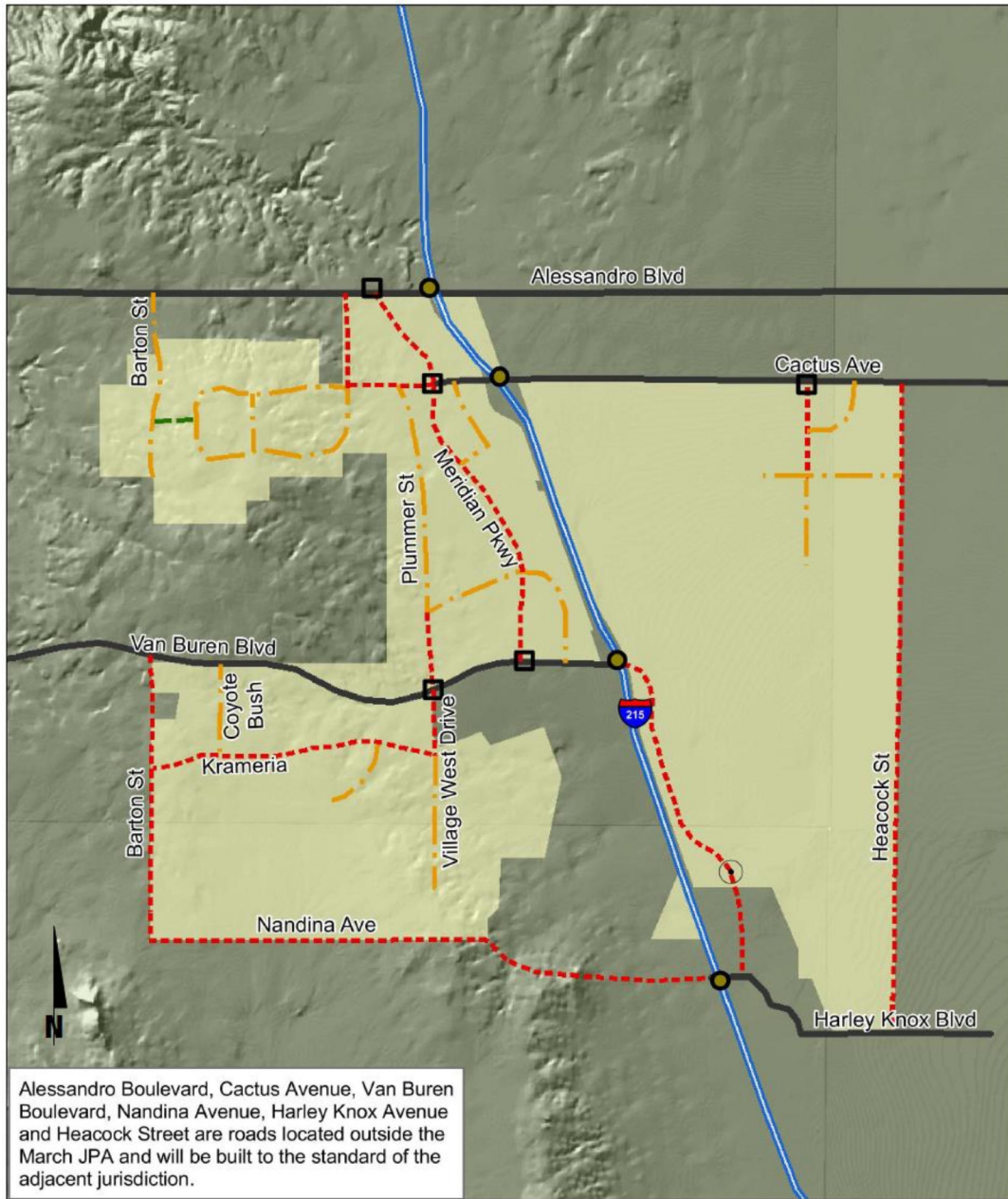
#### **3.4 BICYCLE & PEDESTRIAN FACILITIES**

Field observations conducted in 2019 indicate nominal pedestrian and bicycle activity within the study area (last observed pre-COVID). March JPA does not have a bike/pedestrian facilities exhibit. Exhibit 3-10 illustrates the City of Moreno Valley Bicycle Master Plan and Exhibit 3-11 shows the City of Moreno Valley master plan of trails. As shown in Exhibit 3-10, there are Class II bike lanes along the Project frontage on Heacock Street. Exhibit 3-12 illustrates the City of Perris proposed bikeways and trails improvements. Existing pedestrian facilities within the study area are shown on Exhibit 3-13.

EXHIBIT 3-1: EXISTING NUMBER OF THROUGH LANES AND INTERSECTION CONTROLS



**EXHIBIT 3-2: MARCH JPA GENERAL PLAN CIRCULATION ELEMENT**



**LEGEND**

- Arterial Highway
- Arterial/Urban Arterial Highway
- - - Emergency Access
- - - Industrial Collector
- - - Secondary Highway
- March JPA Planning Area
- 215 Freeway Interchange
- Roundabout
- Enhanced Intersection
- Freeway Interchange

**EXHIBIT 3-3: MARCH JPA GENERAL PLAN ROADWAY CROSS-SECTIONS**

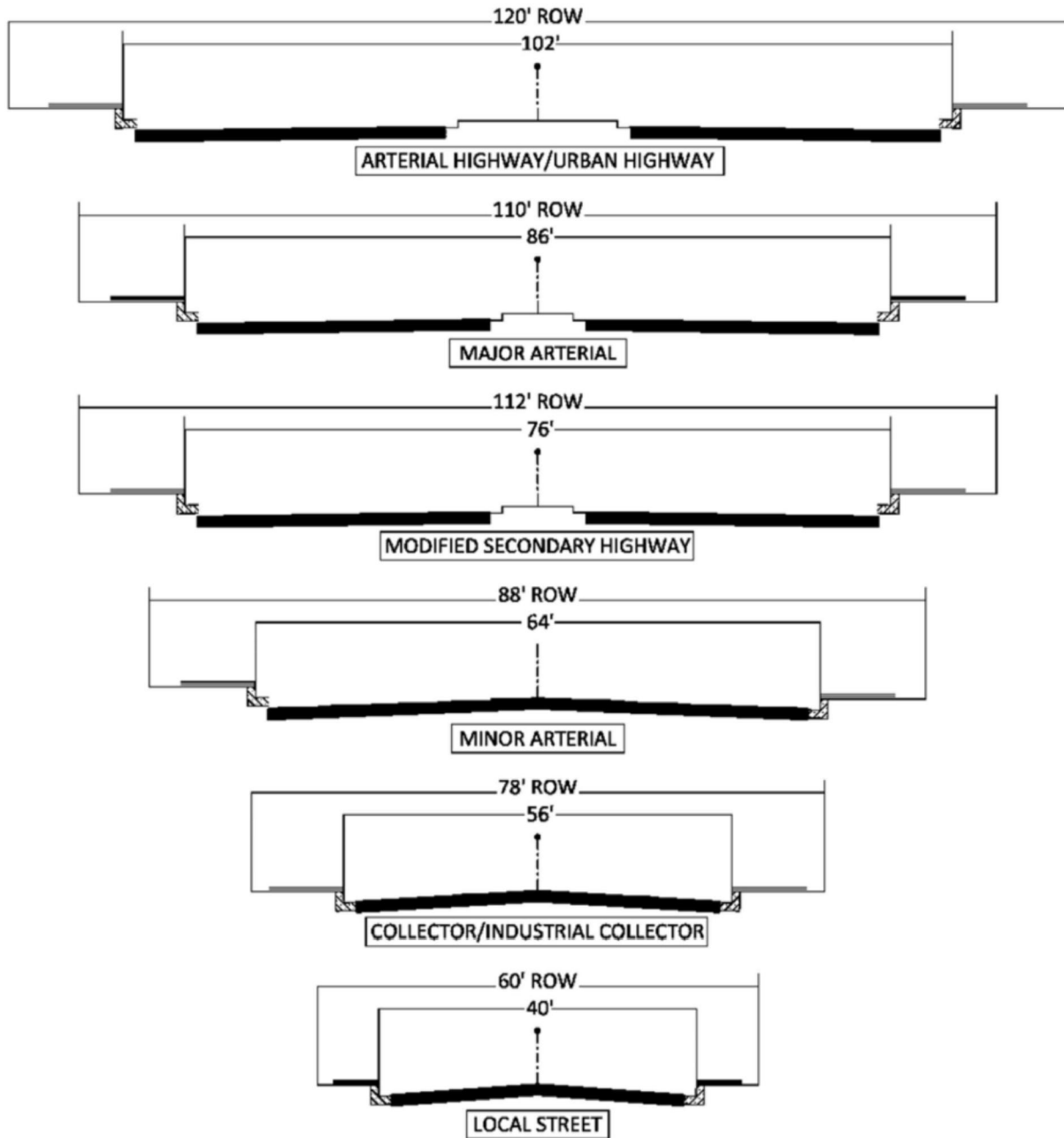
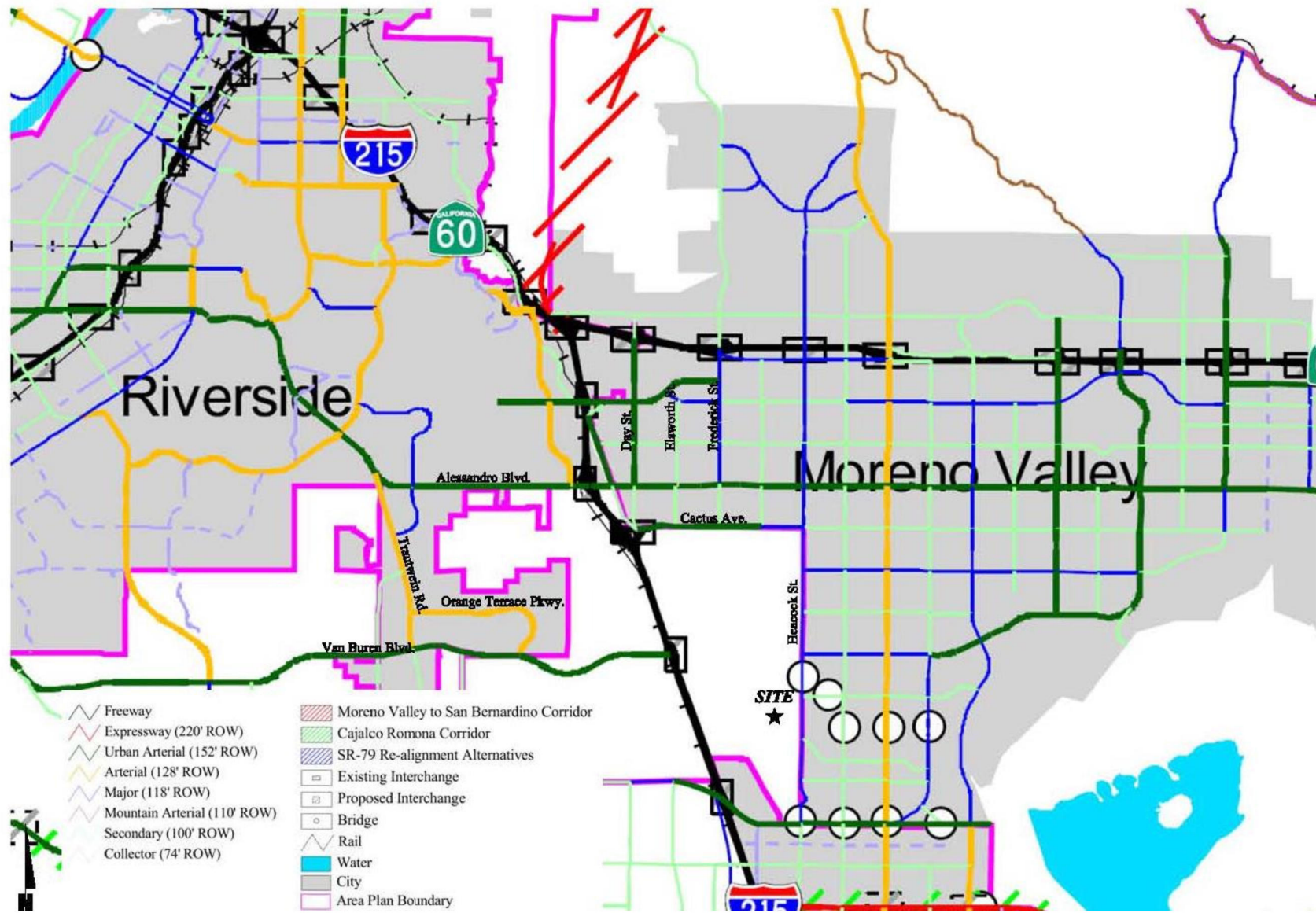


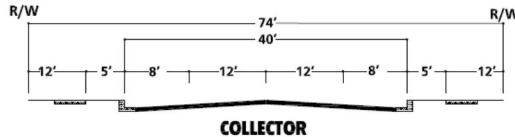
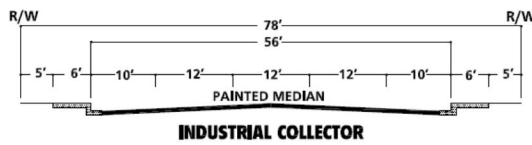
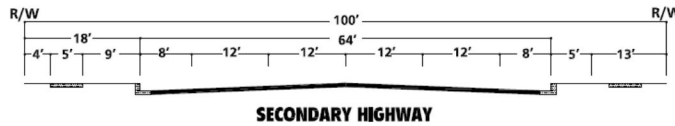
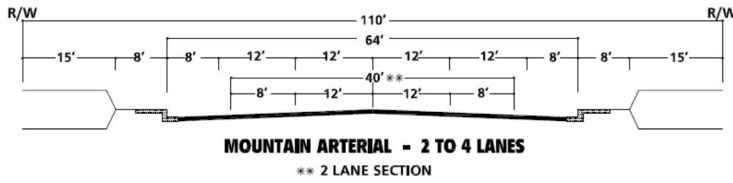
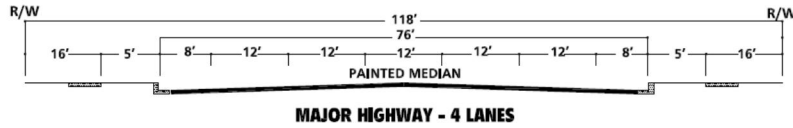
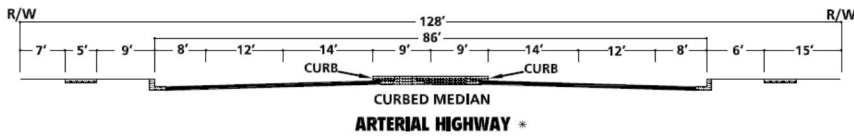
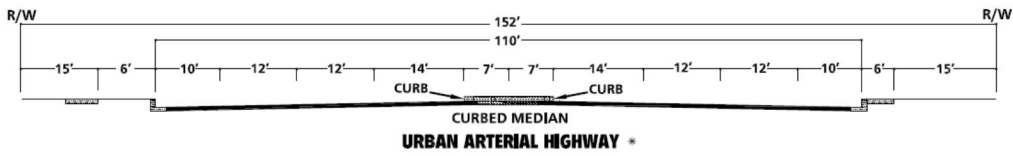
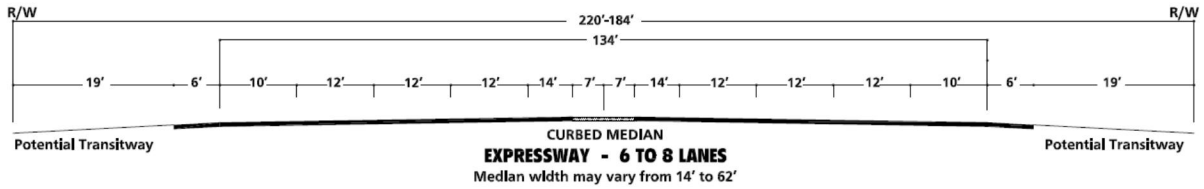


EXHIBIT 3-4: COUNTY OF RIVERSIDE GENERAL PLAN CIRCULATION ELEMENT



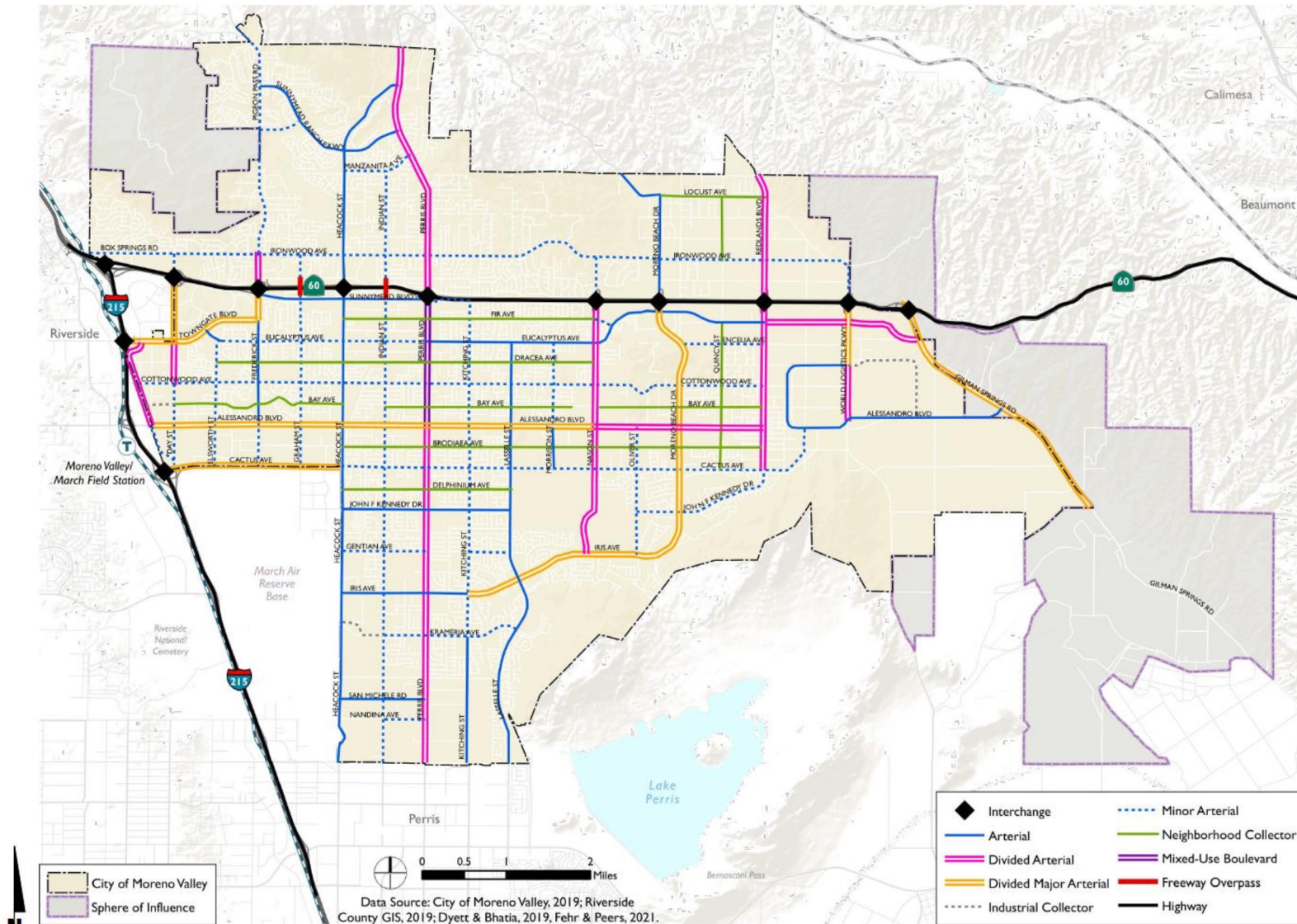


**EXHIBIT 3-5: COUNTY OF RIVERSIDE GENERAL PLAN ROADWAY CROSS-SECTIONS**



\* IMPROVEMENTS MAY BE RECONFIGURED TO ACCOMMODATE EXCLUSIVE TRANSIT LANES OR ALTERNATIVE LANE ARRANGEMENTS ADDITIONAL RIGHT OF WAY MAY BE REQUIRED AT INTERSECTIONS TO ACCOMMODATE ULTIMATE IMPROVEMENTS FOR STATE HIGHWAYS SHALL CONFORM TO CALTRANS DESIGN STANDARDS.

EXHIBIT 3-6: CITY OF MORENO VALLEY GENERAL PLAN CIRCULATION ELEMENT

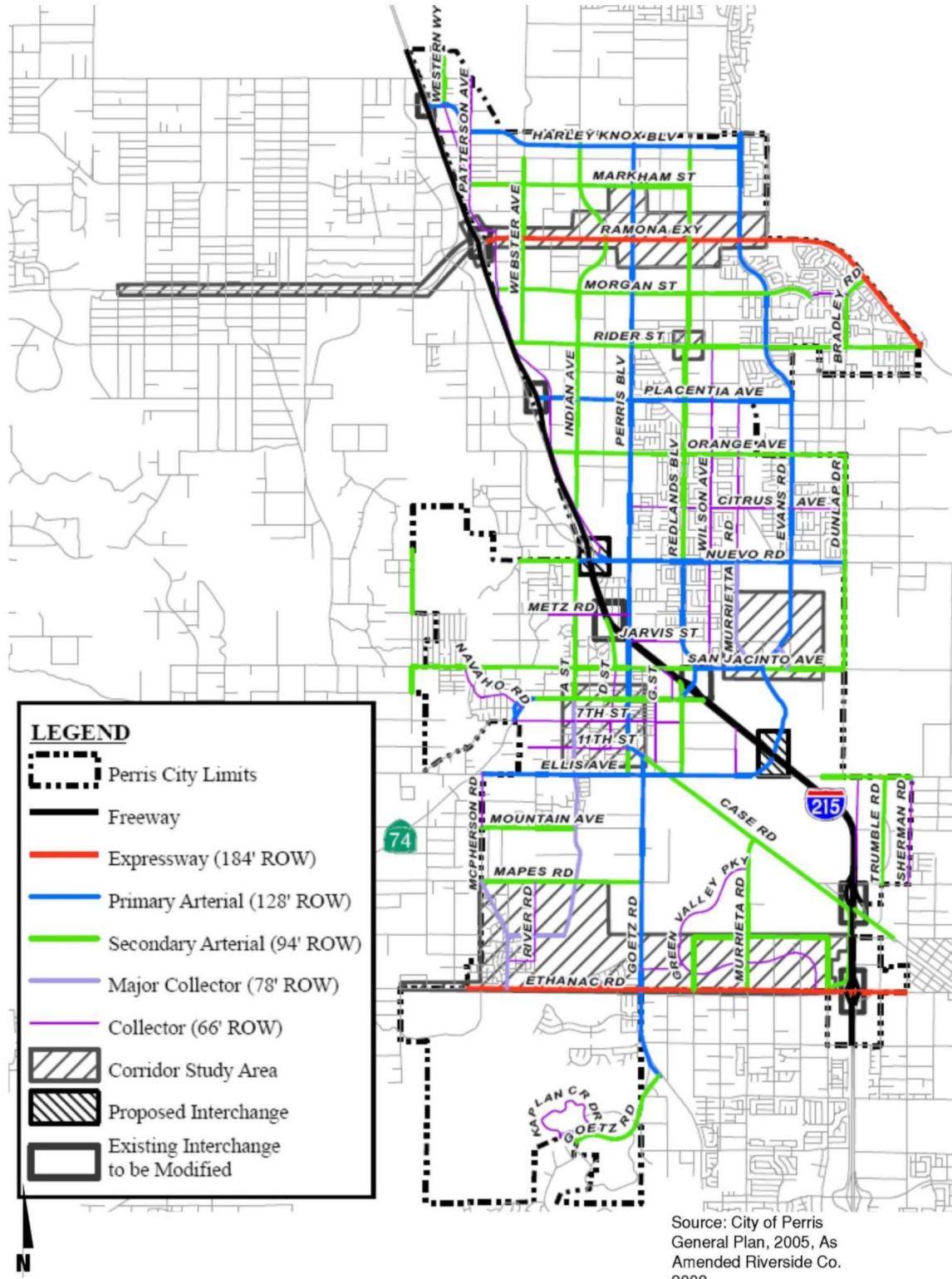


**EXHIBIT 3-7: CITY OF MORENO VALLEY GENERAL PLAN ROADWAY CROSS-SECTIONS**

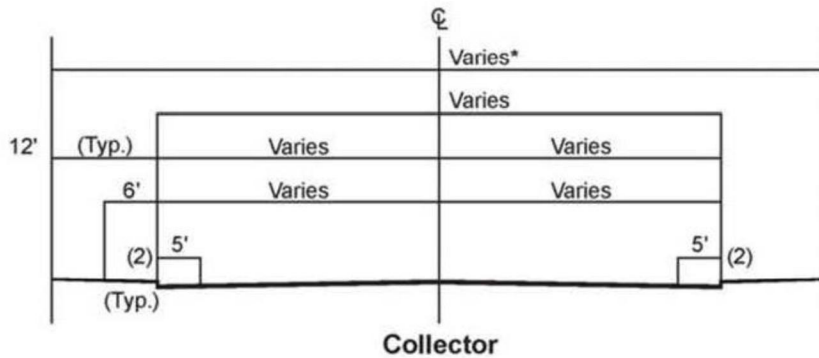
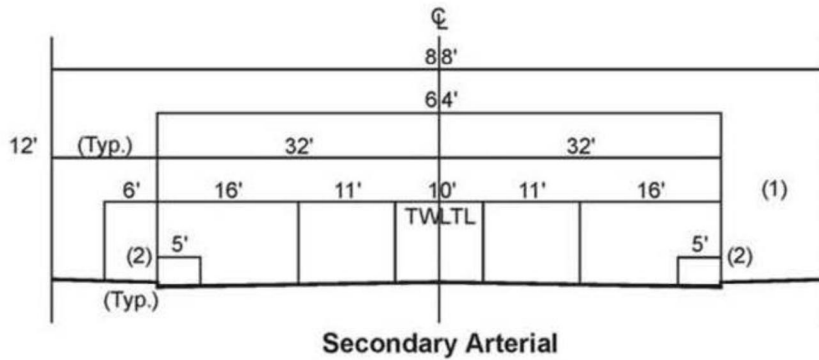
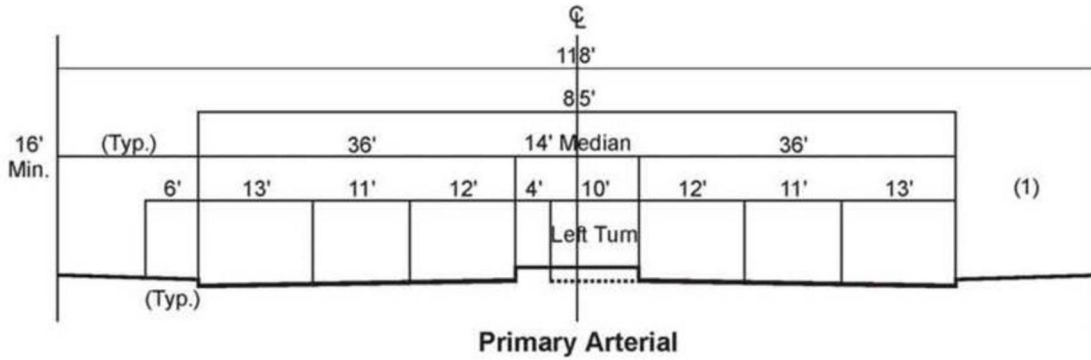
**STREET CLASSIFICATION AND CROSS SECTION  
DESIGN STANDARDS**

STANDARD PLAN NO.	STREET CLASS	ROW/ CURB TO CURB (FT)	TYPICAL SECTION (PARKING, TRAVEL LANES & MEDIAN) *** (FT)	PARKWAY WIDTH (FT)	THRU LANES	LOS C CAPACITY (ADT)	TRAFFIC INDEX ▲▲	MIN BUS BAY WIDTH (FT)	MIN THICKNESS AC OVER CAB (FT)
MVSI-101A-0, MVSI-101B-0	DIVIDED MAJOR ARTERIAL ALT. 142/110	134/110 (RAISED MEDIAN)	8   12   12   14   18   14   12   12   8	12**	6 ▲	45,000	10	10	.50/1.00
MVSI-102A-0, MVSI-102B-0	MODIFIED DIVIDED MAJOR ARTERIAL ALT. 130/102	120/102 (RAISED MEDIAN)	8   12   12   12   14   12   12   12   8	9**	6 ▲	45,000	10	10	.50/1.00
MVSI-103A-0, MVSI-103B-0	4-LANE DIVIDED ARTERIAL ALT. 114/86	110/86 (RAISED MEDIAN)	8   12   14   18   14   12   8	12**	4 ▲	30,000	10	10	.50/1.00
MVSI-103C-0	6-LANE DIVIDED ARTERIAL	110/86 (RAISED MEDIAN)	13   11   12   14   12   11   13	12	6	45,000	10	10	.50/1.00
MVSI-104A-0, MVSI-104B-0	ARTERIAL ALT. 104/76	100/76	8   12   12   12   12   12   8 ***** 6   12   13   14   13   12   6 *****	12**	4 ▲	20,000 30,000	10	10	.50/1.00
MVSI-105A-0, MVSI-105B-0	MINOR ARTERIAL	88/64	8   12   12   12   12   8 6   11   10   10   10   11   6 7   10   10   10   10   7	12**	4	20,000	9	10	.45/75
MVSI-105C-0	PIGEON PASS RD.	98/74	6   13   12   12   12   13   6	12	4 ▲	20,000	9	10	.45/75
MVSI-106A-0	INDUSTRIAL COLLECTOR	78/56	10   12   12   12   10	11	2 ▲	10,000	10	10	.50/1.00
MVSI-106B-0	COLLECTOR	66/44	8   14   14   8	11	2	N/A	7	N/A	.30/50
MVSI-107A-0	LOCAL STREET	56/36	7   11   11   7	10	2	N/A	6	N/A	.30/50
MVSI-107B-0	MODIFIED LOCAL STREET	50/36	7   11   11   7	7	2	N/A	6	N/A	.30/50
NOT TO SCALE	MVSI-104C-0, MVSI-104D-0, MVSI-104E-0	100/72	20   12   12   12   16	12/16	4	30,000	10	10	.50/1.00
		100/68	16   12   12   12   16	16	4	30,000	10	10	.50/1.00
		100/68	16   12   12   12   16	16	4	30,000	10	10	.50/1.00
			6   11   11   12   11   11   6						

EXHIBIT 3-8: CITY OF PERRIS GENERAL PLAN CIRCULATION ELEMENT



**EXHIBIT 3-9: CITY OF PERRIS GENERAL PLAN ROADWAY CROSS-SECTIONS**



**Legend**

- (1) No stopping any time both sides.
- (2) Bike lane where designated.
- \* The width of the collector street can range from 40 feet to 64 feet curb-to-curb.
- TWLTL = Two Way Left Turn Lane

Source: City of Perris  
General Plan 8-2008



**EXHIBIT 3-10: CITY OF MORENO VALLEY BIKE PLAN**

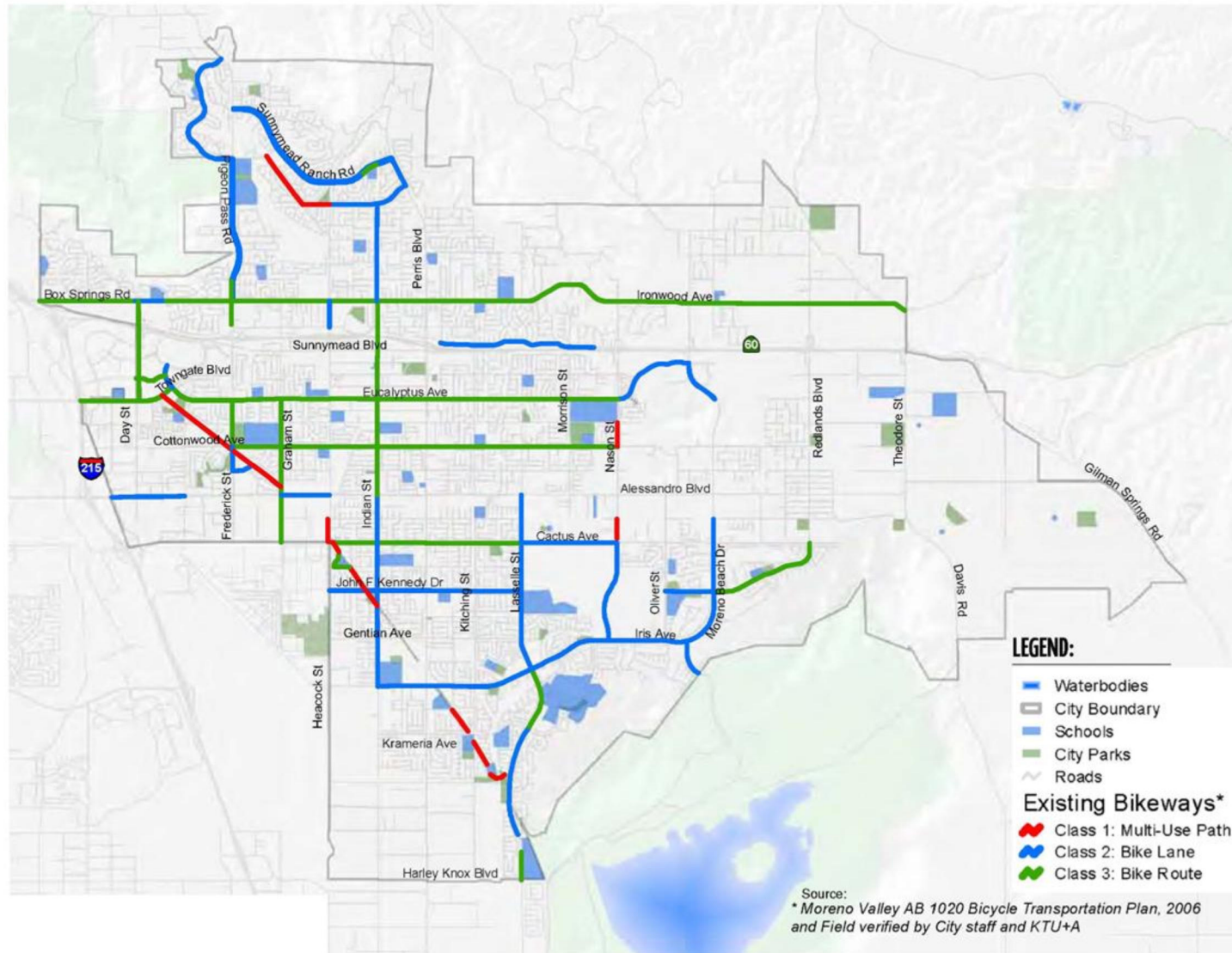
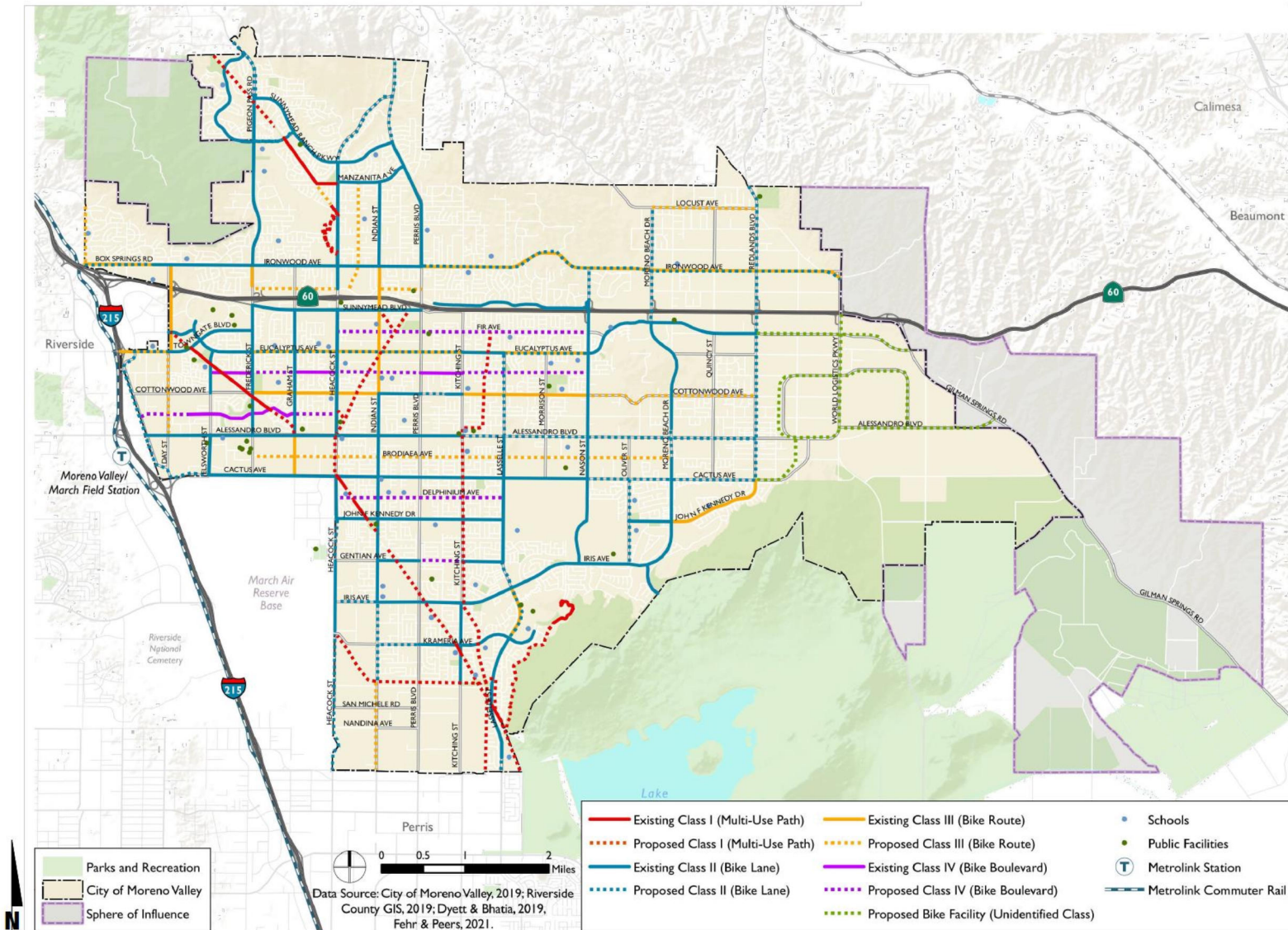
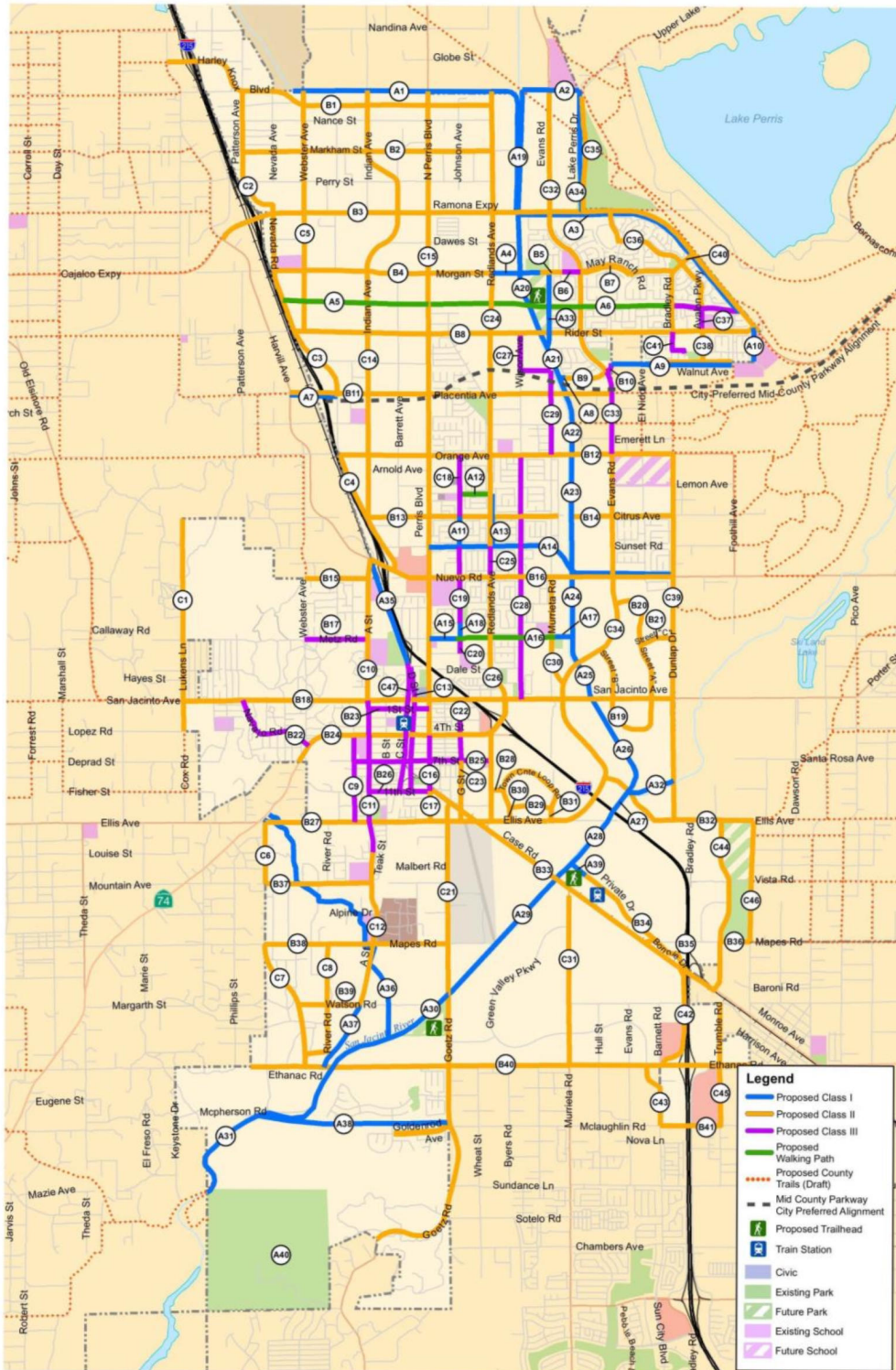


EXHIBIT 3-11: CITY OF MORENO VALLEY MASTER PLAN OF TRAILS





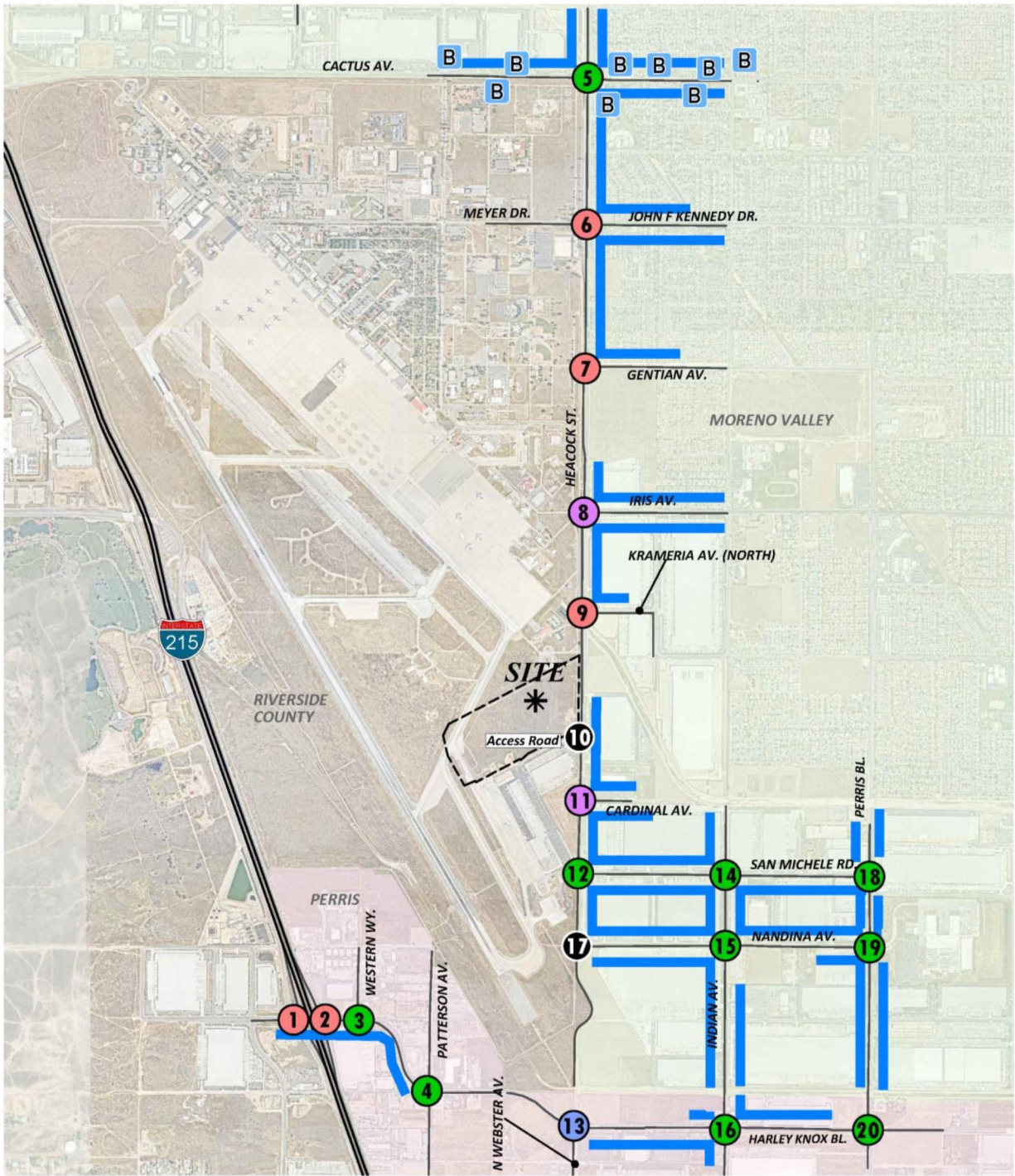
**EXHIBIT 3-12: CITY OF PERRIS PROPOSED BIKEWAYS AND TRAILS IMPROVEMENTS**



Source: City of Perris  
Trails Master Plan



**EXHIBIT 3-13: EXISTING PEDESTRIAN FACILITIES**



**LEGEND:**

- = SIDEWALK
- B = BUS STOP
- 0 = NO CROSSWALK
- 0 = CROSSWALK ON ALL APPROACHES
- 0 = CROSSWALK ON THREE APPROACHES
- 0 = CROSSWALK ON TWO APPROACHES
- 0 = CROSSWALK ON ONE APPROACH



### 3.5 TRUCK ROUTES

The March JPA designated truck route map is shown on Exhibit 3-14. Heacock Street, Meyer Drive, Cactus Avenue, Riverside Drive, Harley Knox Boulevard, San Michele Road, and Indian Avenue are the designated March JPA truck routes within the study area. The City of Moreno Valley designated truck route map is shown on Exhibit 3-15, while the City of Perris truck routes are shown on Exhibit 3-16. Heacock Street, Cactus Avenue, Indian Avenue, San Michele Road, and Harley Knox Boulevard are also designated truck routes within the City of Moreno Valley and City of Perris. The designated truck route maps for have been utilized to route truck traffic for the proposed Project and for future cumulative development projects throughout the study area.

### 3.6 TRANSIT SERVICE

The March JPA is currently served by the Riverside Transit Authority (RTA), a public transit agency serving the unincorporated Riverside County region. There are currently no existing bus routes that serve the roadways within the study area in close proximity to the proposed Project. Existing transit routes in the vicinity of the study area are illustrated on Exhibit 3-17. Transit service is reviewed and updated by RTA periodically to address ridership, budget, and community demand needs. Changes in land use can affect these periodic adjustments which may lead to either enhanced or reduced service where appropriate. As such, it is recommended that the Project Applicant work in conjunction with RTA to potentially accommodate bus service to the site.

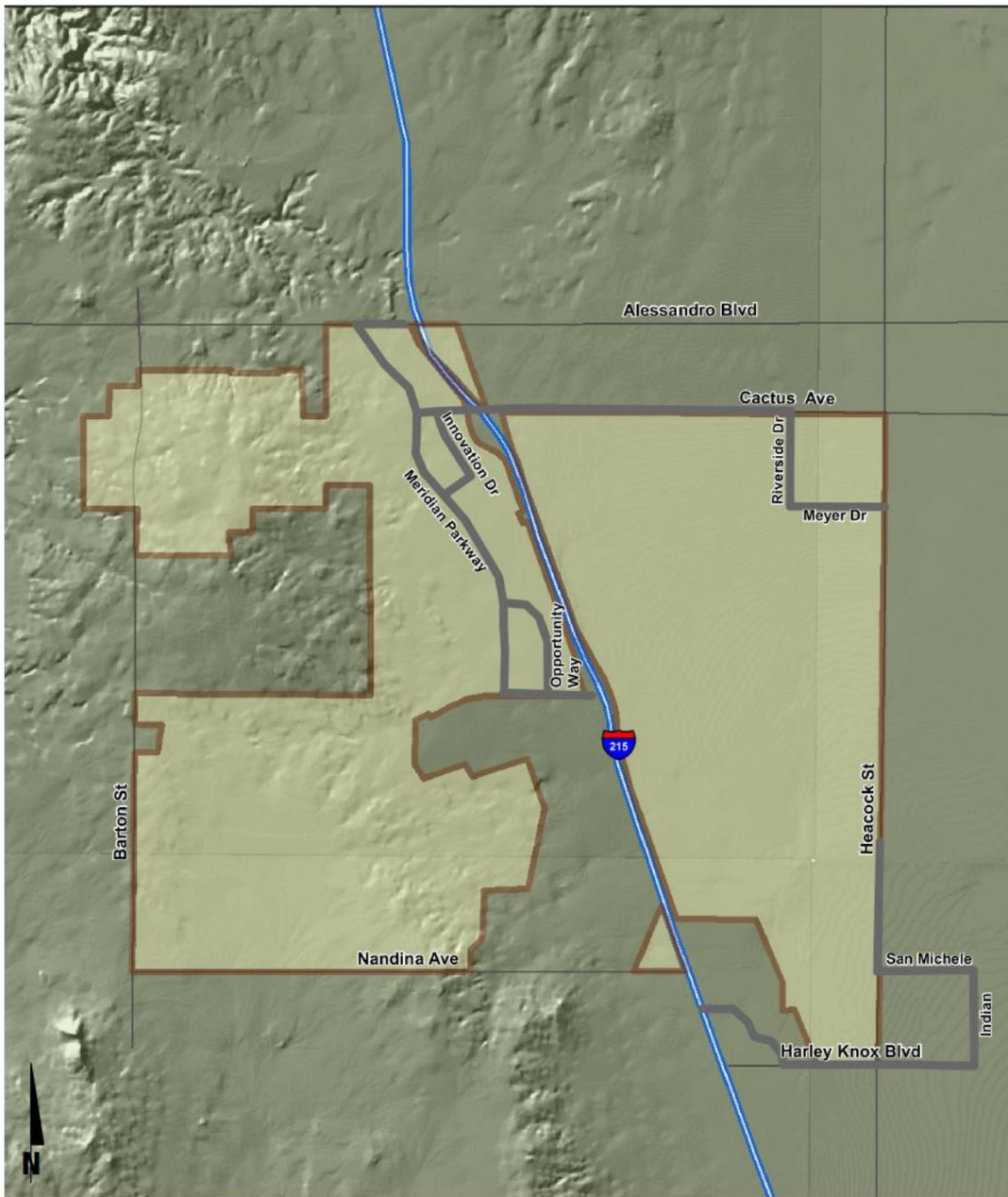
### 3.7 EXISTING (2020) TRAFFIC COUNTS

The intersection LOS analysis is based on the traffic volumes observed during the peak hour conditions using traffic count data collected in 2015, 2018, and 2019. The following peak hours were selected for analysis:

- Weekday AM Peak Hour (peak hour between 7:00 AM and 9:00 AM)
- Weekday PM Peak Hour (peak hour between 4:00 PM and 6:00 PM)

Due to the currently ongoing COVID-19 pandemic, schools and businesses within the study area were closed or operating at less than full capacity at the time this study was prepared. As such, historic (2015, 2018, and 2019) traffic counts were utilized in conjunction with a 2.0% per year growth rate (compounded annually) to reflect 2020 conditions. The 2015, 2018, and 2019 weekday AM and weekday PM peak hour count data is representative of typical weekday peak hour traffic conditions in the study area. There were no observations made in the field that would indicate atypical traffic conditions on the count dates, such as construction activity or detour routes and near-by schools were in session and operating on normal schedules. The raw manual peak hour turning movement traffic count data sheets are included in Appendix 3.1.

**EXHIBIT 3-14: MARCH JPA TRUCK ROUTES**

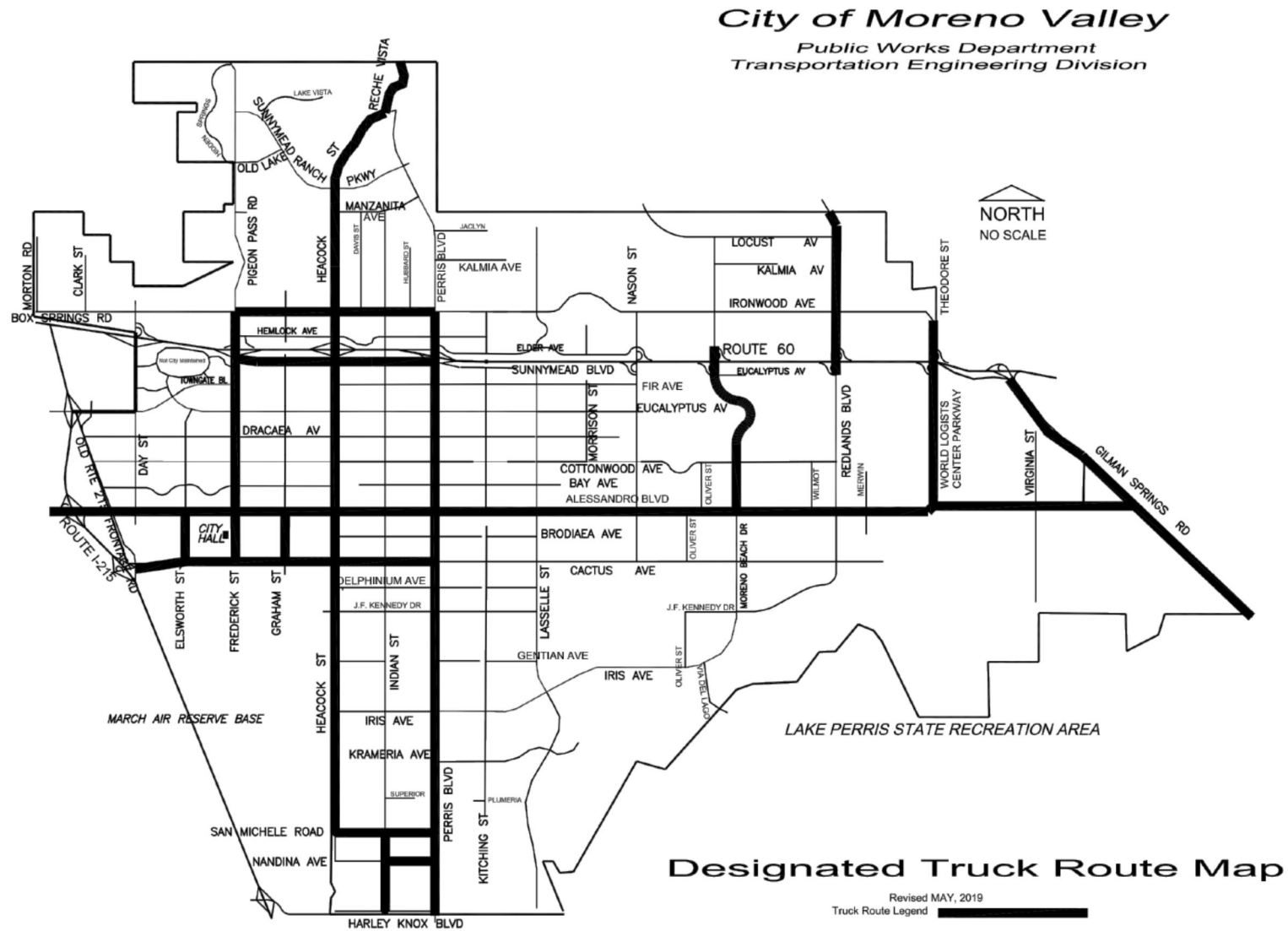


**LEGEND**

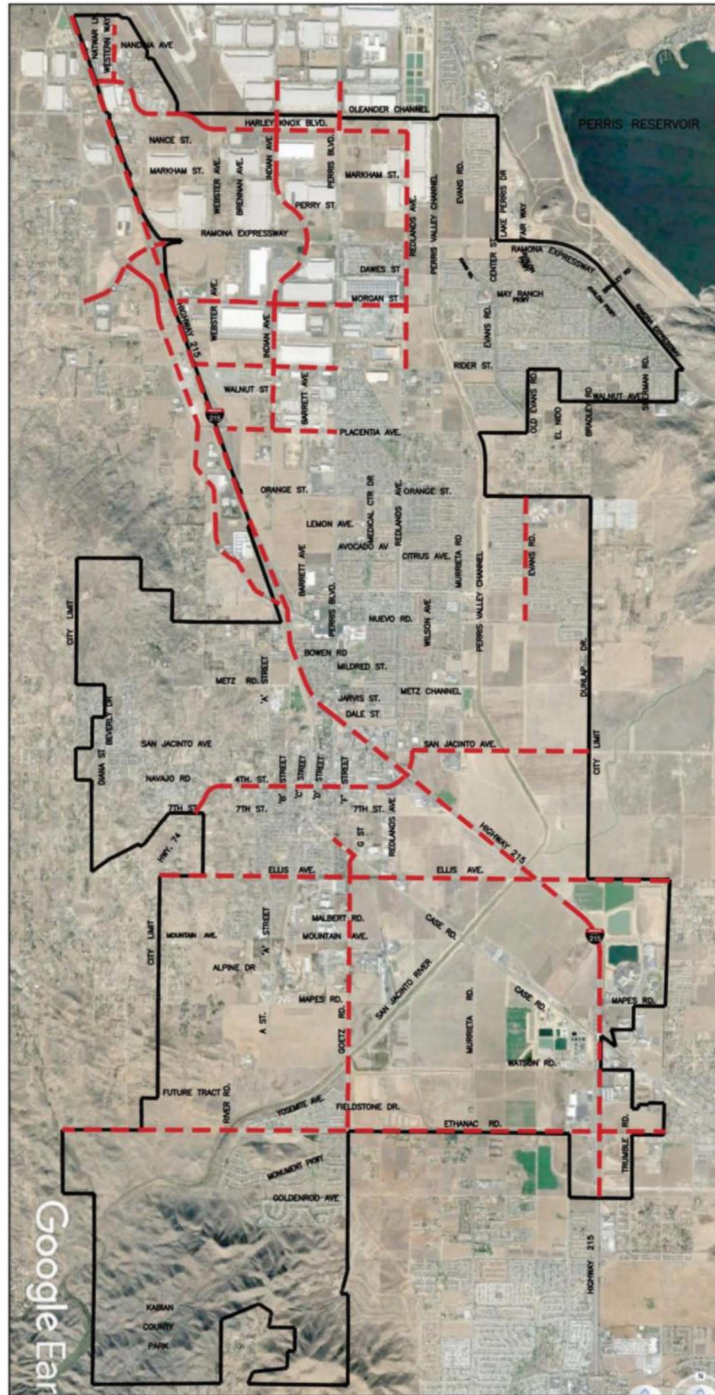
-  Truck Route
-  Major Road
-  Arterial Highway
-  March JPA Planning Area



EXHIBIT 3-15: CITY OF MORENO VALLEY TRUCK ROUTES



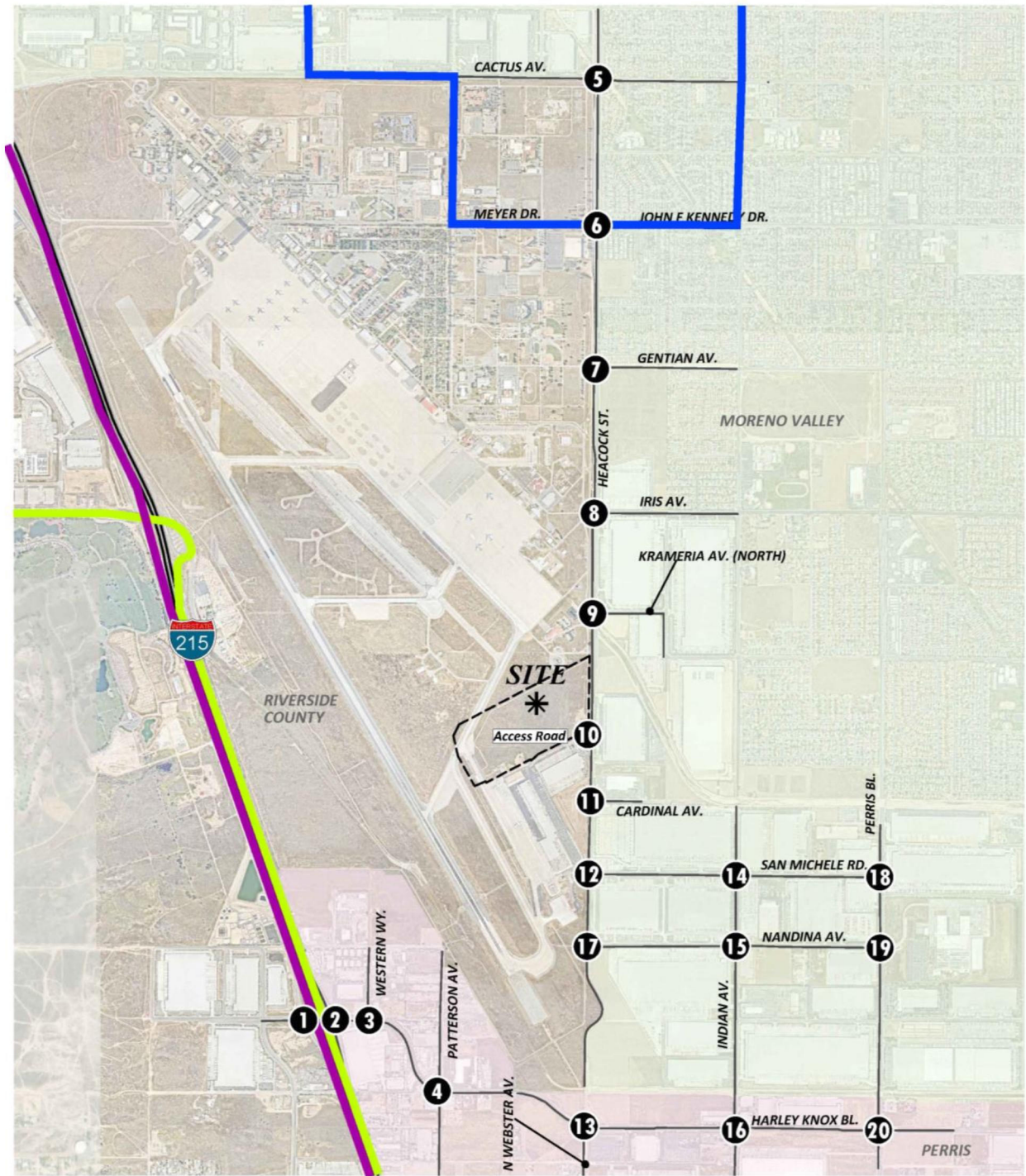
**EXHIBIT 3-16: CITY OF PERRIS TRUCK ROUTES**



**LEGEND:**  
 - - - TRUCK ROUTES  
 \_\_\_\_\_ PERRIS CITY LIMITS

Source: City of Perris Truck Routes, Approved 1-11-2022

**EXHIBIT 3-17: EXISTING TRANSIT ROUTES**



**LEGEND:**

- = RTA ROUTE 11
- = RTA ROUTE 27
- = RTA ROUTE 208





The traffic counts collected in 2015, 2018, and 2019 include the following vehicle classifications: Passenger Cars, 2-Axle Trucks, 3-Axle Trucks, and 4 or More Axle Trucks. To represent the effects large trucks, buses and recreational vehicles have on traffic flow, truck traffic has been accounted for in the analysis as a percentage of total traffic at the study area intersections. Traffic counts have been conducted at the existing intersection of Heacock Street & Access Road in order to determine the traffic utilized by the existing driveway. However, through volumes have been determine based on the traffic volumes at the adjacent intersections.

Existing weekday ADT volumes are shown on Exhibit 3-18. Where actual 24-hour tube count data was not available, Existing ADT volumes were based upon factored intersection peak hour counts collected by Urban Crossroads, Inc. using the following formula for each intersection leg:

$$\text{Weekday PM Peak Hour (Approach Volume + Exit Volume)} \times 12.37 = \text{Leg Volume}$$

A comparison of the PM peak hour and daily traffic volumes of various roadway segments within the study area indicated that the peak-to-daily relationship is approximately 8.08 percent. As such, the above equation utilizing a factor of 12.37 estimates the ADT volumes on the study area roadway segments assuming a peak-to-daily relationship of approximately 8.08 percent (i.e.,  $1/0.0808 = 12.37$ ) and was assumed to sufficiently estimate average daily traffic (ADT) volumes for planning-level analyses. Existing weekday AM and weekday PM peak hour intersection volumes are shown on Exhibit 3-18.

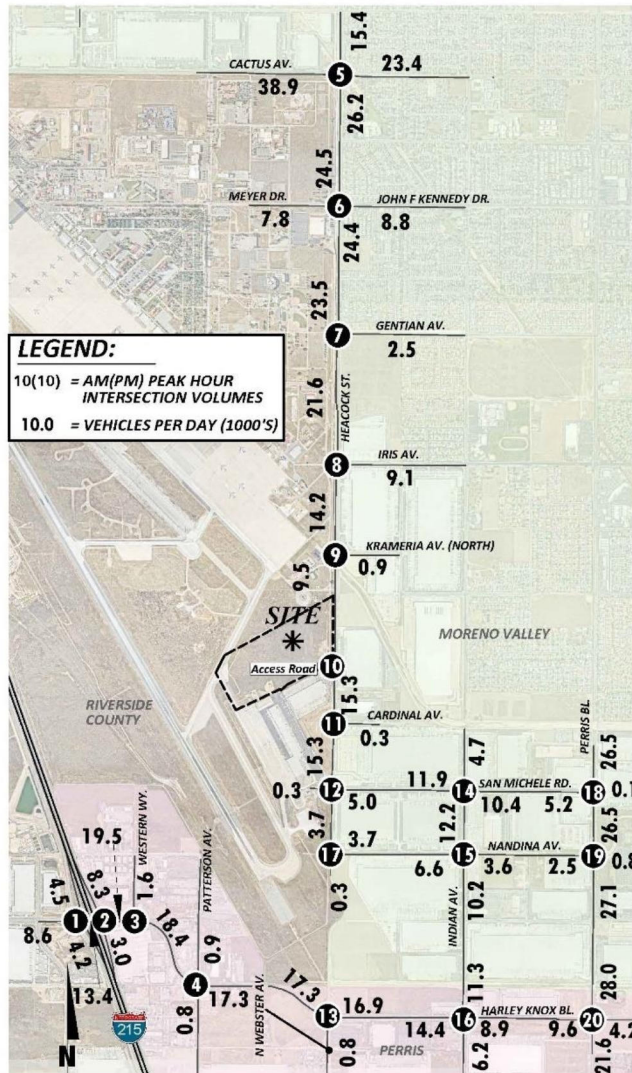
### 3.8 INTERSECTION OPERATIONS ANALYSIS

Existing peak hour traffic operations have been evaluated for the study area intersections based on the analysis methodologies presented in Section 2.2 *Intersection Capacity Analysis* of this report. The intersection operations analysis results are summarized in Table 3-1, which indicates that the study area intersections are currently operating at an acceptable LOS during the peak hours, with the exception of the following intersection:

- I-215 Northbound Ramps & Harley Knox Bl. (#2) – LOS E AM peak hour only

The intersection operations analysis worksheets are included in Appendix 3.2 of this TA.

EXHIBIT 3-18: EXISTING (2020) TRAFFIC VOLUMES



<p><b>1</b> I-215 SB Ramps &amp; Harley Knox Bl.</p> <p>142(124) 1(0) 300(239) 189(187) 105(306)</p>	<p><b>2</b> I-215 NB Ramps &amp; Harley Knox Bl.</p> <p>811(463) 289(475)</p>	<p><b>3</b> Western Wy. &amp; Harley Knox Bl.</p> <p>34(91) 0(0) 5(9) 33(7) 1087(867) 0(0)</p>	<p><b>4</b> Patterson Av. &amp; Harley Knox Bl.</p> <p>17(25) 3(3) 11(19) 14(7) 1051(814) 9(2)</p>	<p><b>5</b> Heacock St. &amp; Cactus Av.</p> <p>75(37) 197(446) 99(117) 98(77) 1131(568) 13(9)</p>
<p><b>6</b> Heacock St. &amp; Meyer Dr./ John F Kennedy Dr.</p> <p>17(15) 470(907) 89(261) 170(133) 193(67) 12(24)</p>	<p><b>7</b> Heacock St. &amp; Gentian Av.</p> <p>496(1047) 81(96) 13(88) 12(6)</p>	<p><b>8</b> Heacock St. &amp; Iris Av.</p> <p>282(647) 234(416) 367(248) 53(29)</p>	<p><b>9</b> Heacock St. &amp; Krameria Av. (North)</p> <p>237(401) 18(33) 52(22) 7(3)</p>	<p><b>10</b> Heacock St. &amp; Access Road</p> <p>Future Intersection</p>
<p><b>11</b> Heacock St. &amp; Cardinal Av.</p> <p>424(725) 4(6) 3(5) 1(4)</p>	<p><b>12</b> Heacock St. &amp; San Michele Rd.</p> <p>7(2) 84(214) 76(166) 136(214) 4(0) 3(12)</p>	<p><b>13</b> Webster Av. &amp; Harley Knox Bl.</p> <p>1068(798) 9(6)</p>	<p><b>14</b> Indian Av. &amp; San Michele Rd.</p> <p>2(22) 2(134) 3(112) 6(50) 178(252) 51(158)</p>	<p><b>15</b> Indian Av. &amp; Nandina Av.</p> <p>4(26) 42(139) 6(17) 17(48) 32(27) 10(84)</p>
<p><b>16</b> Indian Av. &amp; Harley Knox Bl.</p> <p>91(262) 60(224) 10(45) 43(10) 629(289) 12(11)</p>	<p><b>17</b> Heacock St. &amp; Nandina Av.</p> <p>1(11) 88(207) 39(79) 0(0)</p>	<p><b>18</b> Perris Bl. &amp; San Michele Rd.</p> <p>71(81) 843(1002) 1(4) 0(0) 0(0) 2(1)</p>	<p><b>19</b> Indian Av. &amp; Nandina Av.</p> <p>8(40) 831(1072) 14(14) 9(10) 3(5) 5(22)</p>	<p><b>20</b> Perris Bl. &amp; Harley Knox Bl.</p> <p>212(249) 611(906) 39(93) 148(58) 284(53) 6(3)</p>
<p>202(196) 262(342) 32(31) 98(41) 239(177) 17(21)</p>	<p>0(2) 2(9)</p>	<p>32(130) 0(0) 19(148) 103(62) 1071(928) 1(0)</p>	<p>7(23) 2(2) 12(91) 37(42) 1147(950) 18(13)</p>	<p>183(237) 33(120) 14(77) 196(36) 974(719) 9(8)</p>



**TABLE 3-1: INTERSECTION ANALYSIS FOR EXISTING (2020) CONDITIONS**

#	Intersection	Traffic Control <sup>2</sup>	Delay <sup>1</sup> (secs.)		Level of Service	
			AM	PM	AM	PM
1	I-215 SB Ramps & Harley Knox Bl.	TS	10.4	9.1	B	A
2	I-215 NB Ramps & Harley Knox Bl.	TS	<b>60.5</b>	19.6	E	B
3	Western Wy. & Harley Knox Bl.	TS	6.7	7.9	A	A
4	Patterson Av. & Harley Knox Bl.	TS	9.6	9.3	A	A
5	Heacock St. & Cactus Av.	TS	32.6	34.4	C	C
6	Heacock St. & Meyer Dr./John F. Kennedy Dr.	TS	24.6	32.4	C	C
7	Heacock St. & Gentian Av.	TS	6.8	9.1	A	A
8	Heacock St. & Iris Av.	TS	16.3	14.4	B	B
9	Heacock St. & Krameria Av. (North)	TS	12.0	10.4	B	B
10	Heacock St. & Access Road		Future Intersection			
11	Heacock St. & Cardinal Av.	CSS	17.3	17.6	C	C
12	Heacock St. & San Michele Rd.	TS	19.2	17.8	B	B
13	Webster Av. & Harley Knox Bl.	RA	7.8	7.2	A	A
14	Indian Av. & San Michele Rd.	TS	21.4	46.0	C	D
15	Indian Av. & Nandina Av.	TS	15.6	20.9	B	C
16	Indian Av. & Harley Knox Bl.	TS	20.7	21.4	C	C
17	Heacock St. & Nandina Av.	CSS	8.5	8.7	A	A
18	Perris Bl. & San Michele Rd.	TS	10.8	14.0	B	B
19	Perris Bl. & Nandina Av.	TS	10.4	13.6	B	B
20	Perris Bl. & Harley Knox Bl.	TS	25.5	34.8	C	C

**BOLD** = Level of Service (LOS) does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

<sup>1</sup> Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

<sup>2</sup> CSS = Cross-street Stop; TS = Traffic Signal; RA = Roundabout

### 3.9 EXISTING (2020) CONDITIONS ROADWAY SEGMENT CAPACITY ANALYSIS

The roadway segment capacities utilized for the purposes of this analysis are approximate figures only; and are used at the General Plan level to assist in determining the roadway functional classification (number of through lanes) needed to meet traffic demand. Table 3-2 provides a summary of the Existing (2020) conditions roadway segment capacity analysis based on the applicable roadway segment capacities. As shown in Table 3-2, the study area roadway segments are currently operating at an acceptable LOS based on the applicable planning level daily roadway capacities.

**TABLE 3-2: ROADWAY SEGMENT CAPACITY ANALYSIS FOR EXISTING (2020) CONDITIONS**

#	Roadway	Segment Limits	Roadway Section	LOS Capacity <sup>1</sup>	Existing 2020	V/C <sup>2</sup>	LOS <sup>3</sup>
1		Cactus Av. to Iris Av.	4D	37,500	26,178	0.70	B
2	Heacock St.	Iris Av. to San Michele Rd.	4D	37,500	15,260	0.41	A
3		San Michele Rd. to Harley Knox Bl.	3D	28,125	3,866	0.14	A
4	Cactus Av.	West of Heacock St.	6D	56,300	38,888	0.69	B
5	Indian Av.	San Michele Rd. to Harley Knox Bl.	4D	37,500	12,214	0.33	A
6	Perris Bl.	San Michele Rd. to Harley Knox Bl.	6D	56,300	27,991	0.50	A
7	San Michele Rd.	Heacock St. to Perris Bl.	4D	37,500	11,859	0.32	A
8	Nandina Av.	Heacock St. to Perris Bl.	2D	12,500	6,614	0.53	A

<sup>1</sup> These maximum roadway capacities are from the City of Moreno Valley Transportation Impact Analysis Preparation Guide for VMT and LOS Assessment, June 2020.

<sup>2</sup> V/C = Volume to Capacity Ratio

<sup>3</sup> LOS = Level of Service

### 3.10 TRAFFIC SIGNAL WARRANTS ANALYSIS

There are no unsignalized study area intersections that are currently operating at an unacceptable LOS during the peak hours. Per the traffic study scoping agreement, traffic signal warrant analysis has not been evaluated for Existing (2020) traffic conditions since there are no deficient unsignalized intersections.

### 3.11 OFF-RAMP QUEUING ANALYSIS

A queuing analysis was performed for the off-ramps at the I-215 Freeway at Harley Knox Boulevard interchange to assess vehicle queues for the off ramps that may potentially result in deficient peak hour operations at the ramp-to-arterial intersections and may potentially “spill back” onto the I-215 Freeway mainline. Queuing analysis findings are presented in Table 3-3. It is important to note that off-ramp lengths are consistent with the measured distance between the intersection and the freeway mainline. As shown in Table 3-3, there are no movements that are currently experiencing queuing issues during the weekday AM or weekday PM peak 95<sup>th</sup> percentile traffic flows based on the analysis. However, field observations of the I-215 Freeway interchange at Harley Knox Boulevard indicate that there are queues during the peak hours, including at the I-215 Southbound Ramps on Harley Knox Boulevard. Worksheets for Existing (2020) traffic conditions off-ramp queuing analysis are provided in Appendix 3.3.

**TABLE 3-3: PEAK HOUR FREEWAY OFF-RAMP QUEUING SUMMARY FOR EXISTING (2020) CONDITIONS**

Intersection	Movement	Available Stacking Distance (Feet)	95th Percentile Queue (Feet)		Acceptable? <sup>1</sup>	
			AM Peak Hour	PM Peak Hour	AM	PM
I-215 Southbound Ramps & Harley Knox Bl.	SBL/T	1,330	190 <sup>2</sup>	153 <sup>2</sup>	Yes	Yes
	SBR	270	32	33	Yes	Yes
I-215 Northbound Ramps & Harley Knox Bl.	NBL/T	1,120	13	23	Yes	Yes
	NBR	265	0	53	Yes	Yes

<sup>1</sup> Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided. An additional 15 feet of stacking which is assumed to be provided in the transition for turn pockets is reflected in the stacking distance shown on this table, where

<sup>2</sup> 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

<sup>3</sup> Although 95th percentile queue is anticipated to exceed the available storage for the turn lane, the adjacent through lane has sufficient storage to accommodate any spillover without spilling back and affecting the I-215 Freeway mainline.

## 4 PROJECTED FUTURE TRAFFIC

This section presents the traffic volumes estimated to be generated by the Project's trip assignment onto the study area roadway network. Access to the proposed Project will be provided via a signalized intersection at the Access Road on Heacock Street and a driveway off of the Access Road. The proposed Project will be developed in a single phase with an anticipated Opening Year of 2026. Regional access to the Project site will be available from the I-215 Freeway via the Cactus Avenue and Harley Knox Boulevard interchanges.

### 4.1 TRIP GENERATION

Trip generation represents the amount of traffic that is attracted and produced by a development and is based upon the specific land uses planned for a given project.

#### 4.1.1 DEVELOPMENT OF TRIP GENERATION RATES – EMPIRICAL DATA

The ITE Trip Generation Manual (10<sup>th</sup> Edition, 2017) does not currently have any trip generation rates for an air freight cargo center, as such, trip generation estimates for the proposed Project have been developed using data collected at a similar facility with operations similar to those proposed. The existing facility surveyed does not fly between the hours of 10 PM and 7 AM with 6 flights per day (where one flight equals 1 inbound and 1 outbound), but ground operations function 24-hours a day. The maximum number of aircraft that can be parked and unloaded at any given time is 5. Cargo arrives on the planes and is sorted in the cargo building to be distributed to off-site distribution centers. Table 4-1 summarizes the count data collected at the existing facility (the count data is attached to this scoping agreement). Traffic counts were conducted at the existing facility on 3 consecutive days and counts were conducted to capture the trips associated with the air freight portion separately from the existing high-cube warehouse use that supports the air freight cargo use. Although the traffic counts for the existing facility were conducted during the ongoing COVID-19 pandemic, there is the potential that the trip generation would likely be overstated due to the increase in online shopping in comparison to pre-COVID conditions; however, no adjustments have been made to the empirical data in an effort to determine a conservative trip generation. The average data for all 3 days has been calculated in Table 4-1.

Table 4-2 shows the trip generation rates developed for the existing facility which have been calculated based on aircraft parking positions for passenger cars and trucks using the data collected at the site shown in Table 4-1 (see bottom of Table 4-1, used the average of the 3 days). The trip generation rates were calculated by dividing the average trips (average of 3 days) by the maximum number of aircraft parking positions (which is 5 parking positions).

TABLE 4-1: EXISTING EMPIRICAL DATA

Land Use	Building 1 <sup>2</sup>						Daily
	AM Peak Hour			PM Peak Hour			
	In	Out	Total	In	Out	Total	
Day 1: May 12, 2020							
Passenger Cars:	66	11	77	2	36	38	676
Truck Trips:							
2-axle:	1	0	1	1	2	3	26
3-axle:	1	3	4	4	2	6	63
4+-axle:	3	5	8	8	9	17	115
- Truck Trips	5	8	13	13	13	26	204
TOTAL TRIPS (Actual Vehicles) <sup>1</sup>	71	19	90	15	49	64	880
Day 2: May 13, 2020							
Passenger Cars:	80	45	125	2	29	31	740
Truck Trips:							
2-axle:	1	0	1	2	2	4	21
3-axle:	2	4	6	2	1	3	56
4+-axle:	5	2	7	5	11	16	102
- Truck Trips	8	6	14	9	14	23	179
TOTAL TRIPS (Actual Vehicles) <sup>1</sup>	88	51	139	11	43	54	919
Day 3: May 14, 2020							
Passenger Cars:	77	65	142	3	57	60	724
Truck Trips:							
2-axle:	0	0	0	2	1	3	12
3-axle:	2	3	5	10	2	12	82
4+-axle:	4	1	5	5	16	21	114
- Truck Trips	6	4	10	17	19	36	208
TOTAL TRIPS (Actual Vehicles) <sup>1</sup>	83	69	152	20	76	96	932
<b>AVERAGE OF 3 DAYS</b>							
Passenger Cars:	<b>74</b>	<b>40</b>	<b>115</b>	<b>2</b>	<b>41</b>	<b>43</b>	<b>713</b>
Truck Trips:							
2-axle:	<b>1</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>20</b>
3-axle:	<b>2</b>	<b>3</b>	<b>5</b>	<b>5</b>	<b>2</b>	<b>7</b>	<b>67</b>
4+-axle:	<b>4</b>	<b>3</b>	<b>7</b>	<b>6</b>	<b>12</b>	<b>18</b>	<b>110</b>
- Truck Trips	<b>6</b>	<b>6</b>	<b>12</b>	<b>13</b>	<b>15</b>	<b>28</b>	<b>197</b>
TOTAL TRIPS (Actual Vehicles) <sup>1</sup>	<b>81</b>	<b>46</b>	<b>127</b>	<b>15</b>	<b>56</b>	<b>71</b>	<b>910</b>

\* Note: data collected on May 12 - 14, 2020.

<sup>1</sup> TOTAL TRIPS = Passenger Cars + Truck Trips.

<sup>2</sup> Building 1 calculated by totaling counts from Driveway 1 and Driveway 3 (driveway serving PrimeAir only).

TABLE 4-2: CALCULATED TRIP GENERATION RATES

Land Use	Units <sup>1</sup>	AM Peak Hour			PM Peak Hour			Daily
		In	Out	Total	In	Out	Total	
Air Freight Cargo Center <sup>2</sup>	APP							
Passenger Cars		14.867	8.067	22.933	0.467	8.133	8.600	142.667
2-Axle Trucks		0.133	0.000	0.133	0.333	0.333	0.667	3.933
3-Axle Trucks		0.333	0.667	1.000	1.067	0.333	1.400	13.400
4+-Axle Trucks		0.800	0.533	1.333	1.200	2.400	3.600	22.067

<sup>1</sup> APP = Aircraft Parking Positions

<sup>2</sup> Average trip generation rates developed from empirical data summarized on Table 4-1.

Calculated by dividing average trips (see bottom of Table 4-1) by maximum aircraft parking positions (5 APP).

#### 4.1.2 PROPOSED PROJECT TRIP GENERATION

Based on the calculated trip generation rates for aircraft parking positions shown in Table 4-2, the Project's trip generation is summarized in Table 4-3. The proposed Project trip generation is based on the anticipated operations for the site. Specifically, it has been assumed that the building can accommodate 7 aircraft parking positions with approximately 17 flights per day occurring during the typical Non-Peak season (6 days a week from January to late November). The Project is anticipated to generate a total of 1,276 trip-ends per day with 178 AM peak hour trips and 98 PM peak hour trips on a typical Non-Peak season day. The Peak season, which is anticipated to only occur 4 weeks in the year (late November through late December), will include an additional 6 flights per day for a total of 23 flights per day (or an increase in 35.3% from the Non-Peak, approximately 256 flights over a 4-week period). The maximum annual flight operations would not exceed the currently available civilian air cargo operations capacity under the Joint Use Agreement. Flight operations would occur between the hours of 7 AM and 11 PM (approximately 5% of the proposed Project flight operations would occur between 10 PM and 11 PM). The Project is anticipated to generate a total of 1,880 trip-ends per day with 262 AM peak hour trips and 144 PM peak hour trips on a Peak season day. Both the Non-Peak and Peak seasons have been evaluated for the purposes of the LOS-based traffic study (however, the study area is based on the trip generation for the Peak season).

**TABLE 4-3: PROJECT TRIP GENERATION SUMMARY**

Project	Quantity Units <sup>1</sup>	AM Peak Hour			PM Peak Hour			Daily
		In	Out	Total	In	Out	Total	
<b>Typical Day (Non-Peak Season, 48 Weeks)</b>								
Gateway Aviation								
Passenger Cars:	7 APP	104	56	160	3	57	60	1,000
2-axle:		1	0	1	2	2	4	28
3-axle:		2	5	7	7	2	9	94
4+-axle:		6	4	10	8	17	25	154
Total Trucks:		9	9	18	17	21	38	276
<b>TOTAL TRIPS (Actual Vehicles)<sup>2</sup></b>		<b>113</b>	<b>65</b>	<b>178</b>	<b>20</b>	<b>78</b>	<b>98</b>	<b>1,276</b>
<b>Peak Season (4-Weeks)</b>								
Gateway Aviation								
Passenger Cars: <sup>3</sup>	7 APP	153	82	235	4	84	88	1,472
2-axle:		1	0	1	3	3	6	42
3-axle:		3	7	10	10	3	13	138
4+-axle:		9	6	15	12	25	37	228
Total Trucks:		13	13	26	25	31	56	408
<b>TOTAL TRIPS (Actual Vehicles)<sup>2</sup></b>		<b>166</b>	<b>95</b>	<b>262</b>	<b>29</b>	<b>115</b>	<b>144</b>	<b>1,880</b>

<sup>1</sup> APP = Aircraft Parking Positions

<sup>2</sup> TOTAL TRIPS = Passenger Cars + Truck Trips.

<sup>3</sup> Non-peak trip generation has been increased by the increase in flights from 17 per day to 23 flights per day during the peak season.

## 4.2 PROJECT TRIP DISTRIBUTION

The Project trip distribution and assignment process represents the directional orientation of traffic to and from the Project site. The trip distribution pattern of passenger cars is heavily influenced by the geographical location of the site, the location of surrounding land uses, and the proximity to the regional freeway system. The trip distribution pattern for truck traffic is also influenced by the local truck routes approved by the March JPA, City of Moreno Valley, and City of Perris. At the request of the March JPA, passenger car and truck trip distributions are consistent with other March JPA projects within the immediate vicinity.

Given these differences between passenger cars and trucks, separate trip distributions were generated for both passenger cars and truck trips. Exhibit 4-1 illustrates the truck trip distribution patterns. Exhibits 4-2 illustrates the trip distribution patterns for passenger cars for E+P, Opening Year Cumulative, and Horizon Year Without Heacock Street Extension conditions. Exhibit 4-3 will be utilized for passenger cars only under Horizon Year traffic conditions with the future Heacock Street Extension only. Each of these distribution patterns were reviewed by the March JPA and City of Moreno Valley as part of the TA scoping process (see Appendix 1.1).

## 4.3 MODAL SPLIT

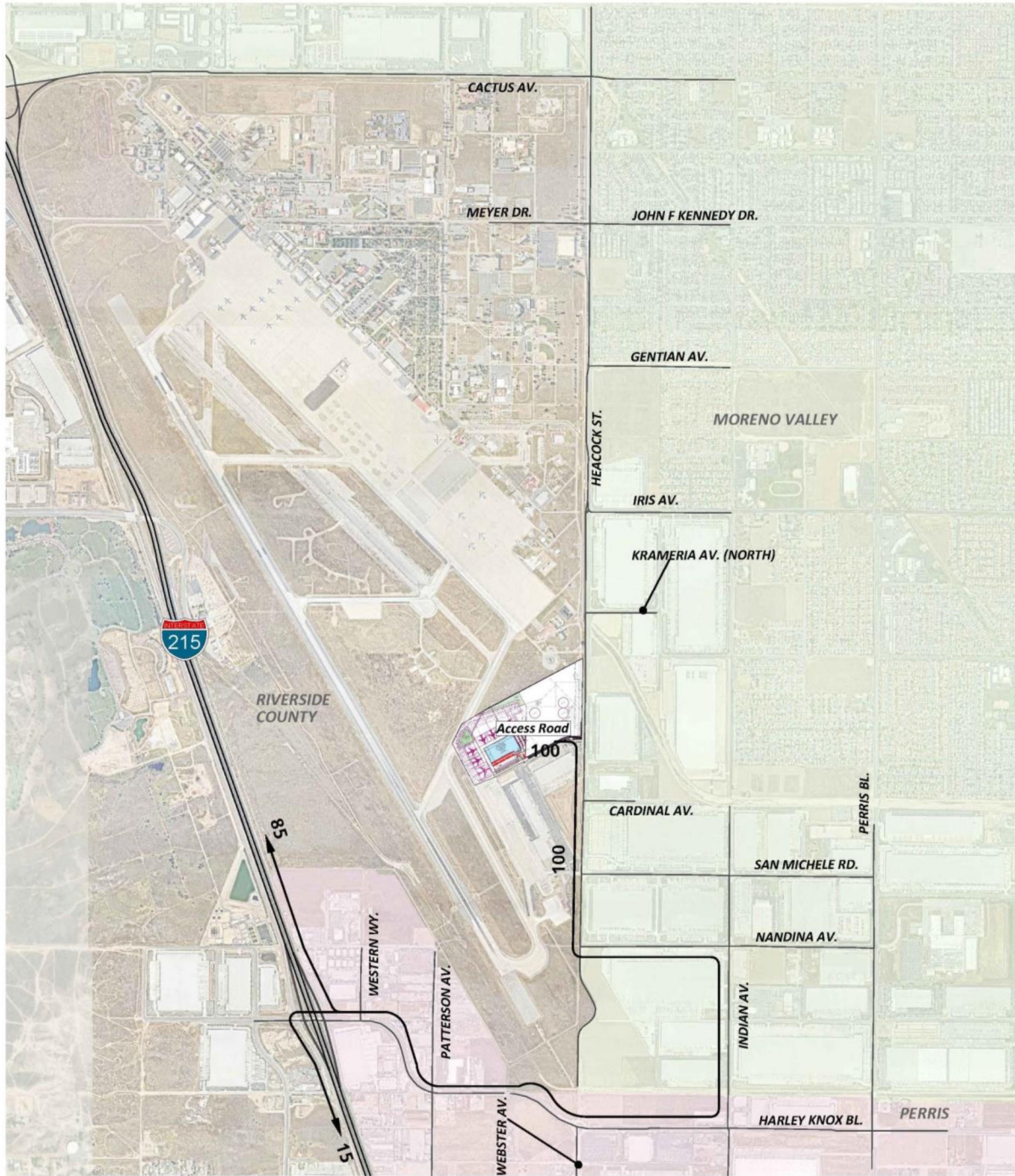
The potential for Project trips to be reduced by the use of public transit, walking or bicycling have not been included as part of the Project's estimated trip generation. Essentially, the Project's traffic projections are "conservative" in that these alternative travel modes would reduce the forecasted traffic volumes.

## 4.4 PROJECT TRIP ASSIGNMENT

The assignment of traffic from the Project area to the adjoining roadway system is based upon the Project trip generation, trip distribution, and the arterial highway and local street system improvements that would be in place by the time of initial occupancy of the Project. Based on the identified Project traffic generation and trip distribution patterns, the Project (Non-Peak) and Project (Peak) ADT and peak hour intersection turning movement volumes are shown on Exhibits 4-4 and 4-5 for Without Heacock Street Extension Conditions. The Project (Non-Peak) and Project (Peak) ADT and peak hour intersection turning movement volumes are shown on Exhibits 4-6 and 4-7 for With Heacock Street Extension Conditions.



### EXHIBIT 4-1: PROJECT (TRUCK) TRIP DISTRIBUTION



#### LEGEND:

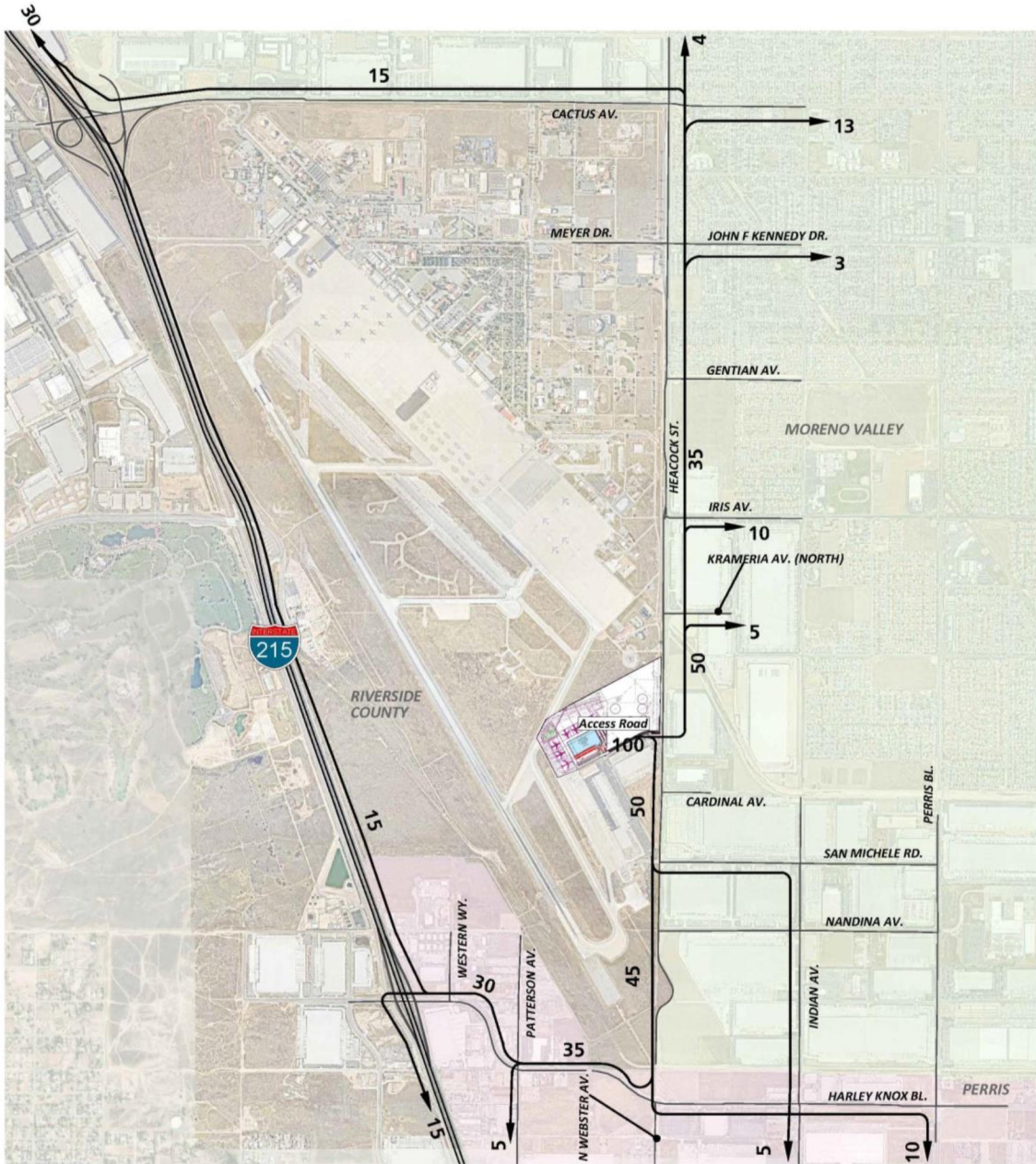
10 = PERCENT TO/FROM PROJECT







**EXHIBIT 4-3: PROJECT LONG RANGE (PASSENGER CAR) TRIP DISTRIBUTION**



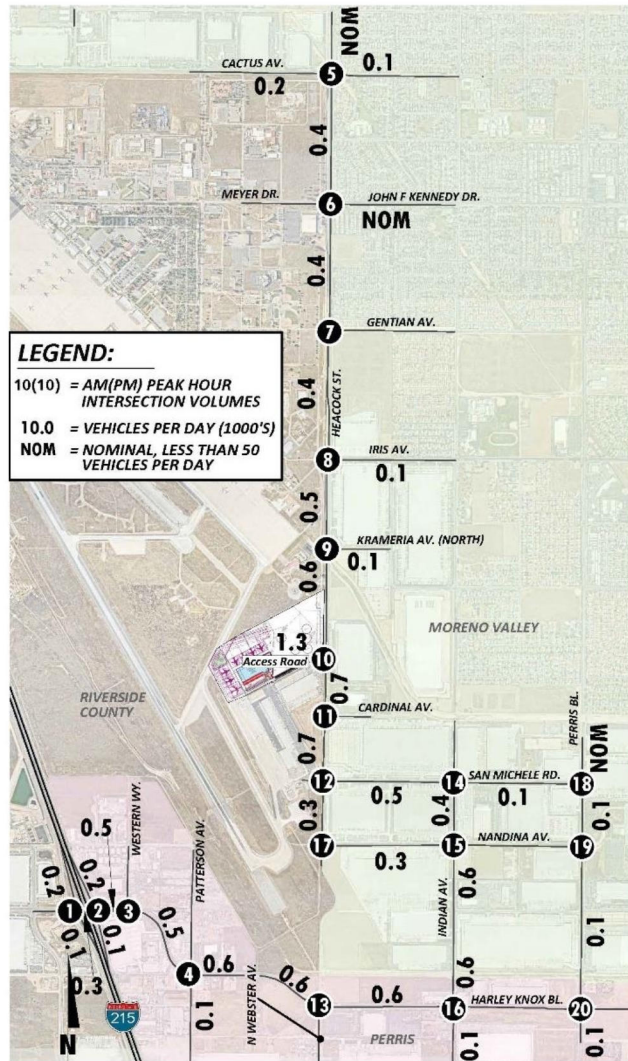
**LEGEND:**

10 = PERCENT TO/FROM PROJECT





EXHIBIT 4-4: PROJECT ONLY (NON-PEAK, WITHOUT HEACOCK STREET EXTENSION) TRAFFIC VOLUMES



1 I-215 SB Ramps & Harley Knox Bl. 0(0) 0(0) 18(15) 0(0) 10(12) 0(0) 0(0) 0(0)	2 I-215 NB Ramps & Harley Knox Bl. 0(0) 18(15) 0(0) 0(0) 13(24) 10(12) 0(0) 17(3)	3 Western Wy. & Harley Knox Bl. 0(0) 0(0) 0(0) 0(0) 0(0) 23(35) 0(0) 35(18) 0(0) 0(0) 0(0)	4 Patterson Av. & Harley Knox Bl. 0(0) 0(0) 0(0) 0(0) 0(0) 23(35) 0(0) 35(18) 0(0) 0(0) 5(0)	5 Heacock St. & Cactus Av. 0(0) 0(0) 0(0) 0(0) 0(0) 0(0) 0(0) 21(1) 11(11) 2(2) 7(7)
6 Heacock St. & Meyer Dr./ John F Kennedy Dr. 0(0) 38(1) 0(0) 0(0) 0(0) 3(0) 0(0) 21(21) 2(2)	7 Heacock St. & Gentian Av. 42(1) 0(0) 0(0) 0(0) 22(23) 0(0)	8 Heacock St. & Iris Av. 42(1) 0(0) 0(0) 10(0) 22(23) 6(6)	9 Heacock St. & Krameria Av. (North) 52(2) 0(0) 0(0) 5(0) 28(29) 3(3)	10 Heacock St. & Access Road 57(2) 0(0) 31(31) 34(47) 56(18) 0(0)
11 Heacock St. & Cardinal Av. 34(47) 0(0) 0(0) 0(0) 56(18) 0(0)	12 Heacock St. & San Michele Rd. 0(0) 9(21) 25(26) 47(1) 0(0) 0(0) 0(0) 9(17) 0(0)	13 Webster Av. & Harley Knox Bl. 26(38) 0(0) 40(18) 0(0) 0(0) 0(0)	14 Indian Av. & San Michele Rd. 0(0) 0(0) 0(0) 0(0) 0(0) 10(0) 0(0) 6(6) 20(20) 36(1) 0(0)	15 Indian Av. & Nandina Av. 0(0) 0(0) 0(0) 0(0) 0(0) 20(20) 9(21) 9(17) 36(1) 0(0)
16 Indian Av. & Harley Knox Bl. 26(38) 3(3) 0(0) 0(0) 0(0) 40(18) 0(0) 0(0) 5(0) 0(0)	17 Heacock St. & Nandina Av. 9(21) 25(26) 47(1) 0(0) 9(17) 0(0)	18 Perris Bl. & San Michele Rd. 0(0) 0(0) 0(0) 0(0) 0(0) 26(38) 0(0) 40(18) 0(0) 0(0)	19 Indian Av. & Nandina Av. 0(0) 0(0) 0(0) 0(0) 0(0) 10(0) 0(0) 6(6) 20(20) 36(1) 0(0)	20 Perris Bl. & Harley Knox Bl. 0(0) 20(20) 0(0) 0(0) 0(0) 0(0) 9(21) 9(17) 36(1) 0(0)

EXHIBIT 4-5: PROJECT ONLY (PEAK, WITHOUT HEACOCK STREET EXTENSION) TRAFFIC VOLUMES

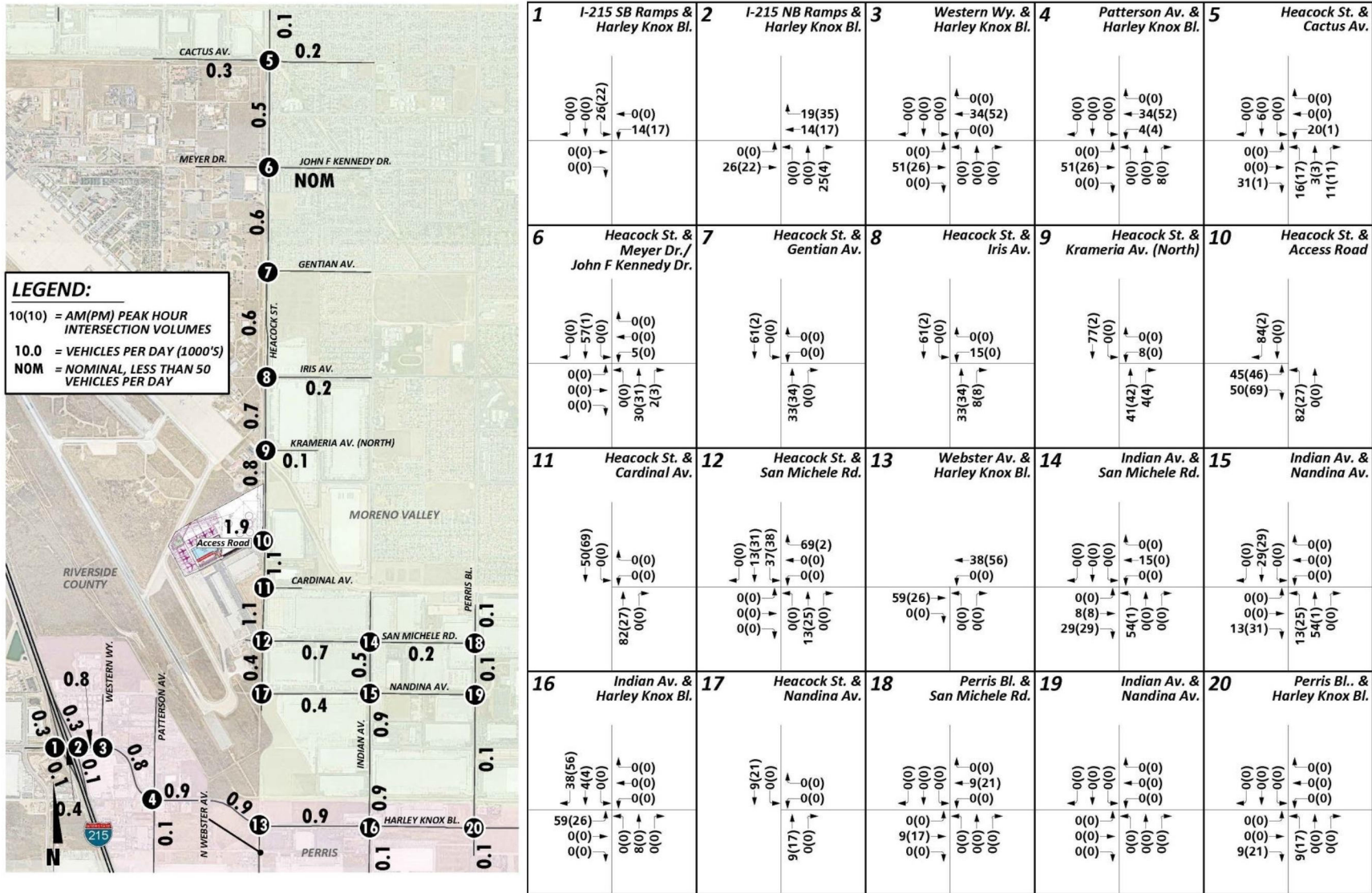
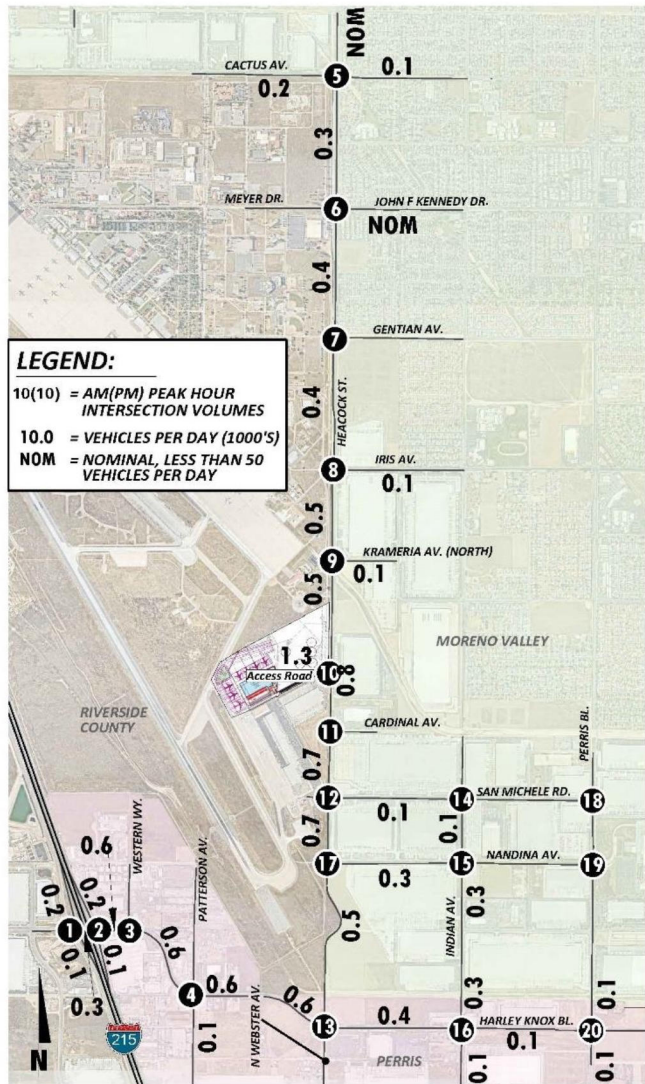


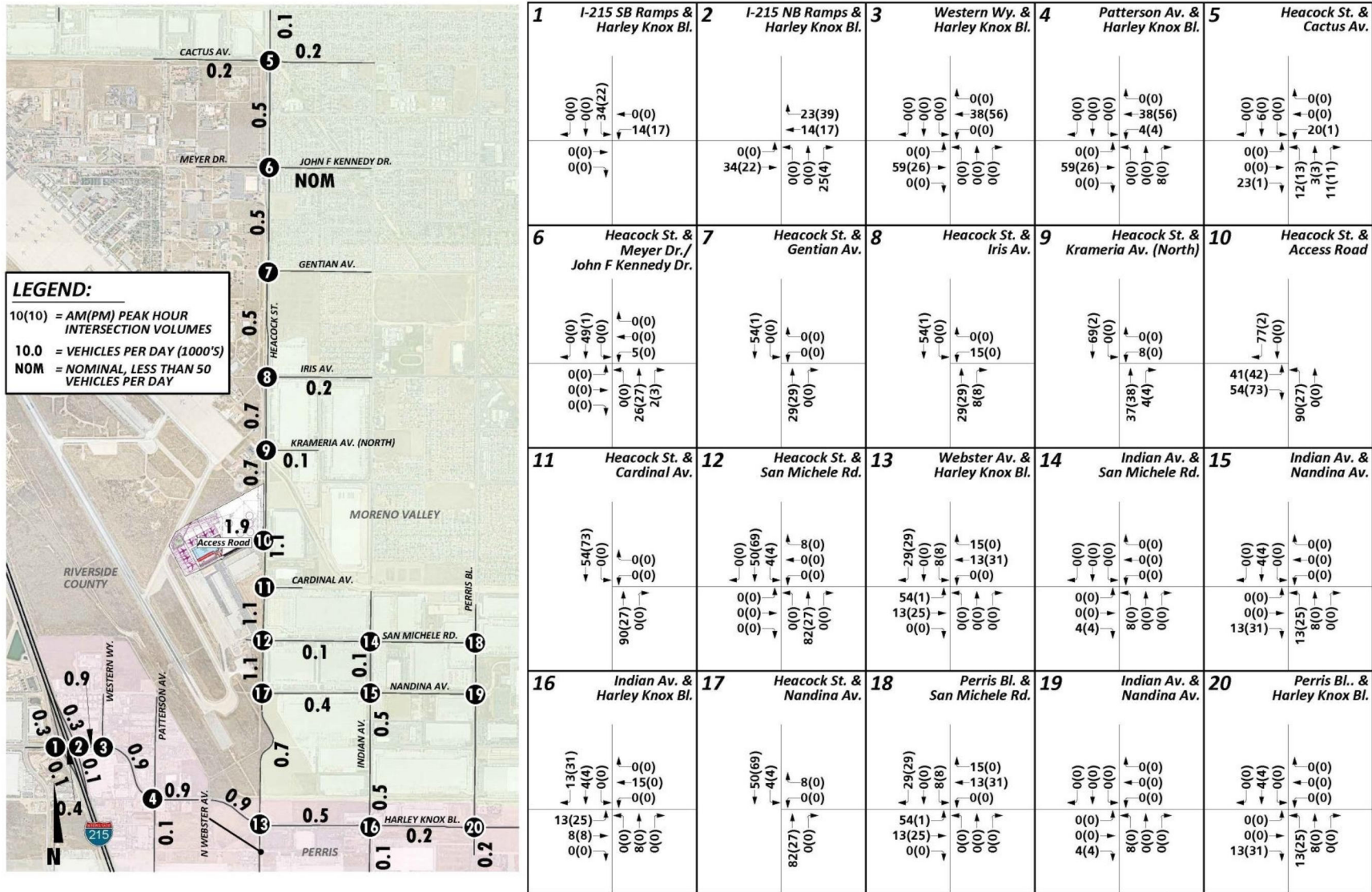


EXHIBIT 4-6: PROJECT ONLY (NON-PEAK, WITH HEACOCK STREET EXTENSION) TRAFFIC VOLUMES



<p><b>1</b> I-215 SB Ramps &amp; Harley Knox Bl.</p> <p>↑ 0(0) ↓ 0(0) ← 0(0) → 23(15)</p> <p>0(0) ↓ 0(0) ↓</p>	<p><b>2</b> I-215 NB Ramps &amp; Harley Knox Bl.</p> <p>↑ 16(26) ↓ 10(12)</p> <p>0(0) ↑ 0(0) ↑ 0(0) ↑ 17(3) ↓</p>	<p><b>3</b> Western Wy. &amp; Harley Knox Bl.</p> <p>↑ 0(0) ↓ 0(0) ← 0(0) → 26(38)</p> <p>0(0) ↑ 0(0) ↑ 0(0) ↑ 0(0) ↓</p> <p>40(18) → 0(0) ↓ 0(0) ↓</p>	<p><b>4</b> Patterson Av. &amp; Harley Knox Bl.</p> <p>↑ 0(0) ↓ 0(0) ← 0(0) → 26(38)</p> <p>0(0) ↑ 0(0) ↑ 0(0) ↑ 5(0) ↓</p> <p>40(18) → 0(0) ↓ 0(0) ↓</p>	<p><b>5</b> Heacock St. &amp; Cactus Av.</p> <p>↑ 0(0) ↓ 4(0) ← 0(0) → 14(0)</p> <p>0(0) ↑ 0(0) ↑ 0(0) ↑ 8(9) ↓ 2(2) ↓ 7(7) ↓</p>
<p><b>6</b> Heacock St. &amp; Meyer Dr./ John F Kennedy Dr.</p> <p>↑ 0(0) ↓ 33(1) ← 0(0) → 0(0)</p> <p>0(0) ↑ 0(0) ↑ 0(0) ↑ 18(18) ↓ 2(2) ↓</p>	<p><b>7</b> Heacock St. &amp; Gentian Av.</p> <p>↑ 36(1) ↓ 0(0) ← 0(0) → 0(0)</p> <p>0(0) ↑ 0(0) ↑ 20(20) ↓ 0(0) ↓</p>	<p><b>8</b> Heacock St. &amp; Iris Av.</p> <p>↑ 36(1) ↓ 0(0) ← 0(0) → 10(0)</p> <p>0(0) ↑ 0(0) ↑ 20(20) ↓ 6(6) ↓</p>	<p><b>9</b> Heacock St. &amp; Krameria Av. (North)</p> <p>↑ 47(1) ↓ 0(0) ← 0(0) → 5(0)</p> <p>0(0) ↑ 0(0) ↑ 25(26) ↓ 3(3) ↓</p>	<p><b>10</b> Heacock St. &amp; Access Road</p> <p>↑ 52(2) ↓ 0(0) ← 28(29) → 37(50)</p> <p>0(0) ↑ 61(18) ↓ 0(0) ↓</p>
<p><b>11</b> Heacock St. &amp; Cardinal Av.</p> <p>↑ 37(50) ↓ 0(0) ← 0(0) → 0(0)</p> <p>0(0) ↑ 0(0) ↑ 61(18) ↓ 0(0) ↓</p>	<p><b>12</b> Heacock St. &amp; San Michele Rd.</p> <p>↑ 0(0) ↓ 34(47) ← 3(3) → 5(0)</p> <p>0(0) ↑ 0(0) ↑ 0(0) ↑ 56(18) ↓ 0(0) ↓</p>	<p><b>13</b> Webster Av. &amp; Harley Knox Bl.</p> <p>↑ 20(20) ↓ 0(0) ← 0(0) → 6(6)</p> <p>0(0) ↑ 0(0) ↑ 36(1) ↓ 9(17) ↓ 0(0) ↓</p> <p>10(0) ↑ 9(21) ↓ 0(0) ↓</p>	<p><b>14</b> Indian Av. &amp; San Michele Rd.</p> <p>↑ 0(0) ↓ 0(0) ← 0(0) → 0(0)</p> <p>0(0) ↑ 0(0) ↑ 0(0) ↑ 5(0) ↓ 0(0) ↓ 3(3) ↓</p>	<p><b>15</b> Indian Av. &amp; Nandina Av.</p> <p>↑ 0(0) ↓ 3(3) ← 0(0) → 0(0)</p> <p>0(0) ↑ 0(0) ↑ 9(21) ↓ 9(17) ↓ 5(0) ↓ 0(0) ↓</p>
<p><b>16</b> Indian Av. &amp; Harley Knox Bl.</p> <p>↑ 9(21) ↓ 3(3) ← 0(0) → 10(0)</p> <p>0(0) ↑ 0(0) ↑ 9(17) ↓ 6(6) ↓ 0(0) ↓</p>	<p><b>17</b> Heacock St. &amp; Nandina Av.</p> <p>↑ 34(47) ↓ 3(3) ← 5(0) → 0(0)</p> <p>0(0) ↑ 56(18) ↓ 0(0) ↓</p>	<p><b>18</b> Perris Bl. &amp; San Michele Rd.</p> <p>↑ 20(20) ↓ 0(0) ← 0(0) → 6(6)</p> <p>0(0) ↑ 0(0) ↑ 36(1) ↓ 9(17) ↓ 0(0) ↓</p> <p>10(0) ↑ 9(21) ↓ 0(0) ↓</p>	<p><b>19</b> Indian Av. &amp; Nandina Av.</p> <p>↑ 0(0) ↓ 0(0) ← 0(0) → 0(0)</p> <p>0(0) ↑ 0(0) ↑ 0(0) ↑ 5(0) ↓ 0(0) ↓ 3(3) ↓</p>	<p><b>20</b> Perris Bl. &amp; Harley Knox Bl.</p> <p>↑ 0(0) ↓ 3(3) ← 0(0) → 0(0)</p> <p>0(0) ↑ 0(0) ↑ 9(21) ↓ 9(17) ↓ 5(0) ↓ 0(0) ↓</p>

EXHIBIT 4-7: PROJECT ONLY (PEAK, WITH HEACOCK STREET EXTENSION) TRAFFIC VOLUMES



## 4.5 BACKGROUND TRAFFIC

### 4.5.1 OPENING YEAR CUMULATIVE CONDITIONS

Future year traffic forecasts have been based upon background (ambient) growth at 2.0% per year. The total ambient growth is 12.62% for 2026 conditions (2.0% per year compounded over 6 years). The ambient growth factor is intended to approximate regional traffic growth. This ambient growth rate is added to existing traffic volumes to account for area-wide growth not reflected by cumulative development projects. Ambient growth has been added to daily and peak hour traffic volumes on surrounding roadways, in addition to traffic generated by the development of future projects that have been approved but not yet built and/or for which development applications have been filed and are under consideration by governing agencies. Opening Year Cumulative (2026) traffic volumes are provided in Section 6 of this report. The traffic generated by the proposed Project was then manually added to the base volume to determine Opening Year Cumulative “With Project” forecasts for both Non-Peak and Peak conditions.

### 4.5.2 HORIZON YEAR (2045) CONDITIONS

The currently adopted Southern California Association of Governments (SCAG) Connect SoCal Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (September 2020) growth forecasts for the March JPA identifies projected growth in population of 370,500 in 2016 to 525,600 in 2045, or a 41.9 percent increase over the 29-year period. (6) The change in population equates to roughly a 1.21 percent growth rate, compounded annually. Similarly, growth over the same 29-year period in households is projected to increase by 59.2 percent, or 1.62 percent annual growth rate. Finally, growth in employment over the same 29-year period is projected to increase by 83.4 percent, or a 2.11 percent annual growth rate. As such, an average growth rate of 1.65 percent per year has been utilized for Horizon Year (2045) traffic conditions, without the Heacock Street Extension.

## 4.6 CUMULATIVE DEVELOPMENT TRAFFIC

A cumulative project list was developed for the purposes of this analysis through consultation with planning and engineering staff from the March JPA. The cumulative projects listed are those that would generate traffic and would contribute traffic to study area intersections. Cumulative projects from the neighboring jurisdictions of Moreno Valley and Perris have also been included.

Exhibit 4-8 illustrates the cumulative development location map. A summary of cumulative development projects and their proposed land uses are shown in Table 4-4. If applicable, the traffic generated by individual cumulative projects was manually added to the Opening Year Cumulative forecasts to ensure that traffic generated by the listed cumulative development projects in Table 4-4 are reflected as part of the background traffic. In an effort to conduct a conservative analysis, the cumulative projects are added in conjunction with the ambient growth identified in Section 4.5.1 *Background Traffic: Opening Year Cumulative Conditions*.



EXHIBIT 4-8: CUMULATIVE DEVELOPMENT LOCATION MAP

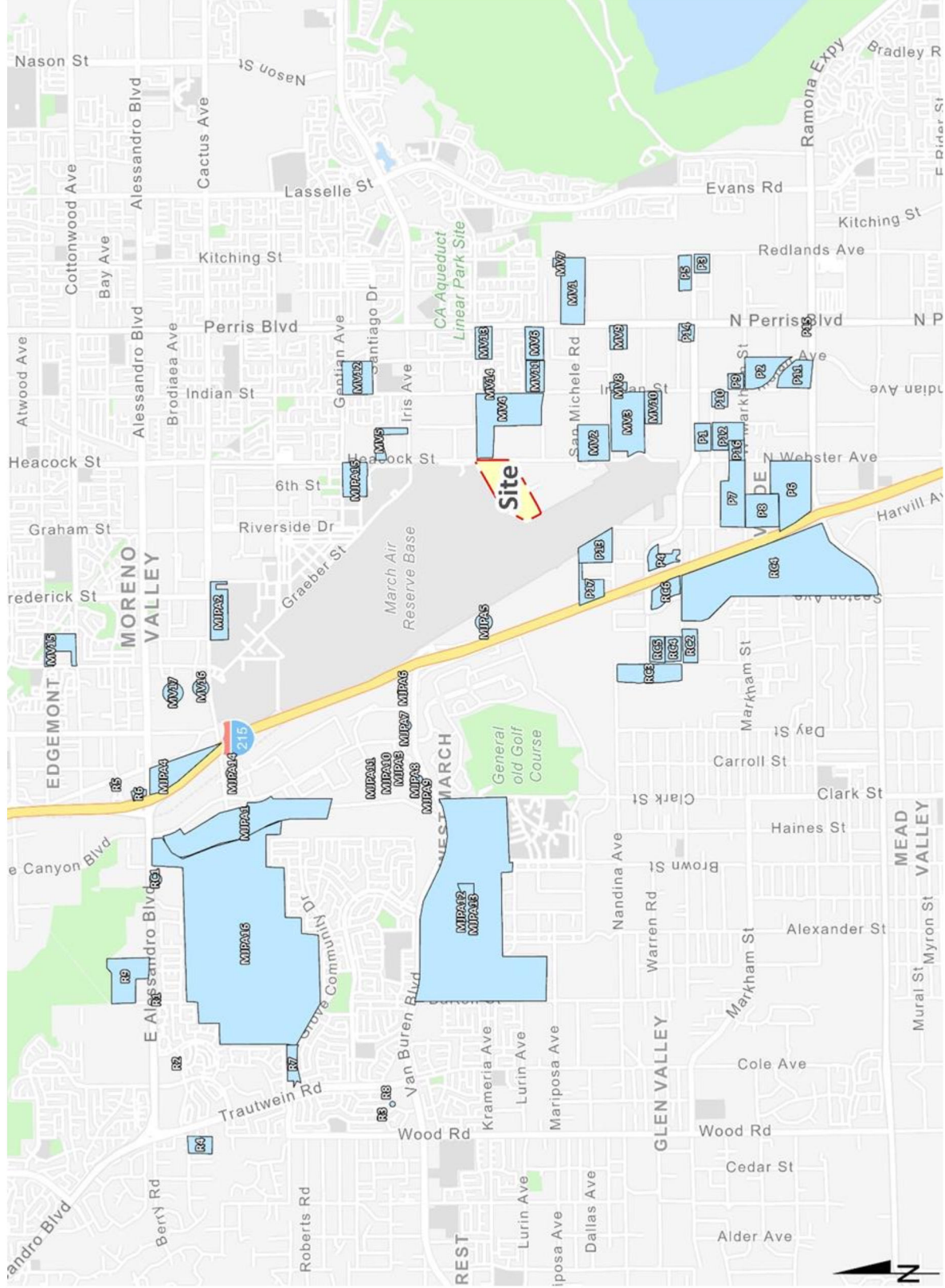
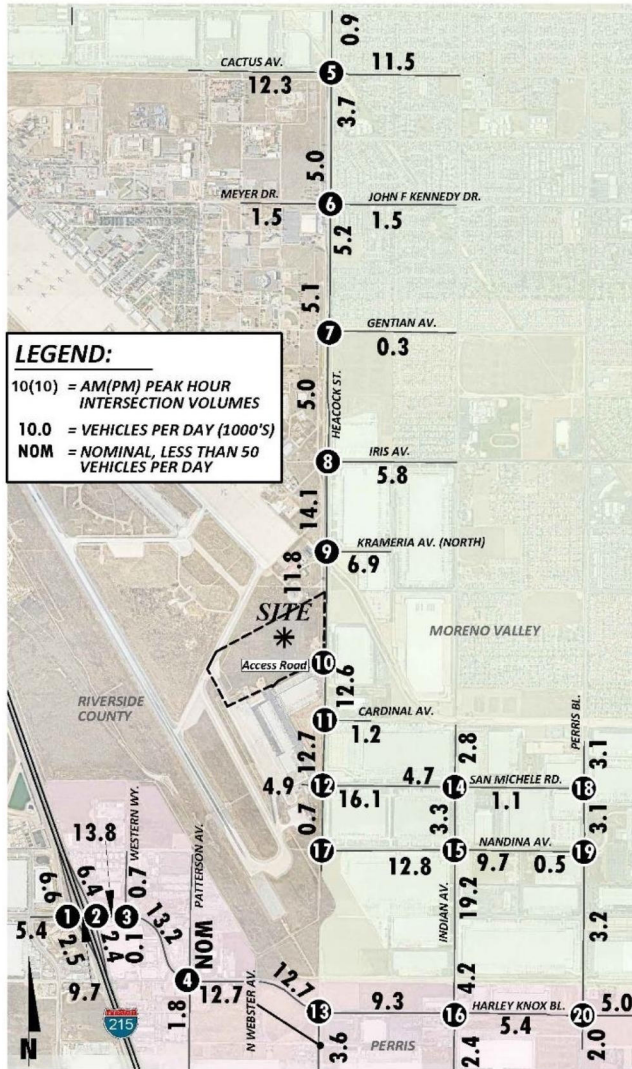




EXHIBIT 4-9: CUMULATIVE ONLY TRAFFIC VOLUMES



1 <i>I-215 SB Ramps &amp; Harley Knox Bl.</i>	2 <i>I-215 NB Ramps &amp; Harley Knox Bl.</i>	3 <i>Western Wy. &amp; Harley Knox Bl.</i>	4 <i>Patterson Av. &amp; Harley Knox Bl.</i>	5 <i>Heacock St. &amp; Cactus Av.</i>
136(73) ↓ 0(0) ↓ 74(43) ← 63(245) ↓ 77(192) → 21(56) ↓	163(518) ↓ 89(263) ↓ 48(25) ↓ 0(0) ↓ 223(77) ↓	8(31) ↓ 0(0) ↓ 1(4) ↓ 3(2) ↓ 243(748) ↓ 12(2) ↓ 26(13) ↓ 689(342) ↓ 9(1) ↓ 1(3) ↓ 0(0) ↓ 2(4) ↓	0(0) ↓ 0(0) ↓ 1(2) ↓ 1(2) ↓ 230(674) ↓ 32(40) ↓ 1(0) ↓ 622(294) ↓ 63(22) ↓ 17(69) ↓ 0(0) ↓ 37(35) ↓	15(17) ↓ 130(205) ↓ 22(42) ↓ 41(38) ↓ 680(266) ↓ 47(15) ↓ 42(38) ↓ 432(774) ↓ 270(345) ↓ 148(320) ↓ 198(192) ↓ 12(45) ↓
6 <i>Heacock St. &amp; Meyer Dr./ John F Kennedy Dr.</i>	7 <i>Heacock St. &amp; Gentian Av.</i>	8 <i>Heacock St. &amp; Iris Av.</i>	9 <i>Heacock St. &amp; Krameria Av. (North)</i>	10 <i>Heacock St. &amp; Access Road</i>
2(6) ↓ 232(136) ↓ 21(52) ↓ 29(36) ↓ 11(19) ↓ 17(6) ↓ 1(4) ↓ 8(15) ↓ 17(14) ↓ 7(20) ↓ 133(275) ↓ 6(21) ↓	275(178) ↓ 6(11) ↓ 8(8) ↓ 0(0) ↓ 151(314) ↓ 0(1) ↓	276(179) ↓ 50(50) ↓ 50(50) ↓ 290(216) ↓ 151(315) ↓ 172(327) ↓	369(319) ↓ 197(77) ↓ 69(226) ↓ 92(222) ↓ 256(417) ↓ 193(93) ↓	Future Intersection
11 <i>Heacock St. &amp; Cardinal Av.</i>	12 <i>Heacock St. &amp; San Michele Rd.</i>	13 <i>Webster Av. &amp; Harley Knox Bl.</i>	14 <i>Indian Av. &amp; San Michele Rd.</i>	15 <i>Indian Av. &amp; Nandina Av.</i>
385(632) ↓ 43(10) ↓ 9(46) ↓ 10(51) ↓ 533(435) ↓ 47(12) ↓	40(30) ↓ 8(16) ↓ 354(633) ↓ 540(393) ↓ 305(93) ↓ 32(7) ↓ 26(40) ↓ 72(309) ↓ 0(0) ↓ 0(0) ↓ 12(10) ↓ 6(33) ↓	205(552) ↓ 3(2) ↓ 513(255) ↓ 147(74) ↓ 58(70) ↓ 1(4) ↓	10(6) ↓ 126(204) ↓ 2(10) ↓ 4(0) ↓ 624(192) ↓ 115(58) ↓ 10(10) ↓ 134(638) ↓ 289(1131) ↓ 1098(391) ↓ 189(125) ↓ 117(75) ↓	20(6) ↓ 400(1284) ↓ 5(0) ↓ 3(1) ↓ 7(14) ↓ 22(80) ↓ 4(20) ↓ 6(13) ↓ 60(180) ↓ 209(43) ↓ 1288(465) ↓ 54(38) ↓
16 <i>Indian Av. &amp; Harley Knox Bl.</i>	17 <i>Heacock St. &amp; Nandina Av.</i>	18 <i>Perris Bl. &amp; San Michele Rd.</i>	19 <i>Indian Av. &amp; Nandina Av.</i>	20 <i>Perris Bl. &amp; Harley Knox Bl.</i>
71(314) ↓ 8(32) ↓ 2(3) ↓ 1(3) ↓ 106(175) ↓ 48(28) ↓ 289(89) ↓ 161(132) ↓ 64(39) ↓ 30(65) ↓ 29(5) ↓ 23(63) ↓	0(69) ↓ 39(4) ↓ 18(0) ↓ 0(0) ↓ 0(27) ↓ 0(0) ↓	0(29) ↓ 427(0) ↓ 0(8) ↓ 0(1) ↓ 0(25) ↓ 0(0) ↓ 0(0) ↓ 0(0) ↓ 4(4) ↓ 0(0) ↓	12(0) ↓ 415(0) ↓ 0(0) ↓ 0(0) ↓ 7(0) ↓ 0(0) ↓ 6(4) ↓ 6(0) ↓ 407(0) ↓ 0(0) ↓	48(0) ↓ 31(4) ↓ 28(0) ↓ 21(0) ↓ 67(0) ↓ 2(0) ↓ 19(0) ↓ 243(0) ↓ 7(31) ↓ 19(25) ↓ 72(0) ↓ 5(0) ↓

TABLE 4-4: CUMULATIVE DEVELOPMENT LAND USE SUMMARY

ID	Project Name	Land Use	Quantity	Units <sup>1</sup>
<b>March Joint Powers Authority</b>				
MJPA1	Meridian Business Park (West Campus)	Industrial Park	2,278.852	TSF
MJPA2	K4 Parcel	Warehouse	718.000	TSF
MJPA3	Economic Business Center	Warehouse	124.523	TSF
MJPA4	Freeway Business Center	Warehouse	709	TSF
MJPA5	Veteran's Industrial Plaza/VIP 215	Warehouse	1,866.948	TSF
MJPA6	Veteran's Plaza Phase I Veteran's Plaza Phase II (Proposed)	Commercial Retail	219.695	TSF
		Warehouse	100.000	TSF
		Public Storage Facility	107.714	TSF
MJPA7	MS Van Buren I	Warehouse	176.396	TSF
MJPA8	MS Van Buren II	Warehouse	162.041	TSF
MJPA9	MS Prime Six	General Office	74.922	TSF
MJPA10	Meridian Distribution Center IV	Warehouse	90.000	TSF
MJPA11	Meridian Distribution Center III	Warehouse	262.269	TSF
MJPA12	Eagle Business Park	Business Park	390.480	TSF
MJPA13	Meridian South Campus	Office	388.011	TSF
		Commercial Retail	298.215	TSF
		Business Park	1,764.180	TSF
		Warehousing	774.437	TSF
		High-Cube Cold Storage	700.000	TSF
		High-Cube Transload	800.000	TSF
		LGB6 (Building A)	1,000.000	TSF
		Parcel Delivery	1,000.000	TSF
	Dog Park	6.2	Acres	
MJPA14	Meridian U1 L2 Industrial Warehouse	Warehouse	48.830	TSF
MJPA15	March Vets Village - Building 1	Transitional Housing	16	DU
MJPA16	West Campus Upper Plateau	High-Cube Fulfillment	2,562.561	TSF
		High-Cube Cold Storage	500.000	TSF
		Business Park - Office	528.951	TSF
		Business Park - Warehouse	1,234.218	TSF
		Commercial	160.921	TSF
		Active Park	42.20	Acres
		Public Park	18.08	Acres
<b>City of Riverside</b>				
R1	P17-0419/20/21	Fast Food w/ Drive Thru	1.857	TSF
R2	P16-0578	Warehouse	82.200	TSF
R3	P19-0151/P19-0152/P19-0153	Health and Fitness Club	21.706	TSF
R4	P13-0665	Single Family Detached	8	DU
R5	P15-1035/P16-0556/P16-0567	Warehouse	176.149	TSF
R6	P14-0841 to P14-0848/P16-0472/P16-0474	Warehouse	73.200	TSF
		Commercial Retail	15.000	TSF
R7	P14-0472/P14-0473/P15-0321/P15-0322	Single Family Detached	85	DU
R8	P19-0022/P19-0024/P19-0026/P19-0027/P19-0028	Fast Food w/ Drive Thru	4.319	TSF
R9	Sycamore Hills Distribution Center	Warehouse	603.100	TSF

ID	Project Name	Land Use	Quantity Units <sup>1</sup>
<b>County of Riverside</b>			
RC1	PP 25422	Warehouse	814.000 TSF
RC2	Knox Business Park	Warehouse	1,259.050 TSF
RC3	Oleander Business Park	Warehouse	710.736 TSF
RC4	Majestic Freeway Business Center SP	General Light Industrial	6,200.00 TSF
RC5	PPT210130	Warehouse	239.308 TSF
RC6	PPT190031	High-Cube Warehouse	418.000 TSF
<b>City of Moreno Valley</b>			
MV1	Kearney	High-Cube Warehouse	1,100.00 TSF
MV2	IDS	High-Cube Warehouse	701.00 TSF
MV3	First Industrial	High-Cube Warehouse	1,380.00 TSF
MV4	Prologis 1	High-Cube Warehouse	1,000.00 TSF
MV5	Moreno Valley Industrial Park	High-Cube Warehouse	207.68 TSF
MV6	Tract 31442	Single Family Detached	63 DU
MV7	Moreno Valley Utility Substation	High-Cube Warehouse	PUBLIC TSF
MV8	Phelan Development	High-Cube Warehouse	98.21 TSF
MV9	Nandina Industrial Center	High-Cube Warehouse	335.97 TSF
MV10	Indian Street Commerce Center	High-Cube Warehouse	433.92 TSF
MV11	Tract 32716	Single Family Detached	57 DU
MV12	Tract 36760	Single Family Detached	221 DU
MV13	PEN18-0042	Single Family Detached	2 DU
MV14	Tract 33024	Single Family Detached	8 DU
MV15	Scottish Village	Multi-family	194 DU
MV16	Moreno Valley Cactus Center (PEN16-0131)	Warehouse Fast Food w/ Drive Thru Gas Station w/ Car Wash	36.950 TSF 7.900 TSF 28 VFP
MV17	PA 08-0047-0052 (Komar Cactus Plaza)	Hotel Fast Food w/ Drive Thru Commercial	110 Rooms 8.000 TSF 42.400 TSF
<b>City of Perris</b>			
P1	Bargemann / DPR 07-09-0018	Warehousing	173.00 TSF
P2	Duke 2 / DPR 16-00008	High-Cube Warehouse	669.00 TSF
P3	Perris Circle 3	Warehousing	210.90 TSF
P4	Gateway / DPR 16-00003	High-Cube Warehouse	400.00 TSF
P5	Harley Knox Commerce Park / DPR 16-004	High-Cube Warehouse	386.28 TSF
P6	OLC 1 / DPR 12-10-0005	High-Cube Warehouse	1,455.00 TSF
P7	OLC2 / DPR 14-01-0015	High-Cube Warehouse	1,037.00 TSF
P8	Duke at Patterson / DPR 17-00001	High-Cube Warehouse	811.00 TSF
P9	Markham Industrial / DPR 16-00015	Warehousing	170.00 TSF
P10	Westcoast Textile / DPR 16-00001	Warehousing	180.00 TSF
P11	Indian/Ramona Warehouse	High-Cube Warehouse	428.73 TSF
P12	IPT Perris DC II	High-Cube Warehouse	273.00 TSF
P13	Western Way/Nandina Warehouse	Cold Storage Warehouse	252.030 TSF
P14	March Plaza / CUP16-05165	Commercial Retail	47.253 TSF
P15	Cali Express Carwash / CUP 16-05258	Carwash	5.600 TSF
P16	Integra Expansion / MMOD 17-05075	High-Cube Warehouse	273.000 TSF
P17	First March Logistics	Manufacturing Warehousing High-Cube Fulfillment	100.000 TSF 139.971 TSF 350.000 TSF

<sup>1</sup> DU = Dwelling Units; TSF = Thousand Square Feet; VFP = Vehicle Fueling Positions

Although it is unlikely that all of these cumulative projects would be fully built and occupied by Year 2026, they have been included in an effort to conduct a conservative analysis and overstate as opposed to understate potential traffic deficiencies. Any other cumulative projects located beyond the cumulative study area that are not expected to contribute measurable traffic to study area intersections have not been included since the traffic would dissipate due to the distance from the Project site and study area intersections. Cumulative Only ADT and peak hour intersection turning movement volumes are shown on Exhibit 4-9.

#### **4.7 HORIZON YEAR (2045) VOLUME DEVELOPMENT**

Traffic projections for Horizon Year (2045) without Project conditions were derived from the latest RIVCOM traffic model using accepted procedures for model forecast refinement. The post processing volume worksheets are provided in Appendix 4.1 of this TA.

The traffic forecasts reflect the area-wide growth anticipated between Existing (2020) conditions and Horizon Year (2045) traffic conditions. In most instances the traffic model zone structure is not designed to provide accurate turning movements along arterial roadways unless refinement and reasonableness checking is performed. Therefore, the Horizon Year (2045) peak hour forecasts were refined using the model derived long range forecasts, base (validation) year model forecasts, along with existing peak hour traffic count data collected at each analysis location. The RIVCOM has a base (validation) year of 2018 and a horizon (future forecast) year of 2045. The RIVCOM 2045 model utilized for the purposes of this analysis. It should be noted, the RIVCOM network includes the Heacock Street extension.

The refined future peak hour approach and departure volumes obtained from the model output data are then entered into a spreadsheet program consistent with the National Cooperative Highway Research Program (NCHRP Report 765), along with initial estimates of turning movement proportions. A linear programming algorithm is used to calculate individual turning movements which match the known directional roadway segment forecast volumes computed in the previous step. This program computes a likely set of intersection turning movements from intersection approach counts and the initial turning proportions from each approach leg.

Typically, the model growth is prorated and is subsequently added to the existing (base validation) traffic volumes to represent Horizon Year traffic conditions. In an effort to conduct a conservative analysis, reductions to traffic forecasts from either Existing or Opening Year Cumulative traffic conditions were not assumed as part of this analysis. As such, in conjunction with the addition of cumulative projects that are not consistent with the General Plan, additional growth has also been applied on a movement-by-movement basis, where applicable, to estimate reasonable Horizon Year (2045) forecasts. Horizon Year (2045) turning volumes were compared to Opening Year Cumulative (2026) volumes in order to ensure a minimum growth as a part of the refinement process. The minimum growth includes any additional growth between Opening Year Cumulative (2026) and Horizon Year (2045) traffic conditions that is not accounted for by the traffic generated by cumulative development projects and ambient growth rates assumed between Existing (2020) and Opening Year Cumulative (2026) conditions. Future estimated peak hour traffic data was used for new intersections and intersections with an anticipated change in travel patterns to further refine the Horizon Year (2045) peak hour forecasts.

The future Horizon Year (2045) Without Project peak hour turning movements were then reviewed by Urban Crossroads, Inc. for reasonableness, and in some cases, were adjusted to achieve flow conservation, reasonable growth, and reasonable diversion between parallel routes. Flow conservation checks ensure that traffic flow between two closely spaced intersections, such as two adjacent driveway locations, is verified in order to make certain that vehicles leaving one intersection are entering the adjacent intersection and that there is no unexplained loss of vehicles. The result of this traffic forecasting procedure is a series of traffic volumes which are suitable for traffic operations analysis.

## 5 E+P TRAFFIC CONDITIONS

This section discusses the traffic forecasts for E+P conditions and the resulting intersection operations, roadway segment, traffic signal warrant, and freeway off-ramp queuing analyses.

### 5.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for E+P conditions are consistent with those shown previously on Exhibit 3-1, with the exception of the following:

- Project driveways and those facilities assumed to be constructed by the Project to provide site access are also assumed to be in place for E+P conditions only (e.g., intersection and roadway improvements at the Project's frontage and driveways).

### 5.2 EXISTING PLUS PROJECT TRAFFIC VOLUME FORECASTS

This scenario includes Existing traffic volumes plus Project (Non-Peak) and Project (Peak) traffic. The ADT and weekday AM and PM peak hour intersection turning movement volumes which can be expected for E+P (Non-Peak) and E+P (Peak) traffic conditions are shown on Exhibits 5-1 and 5-2, respectively.

### 5.3 INTERSECTION OPERATIONS ANALYSIS

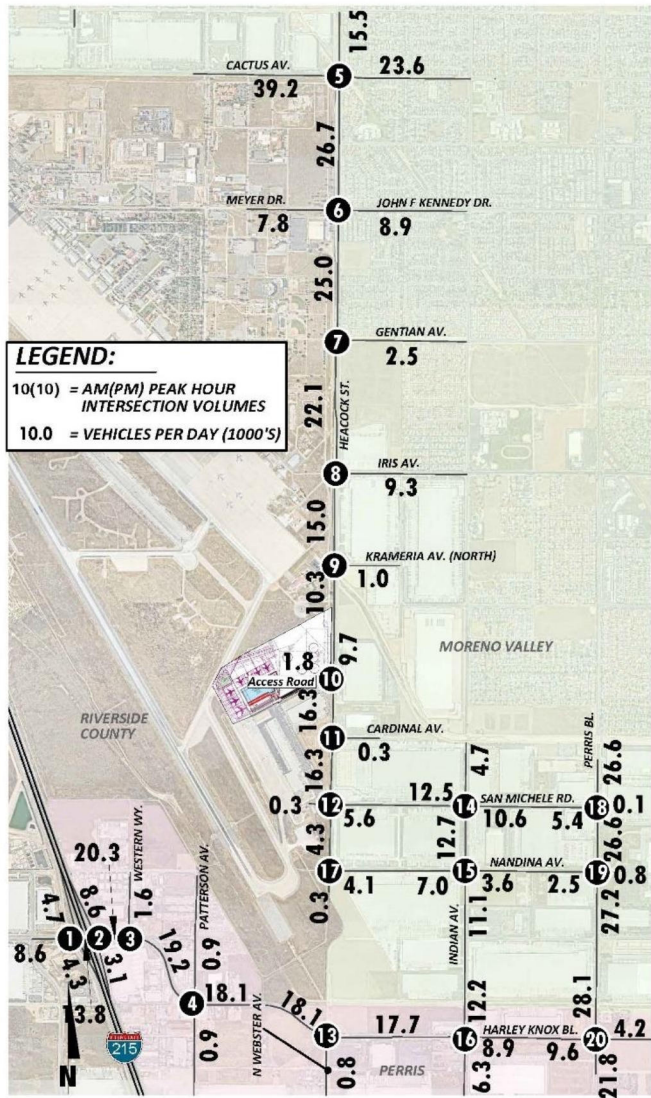
E+P (Non-Peak) and E+P (Peak) peak hour traffic operations have been evaluated for the study area intersections based on the analysis methodologies presented in Section 2 *Methodologies* of this TA. The intersection analysis results are summarized in Table 5-1 for E+P (Non-Peak) and E+P (Peak) traffic conditions, which indicates that there are no additional study area intersections that are anticipated to operate at an unacceptable LOS during the peak hours, in addition to intersection previously identified under Existing (2020) conditions. The intersection operations analysis worksheets for E+P (Non-Peak) and E+P (Peak) traffic conditions are included in Appendices 5.1 and 5.2, respectively.







EXHIBIT 5-2: E+P (PEAK) TRAFFIC VOLUMES



<p><b>1</b> I-215 SB Ramps &amp; Harley Knox Bl.</p> <p>142(124) 1(0) 326(261)</p> <p>189(187) 119(323)</p> <p>671(354) 4(30)</p>	<p><b>2</b> I-215 NB Ramps &amp; Harley Knox Bl.</p> <p>830(498) 303(492)</p> <p>393(205) 604(410)</p> <p>5(17) 3(3) 58(223)</p>	<p><b>3</b> Western Wy. &amp; Harley Knox Bl.</p> <p>34(91) 0(0) 5(9)</p> <p>33(7) 1121(919) 0(0)</p> <p>66(18) 609(627) 0(0)</p>	<p><b>4</b> Patterson Av. &amp; Harley Knox Bl.</p> <p>17(25) 3(3) 11(19)</p> <p>14(7) 1085(866) 13(6)</p> <p>20(20) 555(577) 11(19)</p> <p>53(35) 6(2) 14(4)</p>	<p><b>5</b> Heacock St. &amp; Cactus Av.</p> <p>75(37) 203(446) 99(117)</p> <p>98(77) 1131(568) 33(10)</p> <p>111(173) 507(1109) 430(857)</p> <p>609(417) 432(398) 20(21)</p>
<p><b>6</b> Heacock St. &amp; Meyer Dr./ John F Kennedy Dr.</p> <p>17(15) 527(908) 89(261)</p> <p>170(133) 193(67) 17(24)</p> <p>35(27) 32(172) 87(287)</p> <p>24(65) 790(666) 44(58)</p>	<p><b>7</b> Heacock St. &amp; Gentian Av.</p> <p>557(1049) 81(96)</p> <p>13(88) 12(6)</p> <p>701(699) 8(11)</p>	<p><b>8</b> Heacock St. &amp; Iris Av.</p> <p>343(649) 234(416)</p> <p>367(248) 68(29)</p> <p>338(464) 55(51)</p>	<p><b>9</b> Heacock St. &amp; Krameria Av. (North)</p> <p>314(403) 18(33)</p> <p>52(22) 15(3)</p> <p>249(390) 10(19)</p>	<p><b>10</b> Heacock St. &amp; Access Road</p> <p>84(2) 221(366)</p> <p>45(46) 50(69)</p> <p>82(27) 193(329)</p>
<p><b>11</b> Heacock St. &amp; Cardinal Av.</p> <p>474(794) 4(6)</p> <p>3(5) 1(4)</p> <p>496(525) 8(6)</p>	<p><b>12</b> Heacock St. &amp; San Michele Rd.</p> <p>7(2) 97(245) 113(204)</p> <p>205(216) 4(0) 3(12)</p> <p>2(12) 2(7) 3(6)</p> <p>1(0) 48(102) 3(3)</p>	<p><b>13</b> Webster Av. &amp; Harley Knox Bl.</p> <p>1106(854) 9(6)</p> <p>570(577) 10(23)</p> <p>5(25) 9(8)</p>	<p><b>14</b> Indian Av. &amp; San Michele Rd.</p> <p>2(22) 2(134) 3(112)</p> <p>6(50) 193(252) 51(158)</p> <p>3(10) 58(157) 68(271)</p> <p>343(285) 8(50) 92(120)</p>	<p><b>15</b> Indian Av. &amp; Nandina Av.</p> <p>4(26) 71(168) 6(17)</p> <p>17(48) 32(27) 10(84)</p> <p>3(22) 24(84) 90(322)</p> <p>121(111) 357(194) 14(29)</p>
<p><b>16</b> Indian Av. &amp; Harley Knox Bl.</p> <p>129(318) 64(228) 10(45)</p> <p>43(10) 629(289) 12(11)</p> <p>261(222) 262(342) 32(31)</p> <p>98(41) 247(177) 17(21)</p>	<p><b>17</b> Heacock St. &amp; Nandina Av.</p> <p>1(11) 101(238)</p> <p>52(104) 0(0)</p> <p>0(2) 2(9)</p>	<p><b>18</b> Perry Bl. &amp; San Michele Rd.</p> <p>74(81) 843(1002) 1(4)</p> <p>0(0) 0(0) 2(1)</p> <p>34(132) 0(0) 26(155)</p> <p>115(62) 1071(928) 1(0)</p>	<p><b>19</b> Indian Av. &amp; Nandina Av.</p> <p>8(40) 838(1079) 14(14)</p> <p>9(10) 3(5) 5(22)</p> <p>7(23) 2(2) 12(91)</p> <p>37(42) 1159(950) 18(13)</p>	<p><b>20</b> Perry Bl. &amp; Harley Knox Bl.</p> <p>212(249) 618(913) 39(93)</p> <p>148(58) 284(53) 6(3)</p> <p>183(237) 33(120) 14(77)</p> <p>196(36) 986(719) 9(8)</p>

**TABLE 5-1: INTERSECTION ANALYSIS FOR E+P CONDITIONS**

#	Intersection	Traffic Control <sup>2</sup>	Existing (2020)				E+P (Non-Peak)				E+P (Peak)			
			Delay <sup>1</sup> (secs.)		Level of Service		Delay <sup>1</sup> (secs.)		Level of Service		Delay <sup>1</sup> (secs.)		Level of Service	
			AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1	I-215 SB Ramps & Harley Knox Bl.	TS	10.4	9.1	B	A	10.8	9.6	B	A	11.0	9.9	B	A
2	I-215 NB Ramps & Harley Knox Bl.	TS	<b>60.5</b>	19.6	<b>E</b>	B	<b>62.0</b>	20.3	<b>E</b>	C	<b>62.4</b>	20.8	<b>E</b>	C
3	Western Wy. & Harley Knox Bl.	TS	6.7	7.9	A	A	6.7	7.9	A	A	6.7	7.9	A	A
4	Patterson Av. & Harley Knox Bl.	TS	9.6	9.3	A	A	9.6	9.4	A	A	9.7	9.4	A	A
5	Heacock St. & Cactus Av.	TS	32.6	34.4	C	C	33.2	34.7	C	C	33.5	35.3	C	D
6	Heacock St. & Meyer Dr./John F. Kennedy Dr.	TS	24.6	32.4	C	C	24.7	32.5	C	C	24.7	32.5	C	C
7	Heacock St. & Gentian Av.	TS	6.8	9.1	A	A	6.9	9.1	A	A	6.9	9.1	A	A
8	Heacock St. & Iris Av.	TS	16.3	14.4	B	B	16.3	14.6	B	B	16.3	14.7	B	B
9	Heacock St. & Krameria Av. (North)	TS	12.0	10.4	B	B	12.2	10.8	B	B	12.4	11.0	B	B
10	Heacock St. & Access Road	<b>TS</b> <sup>3</sup>	Future Intersection				8.1	14.5	A	B	9.4	18.3	A	B
11	Heacock St. & Cardinal Av.	CSS	17.3	17.6	C	C	18.6	18.3	C	C	19.4	18.5	C	C
12	Heacock St. & San Michele Rd.	TS	19.2	17.8	B	B	19.9	18.7	B	B	20.3	18.8	C	B
13	Webster Av. & Harley Knox Bl.	RA	7.8	7.2	A	A	8.0	7.7	A	A	8.0	7.9	A	A
14	Indian Av. & San Michele Rd.	TS	21.4	46.0	C	D	21.7	50.2	C	D	21.9	52.6	C	D
15	Indian Av. & Nandina Av.	TS	15.6	20.9	B	C	15.6	22.5	B	C	15.6	23.4	B	C
16	Indian Av. & Harley Knox Bl.	TS	20.7	21.4	C	C	21.7	23.1	C	C	22.2	24.0	C	C
17	Heacock St. & Nandina Av.	CSS	8.5	8.7	A	A	8.7	9.0	A	A	8.8	9.1	A	A
18	Perris Bl. & San Michele Rd.	TS	10.8	14.0	B	B	11.1	14.0	B	B	11.3	14.0	B	B
19	Perris Bl. & Nandina Av.	TS	10.4	13.6	B	B	10.4	13.6	B	B	10.4	13.6	B	B
20	Perris Bl. & Harley Knox Bl.	TS	25.5	34.8	C	C	25.6	34.9	C	C	25.6	34.9	C	C

<sup>1</sup> **BOLD** = Level of Service (LOS) does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).  
<sup>2</sup> Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.  
<sup>3</sup> CSS = Cross-street Stop; TS = Traffic Signal; RA = Roundabout; **TS** = Improvement  
<sup>3</sup> The Project will construct a traffic signal as part of the Project design features.

### 5.4 ROADWAY SEGMENT ANALYSIS

The roadway segment capacities are approximate figures only and are used at the General Plan level to assist in determining the roadway functional classification (number of through lanes) needed to meet traffic demand. Table 5-2 provides a summary of the for E+P (Non-Peak) and Table 5-3 provides a summary of the E+P (Peak) traffic conditions roadway segment capacity analysis based on the applicable roadway segment capacity thresholds. As shown on Table 5-2 and Table 5-3, the study area roadway segments are anticipated to operate at an acceptable LOS based on the applicable planning level daily roadway capacity thresholds, consistent with Existing (2021) traffic conditions.

**TABLE 5-2: ROADWAY SEGMENT ANALYSIS FOR E+P (NON-PEAK) CONDITIONS**

#	Roadway	Segment Limits	Roadway Section	LOS Capacity <sup>1</sup>	Existing 2020	V/C <sup>2</sup>	LOS <sup>3</sup>	E+P	V/C <sup>2</sup>	LOS <sup>3</sup>
1		Cactus Av. to Iris Av.	4D	37,500	26,178	0.70	B	26,548	0.71	C
2	Heacock St.	Iris Av. to San Michele Rd.	4D	37,500	15,260	0.41	A	15,986	0.43	A
3		San Michele Rd. to Harley Knox Bl.	3D	28,125	3,866	0.14	A	4,142	0.15	A
4	Cactus Av.	West of Heacock St.	6D	56,300	38,888	0.69	B	39,088	0.69	B
5	Indian Av.	San Michele Rd. to Harley Knox Bl.	4D	37,500	12,214	0.33	A	12,564	0.34	A
6	Perris Bl.	San Michele Rd. to Harley Knox Bl.	6D	56,300	27,991	0.50	A	28,071	0.50	A
7	San Michele Rd.	Heacock St. to Perris Bl.	4D	37,500	11,859	0.32	A	11,909	0.32	A
8	Nandina Av.	Heacock St. to Perris Bl.	2D	12,500	6,614	0.53	A	6,890	0.55	A

<sup>1</sup> These maximum roadway capacities are from the City of Moreno Valley Transportation Impact Analysis Preparation Guide for VMT and LOS Assessment, June 2020.

<sup>2</sup> V/C = Volume to Capacity Ratio

<sup>3</sup> LOS = Level of Service

**TABLE 5-3: ROADWAY SEGMENT ANALYSIS FOR E+P (PEAK) CONDITIONS**

#	Roadway	Segment Limits	Roadway Section	LOS Capacity <sup>1</sup>	Existing 2020	V/C <sup>2</sup>	LOS <sup>3</sup>	E+P	V/C <sup>2</sup>	LOS <sup>3</sup>
1		Cactus Av. to Iris Av.	4D	37,500	26,178	0.70	B	26,722	0.71	C
2	Heacock St.	Iris Av. to San Michele Rd.	4D	37,500	15,260	0.41	A	16,330	0.44	A
3		San Michele Rd. to Harley Knox Bl.	3D	28,125	3,866	0.14	A	4,274	0.15	A
4	Cactus Av.	West of Heacock St.	6D	56,300	38,888	0.69	B	39,182	0.70	B
5	Indian Av.	San Michele Rd. to Harley Knox Bl.	4D	37,500	12,214	0.33	A	12,730	0.34	A
6	Perris Bl.	San Michele Rd. to Harley Knox Bl.	6D	56,300	27,991	0.50	A	28,109	0.50	A
7	San Michele Rd.	Heacock St. to Perris Bl.	4D	37,500	11,859	0.32	A	12,523	0.33	A
8	Nandina Av.	Heacock St. to Perris Bl.	2D	12,500	6,614	0.53	A	7,022	0.56	A

<sup>1</sup> These maximum roadway capacities are from the City of Moreno Valley Transportation Impact Analysis Preparation Guide for VMT and LOS Assessment, June 2020.

<sup>2</sup> V/C = Volume to Capacity Ratio

<sup>3</sup> LOS = Level of Service

## 5.5 TRAFFIC SIGNAL WARRANTS ANALYSIS

Traffic signal warrant analysis has been conducted for the intersection of Heacock Street & Access Road. Based on the traffic signal warrant analysis, Heacock Street & Access Road is not anticipated to meet a traffic signal warrant under E+P (Non-Peak) and E+P (Peak) traffic conditions (see Appendices 5.3 and 5.4, respectively). There are no other existing study area intersections that are anticipated to operate at an unacceptable LOS during the peak hours under E+P traffic conditions. As such, additional traffic signal warrants have not been evaluated for existing unsignalized study area intersections.

## 5.6 OFF-RAMP QUEUING ANALYSIS

A queuing analysis was performed for the off-ramps at the I-215 Freeway at Harley Knox Boulevard interchange to assess vehicle queues for the off ramps that may potentially result in deficient peak hour operations at the ramp-to-arterial intersections and may potentially “spill back” onto the I-215 Freeway mainline. Queuing analysis findings are presented in Table 5-4. It is important to note that off-ramp lengths are consistent with the measured distance between the intersection and the freeway mainline. As shown in Table 5-4, there are no movements that are anticipated to experience queuing issues during the weekday AM or weekday PM peak 95<sup>th</sup> percentile traffic flows for E+P (Non-Peak) and E+P (Peak) traffic conditions, consistent with Existing (2020) traffic conditions. Worksheets for E+P (Non-Peak) and E+P (Peak) traffic conditions off-ramp queuing analysis are provided in Appendices 5.5 and 5.6, respectively.

**TABLE 5-4: PEAK HOUR FREEWAY OFF-RAMP QUEUING SUMMARY FOR E+P CONDITIONS**

Intersection	Movement	Available Stacking Distance (Feet)	Existing (2020)				E+P (Non-Peak)				E+P (Peak)			
			95th Percentile Queue (Feet)		Acceptable? <sup>1</sup>		95th Percentile Queue (Feet)		Acceptable? <sup>1</sup>		95th Percentile Queue (Feet)		Acceptable? <sup>1</sup>	
			AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
I-215 Southbound Ramps & Harley Knox Bl.	SBL/T	1,330	190 <sup>2</sup>	153 <sup>2</sup>	Yes	Yes	221 <sup>2</sup>	187 <sup>2</sup>	Yes	Yes	230 <sup>2</sup>	198 <sup>2</sup>	Yes	Yes
	SBR	270	32	33	Yes	Yes	32	33	Yes	Yes	32	33	Yes	Yes
I-215 Northbound Ramps & Harley Knox Bl.	NBL/T	1,120	13	23	Yes	Yes	13	23	Yes	Yes	13	23	Yes	Yes
	NBR	265	0	53	Yes	Yes	5	53	Yes	Yes	10	53	Yes	Yes

<sup>1</sup> Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided. An additional 15 feet of stacking which is assumed to be provided in the transition for turn pockets is reflected in the stacking distance shown on this table, where applicable.

<sup>2</sup> 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

## 5.7 DEFICIENCIES AND IMPROVEMENTS

### 5.7.1 IMPROVEMENTS TO ADDRESS DEFICIENCIES AT INTERSECTIONS

This section provides a summary of Project deficiencies and identified improvements. Based on the deficiency criteria discussed in Section 2.6 *Deficiency Criteria*, study area intersections were found to be deficient.

The effectiveness of the improvement strategy discussed below to address the E+P traffic deficiency is presented in Table 5-5. It should be noted the improvement recommendations below are consistent with those needed to address existing deficiencies (no new improvements). Analysis worksheets, with improvements, for E+P traffic conditions are provided in Appendices 5.7 and 5.8, respectively.

### 5.7.2 IMPROVEMENTS TO ADDRESS DEFICIENCIES AT ROADWAY SEGMENT

As shown previously in Table 5-2 and Table 5-3, there are no anticipated roadway segment deficiencies for E+P traffic conditions, consistent with Existing (2020) traffic conditions. As such, no roadway widening improvements have been recommended.

### 5.7.3 IMPROVEMENTS TO ADDRESS DEFICIENCIES ON OFF-RAMP QUEUES

As shown previously in Table 5-4, there are no anticipated peak hour queuing issues at the I-215 Freeway at Harley Knox Boulevard interchange for E+P traffic conditions, consistent with Existing (2020) traffic conditions. However, field observations of the I-215 Freeway interchange at Harley Knox Boulevard indicate that there are queues during the peak hours. Although the I-215 Southbound Ramps at Harley Knox Boulevard is currently operating at an acceptable LOS, the following interim restriping improvements recommendations are needed to address peak hour queues through the interchange area along Harley Knox Boulevard:

#### ***I-215 Southbound Ramps & Harley Knox Bl. (#1):***

- Restripe the westbound approach to accommodate the existing left, 2<sup>nd</sup> left turn lane with 200-feet of stacking, and one through lane. There are no additional changes proposed to the other approaches.

The restriping recommendations are also evaluated operationally as shown in Table 5-5.

**TABLE 5-5: INTERSECTION ANALYSIS FOR E+P CONDITIONS WITH IMPROVEMENTS**

#	Intersection	Traffic Control <sup>3</sup>	Intersection Approach Lanes <sup>1</sup>												Delay <sup>2</sup> (secs.)		Level of Service	
			Northbound			Southbound			Eastbound			Westbound			AM	PM	AM	PM
			L	T	R	L	T	R	L	T	R	L	T	R				
1	I-215 SB Ramps & Harley Knox Bl. - E+P (Non-Peak) <sup>4</sup>	TS	0	0	0	0	1	1	0	2	d	<u>2</u>	<u>1</u>	0	10.7	8.9	B	A
		TS	0	0	0	0	1	1	0	2	d	<u>2</u>	<u>1</u>	0	10.8	9.1	B	A
2	I-215 NB Ramps & Harley Knox Bl. - E+P (Non-Peak)	TS	0	1	1	0	0	0	1	2	0	0	2	<u>1&gt;&gt;</u>	11.2	18.8	B	B
		TS	0	1	1	0	0	0	1	2	0	0	2	<u>1&gt;&gt;</u>	11.2	19.0	B	B

\* **BOLD** = Level of Service (LOS) does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

<sup>1</sup> When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; >> = Free Right Turn Lane; 1 = Improvement

<sup>2</sup> Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

<sup>3</sup> TS = Traffic Signal

<sup>4</sup> Interim restriping improvement recommendations needed to address peak hour queues (not LOS deficiencies).

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## 6 OPENING YEAR CUMULATIVE (2026) TRAFFIC CONDITIONS

This section discusses the methods used to develop Opening Year Cumulative (2026) Without and With Project traffic forecasts, and the resulting intersection operations, roadway segment, traffic signal warrant, and freeway off-ramp queuing analyses.

### 6.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for Opening Year Cumulative (2026) conditions are consistent with those shown previously on Exhibit 3-1, with the exception of the following:

- Project driveways and those facilities assumed to be constructed by the Project to provide site access are also assumed to be in place for Opening Year Cumulative conditions only (e.g., intersection and roadway improvements along the Project's frontage and driveways).
- Driveways and those facilities assumed to be constructed by cumulative developments to provide site access are also assumed to be in place for Opening Year Cumulative conditions only.

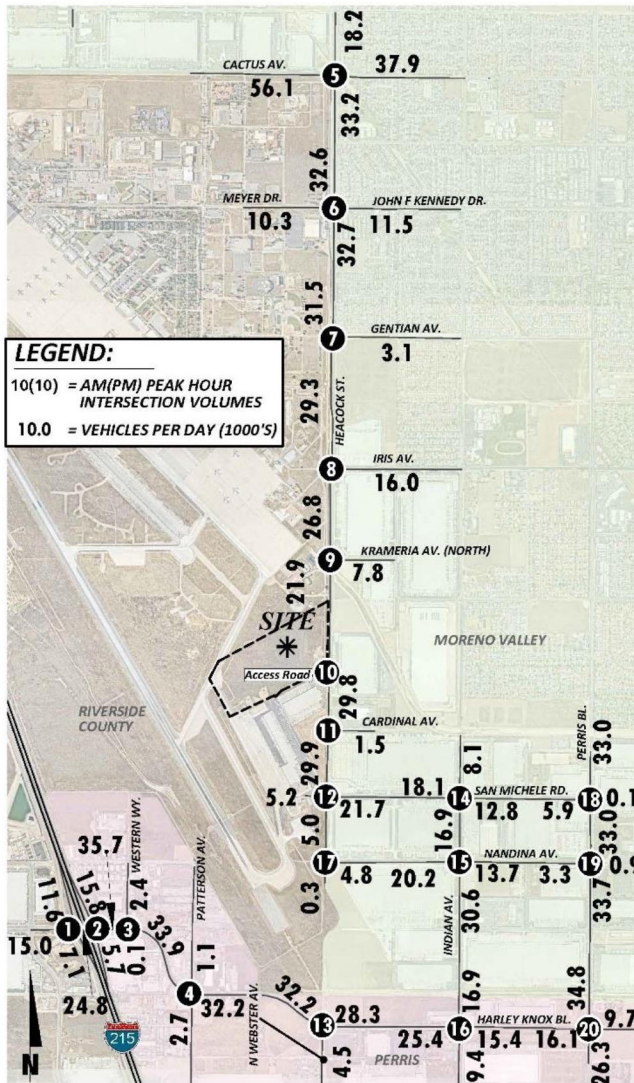
### 6.2 OPENING YEAR CUMULATIVE (2026) WITHOUT PROJECT TRAFFIC VOLUME FORECASTS

This scenario includes Existing traffic volumes plus an ambient growth factor of 12.62% plus traffic from pending and approved but not yet constructed known development projects in the area. The weekday ADT and weekday AM and PM peak hour volumes which can be expected for Opening Year Cumulative (2026) Without Project traffic conditions are shown on Exhibit 6-1.

### 6.3 OPENING YEAR CUMULATIVE (2026) WITH PROJECT TRAFFIC VOLUME FORECASTS

This scenario includes Opening Year Cumulative (2026) Without Project traffic in conjunction with the addition of Project (Non-Peak) and Project (Peak) traffic. The weekday ADT and weekday AM and PM peak hour volumes which can be expected for Opening Year Cumulative (2026) With Project (Non-Peak) traffic conditions are shown on Exhibit 6-2. The weekday ADT and weekday AM and PM peak hour volumes which can be expected for Opening Year Cumulative (2026) With Project (Peak) traffic conditions are shown on Exhibit 6-3.

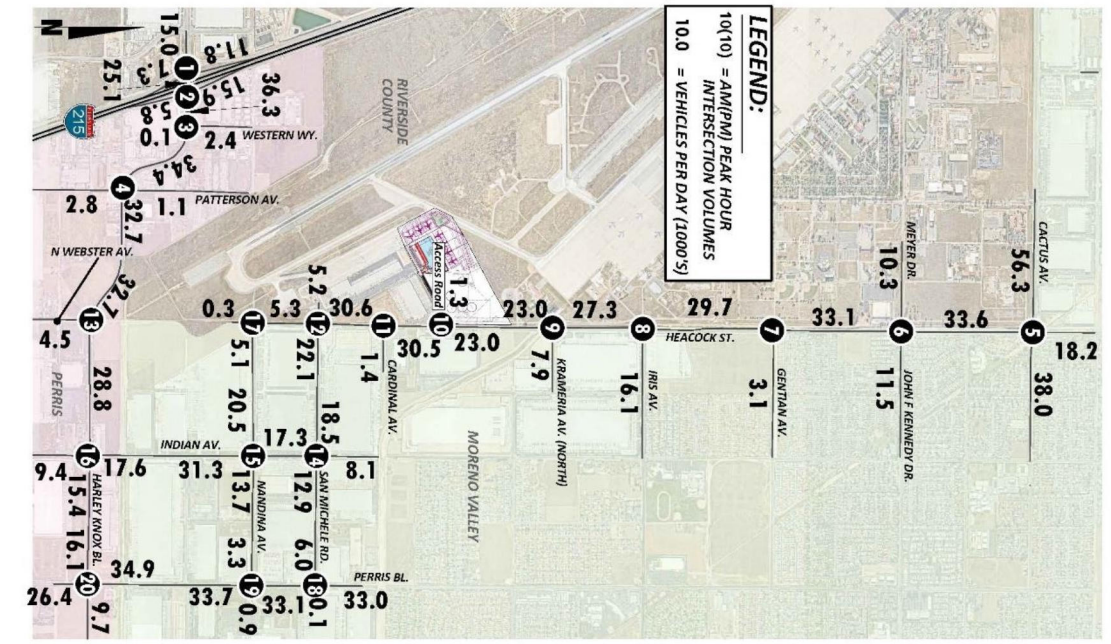
EXHIBIT 6-1: OPENING YEAR CUMULATIVE (2026) WITHOUT PROJECT TRAFFIC VOLUMES



**LEGEND:**  
 10(10) = AM(PM) PEAK HOUR INTERSECTION VOLUMES  
 10.0 = VEHICLES PER DAY (1000'S)

<p><b>1</b> I-215 SB Ramps &amp; Harley Knox Bl.</p> <p>296(213) 1(0) 816(490) 286(254) 181(590)</p> <p>833(591) 26(89)</p>	<p><b>2</b> I-215 NB Ramps &amp; Harley Knox Bl.</p> <p>1076(1039) 414(798)</p> <p>503(394) 1032(686)</p> <p>53(44) 3(3) 260(324)</p>	<p><b>3</b> Western Wy. &amp; Harley Knox Bl.</p> <p>47(133) 0(0) 7(15) 40(10) 1467(1724) 12(2)</p> <p>100(33) 1317(1020) 9(1)</p> <p>1(3) 0(0) 2(4)</p>	<p><b>4</b> Patterson Av. &amp; Harley Knox Bl.</p> <p>19(28) 4(4) 14(23) 16(10) 1413(1590) 43(42)</p> <p>23(22) 1189(915) 76(43)</p> <p>77(109) 7(2) 44(40)</p>	<p><b>5</b> Heacock St. &amp; Cactus Av.</p> <p>100(58) 351(707) 133(175) 151(125) 1954(906) 61(25)</p> <p>167(233) 003(2023) 719(1309)</p> <p>815(770) 681(637) 22(57)</p>
<p><b>6</b> Heacock St. &amp; Meyer Dr./ John F Kennedy Dr.</p> <p>21(23) 761(1157) 121(346) 220(185) 228(95) 31(34)</p> <p>40(33) 43(209) 114(337)</p> <p>35(93) 989(991) 54(83)</p>	<p><b>7</b> Heacock St. &amp; Gentian Av.</p> <p>834(1357) 97(119) 23(107) 14(7)</p> <p>903(1063) 10(14)</p>	<p><b>8</b> Heacock St. &amp; Iris Av.</p> <p>593(907) 313(519) 464(329) 350(248)</p> <p>495(800) 225(376)</p>	<p><b>9</b> Heacock St. &amp; Krameria Av. (North)</p> <p>637(770) 217(114) 127(251) 99(226)</p> <p>489(808) 199(110)</p>	<p><b>10</b> Heacock St. &amp; Access Road</p> <p>Future Intersection</p>
<p><b>11</b> Heacock St. &amp; Cardinal Av.</p> <p>867(1449) 48(17) 12(52) 11(56)</p> <p>999(995) 56(19)</p>	<p><b>12</b> Heacock St. &amp; San Michele Rd.</p> <p>47(32) 102(257) 440(820) 693(634) 310(93) 36(21)</p> <p>28(54) 74(316) 4(6)</p> <p>1(0) 52(97) 10(37)</p>	<p><b>13</b> Webster Av. &amp; Harley Knox Bl.</p> <p>1408(1451) 14(9)</p> <p>1088(876) 159(100)</p> <p>64(98) 12(14)</p>	<p><b>14</b> Indian Av. &amp; San Michele Rd.</p> <p>12(31) 129(354) 6(136) 10(56) 824(476) 172(235)</p> <p>14(21) 190(806) 333(1403)</p> <p>1424(711) 198(181) 220(210)</p>	<p><b>15</b> Indian Av. &amp; Nandina Av.</p> <p>24(35) 447(1440) 12(20) 22(55) 42(44) 33(174)</p> <p>7(45) 33(107) 147(508)</p> <p>331(139) 1629(682) 70(70)</p>
<p><b>16</b> Indian Av. &amp; Harley Knox Bl.</p> <p>173(609) 76(284) 13(53) 49(15) 815(501) 62(41)</p> <p>516(309) 456(517) 101(75)</p> <p>141(110) 299(204) 42(77)</p>	<p><b>17</b> Heacock St. &amp; Nandina Av.</p> <p>1(13) 138(256) 62(132) 0(0)</p> <p>0(3) 3(10)</p>	<p><b>18</b> Perry Bl. &amp; San Michele Rd.</p> <p>80(91) 1376(1834) 1(5) 0(0) 0(0) 2(1)</p> <p>36(146) 0(0) 21(167)</p> <p>116(70) 1620(1739) 1(0)</p>	<p><b>19</b> Indian Av. &amp; Nandina Av.</p> <p>21(50) 135(1908) 16(16) 10(11) 3(6) 6(25)</p> <p>15(49) 2(2) 20(123)</p> <p>48(49) 1699(1741) 20(15)</p>	<p><b>20</b> Perry Bl. &amp; Harley Knox Bl.</p> <p>287(301) 719(1122) 72(139) 188(106) 386(240) 9(8)</p> <p>225(318) 280(222) 22(106)</p> <p>239(48) 1169(672) 15(11)</p>

EXHIBIT 6-2: OPENING YEAR CUMULATIVE (2026) WITH PROJECT (NON-PEAK) TRAFFIC VOLUMES

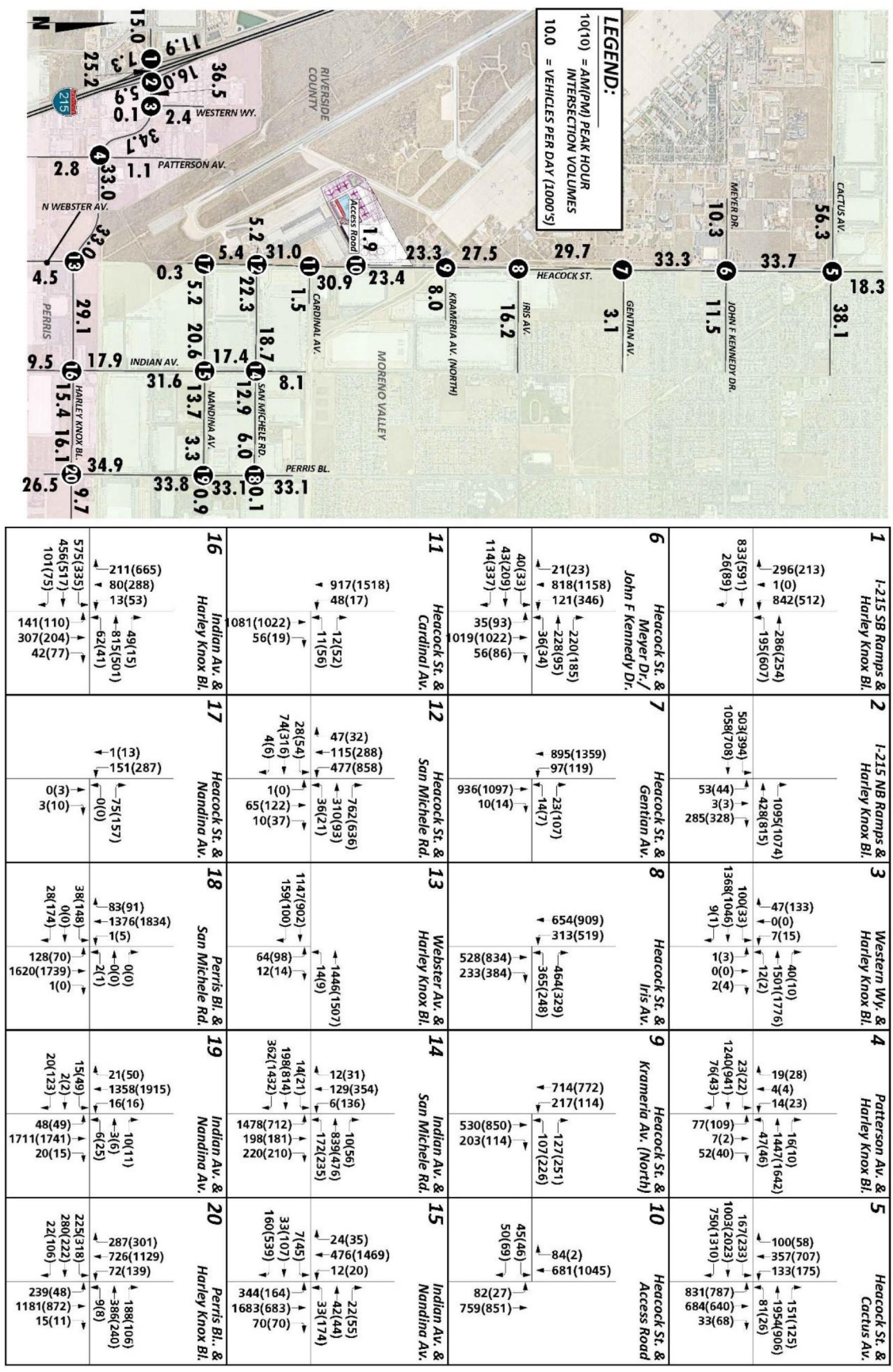


<b>1</b> I-215 SB Ramps & Harley Knox Bl.	<b>2</b> I-215 NB Ramps & Harley Knox Bl.	<b>3</b> Western Wy. & Harley Knox Bl.	<b>4</b> Patterson Av. & Harley Knox Bl.	<b>5</b> Hearcock St. & Cactus Av.
833(591) 26(89)	503(394) 1050(701)	1000(333) 1352(1038) 9(1)	23(22) 1224(933) 76(43)	167(233) 1003(2023) 740(1310)
296(213) 1(0) 834(505)	1089(1063) 424(610) 53(44) 3(3) 277(327)	47(133) 0(0) 7(15) 40(10) 1430(1759) 12(2)	19(28) 4(4) 14(23) 16(10) 1436(1625) 46(45)	100(58) 355(707) 133(175) 151(125) 1954(906) 75(25)
286(254) 191(602)	876(1358) 97(119)	635(908) 313(519)	689(772) 217(114)	57(2) 681(1045)
220(185) 228(95) 34(34)	23(107) 14(7)	464(323) 360(248)	127(251) 104(226)	31(31) 34(47)
21(23) 799(1158) 121(346)	925(1086) 10(14)	517(823) 231(382)	517(837) 202(113)	56(18) 759(851)
40(33) 43(209) 114(337)	740(635) 310(93) 36(21)	1128(894) 159(100)	12(31) 129(354) 6(136)	24(35) 467(1460) 12(20)
35(93) 1010(1012) 56(85)	1(0) 61(114) 10(37)	64(98) 12(14)	10(56) 834(476) 172(235)	22(55) 42(44) 33(174)
901(1496) 48(17)	28(54) 74(316) 4(6)	1434(1489) 14(9)	142(1) 196(612) 353(1423)	7(45) 33(107) 156(529)
12(52) 11(56)	1(13) 147(277)	82(91) 1376(1834) 1(5)	1460(712) 198(181) 220(210)	340(156) 1665(683) 70(70)
56(19)	71(149) 0(0)	0(0) 0(0) 2(1)	198(181) 6(25)	287(301) 723(1127) 72(139)
141(110) 304(204) 42(77)	0(3) 3(10)	37(47) 0(0) 25(172)	15(49) 2(2) 20(123)	225(318) 280(222) 22(106)
49(15) 815(501) 62(41)	1(13) 147(277)	82(91) 1376(1834) 1(5)	21(50) 1355(1913) 16(16)	188(106) 386(240) 9(6)
199(647) 79(287) 13(53)	71(149) 0(0)	0(0) 0(0) 2(1)	10(11) 3(6) 6(25)	188(106) 386(240) 9(6)
556(327) 456(517) 101(75)	0(3) 3(10)	37(47) 0(0) 25(172)	15(49) 2(2) 20(123)	225(318) 280(222) 22(106)
141(110) 304(204) 42(77)	0(3) 3(10)	124(70) 1620(1739) 1(0)	48(49) 1707(1741) 20(15)	239(48) 1177(872) 15(11)





EXHIBIT 6-3: OPENING YEAR CUMULATIVE (2026) WITH PROJECT (PEAK) TRAFFIC VOLUMES



## 6.4 INTERSECTION OPERATIONS ANALYSIS

### 6.4.1 OPENING YEAR CUMULATIVE (2026) WITHOUT PROJECT TRAFFIC CONDITIONS

Opening Year Cumulative (2026) peak hour traffic operations have been evaluated for the study area intersections based on the analysis methodologies presented in Section 2.2 *Intersection Capacity Analysis* of this report. The intersection analysis results are summarized in Table 6-1, which indicates that the following study area intersections are anticipated to continue to operate at an unacceptable LOS during the peak hours under Opening Year Cumulative (2026) Without Project traffic conditions:

- I-215 SB Ramps & Harley Knox Boulevard (#1) – LOS E AM peak hour; LOS F PM peak hour
- I-215 NB Ramps & Harley Knox Boulevard (#2) – LOS F AM and PM peak hours
- Heacock Street & Cactus Avenue (#5) – LOS F AM and PM peak hours
- Heacock Street & Meyer Drive/John F. Kennedy Drive (#6) – LOS E PM peak hour only
- Heacock Street & Cardinal Avenue (#11) – LOS F PM peak hour only
- Heacock Street & San Michele Road (#12) – LOS F AM and PM peak hours
- Indian Avenue & San Michele Road (#14) – LOS F AM and PM peak hours
- Indian Avenue & Nandina Avenue (#15) – LOS F PM peak hour only
- Indian Avenue & Harley Knox Boulevard (#16) – LOS E PM peak hour only
- Perris Boulevard & Harley Knox Boulevard (#20) – LOS E PM peak hour only

The intersection operations analysis worksheets for Opening Year Cumulative (2026) Without Project traffic conditions are included in Appendix 6.1 of this TA.

### 6.4.2 OPENING YEAR CUMULATIVE (2026) WITH PROJECT TRAFFIC CONDITIONS

As shown in Table 6-1, with the addition of Project (Non-Peak) and Project (Peak) traffic, there are no additional study area intersections anticipated to operate at a deficient LOS during the peak hours although the following locations have LOS changes:

- I-215 SB Ramps & Harley Knox Boulevard (#1) – LOS E to LOS F in the AM peak hour only
- Indian Avenue & Harley Knox Boulevard (#16) – LOS E to LOS F in the PM peak hour only

The intersection operations analysis worksheets for Opening Year Cumulative (2026) With Project (Non-Peak) and With Project (Peak) traffic conditions are included in Appendices 6.2 and 6.3, respectively.

**TABLE 6-1: INTERSECTION ANALYSIS FOR OPENING YEAR CUMULATIVE (2026) CONDITIONS**

#	Intersection	Traffic Control <sup>2</sup>	2026 Without Project				2026 With Project (Non-Peak)					2026 With Project (Peak)						
			Delay <sup>1</sup> (secs.)		Level of Service		Delay <sup>1</sup> (secs.)		Level of Service		Project % of Total Traffic <sup>4</sup>	Delay <sup>1</sup> (secs.)		Level of Service		Project % of Total Traffic <sup>4</sup>		
			AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM		
1	I-215 SB Ramps & Harley Knox Bl.	TS	79.6	98.6	E	F	85.3	106.2	F	F	--	--	87.7	110.7	F	F	--	--
2	I-215 NB Ramps & Harley Knox Bl.	TS	158.2	165.1	F	F	167.8	177.7	F	F	--	--	171.6	181.4	F	F	--	--
3	Western Wy. & Harley Knox Bl.	TS	8.6	9.8	A	A	8.6	9.9	A	A	--	--	8.7	10.0	A	A	--	--
4	Patterson Av. & Harley Knox Bl.	TS	11.2	17.5	B	B	11.5	193.0	B	B	--	--	11.9	20.0	B	B	--	--
5	Heacock St. & Cactus Av.	TS	140.3	172.2	F	F	141.8	172.4	F	F	0.9%	0.3%	142.7	172.9	F	F	1.4%	0.5%
6	Heacock St. & Meyer Dr./John F. Kennedy Dr.	TS	28.4	73.1	C	E	28.8	73.6	C	E	2.4%	0.7%	29.1	74.2	C	E	3.4%	1.0%
7	Heacock St. & Gentian Av.	TS	7.3	10.4	A	B	7.4	10.5	A	B	--	--	7.4	10.5	A	B	--	--
8	Heacock St. & Iris Av.	TS	22.9	25.6	C	C	23.3	26.1	C	C	--	--	23.5	26.4	C	C	--	--
9	Heacock St. & Krameria Av. (North)	TS	16.5	22.3	B	C	16.5	23.2	B	C	--	--	16.7	23.5	B	C	--	--
10	Heacock St. & Access Road	TS <sup>3</sup>	Future Intersection				7.7	10.7	A	B	--	--	8.8	13.7	A	B	--	--
11	Heacock St. & Cardinal Av.	CSS	29.1	59.3	D	F	31.4	62.5	D	F	4.3%	2.5%	32.4	64.2	D	F	6.2%	3.6%
12	Heacock St. & San Michele Rd.	TS	>200.0	>200.0	F	F	>200.0	>200.0	F	F	4.8%	2.7%	>200.0	>200.0	F	F	6.8%	3.9%
13	Webster Av. & Harley Knox Bl.	RA	11.6	18.0	B	C	11.9	20.1	B	C	--	--	12.3	21.7	B	C	--	--
14	Indian Av. & San Michele Rd.	TS	>200.0	>200.0	F	F	>200.0	>200.0	F	F	--	--	>200.0	>200.0	F	F	--	--
15	Indian Av. & Nandina Av.	TS	24.7	>200.0	D	F	26.7	>200.0	C	F	--	--	27.9	>200.0	C	F	--	--
16	Indian Av. & Harley Knox Bl.	TS	39.1	80.0	D	E	48.8	98.4	D	F	--	--	54.2	106.4	D	F	--	--
17	Heacock St. & Nandina Av.	CSS	8.6	9.0	A	A	8.7	9.3	A	A	--	--	8.8	9.4	A	A	--	--
18	Perris Bl. & San Michele Rd.	TS	11.1	14.8	B	B	11.5	14.8	B	B	--	--	11.7	14.8	B	B	--	--
19	Perris Bl. & Nandina Av.	TS	11.4	16.9	B	B	11.4	16.9	B	B	--	--	11.4	16.9	B	B	--	--
20	Perris Bl. & Harley Knox Bl.	TS	35.6	60.4	D	E	35.7	60.4	D	E	--	--	35.8	60.5	D	E	--	--

L = Left; T = Through; R = Right; >= Right-Turn Overlap Phasing; >>=Free-Right Turn Lane; d=Defacto Right Turn Lane

\* **BOLD** = Level of Service (LOS) does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

<sup>1</sup> Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

<sup>2</sup> CSS = Cross-street Stop; TS = Traffic Signal; RA = Roundabout; **TS** = Improvement

<sup>3</sup> The Project will construct a traffic signal as part of the Project design features.

<sup>4</sup> Project percent of total traffic is calculated for deficient intersections within the jurisdiction of March JPA only. Based on the March JPA traffic study guidelines, a project-related traffic deficiency is deemed to occur if the Project percent of total traffic is 2.0% or more.

## 6.5 ROADWAY SEGMENT ANALYSIS

The roadway segment capacities are approximate figures only and are used at the General Plan level to assist in determining the roadway functional classification (number of through lanes) needed to meet traffic demand. Tables 6-2 provides a summary of the Opening Year Cumulative (2026) Without Project conditions roadway segment capacity analysis based on the applicable roadway segment capacity thresholds. As shown on Table 6-2, the following study area roadway segments are anticipated to operate at an unacceptable LOS based on the applicable planning level daily roadway capacity thresholds:

- Cactus Avenue, West of Heacock Street (#4) – LOS E
- Nandina Avenue, Heacock Street to Perris Boulevard (#8) – LOS F

There are no new roadway segment deficiencies anticipated with the addition of Project traffic, however, the following roadway segment LOS worsens with the addition of Project (Peak) traffic only:

- Cactus Avenue, West of Heacock Street (#4) – LOS E to LOS F

Opening Year Cumulative (2026) With Project (Non-Peak) and With Project (Peak) volumes and roadway segment analysis results are presented on Table 6-2 and Table 6-3, respectively.



**TABLE 6-2: ROADWAY SEGMENT ANALYSIS FOR OPENING YEAR CUMULATIVE (2026) (NON-PEAK) CONDITIONS**

#	Roadway	Segment Limits	Roadway Section	LOS Capacity <sup>1</sup>	2026 NP	V/C <sup>2</sup>	LOS <sup>3</sup>	2026 WP	V/C <sup>2</sup>	LOS <sup>3</sup>
1		Cactus Av. to Iris Av.	4D	37,500	33,179	0.88	D	33,549	0.89	D
2	Heacock St.	Iris Av. to San Michele Rd.	4D	37,500	29,885	0.80	C	30,611	0.82	C
3		San Michele Rd. to Harley Knox Bl.	3D	28,125	5,035	0.18	A	5,311	0.19	A
4	Cactus Av.	West of Heacock St.	6D	56,300	<b>56,048</b>	<b>1.00</b>	<b>E</b>	<b>56,248</b>	<b>1.00</b>	<b>E</b>
5	Indian Av.	San Michele Rd. to Harley Knox Bl.	4D	37,500	16,900	0.45	A	17,250	0.46	A
6	Perris Bl.	San Michele Rd. to Harley Knox Bl.	6D	56,300	34,766	0.62	A	34,846	0.62	A
7	San Michele Rd.	Heacock St. to Perris Bl.	4D	37,500	18,077	0.48	A	18,127	0.48	A
8	Nandina Av.	Heacock St. to Perris Bl.	2D	12,500	<b>20,207</b>	<b>1.62</b>	<b>F</b>	<b>20,483</b>	<b>1.64</b>	<b>F</b>

<sup>1</sup> These maximum roadway capacities are from the City of Moreno Valley Transportation Impact Analysis Preparation Guide for VMT and LOS Assessment, June 2020.

<sup>2</sup> V/C = Volume to Capacity Ratio

<sup>3</sup> LOS = Level of Service

**TABLE 6-3: ROADWAY SEGMENT ANALYSIS FOR OPENING YEAR CUMULATIVE (2026) (PEAK) CONDITIONS**

#	Roadway	Segment Limits	Roadway Section	LOS Capacity <sup>1</sup>	2026 NP	V/C <sup>2</sup>	LOS <sup>3</sup>	2026 WP	V/C <sup>2</sup>	LOS <sup>3</sup>
1		Cactus Av. to Iris Av.	4D	37,500	33,179	0.88	D	33,723	0.90	D
2	Heacock St.	Iris Av. to San Michele Rd.	4D	37,500	29,885	0.80	C	30,955	0.83	D
3		San Michele Rd. to Harley Knox Bl.	3D	28,125	5,035	0.18	A	5,443	0.19	A
4	Cactus Av.	West of Heacock St.	6D	56,300	<b>56,048</b>	<b>1.00</b>	<b>E</b>	<b>56,342</b>	<b>1.00</b>	<b>F</b>
5	Indian Av.	San Michele Rd. to Harley Knox Bl.	4D	37,500	16,900	0.45	A	17,416	0.46	A
6	Perris Bl.	San Michele Rd. to Harley Knox Bl.	6D	56,300	34,766	0.62	B	34,884	0.62	B
7	San Michele Rd.	Heacock St. to Perris Bl.	4D	37,500	18,077	0.48	A	18,741	0.50	A
8	Nandina Av.	Heacock St. to Perris Bl.	2D	12,500	<b>20,207</b>	<b>1.62</b>	<b>F</b>	<b>20,615</b>	<b>1.65</b>	<b>F</b>

<sup>1</sup> These maximum roadway capacities are from the City of Moreno Valley Transportation Impact Analysis Preparation Guide for VMT and LOS Assessment, June 2020.

<sup>2</sup> V/C = Volume to Capacity Ratio

<sup>3</sup> LOS = Level of Service

## 6.6 TRAFFIC SIGNAL WARRANTS ANALYSIS

The following unsignalized study area intersection is anticipated to warrant a traffic signal for Opening Year Cumulative (2026) Without Project traffic conditions (see Appendix 6.4) based on peak hour volumes:

- Heacock Street & Cardinal Avenue (#11)

Heacock Street & Access Road is not anticipated to meet a peak hour volume based or planning level traffic signal warrant under Opening Year Cumulative (2026) Without Project, With Project (Non-Peak), or With Project (Peak) traffic conditions (see Appendices 6.4, 6.5, and 6.6).

## 6.7 OFF-RAMP QUEUING ANALYSIS

A queuing analysis was performed for the off-ramps at the I-215 Freeway at Harley Knox Boulevard interchange to assess vehicle queues for the off ramps that may potentially result in deficient peak hour operations at the ramp-to-arterial intersections and may potentially “spill back” onto the I-215 Freeway mainline. Queuing analysis findings are presented in Table 6-4. It is important to note that off-ramp lengths are consistent with the measured distance between the intersection and the freeway mainline. As shown in Table 6-4, there are no movements that

are anticipated to experience queuing issues during the weekday AM or weekday PM peak 95<sup>th</sup> percentile traffic flows for Opening Year Cumulative (2026) Without Project, With Project (Non-Peak), and With Project (Peak) traffic conditions, consistent with Existing (2020) traffic conditions. Worksheets for Opening Year Cumulative (2026) Without Project, With Project (Non-Peak), and With Project (Peak) traffic conditions off-ramp queuing analysis are provided in Appendices 6.7, 6.8, and 6.9, respectively.

**TABLE 6-4: PEAK HOUR FREEWAY OFF-RAMP QUEUING SUMMARY FOR OPENING YEAR CUMULATIVE (2026) CONDITIONS**

Intersection	Movement	Available Stacking Distance (Feet)	2026 Without Project				2026 With Project (Non-Peak)				2026 With Project (Peak)			
			95th Percentile Queue (Feet)		Acceptable? <sup>1</sup>		95th Percentile Queue (Feet)		Acceptable? <sup>1</sup>		95th Percentile Queue (Feet)		Acceptable? <sup>1</sup>	
			AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
I-215 Southbound Ramps & Harley Knox Bl.	SBL/T	1,330	668 <sup>2</sup>	408 <sup>2</sup>	Yes	Yes	687 <sup>2</sup>	428	Yes	Yes	694 <sup>2</sup>	436 <sup>2</sup>	Yes	Yes
	SBR	270	45	41	Yes	Yes	45	41	Yes	Yes	45	41	Yes	Yes
I-215 Northbound Ramps & Harley Knox Bl.	NBL/T	1,120	54	42	Yes	Yes	54	42	Yes	Yes	54	42	Yes	Yes
	NBR	265	191 <sup>2</sup>	153 <sup>2</sup>	Yes	Yes	213 <sup>2</sup>	163 <sup>2</sup>	Yes	Yes	224 <sup>2</sup>	167 <sup>2</sup>	Yes	Yes

<sup>1</sup> Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided. An additional 15 feet of stacking which is assumed to be provided in the transition for turn pockets is reflected in the stacking distance shown on this table, where applicable.

<sup>2</sup> 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

## 6.8 DEFICIENCIES AND IMPROVEMENTS

### 6.8.1 IMPROVEMENTS TO ADDRESS DEFICIENCIES AT INTERSECTIONS

This section provides a summary of Project deficiencies and identified improvements. Based on the deficiency criteria discussed in Section 2.6 *Deficiency Criteria*, study area intersections were found to be deficient.

The effectiveness of the recommended improvement strategies to address Opening Year Cumulative (2026) traffic deficiencies are presented in Table 6-5. If not constructed by the Project, the Project Applicant should contribute to these improvements through payment of fair share or TUMF fees. Worksheets for Opening Year Cumulative (2026) Without Project, With Project (Non-Peak), and With Project (Peak) conditions, with improvements, HCM calculation worksheets are provided in Appendices 6.10, 6.11, and 6.12, respectively.

**TABLE 6-5: INTERSECTION ANALYSIS FOR OPENING YEAR CUMULATIVE (2026) CONDITIONS WITH IMPROVEMENTS**

#	Intersection	Traffic Control <sup>3</sup>	Intersection Approach Lanes <sup>1</sup>												Delay <sup>2</sup> (secs.)		Level of Service		
			Northbound			Southbound			Eastbound			Westbound			AM	PM	AM	PM	
			L	T	R	L	T	R	L	T	R	L	T	R					
1	I-215 SB Ramps & Harley Knox Bl.																		
	- Without Project	TS	0	0	0	<u>1</u>	1	1	0	2	d	<u>2</u>	<u>1</u>	0	25.0	20.2	C	C	
	- With Project (Non-Peak)	TS	0	0	0	<u>1</u>	1	1	0	2	d	<u>2</u>	<u>1</u>	0	25.2	20.7	C	C	
	- With Project (Peak)	TS	0	0	0	<u>1</u>	1	1	0	2	d	<u>2</u>	<u>1</u>	0	25.3	21.0	C	C	
2	I-215 NB Ramps & Harley Knox Bl.																		
	- Without Project	TS	0	1	1	0	0	0	<u>2</u>	2	0	0	2	<u>1&gt;&gt;</u>	18.5	24.6	B	C	
	- With Project (Non-Peak)	TS	0	1	1	0	0	0	<u>2</u>	2	0	0	2	<u>1&gt;&gt;</u>	18.8	24.5	B	C	
	- With Project (Peak)	TS	0	1	1	0	0	0	<u>2</u>	2	0	0	2	<u>1&gt;&gt;</u>	18.9	24.5	B	C	
5	Heacock St. & Cactus Av.																		
	- Without Project	TS	2	2	0	1	2	0	1	<u>3</u>	1>	1	<u>3</u>	0	43.3	42.4	D	D	
	- With Project (Non-Peak)	TS	2	2	0	1	2	0	1	<u>3</u>	1>	1	<u>3</u>	0	44.6	43.3	D	D	
	- With Project (Peak)	TS	2	2	0	1	2	0	1	<u>3</u>	1>	1	<u>3</u>	0	45.2	43.8	D	D	
6	Heacock St. & Meyer Dr./John F. Kennedy Dr.																		
	- Without Project	TS	1	2	d	<u>2</u>	2	<u>0</u>	1	1	1	1	2	0	20.2	45.7	C	D	
	- With Project (Non-Peak)	TS	1	2	d	<u>2</u>	2	<u>0</u>	1	1	1	1	2	0	20.3	45.8	B	D	
	- With Project (Peak)	TS	1	2	d	<u>2</u>	2	<u>0</u>	1	1	1	1	2	0	20.4	45.8	C	D	
11	Heacock St. & Cardinal Av.																		
	- Without Project	<b>TS</b>	0	2	0	1	2	0	0	0	0	1	0	1	6.1	8.5	A	A	
	- With Project (Non-Peak)	<b>TS</b>	0	2	0	1	2	0	0	0	0	1	0	1	6.1	8.5	A	A	
	- With Project (Peak)	<b>TS</b>	0	2	0	1	2	0	0	0	0	1	0	1	6.1	8.5	A	A	
12	Heacock St. & San Michele Rd.																		
	- Without Project	TS	1	2	0	<u>2</u>	1	1	1	1	1	1	1	<u>1&gt;</u>	17.8	27.0	B	C	
	- With Project (Non-Peak)	TS	1	2	0	<u>2</u>	1	1	1	1	1	1	1	<u>1&gt;</u>	19.0	28.8	B	C	
	- With Project (Peak)	TS	1	2	0	<u>2</u>	1	1	1	1	1	1	1	<u>1&gt;</u>	19.8	29.7	B	C	
14	Indian Av. & San Michele Rd.																		
	- Without Project	TS	2	1	1	1	2	0	1	2	<u>2&gt;</u>	<u>2</u>	2	0	36.7	36.8	D	D	
	- With Project (Non-Peak)	TS	2	1	1	1	2	0	1	2	<u>2&gt;</u>	<u>2</u>	2	0	40.0	37.0	D	D	
	- With Project (Peak)	TS	2	1	1	1	2	0	1	2	<u>2&gt;</u>	<u>2</u>	2	0	41.8	37.1	D	D	
15	Indian Av. & Nandina Av.																		
	- Without Project	TS	<u>2</u>	2	0	1	2	0	1	1	<u>1&gt;</u>	1	1	0	28.9	35.1	C	D	
	- With Project (Non-Peak)	TS	<u>2</u>	2	0	1	2	0	1	1	<u>1&gt;</u>	1	1	0	31.4	39.9	C	D	
	- With Project (Peak)	TS	<u>2</u>	2	0	1	2	0	1	1	<u>1&gt;</u>	1	1	0	32.8	42.5	C	D	
16	Indian Av. & Harley Knox Bl.																		
	- Without Project	TS	2	2	1	1	2	0	<u>2</u>	3	<u>0</u>	1	3	0	29.4	23.7	C	C	
	- With Project (Non-Peak)	TS	2	2	1	1	2	0	<u>2</u>	3	<u>0</u>	1	3	0	31.7	25.0	C	C	
	- With Project (Peak)	TS	2	2	1	1	2	0	<u>2</u>	3	<u>0</u>	1	3	0	32.9	25.6	C	C	
20	Perris Bl. & Harley Knox Bl.																		
	- Without Project	TS	2	3	1	2	3	1	<u>2</u>	2	1	2	3	1	22.5	23.9	C	C	
	- With Project (Non-Peak)	TS	2	3	1	2	3	1	<u>2</u>	2	1	2	3	1	22.5	24.0	C	C	
	- With Project (Peak)	TS	2	3	1	2	3	1	<u>2</u>	2	1	2	3	1	22.6	24.0	C	C	

\* **BOLD** = Level of Service (LOS) does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

<sup>1</sup> When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.  
 L = Left; T = Through; R = Right; > = Right-Turn Overlap Phasing; >> = Free Right Turn Lane; 1 = Improvement

<sup>2</sup> Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

<sup>3</sup> TS = Traffic Signal; **TS** = Improvement



### 6.8.2 IMPROVEMENTS TO ADDRESS DEFICIENCIES AT ROADWAY SEGMENT

The intersection of Heacock Street and Cactus Avenue is anticipated to operate at an acceptable LOS with the additional improvements identified on Table 6-5 (which includes adding a 3<sup>rd</sup> eastbound through lane and 3<sup>rd</sup> westbound through lane). As such, additional roadway widening is not recommended for the segment of Cactus Avenue, west of Heacock Street, beyond those improvements needed to support acceptable peak hour operations at the intersection of Heacock Street and Cactus Avenue.

In an effort to conduct a conservative analysis, the highest projected daily volumes along Nandina Avenue have been reported for the purposes of this focused traffic assessment. Nandina Avenue is classified as a 4-lane divided minor arterial on the City of Moreno Valley’s General Plan Circulation Element and it is anticipated to operate at an acceptable LOS with the implementation of its ultimate cross-section (which has a daily capacity of 37,500 vehicles per day).

Table 6-6 summarizes the anticipated LOS with the implementation of the ultimate roadway cross-section for Nandina Avenue.

**TABLE 6-6: ROADWAY SEGMENT ANALYSIS FOR OPENING YEAR CUMULATIVE (2026) CONDITIONS WITH IMPROVEMENTS**

#### With Project (Non-Peak):

#	Roadway	Segment Limits	Roadway Section	LOS Capacity <sup>1</sup>	2026 NP	V/C <sup>2</sup>	LOS <sup>3</sup>	2026 WP	V/C <sup>2</sup>	LOS <sup>3</sup>
8	Nandina Av.	Heacock St. to Perris Bl.	<b>4D</b>	37,500	20,207	0.54	A	20,483	0.55	A

<sup>1</sup> These maximum roadway capacities are from the City of Moreno Valley Transportation Impact Analysis Preparation Guide for VMT and LOS Assessment, June 2020.

<sup>2</sup> V/C = Volume to Capacity Ratio

<sup>3</sup> LOS = Level of Service

#### With Project (Peak):

#	Roadway	Segment Limits	Roadway Section	LOS Capacity <sup>1</sup>	2026 NP	V/C <sup>2</sup>	LOS <sup>3</sup>	2026 WP	V/C <sup>2</sup>	LOS <sup>3</sup>
8	Nandina Av.	Heacock St. to Perris Bl.	<b>4D</b>	37,500	20,207	0.54	A	20,615	0.55	A

<sup>1</sup> These maximum roadway capacities are from the City of Moreno Valley Transportation Impact Analysis Preparation Guide for VMT and LOS Assessment, June 2020.

<sup>2</sup> V/C = Volume to Capacity Ratio

<sup>3</sup> LOS = Level of Service

### 6.8.3 IMPROVEMENTS TO ADDRESS DEFICIENCIES ON OFF-RAMP QUEUES

As shown previously in Table 6-4, there are no anticipated peak hour queuing issues at the I-215 Freeway and Harley Knox Boulevard interchange for Opening Year Cumulative (2026) traffic conditions. As such, no improvements have been identified.

## 7 HORIZON YEAR (2045) TRAFFIC CONDITIONS

This section discusses the methods used to develop Horizon Year (2045) Without and With Project traffic forecasts, and the resulting intersection operations, roadway segment, traffic signal warrant, and freeway off-ramp queuing analyses.

### 7.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for Horizon Year (2045) conditions are consistent with those shown previously on Exhibit 3-1, with the exception of the following:

- Project driveways and those facilities assumed to be constructed by the Project to provide site access are also assumed to be in place for Horizon Year conditions only (e.g., intersection and roadway improvements along the Project's frontage and driveways).
- Driveways and those facilities assumed to be constructed by cumulative developments to provide site access are also assumed to be in place for Horizon Year conditions only (e.g., intersection and roadway improvements along the cumulative development's frontages and driveways).
- Other parallel facilities, that although not evaluated for the purposes of this analysis, are anticipated to be in place for Horizon Year traffic conditions and would affect the travel patterns within the study area.
- The Heacock Street extension, from Nandina Avenue to Harley Knox Boulevard, is assumed to be in place for With Heacock Street Extension conditions only.

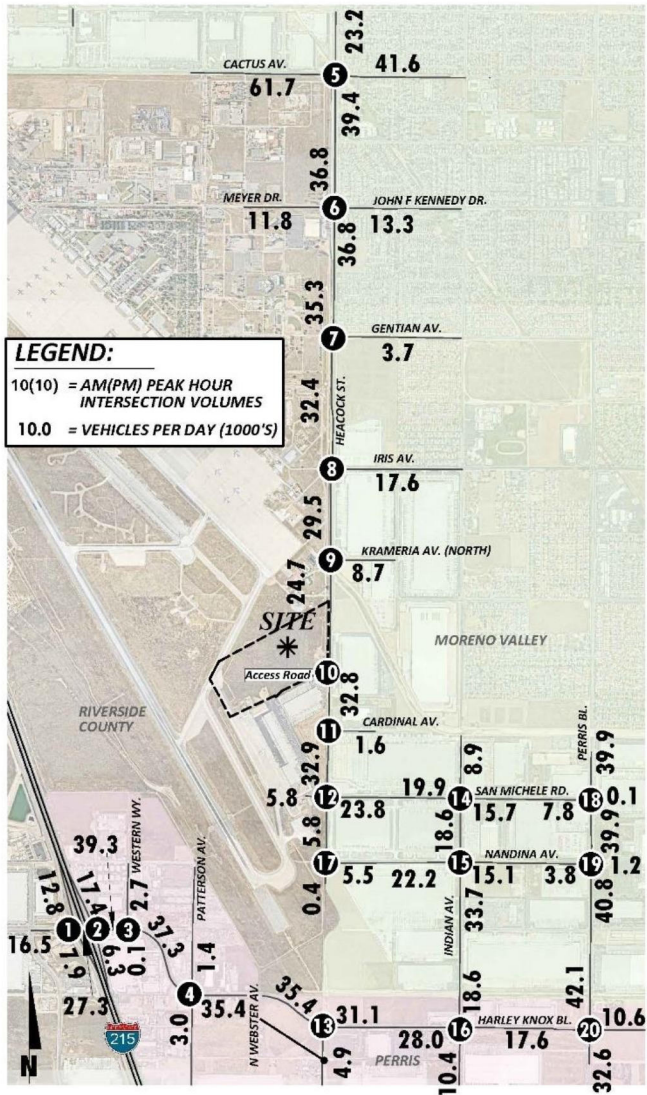
### 7.2 HORIZON YEAR (2045) WITHOUT HEACOCK STREET EXTENSION TRAFFIC VOLUME FORECASTS

#### 7.2.1 HORIZON YEAR (2045) WITHOUT PROJECT TRAFFIC VOLUME FORECASTS

This scenario includes Existing baseline volumes, cumulative development traffic, and growth between 2020 to 2045 (annual growth compounded over 25 years based on the average growth for employment, households, and population per the latest SCAG RTP for Riverside County). The weekday ADT and weekday AM and PM peak hour volumes which can be expected for Horizon Year (2045) Without Project traffic conditions are shown on Exhibit 7-1.



EXHIBIT 7-1: HORIZON YEAR (2045) WITHOUT PROJECT (WITHOUT HEACOCK STREET EXTENSION) TRAFFIC VOLUMES



**LEGEND:**  
 10(10) = AM(PM) PEAK HOUR INTERSECTION VOLUMES  
 10.0 = VEHICLES PER DAY (1000'S)

<p><b>1</b> I-215 SB Ramps &amp; Harley Knox Bl.</p> <p>↓ 325(235)                  ↓ 2(0)                  ↓ 998(539)</p> <p>↑ 253(282)                  ↓ 199(649)</p> <p>811(900) →                  28(98) ↓</p>	<p><b>2</b> I-215 NB Ramps &amp; Harley Knox Bl.</p> <p>↑ 1220(1143)                  ↓ 393(881)</p> <p>59(48) ↑                  5(5) ↑                  286(356) ↓</p> <p>441(493) →                  1367(946) ↓</p>	<p><b>3</b> Western Wy. &amp; Harley Knox Bl.</p> <p>↓ 52(146)                  ↓ 0(0)                  ↓ 8(16)</p> <p>↑ 50(11)                  ↓ 1640(1897)                  ↓ 13(2)</p> <p>110(36) →                  1448(1265) ↓                  10(1) ↓</p> <p>1(3) ↓                  0(0) ↓                  2(4) ↓</p>	<p><b>4</b> Patterson Av. &amp; Harley Knox Bl.</p> <p>↓ 25(38)                  ↓ 5(5)                  ↓ 17(28)</p> <p>↑ 20(11)                  ↓ 1593(1752)                  ↓ 47(46)</p> <p>30(30) →                  1308(1006) ↓                  84(48) ↓</p> <p>85(120) ↑                  9(3) ↑                  48(44) ↓</p>	<p><b>5</b> Heacock St. &amp; Cactus Av.</p> <p>↑ 114(64)                  ↓ 386(778)                  ↓ 149(192)</p> <p>↑ 166(137)                  ↓ 2149(996)                  ↓ 68(27)</p> <p>184(261) →                  1103(2225) ↓                  791(1439) ↓</p> <p>897(847) ↑                  750(701) ↑                  24(62) ↓</p>
<p><b>6</b> Heacock St. &amp; Meyer Dr./ John F Kennedy Dr.</p> <p>↓ 26(25)                  ↓ 837(1365)                  ↓ 134(395)</p> <p>↑ 256(204)                  ↓ 290(104)                  ↓ 34(37)</p> <p>52(40) →                  48(259) ↓                  130(431) ↓</p> <p>38(102) ↑                  1144(1090) ↑                  65(91) ↓</p>	<p><b>7</b> Heacock St. &amp; Gentian Av.</p> <p>↓ 917(1575)                  ↓ 121(144)</p> <p>↑ 25(132)                  ↓ 18(9)</p> <p>52(40) →                  48(259) ↓                  130(431) ↓</p> <p>38(102) ↑                  1144(1090) ↑                  65(91) ↓</p>	<p><b>8</b> Heacock St. &amp; Iris Av.</p> <p>↓ 652(998)                  ↓ 352(626)</p> <p>↑ 553(373)                  ↓ 385(273)</p> <p>52(40) →                  48(259) ↓                  130(431) ↓</p> <p>38(102) ↑                  1144(1090) ↑                  65(91) ↓</p>	<p><b>9</b> Heacock St. &amp; Krameria Av. (North)</p> <p>↓ 700(648)                  ↓ 239(126)</p> <p>↑ 140(276)                  ↓ 109(248)</p> <p>52(40) →                  48(259) ↓                  130(431) ↓</p> <p>38(102) ↑                  1144(1090) ↑                  65(91) ↓</p>	<p><b>10</b> Heacock St. &amp; Access Road</p> <p><b>Future Intersection</b></p>
<p><b>11</b> Heacock St. &amp; Cardinal Av.</p> <p>↓ 954(1594)                  ↓ 52(19)</p> <p>↑ 14(57)                  ↓ 12(61)</p> <p>1099(1095) →                  62(21) ↓</p>	<p><b>12</b> Heacock St. &amp; San Michele Rd.</p> <p>↓ 52(36)                  ↓ 126(322)                  ↓ 484(901)</p> <p>↑ 762(698)                  ↓ 341(102)                  ↓ 39(23)</p> <p>31(59) →                  82(348) ↓                  5(8) ↓</p> <p>2(0) ↓                  57(116) ↓                  11(40) ↓</p>	<p><b>13</b> Webster Av. &amp; Harley Knox Bl.</p> <p>↑ 1613(1815)                  ↓ 15(10)</p> <p>1197(968) →                  175(110) ↓</p> <p>70(108) ↓                  14(15) ↓</p>	<p><b>14</b> Indian Av. &amp; San Michele Rd.</p> <p>↓ 14(34)                  ↓ 141(390)                  ↓ 6(168)</p> <p>↑ 11(75)                  ↓ 907(523)                  ↓ 189(259)</p> <p>15(23) →                  209(887) ↓                  366(1543) ↓</p> <p>1566(782) ↑                  218(200) ↑                  242(231) ↓</p>	<p><b>15</b> Indian Av. &amp; Nandina Av.</p> <p>↓ 27(38)                  ↓ 492(1585)                  ↓ 13(26)</p> <p>↑ 26(72)                  ↓ 48(48)                  ↓ 37(192)</p> <p>8(50) →                  37(126) ↓                  161(558) ↓</p> <p>364(153) ↑                  1792(750) ↑                  77(77) ↓</p>
<p><b>16</b> Indian Av. &amp; Harley Knox Bl.</p> <p>↓ 191(670)                  ↓ 91(337)                  ↓ 16(67)</p> <p>↑ 64(16)                  ↓ 947(551)                  ↓ 68(45)</p> <p>567(340) →                  502(569) ↓                  111(82) ↓</p> <p>155(121) ↑                  360(266) ↑                  46(85) ↓</p>	<p><b>17</b> Heacock St. &amp; Nandina Av.</p> <p>↓ 2(17)                  ↓ 152(312)</p> <p>↑ 69(145)                  ↓ 0(0)</p> <p>0(3) →                  3(14) ↓</p>	<p><b>18</b> Perris Bl. &amp; San Michele Rd.</p> <p>↓ 107(122)                  ↓ 1514(2018)                  ↓ 2(6)</p> <p>↑ 0(0)                  ↓ 0(0)                  ↓ 3(2)</p> <p>48(196) →                  0(0) ↓                  29(223) ↓</p> <p>155(93) ↑                  1782(1913) ↑                  2(0) ↓</p>	<p><b>19</b> Indian Av. &amp; Nandina Av.</p> <p>↓ 23(60)                  ↓ 1486(2099)                  ↓ 21(21)</p> <p>↑ 14(15)                  ↓ 10(227)                  ↓ 8(33)</p> <p>16(54) →                  3(7) ↓                  21(137) ↓</p> <p>56(63) ↑                  1869(1915) ↑                  27(20) ↓</p>	<p><b>20</b> Perris Bl. &amp; Harley Knox Bl.</p> <p>↓ 319(375)                  ↓ 919(1363)                  ↓ 79(153)</p> <p>↑ 223(117)                  ↓ 427(264)                  ↓ 10(9)</p> <p>275(357) →                  308(244) ↓                  25(117) ↓</p> <p>295(54) ↑                  1466(1082) ↑                  16(12) ↓</p>

### **7.2.2 HORIZON YEAR (2045) WITH PROJECT TRAFFIC VOLUME FORECASTS**

This scenario includes Existing baseline volumes, cumulative development traffic, and growth between 2020 to 2045 (annual growth compounded over 25 years to be based on the average growth for employment, households, and population per the latest SCAG RTP for Riverside County), plus the traffic generated by the proposed Project for Non-Peak and Peak conditions. The weekday ADT and weekday AM and PM peak hour volumes which can be expected for Horizon Year (2045) With Project (Non-Peak) Without Heacock Street Extension traffic conditions are shown on Exhibit 7-2. The weekday ADT and weekday AM and PM peak hour volumes which can be expected for Horizon Year (2045) With Project (Peak) Without Heacock Street Extension traffic conditions are shown on Exhibit 7-3.

### **7.3 HORIZON YEAR (2045) WITH HEACOCK STREET EXTENSION TRAFFIC VOLUME FORECASTS**

#### **7.3.1 HORIZON YEAR (2045) WITHOUT PROJECT TRAFFIC VOLUME FORECASTS**

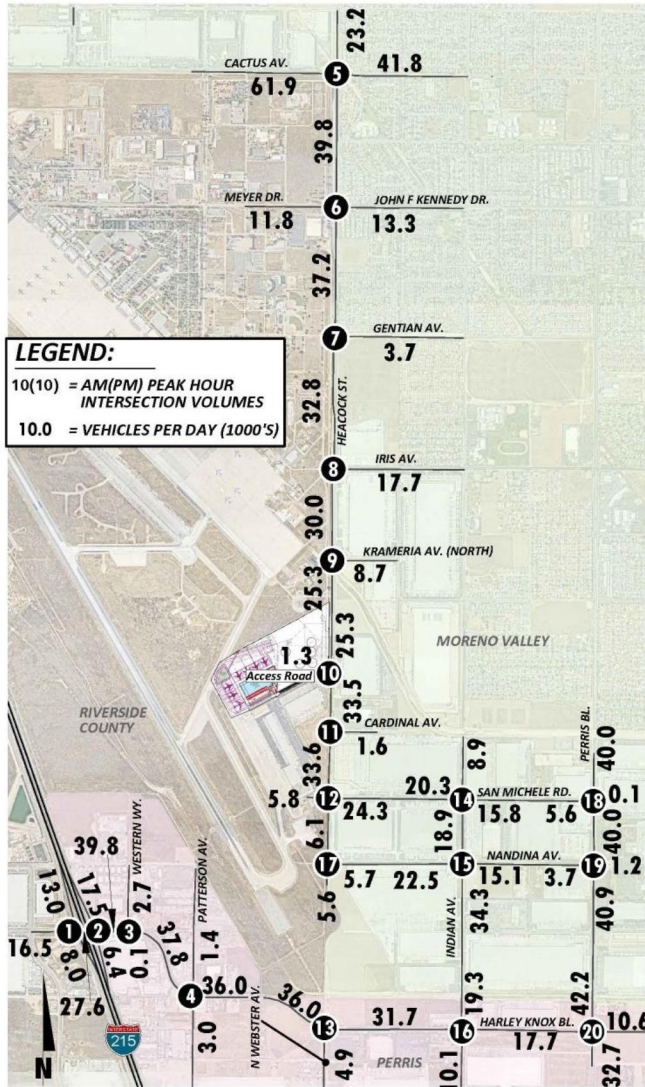
This scenario includes the refined post-processed volumes developed from the RIVCOM (see Section 4.7 *Horizon Year (2045) Volume Development* of this TA for a detailed discussion on the post-processing methodology) and includes the Heacock Street extension. The weekday ADT and weekday AM and PM peak hour volumes which can be expected for Horizon Year (2045) Without Project traffic conditions are shown on Exhibit 7-4.

#### **7.3.2 HORIZON YEAR (2045) WITH PROJECT TRAFFIC VOLUME FORECASTS**

This scenario includes the refined post-processed volumes developed from the RIVCOM, which includes the Heacock Street extension, plus the traffic generated by the proposed Project for Non-Peak and Peak conditions. The weekday ADT and weekday AM and PM peak hour volumes which can be expected for Horizon Year (2045) With Project (Non-Peak) With Heacock Street Extension traffic conditions are shown on Exhibit 7-5. The weekday ADT and weekday AM and PM peak hour volumes which can be expected for Horizon Year (2045) With Project (Peak) With Heacock Street Extension traffic conditions are shown on Exhibit 7-6.



EXHIBIT 7-2: HORIZON YEAR (2045) WITH PROJECT (NON-PEAK, WITHOUT HEACOCK STREET EXTENSION) TRAFFIC VOLUMES



**LEGEND:**  
 10(10) = AM(PM) PEAK HOUR INTERSECTION VOLUMES  
 10.0 = VEHICLES PER DAY (1000'S)

<p><b>1</b> I-215 SB Ramps &amp; Harley Knox Bl.</p> <p>↓ 325(235)                  ↓ 2(0)                  ↓ 1016(554)</p> <p>← 253(282)                  ↓ 209(661)</p> <p>811(900) →                  28(98) ↓</p>	<p><b>2</b> I-215 NB Ramps &amp; Harley Knox Bl.</p> <p>↑ 1233(1167)                  ↑ 403(893)</p> <p>441(493) ↑                  1385(961) ↑</p> <p>59(49) ↓                  5(5) ↓                  303(359) ↓</p>	<p><b>3</b> Western Wy. &amp; Harley Knox Bl.</p> <p>↓ 52(146)                  ↓ 0(0)                  ↓ 8(16)</p> <p>↑ 50(11)                  ↑ 1663(1932)                  ↑ 13(2)</p> <p>110(36) →                  1483(1283) →                  10(1) ↓</p> <p>1(3) ↓                  0(0) ↓                  2(4) ↓</p>	<p><b>4</b> Patterson Av. &amp; Harley Knox Bl.</p> <p>↓ 25(38)                  ↓ 5(5)                  ↓ 17(28)</p> <p>↑ 20(11)                  ↑ 1616(1787)                  ↑ 50(49)</p> <p>30(30) →                  1343(1024) →                  84(48) ↓</p> <p>85(120) ↓                  9(3) ↓                  53(44) ↓</p>	<p><b>5</b> Heacock St. &amp; Cactus Av.</p> <p>↓ 114(64)                  ↓ 390(778)                  ↓ 149(192)</p> <p>↑ 166(137)                  ↑ 2149(996)                  ↑ 82(27)</p> <p>184(261) →                  1103(2225) →                  812(1440) ↓</p> <p>908(858) ↓                  752(703) ↓                  31(69) ↓</p>
<p><b>6</b> Heacock St. &amp; Meyer Dr./ John F Kennedy Dr.</p> <p>↓ 26(25)                  ↓ 875(1366)                  ↓ 134(393)</p> <p>↑ 256(204)                  ↑ 290(104)                  ↑ 37(37)</p> <p>52(40) →                  48(259) →                  130(431) ↓</p> <p>38(102) ↓                  1165(1111) ↓                  65(93) ↓</p>	<p><b>7</b> Heacock St. &amp; Gentian Av.</p> <p>↓ 959(1576)                  ↓ 121(144)</p> <p>↑ 25(132)                  ↑ 18(9)</p> <p>1027(1192) ↓                  12(17) ↓</p>	<p><b>8</b> Heacock St. &amp; Iris Av.</p> <p>↓ 694(999)                  ↓ 352(626)</p> <p>↑ 553(373)                  ↑ 395(273)</p> <p>566(903) ↓                  254(419) ↓</p>	<p><b>9</b> Heacock St. &amp; Krameria Av. (North)</p> <p>↓ 752(850)                  ↓ 239(126)</p> <p>↑ 140(276)                  ↑ 114(248)</p> <p>566(918) ↓                  222(124) ↓</p>	<p><b>10</b> Heacock St. &amp; Access Road</p> <p>↓ 57(2)                  ↓ 749(1160)</p> <p>31(31) →                  34(47) →</p> <p>56(18) ↓                  835(936) ↓</p>
<p><b>11</b> Heacock St. &amp; Cardinal Av.</p> <p>↓ 988(1641)                  ↓ 52(19)</p> <p>↑ 14(57)                  ↑ 12(61)</p> <p>1155(1113) ↓                  62(21) ↓</p>	<p><b>12</b> Heacock St. &amp; San Michele Rd.</p> <p>↓ 52(36)                  ↓ 135(343)                  ↓ 509(927)</p> <p>↑ 809(699)                  ↑ 341(102)                  ↑ 39(23)</p> <p>31(59) →                  82(348) →                  5(8) ↓</p> <p>2(0) ↓                  66(133) ↓                  11(40) ↓</p>	<p><b>13</b> Webster Av. &amp; Harley Knox Bl.</p> <p>↑ 1639(1853)                  ↑ 15(10)</p> <p>1237(986) →                  175(110) ↓</p> <p>70(108) ↓                  14(15) ↓</p>	<p><b>14</b> Indian Av. &amp; San Michele Rd.</p> <p>↓ 14(34)                  ↓ 141(390)                  ↓ 6(168)</p> <p>↑ 11(75)                  ↑ 917(523)                  ↑ 189(259)</p> <p>15(23) →                  215(893) →                  386(1563) ↓</p> <p>1602(783) ↓                  218(200) ↓                  242(231) ↓</p>	<p><b>15</b> Indian Av. &amp; Nandina Av.</p> <p>↓ 27(38)                  ↓ 512(1605)                  ↓ 13(26)</p> <p>↑ 26(72)                  ↑ 48(48)                  ↑ 37(192)</p> <p>8(50) →                  37(126) →                  170(579) ↓</p> <p>373(170) ↓                  1828(751) ↓                  77(77) ↓</p>
<p><b>16</b> Indian Av. &amp; Harley Knox Bl.</p> <p>↓ 217(708)                  ↓ 94(340)                  ↓ 16(67)</p> <p>↑ 64(16)                  ↑ 947(551)                  ↑ 68(45)</p> <p>607(358) →                  502(569) →                  111(82) ↓</p> <p>155(121) ↓                  365(266) ↓                  46(85) ↓</p>	<p><b>17</b> Heacock St. &amp; Nandina Av.</p> <p>↓ 2(17)                  ↓ 161(333)</p> <p>↑ 78(162)                  ↑ 0(0)</p> <p>0(3) ↓                  3(14) ↓</p>	<p><b>18</b> Perry Bl. &amp; San Michele Rd.</p> <p>↓ 109(122)                  ↓ 1514(2018)                  ↓ 2(6)</p> <p>↑ 0(0)                  ↑ 0(0)                  ↑ 3(2)</p> <p>49(197) →                  0(0) →                  33(228) ↓</p> <p>163(93) ↓                  1782(1913) ↓                  2(0) ↓</p>	<p><b>19</b> Indian Av. &amp; Nandina Av.</p> <p>↓ 23(60)                  ↓ 1490(2104)                  ↓ 21(21)</p> <p>↑ 14(15)                  ↑ 10(227)                  ↑ 8(33)</p> <p>16(54) →                  3(7) →                  21(137) ↓</p> <p>56(63) ↓                  877(1915) ↓                  27(20) ↓</p>	<p><b>20</b> Perry Bl. &amp; Harley Knox Bl.</p> <p>↓ 319(375)                  ↓ 923(1368)                  ↓ 79(153)</p> <p>↑ 223(117)                  ↑ 427(264)                  ↑ 10(9)</p> <p>275(357) →                  308(244) →                  25(117) ↓</p> <p>295(54) ↓                  1474(1082) ↓                  16(12) ↓</p>

EXHIBIT 7-3: HORIZON YEAR (2045) WITH PROJECT (PEAK, WITHOUT HEACOCK STREET EXTENSION) TRAFFIC VOLUMES

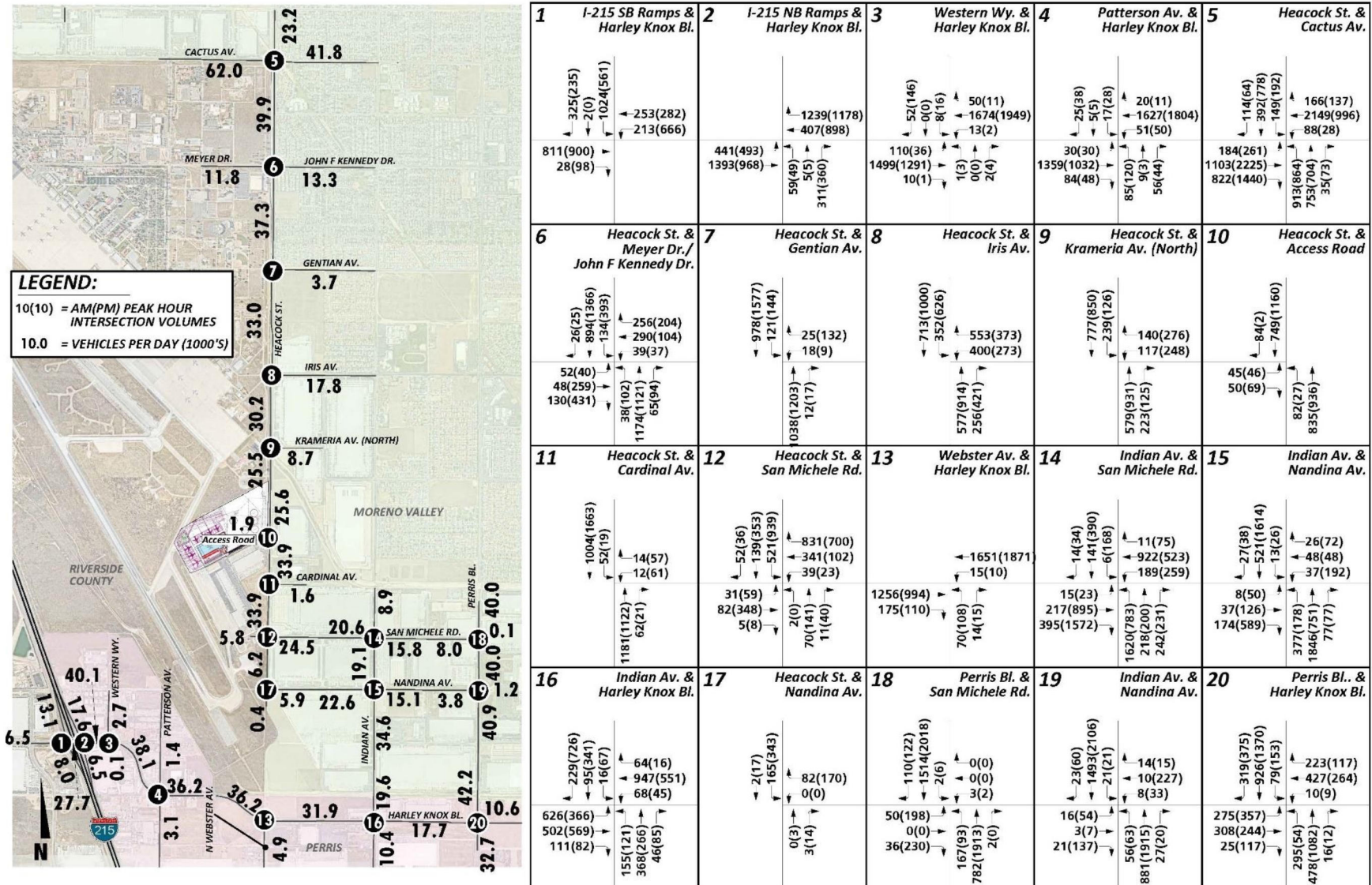
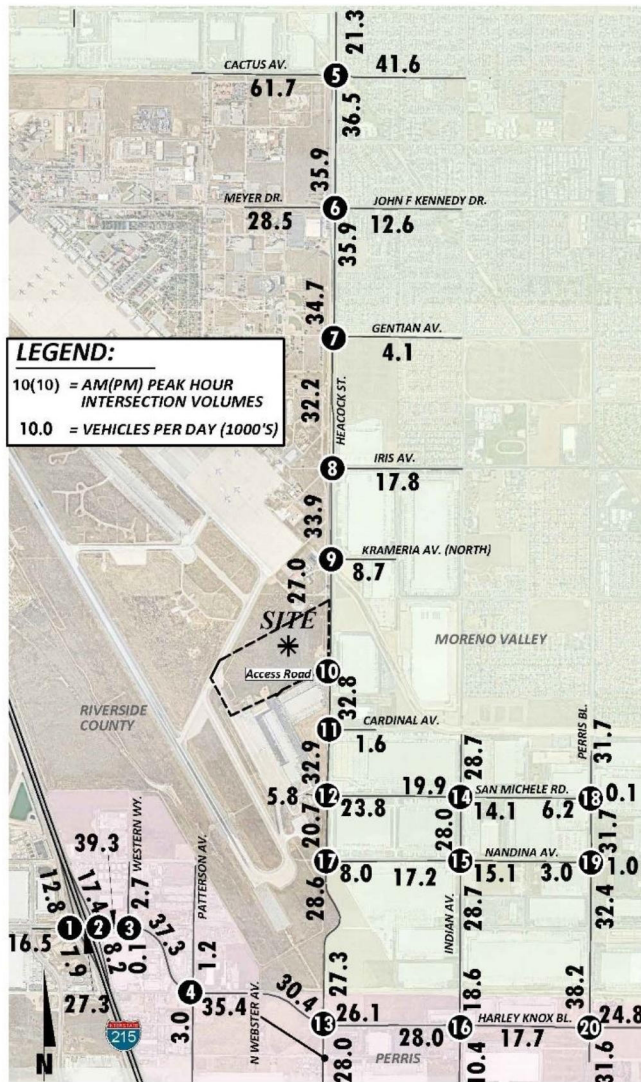




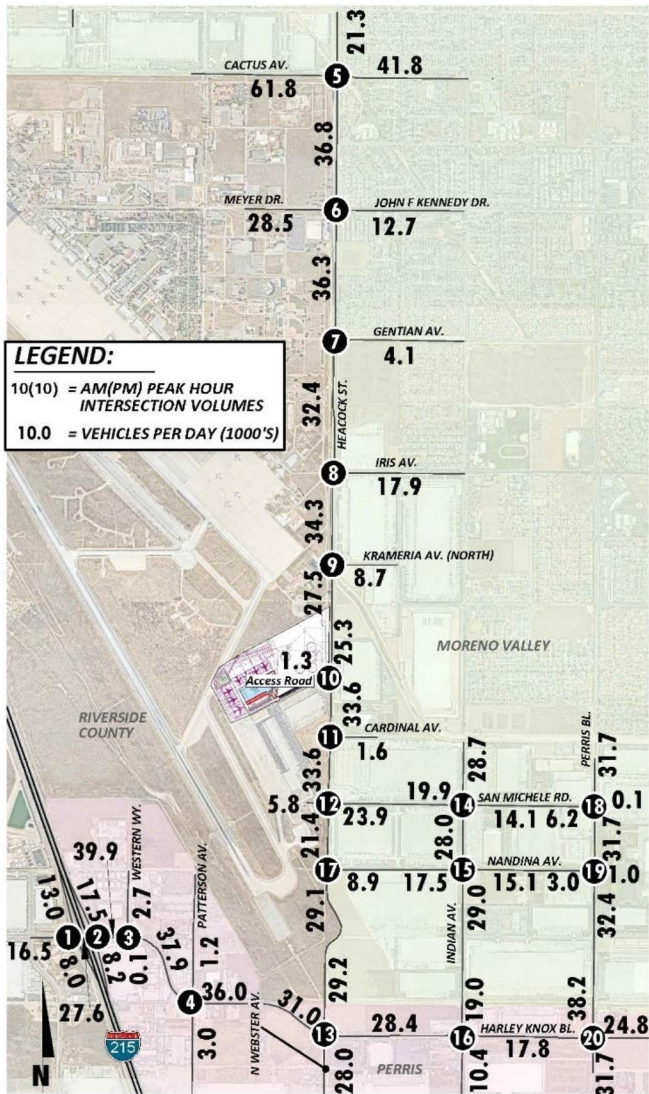
EXHIBIT 7-4: HORIZON YEAR (2045) WITHOUT PROJECT (WITH HEACOCK STREET EXTENSION) TRAFFIC VOLUMES



<p><b>1</b> I-215 SB Ramps &amp; Harley Knox Bl.</p> <p>↓ 325(235) ↓ 1(0) 998(539)</p> <p>← 319(282) ↓ 199(649)</p> <p>917(900) → 28(98) ↓</p>	<p><b>2</b> I-215 NB Ramps &amp; Harley Knox Bl.</p> <p>↑ 1184(1143) ↑ 459(881)</p> <p>554(493) ↑ 1360(946) ↑</p> <p>59(49) ↓ 17(4) ↓ 286(356) ↓</p>	<p><b>3</b> Western Wy. &amp; Harley Knox Bl.</p> <p>↓ 51(146) ↓ 0(0) 8(16)</p> <p>← 45(11) ↑ 1653(1897) 13(2)</p> <p>110(36) ↓ 1448(1265) ↓ 10(1) ↓</p> <p>1(3) ↓ 0(0) ↓ 2(4) ↓</p>	<p><b>4</b> Patterson Av. &amp; Harley Knox Bl.</p> <p>↓ 21(31) ↓ 4(4) 15(25)</p> <p>← 18(11) ↑ 1605(1758) 47(46)</p> <p>26(24) ↓ 1308(1039) ↓ 84(48) ↓</p> <p>85(120) ↓ 8(3) ↓ 48(44) ↓</p>	<p><b>5</b> Heacock St. &amp; Cactus Av.</p> <p>↓ 110(64) ↓ 386(778) 181(192)</p> <p>← 166(137) ↑ 2149(996) 68(28)</p> <p>184(257) ↓ 1103(2225) ↓ 791(1439) ↓</p> <p>897(847) ↓ 750(701) ↓ 24(62) ↓</p>
<p><b>6</b> Heacock St. &amp; Meyer Dr./ John F Kennedy Dr.</p> <p>↓ 23(42) ↓ 837(1272) 133(381)</p> <p>← 252(204) ↑ 460(129) 205(37)</p> <p>44(46) ↓ 47(482) ↓ 277(501) ↓</p> <p>38(235) ↓ 1087(1090) ↓ 107(98) ↓</p>	<p><b>7</b> Heacock St. &amp; Gentian Av.</p> <p>↓ 1094(1493) 107(150)</p> <p>← 25(121) 26(15)</p> <p>994(1169) ↓ 11(43) ↓</p>	<p><b>8</b> Heacock St. &amp; Iris Av.</p> <p>↓ 652(1361) 344(991)</p> <p>↑ 1155(393) 385(273)</p> <p>635(880) ↓ 248(413) ↓</p>	<p><b>9</b> Heacock St. &amp; Krameria Av. (North)</p> <p>↓ 700(1120) 239(126)</p> <p>← 140(276) 109(248)</p> <p>538(889) ↓ 219(121) ↓</p>	<p><b>10</b> Heacock St. &amp; Access Road</p> <p>Future Intersection</p>
<p><b>11</b> Heacock St. &amp; Cardinal Av.</p> <p>← 954(1594) 52(19)</p> <p>↑ 14(57) 12(61)</p> <p>1099(1095) ↓ 62(21) ↓</p>	<p><b>12</b> Heacock St. &amp; San Michele Rd.</p> <p>↓ 52(36) 1101(1696) 99(334)</p> <p>← 320(590) ↑ 341(102) 54(31)</p> <p>31(59) ↓ 82(348) ↓ 4(7) ↓</p> <p>1(0) ↓ 1664(1147) ↓ 17(45) ↓</p>	<p><b>13</b> Webster Av. &amp; Harley Knox Bl.</p> <p>↓ 166(331) 536(949) 40(81)</p> <p>← 93(125) ↑ 856(771) 110(226)</p> <p>268(174) ↓ 829(200) ↓ 217(364) ↓</p> <p>260(200) ↓ 413(601) ↓ 85(89) ↓</p>	<p><b>14</b> Indian Av. &amp; San Michele Rd.</p> <p>↓ 14(8) 556(945) 2(12)</p> <p>← 17(6) ↑ 74(17) 321(218)</p> <p>7(10) ↓ 5(41) ↓ 133(357) ↓</p> <p>571(144) ↓ 1147(473) ↓ 83(207) ↓</p>	<p><b>15</b> Indian Av. &amp; Nandina Av.</p> <p>↓ 216(220) 656(1255) 105(21)</p> <p>← 24(60) ↑ 47(48) 37(192)</p> <p>364(240) ↓ 65(117) ↓ 81(279) ↓</p> <p>182(77) ↓ 1201(599) ↓ 77(77) ↓</p>
<p><b>16</b> Indian Av. &amp; Harley Knox Bl.</p> <p>↓ 191(670) 98(312) 71(422)</p> <p>← 442(58) ↑ 1096(751) 68(45)</p> <p>243(340) ↓ 652(769) ↓ 111(82) ↓</p> <p>155(121) ↓ 316(240) ↓ 46(85) ↓</p>	<p><b>17</b> Heacock St. &amp; Nandina Av.</p> <p>↓ 789(972) 152(282)</p> <p>← 69(145) 251(233)</p> <p>789(972) ↓ 152(282) ↓</p> <p>1002(597) ↓ 575(228) ↓</p>	<p><b>18</b> Perris Bl. &amp; San Michele Rd.</p> <p>↓ 85(97) 1008(1323) 1(5)</p> <p>← 0(0) 0(0) 2(1)</p> <p>38(155) ↓ 0(0) ↓ 23(177) ↓</p> <p>123(74) ↓ 281(1110) ↓ 2(0) ↓</p>	<p><b>19</b> Indian Av. &amp; Nandina Av.</p> <p>↓ 55(48) 994(1420) 17(17)</p> <p>← 11(12) 4(6) 6(27)</p> <p>14(66) ↓ 2(2) ↓ 14(109) ↓</p> <p>44(50) ↓ 371(1153) ↓ 22(16) ↓</p>	<p><b>20</b> Perris Bl. &amp; Harley Knox Bl.</p> <p>↓ 214(184) 819(970) 50(278)</p> <p>← 272(64) ↑ 870(84) 24(7)</p> <p>148(227) ↓ 56(667) ↓ 25(153) ↓</p> <p>329(72) ↓ 983(999) ↓ 19(65) ↓</p>

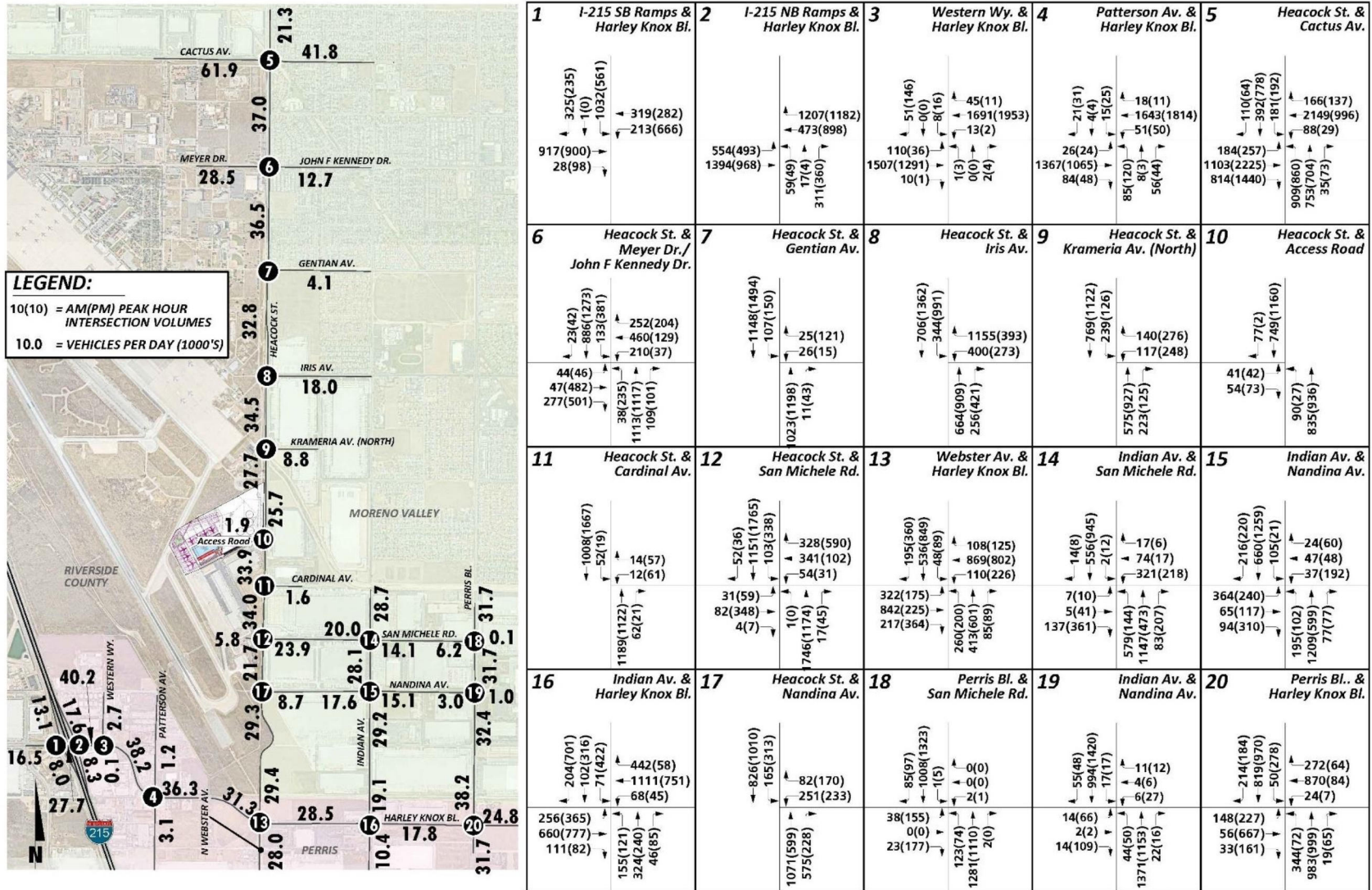


EXHIBIT 7-5: HORIZON YEAR (2045) WITH PROJECT (NON-PEAK, WITH HEACOCK STREET EXTENSION) TRAFFIC VOLUMES



<b>1</b> I-215 SB Ramps & Harley Knox Bl. 325(235) ↓ 1(0) ↓ 1021(554) ↓ 319(282) ← 209(661) ↓ 917(900) ↓ 28(98) ↓	<b>2</b> I-215 NB Ramps & Harley Knox Bl. 1200(1169) ↑ 469(893) ← 554(493) ↑ 1383(961) ↑ 59(49) ↓ 17(4) ↓ 303(359) ↓	<b>3</b> Western Wy. & Harley Knox Bl. 51(146) ↓ 0(0) ↓ 8(16) ↓ 45(11) ↑ 1679(1935) ↑ 13(2) ↓ 110(36) ↓ 1488(1283) ↓ 10(1) ↓ 1(3) ↓ 0(0) ↓ 2(4) ↓	<b>4</b> Patterson Av. & Harley Knox Bl. 21(31) ↓ 4(4) ↓ 15(25) ↓ 18(11) ↑ 1631(1796) ↑ 50(49) ↓ 26(24) ↓ 1348(1057) ↓ 84(48) ↓ 85(120) ↓ 8(3) ↓ 53(44) ↓	<b>5</b> Heacock St. & Cactus Av. 110(64) ↓ 390(778) ↓ 181(192) ↓ 166(137) ↑ 2149(996) ↑ 82(28) ↓ 184(257) ↓ 1103(2225) ↓ 807(1439) ↓ 905(856) ↓ 752(703) ↓ 31(69) ↓
<b>6</b> Heacock St. & Meyer Dr./ John F Kennedy Dr. 23(42) ↓ 870(1273) ↓ 133(381) ↓ 252(204) ↓ 460(129) ↓ 208(37) ↓ 44(46) ↓ 47(482) ↓ 277(501) ↓ 38(235) ↓ 1105(1108) ↓ 109(100) ↓	<b>7</b> Heacock St. & Gentian Av. 1130(1494) ↓ 107(150) ↓ 25(121) ↓ 26(15) ↓ 1014(1189) ↓ 11(43) ↓	<b>8</b> Heacock St. & Iris Av. 688(1362) ↓ 344(991) ↓ 1155(393) ↓ 395(273) ↓ 655(900) ↓ 254(419) ↓	<b>9</b> Heacock St. & Krameria Av. (North) 747(1121) ↓ 239(126) ↓ 140(276) ↓ 114(248) ↓ 563(915) ↓ 222(124) ↓	<b>10</b> Heacock St. & Access Road 52(2) ↓ 749(1160) ↓ 28(29) ↓ 37(50) ↓ 61(18) ↓ 835(936) ↓
<b>11</b> Heacock St. & Cardinal Av. 991(1644) ↓ 52(19) ↓ 14(57) ↓ 12(61) ↓ 1160(1113) ↓ 62(21) ↓	<b>12</b> Heacock St. & San Michele Rd. 52(36) ↓ 1135(1743) ↓ 102(337) ↓ 325(590) ↓ 341(102) ↓ 54(31) ↓ 31(59) ↓ 82(348) ↓ 4(7) ↓ 1(0) ↓ 1720(1165) ↓ 17(45) ↓	<b>13</b> Webster Av. & Harley Knox Bl. 186(351) ↓ 536(849) ↓ 46(87) ↓ 103(125) ↓ 865(792) ↓ 110(226) ↓ 304(175) ↓ 838(217) ↓ 217(364) ↓ 260(200) ↓ 413(601) ↓ 85(89) ↓	<b>14</b> Indian Av. & San Michele Rd. 14(8) ↓ 556(945) ↓ 2(12) ↓ 17(6) ↓ 74(17) ↓ 321(218) ↓ 7(10) ↓ 5(41) ↓ 136(360) ↓ 576(144) ↓ 1147(473) ↓ 83(207) ↓	<b>15</b> Indian Av. & Nandina Av. 216(220) ↓ 659(1258) ↓ 105(21) ↓ 24(60) ↓ 47(48) ↓ 37(192) ↓ 364(240) ↓ 65(117) ↓ 90(300) ↓ 191(94) ↓ 1206(599) ↓ 77(77) ↓
<b>16</b> Indian Av. & Harley Knox Bl. 200(691) ↓ 101(315) ↓ 71(422) ↓ 442(58) ↓ 1106(751) ↓ 68(45) ↓ 252(357) ↓ 658(775) ↓ 111(82) ↓ 155(121) ↓ 321(240) ↓ 46(85) ↓	<b>17</b> Heacock St. & Nandina Av. 814(998) ↓ 161(303) ↓ 78(162) ↓ 251(233) ↓ 1049(598) ↓ 575(228) ↓	<b>18</b> Perris Bl. & San Michele Rd. 85(97) ↓ 1008(1323) ↓ 1(5) ↓ 0(0) ↓ 0(0) ↓ 2(1) ↓ 38(155) ↓ 0(0) ↓ 23(177) ↓ 123(74) ↓ 1281(1110) ↓ 2(0) ↓	<b>19</b> Indian Av. & Nandina Av. 55(48) ↓ 994(1420) ↓ 17(17) ↓ 11(12) ↓ 4(6) ↓ 6(27) ↓ 14(66) ↓ 2(2) ↓ 14(109) ↓ 44(50) ↓ 1371(1153) ↓ 22(16) ↓	<b>20</b> Perris Bl. & Harley Knox Bl. 214(184) ↓ 819(970) ↓ 50(278) ↓ 272(64) ↓ 870(84) ↓ 24(7) ↓ 148(227) ↓ 56(667) ↓ 31(159) ↓ 339(72) ↓ 983(999) ↓ 19(65) ↓

EXHIBIT 7-6: HORIZON YEAR (2045) WITH PROJECT (PEAK, WITH HEACOCK STREET EXTENSION) TRAFFIC VOLUMES





## 7.4 INTERSECTION OPERATIONS ANALYSIS

### 7.4.1 HORIZON YEAR (2045) WITHOUT PROJECT TRAFFIC CONDITIONS – WITHOUT HEACOCK STREET EXTENSION

Horizon Year (2045) peak hour traffic operations have been evaluated for the study area intersections based on the analysis methodologies presented in Section 2.2 *Intersection Capacity Analysis* of this report. The intersection analysis results are summarized in Table 7-1, which indicates that the following study area intersections are anticipated to continue to operate at an unacceptable LOS during the peak hours under Horizon Year (2045) Without Project Without Heacock Street Extension traffic conditions:

- I-215 SB Ramps & Harley Knox Boulevard (#1) – LOS F AM and PM peak hours
- I-215 NB Ramps & Harley Knox Boulevard (#2) – LOS F AM and PM peak hours
- Heacock Street & Cactus Avenue (#5) – LOS F AM and PM peak hours
- Heacock Street & Meyer Drive/John F. Kennedy Drive (#6) – LOS F PM peak hour only
- Heacock Street & Cardinal Avenue (#11) – LOS E PM peak hour only
- Heacock Street & San Michele Road (#12) – LOS F AM and PM peak hours
- Indian Avenue & San Michele Road (#14) – LOS F AM and PM peak hours
- Indian Avenue & Nandina Avenue (#15) – LOS F PM peak hour only
- Indian Avenue & Harley Knox Boulevard (#16) – LOS F AM and PM peak hours
- Perris Boulevard & Harley Knox Boulevard (#20) – LOS E PM peak hour only

The intersection operations analysis worksheets for Horizon Year (2045) Without Project Without Heacock Street Extension traffic conditions are included in Appendix 7.1 of this TA.

### 7.4.2 HORIZON YEAR (2045) WITH PROJECT TRAFFIC CONDITIONS – WITHOUT HEACOCK STREET EXTENSION

As shown in Table 7-1, with the addition of Project (Non-Peak), Without Heacock Street Extension, there are no additional study area intersections anticipated to operate at a deficient LOS during the peak hours although the following location would have an LOS change:

- Perris Boulevard & Harley Knox Boulevard (#20) – LOS E to LOS F in the AM peak hour only

As shown in Table 7-1, with the addition of Project (Peak), Without Heacock Street Extension, there are no additional study area intersections anticipated to operate at a deficient LOS during the peak hours although the following locations would have LOS changes:

- Heacock Street & Cardinal Avenue (#11) – LOS D to LOS E AM peak hour; LOS E to LOS F in the PM peak hour
- Perris Boulevard & Harley Knox Boulevard (#20) – LOS E to LOS F in the AM peak hour only

The intersection operations analysis worksheets for Horizon Year (2045) With Project (Non-Peak) and With Project (Peak), Without Heacock Street Extension, traffic conditions are included in Appendices 7.2 and 7.3, respectively.

**TABLE 7-1: INTERSECTION ANALYSIS FOR HORIZON YEAR (2045) CONDITIONS WITHOUT HEACOCK STREET EXTENSION**

#	Intersection	Traffic Control <sup>2</sup>	2045 Without Project				2045 With Project (Non-Peak)						2045 With Project (Peak)									
			Delay <sup>1</sup> (secs.)		Level of Service		Delay <sup>1</sup> (secs.)		Level of Service		Project % of Total Traffic <sup>4</sup>		Difference in Delay <sup>5</sup>		Delay <sup>1</sup> (secs.)		Level of Service		Project % of Total Traffic <sup>4</sup>		Difference in Delay <sup>5</sup>	
			AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1	I-215 SB Ramps & Harley Knox Bl.	TS	143.9	170.7	F	F	150.4	179.3	F	F	--	--	--	--	153.4	183.4	F	F	--	--	--	--
2	I-215 NB Ramps & Harley Knox Bl.	TS	119.6	>200.0	F	F	127.9	>200.0	F	F	--	--	--	--	132.8	>200.0	F	F	--	--	--	--
3	Western Wy. & Harley Knox Bl.	TS	9.3	9.8	A	A	9.3	9.8	A	A	--	--	--	--	9.3	9.9	A	A	--	--	--	--
4	Patterson Av. & Harley Knox Bl.	TS	14.2	17.6	B	B	15.2	18.9	B	B	--	--	--	--	16.5	20.6	B	C	--	--	--	--
5	Heacock St. & Cactus Av.	TS	181.9	>200.0	F	F	183.3	>200.0	F	F	0.9%	0.3%	1.4	>5.0	184.4	>200.0	F	F	1.3%	0.4%	2.5	>5.0
6	Heacock St. & Meyer Dr./John F. Kennedy Dr.	TS	40.6	149.9	D	F	43.2	151.2	D	F	2.1%	0.6%	--	1.3	44.2	152.0	D	F	3.0%	0.8%	--	2.1
7	Heacock St. & Gentian Av.	TS	8.0	11.3	A	B	8.0	11.4	A	B	--	--	--	--	8.0	11.4	A	B	--	--	--	--
8	Heacock St. & Iris Av.	TS	26.6	31.6	C	C	27.0	32.1	C	C	--	--	--	--	27.3	32.5	C	C	--	--	--	--
9	Heacock St. & Krameria Av. (North)	TS	16.4	21.5	B	C	16.6	21.9	B	C	--	--	--	--	16.8	22.2	B	C	--	--	--	--
10	Heacock St. & Access Road	IS <sup>3</sup>	Future Intersection				7.7	10.6	A	B	--	--	--	--	8.9	13.2	A	B	--	--	--	--
11	Heacock St. & Cardinal Av.	CSS	32.5	46.3	D	E	34.7	48.7	D	E	3.9%	2.2%	--	2.4	36.0	50.3	E	F	5.7%	3.3%	3.5	4.0
12	Heacock St. & San Michele Rd.	TS	99.2	190.4	F	F	114.8	>200.0	F	F	4.3%	2.4%	15.6	>5.0	132.5	>200.0	F	F	33.3	3.5%	33.3	>5.0
13	Webster Av. & Harley Knox Bl.	RA	15.1	21.0	C	C	16.1	23.6	C	C	--	--	--	--	16.7	25.4	C	D	--	--	--	--
14	Indian Av. & San Michele Rd.	TS	197.7	>200.0	F	F	>200.0	>200.0	F	F	--	--	>5.0	>5.0	>200.0	>200.0	F	F	--	--	>5.0	>5.0
15	Indian Av. & Nandina Av.	TS	31.8	195.2	C	F	35.7	>200.0	D	F	--	--	--	>5.0	49.6	>200.0	D	F	--	--	--	>5.0
16	Indian Av. & Harley Knox Bl.	TS	116.1	116.3	F	F	117.9	139.3	F	F	--	--	--	--	158.7	105.4	F	F	--	--	--	--
17	Heacock St. & Nandina Av.	CSS	8.6	9.1	A	A	8.8	9.4	A	A	--	--	--	--	8.8	9.5	A	A	--	--	--	--
18	Perris Bl. & San Michele Rd.	TS	12.9	16.8	B	B	13.2	17.0	B	B	--	--	--	--	13.3	17.1	B	B	--	--	--	--
19	Perris Bl. & Nandina Av.	TS	12.8	24.2	B	C	12.8	24.2	B	C	--	--	--	--	12.8	24.3	B	C	--	--	--	--
20	Perris Bl. & Harley Knox Bl.	TS	55.0	77.2	D	E	55.1	77.2	E	E	--	--	--	--	55.1	77.3	E	E	--	--	--	--

<sup>1</sup> **BOLD** - Level of Service (LOS) does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).  
<sup>2</sup> Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.  
<sup>3</sup> CSS = Cross-street Stop; TS = Traffic Signal; RA = Roundabout; IS = Improvement  
<sup>4</sup> The Project will construct a traffic signal as part of the Project design features.  
<sup>5</sup> Project percent of total traffic is calculated for deficient intersections within the jurisdiction of March JPA only. Based on the March JPA traffic study guidelines, a project-related traffic deficiency is deemed to occur if the Project percent of total traffic is 2.0% or more.  
<sup>6</sup> Difference in delay has been calculated for City of Moreno Valley intersections only, for those intersections that are anticipated to operate at an unacceptable LOS.

**7.4.3 HORIZON YEAR (2045) WITHOUT PROJECT TRAFFIC CONDITIONS – WITH HEACOCK STREET EXTENSION**

Horizon Year (2045) peak hour traffic operations have been evaluated for the study area intersections based on the analysis methodologies presented in Section 2.2 *Intersection Capacity Analysis* of this report. The intersection analysis results are summarized in Table 7-2, which indicates that the following study area intersections are anticipated to operate at an unacceptable LOS during the peak hours under Horizon Year (2045) Without Project With Heacock Street Extension traffic conditions:

- I-215 SB Ramps & Harley Knox Boulevard (#1) – LOS F AM and PM peak hours
- I-215 NB Ramps & Harley Knox Boulevard (#2) – LOS F AM and PM peak hours
- Heacock Street & Cactus Avenue (#5) – LOS F AM and PM peak hours
- Heacock Street & Meyer Drive/John F. Kennedy Drive (#6) – LOS E AM peak hour; LOS F PM peak hour
- Heacock Street & Iris Avenue (#8) – LOS F AM peak hour only
- Heacock Street & Cardinal Avenue (#11) – LOS E PM peak hour only
- Heacock Street & San Michele Road (#12) – LOS F AM and PM peak hours
- Webster Avenue & Harley Knox Boulevard (#13) – LOS F AM and PM peak hours
- Indian Avenue & San Michele Road (#14) – LOS F AM peak hour; LOS E PM peak hour
- Indian Avenue & Nandina Avenue (#15) – LOS F AM and PM peak hours
- Indian Avenue & Harley Knox Boulevard (#16) – LOS E AM peak hour; LOS F PM peak hour

- Heacock Street & Nandina Avenue (#17) – LOS F AM and PM peak hours

The intersection operations analysis worksheets for Horizon Year (2045) Without Project With Heacock Street Extension traffic conditions are included in Appendix 7.4 of this TA.

#### **7.4.4 HORIZON YEAR (2045) WITH PROJECT TRAFFIC CONDITIONS – WITH HEACOCK STREET EXTENSION**

As shown in Table 7-2, with the addition of Project (Non-Peak), With Heacock Street Extension, there are no additional study area intersections anticipated to operate at a deficient LOS during the peak hours although the following locations have LOS changes:

- Heacock Street & Meyer Drive/John F. Kennedy Drive (#6) – LOS E to LOS F in the AM peak hour only
- Heacock Street & Cardinal Avenue (#11) – LOS D to LOS E in the AM peak hour

As shown in Table 7-2, with the addition of Project (Peak), With Heacock Street Extension, there are no additional study area intersections anticipated to operate at a deficient LOS during the peak hours although the following locations would have LOS changes:

- Heacock Street & Meyer Drive/John F. Kennedy Drive (#6) – LOS E to LOS F in the AM peak hour only
- Heacock Street & Cardinal Avenue (#11) – LOS D to LOS E in the AM peak hour; LOS E to LOS F in the PM peak hour
- Indian Avenue & Harley Knox Boulevard (#16) – LOS E to LOS F in the AM peak hour only

The intersection operations analysis worksheets for Horizon Year (2045) With Project (Non-Peak) and With Project (Peak), With Heacock Street Extension, traffic conditions are included in Appendices 7.5 and 7.6, respectively.



**TABLE 7-2: INTERSECTION ANALYSIS FOR HORIZON YEAR (2045) CONDITIONS WITH HEACOCK STREET EXTENSION**

#	Intersection	Traffic Control <sup>2</sup>	2045 Without Project				2045 With Project (Non-Peak)						2045 With Project (Peak)					
			Delay <sup>1</sup> (secs.)		Level of Service		Delay <sup>1</sup> (secs.)		Level of Service		Project % of Total Traffic <sup>4</sup>		Delay <sup>1</sup> (secs.)		Level of Service		Project % of Total Traffic <sup>4</sup>	
			AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1	I-215 SB Ramps & Harley Knox Bl.	TS	136.3	170.7	F	F	144.8	179.3	F	F	--	--	148.9	183.4	F	F	--	--
2	I-215 NB Ramps & Harley Knox Bl.	TS	125.5	>200.0	F	F	133.6	>200.0	F	F	--	--	137.0	>200.0	F	F	--	--
3	Western Wy. & Harley Knox Bl.	TS	9.2	9.8	A	A	9.3	9.8	A	A	--	--	9.3	9.8	A	A	--	--
4	Patterson Av. & Harley Knox Bl.	TS	14.5	17.2	B	B	15.4	18.1	B	B	--	--	15.8	18.5	B	B	--	--
5	Heacock St. & Cactus Av.	TS	181.8	>200.0	F	F	183.6	>200.0	F	F	0.7%	0.2%	184.6	>200.0	F	F	1.1%	0.4%
6	Heacock St. & Meyer Dr./John F. Kennedy Dr.	TS	79.2	169.6	E	F	81.5	170.5	F	F	1.6%	0.5%	82.8	171.0	F	F	2.3%	0.7%
7	Heacock St. & Gentian Av.	TS	7.9	11.2	A	B	7.9	11.3	A	B	--	--	8.0	11.3	A	B	--	--
8	Heacock St. & Iris Av.	TS	154.5	51.9	F	D	155.0	52.8	F	D	2.1%	--	156.6	53.2	F	D	3.0%	--
9	Heacock St. & Krameria Av. (North)	TS	16.4	20.5	B	C	16.6	20.9	B	C	--	--	16.6	21.1	B	C	--	--
10	Heacock St. & Access Road	TS <sup>3</sup>	Future Intersection				7.8	7.7	A	A	--	--	9.0	8.7	A	A	--	--
11	Heacock St. & Cardinal Av.	CSS	32.5	46.3	D	E	35.0	49.2	E	E	4.3%	2.3%	36.3	50.3	E	F	6.2%	3.4%
12	Heacock St. & San Michele Rd.	TS	161.6	>200.0	F	F	179.0	>200.0	F	F	2.5%	1.5%	187.8	>200.0	F	F	3.7%	2.2%
13	Webster Av. & Harley Knox Bl.	RA	88.9	177.0	F	F	107.0	193.6	F	F	--	--	116.5	>200.0	F	F	--	--
14	Indian Av. & San Michele Rd.	TS	132.7	56.0	F	E	133.4	56.2	F	E	0.7	0.2	133.6	56.3	F	E	0.9	0.3
15	Indian Av. & Nandina Av.	TS	101.8	141.2	F	F	101.8	156.7	F	F	0.0	15.5	101.8	164.2	F	F	0.0	23.0
16	Indian Av. & Harley Knox Bl.	TS	70.3	183.4	E	F	78.4	192.0	E	F	--	--	82.4	196.3	F	F	--	--
17	Heacock St. & Nandina Av.	CSS	>100.0	>100.0	F	F	>100.0	>100.0	F	F	--	--	>100.0	>100.0	F	F	--	--
18	Perris Bl. & San Michele Rd.	TS	11.4	14.2	B	B	11.4	14.2	B	B	--	--	11.4	14.2	B	B	--	--
19	Perris Bl. & Nandina Av.	TS	11.1	15.7	B	B	11.1	15.7	B	B	--	--	11.1	15.7	B	B	--	--
20	Perris Bl. & Harley Knox Bl.	TS	37.8	47.5	D	D	38.8	47.5	D	D	--	--	39.1	47.5	D	D	--	--

<sup>1</sup> **BOLD** = Level of Service (LOS) does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).  
<sup>2</sup> Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.  
<sup>3</sup> CSS = Cross-street Stop; TS = Traffic Signal; RA = Roundabout; **TS** = Improvement  
<sup>4</sup> The Project will construct a traffic signal as part of the Project design features.  
<sup>4</sup> Project percent of total traffic is calculated for deficient intersections within the jurisdiction of March JPA only. Based on the March JPA traffic study guidelines, a project-related traffic deficiency is deemed to occur if the Project percent of total traffic is 2.0% or more.

## 7.5 ROADWAY SEGMENT ANALYSIS

### 7.5.1 NON-PEAK CONDITIONS

The roadway segment capacities are approximate figures only and are used at the General Plan level to assist in determining the roadway functional classification (number of through lanes) needed to meet traffic demand. Tables 7-3 provides a summary of the Horizon Year (2045) Without Project Without and With Heacock Street Extension conditions roadway segment capacity analysis based on the applicable roadway segment capacity thresholds. As shown on Table 7-3, the following study area roadway segments are anticipated to operate at an unacceptable LOS based on the applicable planning level daily roadway capacity thresholds:

- Heacock Street, Cactus Avenue to Iris Avenue (#1) – LOS E
- Cactus Avenue, West of Heacock Street (#4) – LOS F
- Nandina Avenue, Heacock Street to Perris Boulevard (#8) – LOS F

There are no new roadway segment deficiencies anticipated with the addition of Project traffic. Horizon Year (2045) With Project (Without Extension) and With Project (With Extension) with Non-Peak Project volumes and roadway segment analysis results are presented on Table 7-3.



### 7.5.2 PEAK CONDITIONS

The roadway segment capacities are approximate figures only and are used at the General Plan level to assist in determining the roadway functional classification (number of through lanes) needed to meet traffic demand. Tables 7-4 provides a summary of the Horizon Year (2045) Without Project Without and With Heacock Street Extension conditions roadway segment capacity analysis based on the applicable roadway segment capacity thresholds. As shown on Table 7-4, the following study area roadway segments are anticipated to operate at an unacceptable LOS based on the applicable planning level daily roadway capacity thresholds:

- Heacock Street, Cactus Avenue to Iris Avenue (#1) – LOS E
- Cactus Avenue, West of Heacock Street (#4) – LOS F
- Nandina Avenue, Heacock Street to Perris Boulevard (#8) – LOS F

There are no new roadway segment deficiencies anticipated with the addition of Project traffic. Horizon Year (2045) With Project (Without Extension) and With Project (With Extension) with Peak Project volumes and roadway segment analysis results are presented on Table 7-4.

**TABLE 7-3: ROADWAY SEGMENT ANALYSIS FOR HORIZON YEAR (2045) (NON-PEAK) CONDITIONS**

#	Roadway	Segment Limits	Roadway Section	LOS Capacity <sup>1</sup>	2045 NP wo Ext	V/C <sup>2</sup>	LOS <sup>3</sup>	2045 WP wo Ext	V/C <sup>2</sup>	LOS <sup>3</sup>	2045 NP w Ext	V/C <sup>2</sup>	LOS <sup>3</sup>	2045 WP w Ext	V/C <sup>2</sup>	LOS <sup>3</sup>
1		Cactus Av. to Iris Av.	4D	37,500	<b>39,393</b>	<b>1.05</b>	<b>E</b>	<b>39,763</b>	<b>1.06</b>	<b>E</b>	<b>36,496</b>	<b>0.97</b>	<b>E</b>	<b>36,816</b>	<b>0.98</b>	<b>E</b>
2	Heacock St.	Iris Av. to San Michele Rd.	4D	37,500	32,874	0.88	D	33,600	0.90	D	32,874	0.88	D	33,650	0.90	D
3		San Michele Rd. to Harley Knox Bl.	3D	28,125	5,818	0.21	A	6,094	0.22	A	20,652	0.73	A	21,378	0.76	A
4	Cactus Av.	West of Heacock St.	6D	56,300	<b>61,652</b>	<b>1.10</b>	<b>F</b>	<b>61,852</b>	<b>1.10</b>	<b>F</b>	<b>61,652</b>	<b>1.10</b>	<b>F</b>	<b>61,802</b>	<b>1.10</b>	<b>F</b>
5	Indian Av.	San Michele Rd. to Harley Knox Bl.	4D	37,500	18,590	0.50	D	18,940	0.51	D	27,978	0.75	C	28,028	0.75	C
6	Perris Bl.	San Michele Rd. to Harley Knox Bl.	6D	56,300	42,122	0.75	B	42,202	0.75	B	38,243	0.68	B	38,243	0.68	B
7	San Michele Rd.	Heacock St. to Perris Bl.	4D	37,500	19,885	0.53	B	19,935	0.53	B	19,885	0.53	B	19,935	0.53	B
8	Nandina Av.	Heacock St. to Perris Bl.	2D	12,500	<b>22,228</b>	<b>1.78</b>	<b>F</b>	<b>22,504</b>	<b>1.80</b>	<b>F</b>	<b>17,228</b>	<b>1.38</b>	<b>F</b>	<b>17,504</b>	<b>1.40</b>	<b>F</b>

<sup>1</sup> These maximum roadway capacities are from the City of Moreno Valley Transportation Impact Analysis Preparation Guide for VMT and LOS Assessment, June 2020.

<sup>2</sup> V/C = Volume to Capacity Ratio

<sup>3</sup> LOS = Level of Service

**TABLE 7-4: ROADWAY SEGMENT ANALYSIS FOR HORIZON YEAR (2045) (PEAK) CONDITIONS**

#	Roadway	Segment Limits	Roadway Section	LOS Capacity <sup>1</sup>	2045 NP wo Ext	V/C <sup>2</sup>	LOS <sup>3</sup>	2045 WP wo Ext	V/C <sup>2</sup>	LOS <sup>3</sup>	2045 NP w Ext	V/C <sup>2</sup>	LOS <sup>3</sup>	2045 WP w Ext	V/C <sup>2</sup>	LOS <sup>3</sup>
1		Cactus Av. to Iris Av.	4D	37,500	<b>39,393</b>	<b>1.05</b>	<b>E</b>	<b>39,937</b>	<b>1.06</b>	<b>E</b>	<b>36,496</b>	<b>0.97</b>	<b>E</b>	<b>36,966</b>	<b>0.99</b>	<b>E</b>
2	Heacock St.	Iris Av. to San Michele Rd.	4D	37,500	32,974	0.88	D	34,044	0.91	D	32,974	0.88	D	34,118	0.91	D
3		San Michele Rd. to Harley Knox Bl.	3D	28,125	5,818	0.21	A	6,226	0.22	A	20,652	0.73	A	21,722	0.77	A
4	Cactus Av.	West of Heacock St.	6D	56,300	<b>61,652</b>	<b>1.10</b>	<b>F</b>	<b>61,946</b>	<b>1.10</b>	<b>F</b>	<b>61,652</b>	<b>1.10</b>	<b>F</b>	<b>61,872</b>	<b>1.10</b>	<b>F</b>
5	Indian Av.	San Michele Rd. to Harley Knox Bl.	4D	37,500	18,590	0.50	D	19,106	0.51	D	27,978	0.75	C	28,052	0.75	C
6	Perris Bl.	San Michele Rd. to Harley Knox Bl.	6D	56,300	42,122	0.75	B	42,240	0.75	B	38,243	0.68	B	38,243	0.68	B
7	San Michele Rd.	Heacock St. to Perris Bl.	4D	37,500	19,855	0.53	B	20,519	0.55	B	19,855	0.53	B	19,929	0.53	B
8	Nandina Av.	Heacock St. to Perris Bl.	2D	12,500	<b>22,636</b>	<b>1.81</b>	<b>F</b>	<b>23,044</b>	<b>1.84</b>	<b>F</b>	<b>17,228</b>	<b>1.38</b>	<b>F</b>	<b>17,636</b>	<b>1.41</b>	<b>F</b>

<sup>1</sup> These maximum roadway capacities are from the City of Moreno Valley Transportation Impact Analysis Preparation Guide for VMT and LOS Assessment, June 2020.

<sup>2</sup> V/C = Volume to Capacity Ratio

<sup>3</sup> LOS = Level of Service

## 7.6 TRAFFIC SIGNAL WARRANTS ANALYSIS

The only existing unsignalized study area intersection previously met a traffic signal warrant under Opening Year Cumulative (2026) Without Project traffic conditions (intersection of Heacock Street and Cardinal Avenue). Heacock Street & Access Road is not anticipated to warrant a traffic signal under Horizon Year (2045) With Project (Non-Peak) and With Project (Peak), for both Without and With Heacock Street Extension traffic conditions (see Appendices 7.7, 7.8, 7.9, and 7.10, respectively).

## 7.7 OFF-RAMP QUEUING ANALYSIS

A queuing analysis was performed for the off-ramps at the I-215 Freeway at Harley Knox Boulevard interchange to assess vehicle queues for the off ramps that may potentially result in deficient peak hour operations at the ramp-to-arterial intersections and may potentially “spill back” onto the I-215 Freeway mainline. Queuing analysis findings are presented in Table 7-5 for Without Heacock Street Extension conditions and Table 7-6 for With Heacock Street Extension conditions. It is important to note that off-ramp lengths are consistent with the measured distance between the intersection and the freeway mainline. As shown in Tables 7-5 and 7-6, there are no movements that are anticipated to experience queuing issues during the weekday AM or weekday PM peak 95<sup>th</sup> percentile traffic flows for Horizon Year (2045) Without Project, With Project (Non-Peak), and With Project (Peak) traffic conditions for both Without and With Heacock Street Extension conditions, consistent with Existing (2020) traffic conditions. Worksheets for Horizon Year (2045) Without Project, With Project (Non-Peak), and With Project (Peak), Without Heacock Street Extension traffic conditions off-ramp queuing analysis are provided in Appendices 7.11, 7.12, and 7.13, respectively. Worksheets for Horizon Year (2045) Without Project, With Project (Non-Peak), and With Project (Peak), Without Heacock Street Extension traffic conditions off-ramp queuing analysis are provided in Appendices 7.14, 7.15, and 7.16, respectively

**TABLE 7-5: PEAK HOUR FREEWAY OFF-RAMP QUEUING SUMMARY FOR HORIZON YEAR (2045) CONDITIONS WITHOUT HEACOCK STREET EXTENSION**

Intersection	Movement	Available Stacking Distance (Feet)	2045 Without Project				2045 With Project (Non-Peak)				2045 With Project (Peak)			
			95th Percentile Queue (Feet)		Acceptable? <sup>1</sup>		95th Percentile Queue (Feet)		Acceptable? <sup>1</sup>		95th Percentile Queue (Feet)		Acceptable? <sup>1</sup>	
			AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
I-215 Southbound Ramps & Harley Knox Bl.	SBL/T	1,330	838 <sup>2</sup>	451 <sup>2</sup>	Yes	Yes	856 <sup>2</sup>	470 <sup>2</sup>	Yes	Yes	863 <sup>2</sup>	478 <sup>2</sup>	Yes	Yes
	SBR	270	49	45	Yes	Yes	50	45	Yes	Yes	51	45	Yes	Yes
I-215 Northbound Ramps & Harley Knox Bl.	NBL/T	1,120	65 <sup>2</sup>	47	Yes	Yes	65 <sup>2</sup>	47	Yes	Yes	65 <sup>2</sup>	47	Yes	Yes
	NBR	265	245 <sup>2</sup>	266 <sup>2</sup>	Yes	Yes	263 <sup>2</sup>	273 <sup>2</sup>	Yes	Yes	272 <sup>2,3</sup>	276 <sup>2</sup>	Yes	Yes

<sup>1</sup> Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided. An additional 15 feet of stacking which is assumed to be provided in the transition for turn pockets is reflected in the stacking distance shown on this table, where applicable.

<sup>2</sup> 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

**TABLE 7-6: PEAK HOUR FREEWAY OFF-RAMP QUEUING SUMMARY FOR HORIZON YEAR (2045) CONDITIONS WITH HEACOCK STREET EXTENSION**

Intersection	Movement	Available Stacking Distance (Feet)	2045 Without Project				2045 With Project (Non-Peak)				2045 With Project (Peak)			
			95th Percentile Queue (Feet)		Acceptable? <sup>1</sup>		95th Percentile Queue (Feet)		Acceptable? <sup>1</sup>		95th Percentile Queue (Feet)		Acceptable? <sup>1</sup>	
			AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
I-215 Southbound Ramps & Harley Knox Bl.	SBL/T	1,330	837 <sup>2</sup>	451 <sup>2</sup>	Yes	Yes	858 <sup>2</sup>	465 <sup>2</sup>	Yes	Yes	868 <sup>2</sup>	472 <sup>2</sup>	Yes	Yes
	SBR	270	49	45	Yes	Yes	51	45	Yes	Yes	52	45	Yes	Yes
I-215 Northbound Ramps & Harley Knox Bl.	NBL/T	1,120	79 <sup>2</sup>	46	Yes	Yes	79 <sup>2</sup>	46	Yes	Yes	79 <sup>2</sup>	46	Yes	Yes
	NBR	265	245 <sup>2</sup>	266 <sup>2</sup>	Yes	Yes	263 <sup>2</sup>	272 <sup>2</sup>	Yes	Yes	272 <sup>2,3</sup>	275 <sup>2</sup>	Yes	Yes

<sup>1</sup> Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided. An additional 15 feet of stacking which is assumed to be provided in the transition for turn pockets is reflected in the stacking distance shown on this table, where applicable.

<sup>2</sup> 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.



## 7.8 DEFICIENCIES AND IMPROVEMENTS

### 7.8.1 IMPROVEMENTS TO ADDRESS DEFICIENCIES AT INTERSECTIONS

This section provides a summary of Project deficiencies and identified improvements. Based on the deficiency criteria discussed in Section 2.6 *Deficiency Criteria*, study area intersections were found to be deficient.

The effectiveness of the recommended improvement strategies to address Horizon Year (2045) Without Heacock Street Extension conditions traffic deficiencies are presented in Table 7-7. The effectiveness of the recommended improvement strategies to address Horizon Year (2045) With Heacock Street Extension conditions traffic deficiencies are presented in Table 7-8. If not constructed by the Project, the Project Applicant should contribute to these improvements through payment of fair share or TUMF fees.

Worksheets for Horizon Year (2045) Without Project, With Project (Non-Peak), and With Project (Peak) conditions, Without Heacock Street Extension, with improvements, HCM calculation worksheets are provided in Appendices 7.17, 7.18, and 7.19, respectively. Worksheets for Horizon Year (2045) Without Project, With Project (Non-Peak), and With Project (Peak) conditions, With Heacock Street Extension, with improvements, HCM calculation worksheets are provided in Appendices 7.20, 7.21, and 7.22, respectively.

### 7.8.2 IMPROVEMENTS TO ADDRESS DEFICIENCIES AT ROADWAY SEGMENT

The intersection of Heacock Street and Cactus Avenue is anticipated to operate at an acceptable LOS with the additional improvements identified on Table 7-7 and Table 7-8 (which includes adding a 3<sup>rd</sup> eastbound through lane and 3<sup>rd</sup> westbound through lane). As such, additional roadway widening is not recommended for the segment of Cactus Avenue, west of Heacock Street, beyond those improvements needed to support acceptable peak hour operations at the intersection of Heacock Street and Cactus Avenue.

In an effort to conduct a conservative analysis, the highest projected daily volumes along Nandina Avenue have been reported for the purposes of this focused traffic assessment. Nandina Avenue is classified as a 4-lane divided minor arterial on the City of Moreno Valley's General Plan Circulation Element and it is anticipated to operate at an acceptable LOS with the implementation of its ultimate cross-section (which has a daily capacity of 37,500 vehicles per day).

Table 7-9 summarizes the anticipated LOS with the implementation of the ultimate roadway cross-section for Nandina Avenue.

### 7.8.3 IMPROVEMENTS TO ADDRESS DEFICIENCIES ON OFF-RAMP QUEUES

As shown previously in Tables 7-5 and 7-6, there are no anticipated peak hour queuing issues at the I-215 Freeway and Harley Knox Boulevard interchange for Horizon Year (2045) Without and With Heacock Street Extension traffic conditions. As such, no improvements have been identified.

**TABLE 7-7: INTERSECTION ANALYSIS FOR HORIZON YEAR (2045) CONDITIONS WITHOUT HEACOCK STREET EXTENSION WITH IMPROVEMENTS**

#	Intersection	Traffic Control <sup>3</sup>	Intersection Approach Lanes <sup>1</sup>												Delay <sup>2</sup> (secs.)		Level of Service		
			Northbound			Southbound			Eastbound			Westbound			AM	PM	AM	PM	
			L	T	R	L	T	R	L	T	R	L	T	R					
1	I-215 SB Ramps & Harley Knox Bl.																		
	- Without Project	TS	0	0	0	<u>1</u>	1	1	0	2	d	<u>2</u>	<u>1</u>	0	29.5	29.6	C	C	
	- With Project (Non-Peak)	TS	0	0	0	<u>1</u>	1	1	0	2	d	<u>2</u>	<u>1</u>	0	30.1	32.2	C	C	
	- With Project (Peak)	TS	0	0	0	<u>1</u>	1	1	0	2	d	<u>2</u>	<u>1</u>	0	30.4	33.5	C	C	
2	I-215 NB Ramps & Harley Knox Bl.																		
	- Without Project	TS	0	1	1	0	0	0	<u>2</u>	2	0	0	2	<u>1&gt;&gt;</u>	16.5	26.0	B	C	
	- With Project (Non-Peak)	TS	0	1	1	0	0	0	<u>2</u>	2	0	0	2	<u>1&gt;&gt;</u>	16.9	26.0	B	C	
	- With Project (Peak)	TS	0	1	1	0	0	0	<u>2</u>	2	0	0	2	<u>1&gt;&gt;</u>	17.1	26.0	B	C	
5	Heacock St. & Cactus Av.																		
	- Without Project	TS	2	2	0	1	2	0	1	<u>3</u>	1>	1	<u>3</u>	0	52.8	52.6	D	D	
	- With Project (Non-Peak)	TS	2	2	0	1	2	0	1	<u>3</u>	1>	1	<u>3</u>	0	54.2	53.5	D	D	
	- With Project (Peak)	TS	2	2	0	1	2	0	1	<u>3</u>	1>	1	<u>3</u>	0	54.8	54.1	D	D	
6	Heacock St. & Meyer Dr./John F. Kennedy Dr.																		
	- Without Project	TS	1	2	d	<u>2</u>	2	<u>0</u>	1	1	1	1	2	0	24.7	44.7	C	D	
	- With Project (Non-Peak)	TS	1	2	d	<u>2</u>	2	<u>0</u>	1	1	1	1	2	0	25.1	45.1	C	D	
	- With Project (Peak)	TS	1	2	d	<u>2</u>	2	<u>0</u>	1	1	1	1	2	0	25.3	45.3	C	D	
11	Heacock St. & Cardinal Av.																		
	- Without Project	<b>TS</b>	0	2	0	1	2	0	0	0	0	1	0	1	6.2	8.3	A	A	
	- With Project (Non-Peak)	<b>TS</b>	0	2	0	1	2	0	0	0	0	1	0	1	6.3	8.3	A	A	
	- With Project (Peak)	<b>TS</b>	0	2	0	1	2	0	0	0	0	1	0	1	6.3	8.3	A	A	
12	Heacock St. & San Michele Rd.																		
	- Without Project	TS	1	2	0	<u>2</u>	1	1	1	1	1	1	1	1>	33.6	42.7	C	D	
	- With Project (Non-Peak)	TS	1	2	0	<u>2</u>	1	1	1	1	1	1	1	1>	35.4	43.3	D	C	
	- With Project (Peak)	TS	1	2	0	<u>2</u>	1	1	1	1	1	1	1	1>	36.8	43.4	D	D	
14	Indian Av. & San Michele Rd.																		
	- Without Project	TS	2	1	1	1	2	0	1	2	<u>2&gt;</u>	<u>2</u>	2	0	46.9	43.6	D	D	
	- With Project (Non-Peak)	TS	2	1	1	1	2	0	1	2	<u>2&gt;</u>	<u>2</u>	2	0	50.3	43.9	D	C	
	- With Project (Peak)	TS	2	1	1	1	2	0	1	2	<u>2&gt;</u>	<u>2</u>	2	0	52.3	43.9	D	D	
15	Indian Av. & Nandina Av.																		
	- Without Project <sup>4</sup>	TS	<u>2</u>	2	0	1	2	0	1	1	<u>1&gt;</u>	1	1	0	36.9	45.0	D	D	
	- With Project (Non-Peak) <sup>4</sup>	TS	<u>2</u>	2	0	1	2	0	1	1	<u>1&gt;</u>	1	1	0	41.1	48.1	D	C	
	- With Project (Peak) <sup>4</sup>	TS	<u>2</u>	2	0	1	2	0	1	1	<u>1&gt;</u>	1	1	0	43.4	50.0	D	D	
16	Indian Av. & Harley Knox Bl.																		
	- Without Project	TS	2	2	1	1	2	0	<u>2</u>	3	<u>0</u>	1	3	0	41.9	28.8	D	C	
	- With Project (Non-Peak)	TS	2	2	1	1	2	0	<u>2</u>	3	<u>0</u>	1	3	0	49.7	31.4	D	C	
	- With Project (Peak)	TS	2	2	1	1	2	0	<u>2</u>	3	<u>0</u>	1	3	0	54.1	32.7	D	C	
20	Perris Bl. & Harley Knox Bl.																		
	- Without Project	TS	2	3	1	2	3	1	<u>2</u>	2	1	2	3	1	28.5	31.9	C	C	
	- With Project (Non-Peak)	TS	2	3	1	2	3	1	<u>2</u>	2	1	2	3	1	28.6	31.9	C	C	
	- With Project (Peak)	TS	2	3	1	2	3	1	<u>2</u>	2	1	2	3	1	28.7	32.0	C	C	

<sup>\*</sup> **BOLD** = Level of Service (LOS) does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

<sup>1</sup> When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.  
 L = Left; T = Through; R = Right; > = Right-Turn Overlap Phasing; >> = Free Right Turn Lane; 1 = Improvement

<sup>2</sup> Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

<sup>3</sup> TS = Traffic Signal; **TS** = Improvement

<sup>4</sup> Improvement includes restriping the west leg to provide an additional receiving lane for the dual northbound left turn lanes. Parking should be prohibited along Nandina Avenue for the length of the additional receiving lane, until the second lane along Nandina is tapered into one lane.



**TABLE 7-8: INTERSECTION ANALYSIS FOR HORIZON YEAR (2045) CONDITIONS WITH HEACOCK STREET EXTENSION WITH IMPROVEMENTS**

#	Intersection	Traffic Control <sup>3</sup>	Intersection Approach Lanes <sup>1</sup>												Delay <sup>2</sup> (secs.)		Level of Service		
			Northbound			Southbound			Eastbound			Westbound			AM	PM	AM	PM	
			L	T	R	L	T	R	L	T	R	L	T	R					
1	I-215 SB Ramps & Harley Knox Bl.																		
	- Without Project	TS	0	0	0	<u>1</u>	1	1	0	2	d	<u>2</u>	<u>1</u>	0	28.8	29.6	C	C	
	- With Project (Non-Peak)	TS	0	0	0	<u>1</u>	1	1	0	2	d	<u>2</u>	<u>1</u>	0	29.7	32.2	C	C	
	- With Project (Peak)	TS	0	0	0	<u>1</u>	1	1	0	2	d	<u>2</u>	<u>1</u>	0	30.2	33.5	C	C	
2	I-215 NB Ramps & Harley Knox Bl.																		
	- Without Project	TS	0	1	1	0	0	0	<u>2</u>	2	0	0	2	<u>1&gt;&gt;</u>	17.8	26.0	B	C	
	- With Project (Non-Peak)	TS	0	1	1	0	0	0	<u>2</u>	2	0	0	2	<u>1&gt;&gt;</u>	18.1	26.0	B	C	
	- With Project (Peak)	TS	0	1	1	0	0	0	<u>2</u>	2	0	0	2	<u>1&gt;&gt;</u>	18.3	26.0	B	C	
5	Heacock St. & Cactus Av.																		
	- Without Project	TS	2	2	0	1	2	0	1	<u>3</u>	1>	1	<u>3</u>	0	53.4	53.6	D	D	
	- With Project (Non-Peak)	TS	2	2	0	1	2	0	1	<u>3</u>	1>	1	<u>3</u>	0	54.4	54.3	D	D	
	- With Project (Peak)	TS	2	2	0	1	2	0	1	<u>3</u>	1>	1	<u>3</u>	0	54.9	54.8	D	D	
6	Heacock St. & Meyer Dr./John F. Kennedy Dr.																		
	- Without Project	TS	1	2	d	<u>2</u>	2	<u>0</u>	1	1	1	1	2	0	42.0	53.9	D	D	
	- With Project (Non-Peak)	TS	1	2	d	<u>2</u>	2	<u>0</u>	1	1	1	1	2	0	42.9	54.1	D	D	
	- With Project (Peak)	TS	1	2	d	<u>2</u>	2	<u>0</u>	1	1	1	1	2	0	43.4	54.2	D	D	
8	Heacock St. & Iris Av.																		
	- Without Project	TS	0	2	1	2	2	0	0	0	0	2	0	<u>1&gt;</u>	22.2	26.4	C	C	
	- With Project (Non-Peak)	TS	0	2	1	2	2	0	0	0	0	2	0	<u>1&gt;</u>	22.7	27.0	C	C	
	- With Project (Peak)	TS	0	2	1	2	2	0	0	0	0	2	0	<u>1&gt;</u>	22.9	27.3	C	C	
11	Heacock St. & Cardinal Av.																		
	- Without Project	<b>IS</b>	0	2	0	1	2	0	0	0	0	1	0	1	6.2	8.3	A	A	
	- With Project (Non-Peak)	<b>IS</b>	0	2	0	1	2	0	0	0	0	1	0	1	6.3	8.3	A	A	
	- With Project (Peak)	<b>IS</b>	0	2	0	1	2	0	0	0	0	1	0	1	6.3	8.3	A	A	
12	Heacock St. & San Michele Rd.																		
	- Without Project	TS	1	2	0	1	<u>2</u>	<u>0</u>	1	1	1	1	1	1>	44.0	48.8	D	D	
	- With Project (Non-Peak)	TS	1	2	0	1	<u>2</u>	<u>0</u>	1	1	1	1	1	1>	48.1	50.2	D	D	
	- With Project (Peak)	TS	1	2	0	1	<u>2</u>	<u>0</u>	1	1	1	1	1	1>	50.2	51.0	D	D	
13	Webster Av. & Harley Knox Bl. <sup>4</sup>																		
	- Without Project	RA	<u>0</u>	<u>3</u>	<u>1&gt;&gt;</u>	<u>0</u>	<u>3</u>	<u>1&gt;&gt;</u>	<u>0</u>	<u>3</u>	<u>1&gt;&gt;</u>	<u>0</u>	<u>3</u>	<u>1&gt;&gt;</u>	0.8	0.8	D	D	
	- With Project (Non-Peak)	RA	<u>0</u>	<u>3</u>	<u>1&gt;&gt;</u>	<u>0</u>	<u>3</u>	<u>1&gt;&gt;</u>	<u>0</u>	<u>3</u>	<u>1&gt;&gt;</u>	<u>0</u>	<u>3</u>	<u>1&gt;&gt;</u>	0.8	0.8	D	D	
	- With Project (Peak)	RA	<u>0</u>	<u>3</u>	<u>1&gt;&gt;</u>	<u>0</u>	<u>3</u>	<u>1&gt;&gt;</u>	<u>0</u>	<u>3</u>	<u>1&gt;&gt;</u>	<u>0</u>	<u>3</u>	<u>1&gt;&gt;</u>	0.8	0.8	D	D	
15	Indian Av. & Nandina Av.																		
	- Without Project <sup>5</sup>	TS	<u>2</u>	2	0	1	2	0	1	1	<u>1&gt;</u>	1	1	0	50.6	33.9	D	C	
	- With Project (Non-Peak) <sup>5</sup>	TS	<u>2</u>	2	0	1	2	0	1	1	<u>1&gt;</u>	1	1	0	51.0	35.2	D	D	
	- With Project (Peak) <sup>5</sup>	TS	<u>2</u>	2	0	1	2	0	1	1	<u>1&gt;</u>	1	1	0	51.2	35.9	D	D	
16	Indian Av. & Harley Knox Bl.																		
	- Without Project	TS	2	2	1	1	2	0	<u>2</u>	3	<u>0</u>	1	3	0	31.5	46.6	C	D	
	- With Project (Non-Peak)	TS	2	2	1	1	2	0	<u>2</u>	3	<u>0</u>	1	3	0	33.0	51.5	C	D	
	- With Project (Peak)	TS	2	2	1	1	2	0	<u>2</u>	3	<u>0</u>	1	3	0	33.8	54.0	C	D	
17	Heacock St. & Nandina Av.																		
	- Without Project	<b>IS</b>	0	<u>2</u>	<u>1&gt;</u>	1	<u>2</u>	0	0	0	0	0	1	0	1	13.2	18.9	B	B
	- With Project (Non-Peak)	<b>IS</b>	0	<u>2</u>	<u>1&gt;</u>	1	<u>2</u>	0	0	0	0	0	1	0	1	13.8	20.5	B	C
	- With Project (Peak)	<b>IS</b>	0	<u>2</u>	<u>1&gt;</u>	1	<u>2</u>	0	0	0	0	0	1	0	1	14.1	21.3	B	C

\* **BOLD** = Level of Service (LOS) does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

<sup>1</sup> When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.  
L = Left; T = Through; R = Right; > = Right-Turn Overlap Phasing; >> = Free Right Turn Lane; 1 = Improvement

<sup>2</sup> Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

<sup>3</sup> TS = Traffic Signal; RA = Roundabout; **IS** = Improvement

<sup>4</sup> HCM6 methodology is limited to a maximum of 2 lanes for each approach for roundabouts. As such, HCM unsignalized ICU methodology has been utilized and the volume-to-capacity ratio is reported.

<sup>5</sup> Improvement includes restriping the west leg to provide an additional receiving lane for the dual northbound left turn lanes. Parking should be prohibited along Nandina Avenue for the length of the additional receiving lane, until the second lane along Nandina is tapered into one lane.

TABLE 7-9: ROADWAY SEGMENT ANALYSIS FOR HORIZON YEAR (2045) CONDITIONS WITH IMPROVEMENTS

**With Project (Non-Peak):**

#	Roadway	Segment Limits	Roadway Section	LOS Capacity <sup>1</sup>	2045 NP wo Ext	V/C <sup>2</sup>	LOS <sup>3</sup>	2045 WP wo Ext	V/C <sup>2</sup>	LOS <sup>3</sup>	2045 NP w Ext	V/C <sup>2</sup>	LOS <sup>3</sup>	2045 WP w Ext	V/C <sup>2</sup>	LOS <sup>3</sup>
8	Nandina Av.	Heacock St. to Perris Bl.	<b>4D</b>	37,500	22,228	0.59	A	22,504	0.60	A	17,228	0.46	A	17,504	0.47	A

<sup>1</sup> These maximum roadway capacities are from the City of Moreno Valley Transportation Impact Analysis Preparation Guide for VMT and LOS Assessment, June 2020.

<sup>2</sup> V/C = Volume to Capacity Ratio

<sup>3</sup> LOS = Level of Service

**With Project (Peak):**

#	Roadway	Segment Limits	Roadway Section	LOS Capacity <sup>1</sup>	2045 NP wo Ext	V/C <sup>2</sup>	LOS <sup>3</sup>	2045 WP wo Ext	V/C <sup>2</sup>	LOS <sup>3</sup>	2045 NP w Ext	V/C <sup>2</sup>	LOS <sup>3</sup>	2045 WP w Ext	V/C <sup>2</sup>	LOS <sup>3</sup>
8	Nandina Av.	Heacock St. to Perris Bl.	<b>4D</b>	37,500	22,636	0.60	B	23,044	0.61	B	17,228	0.46	A	17,636	0.47	A

<sup>1</sup> These maximum roadway capacities are from the City of Moreno Valley Transportation Impact Analysis Preparation Guide for VMT and LOS Assessment, June 2020.

<sup>2</sup> V/C = Volume to Capacity Ratio

<sup>3</sup> LOS = Level of Service

## **8 LOCAL AND REGIONAL FUNDING MECHANISMS**

Transportation improvements within the March JPA are funded through a combination of improvements constructed by the Project, fee programs or fair share contributions. Fee programs applicable to the Project are described below.

### **8.1 RIVERSIDE COUNTY TRANSPORTATION UNIFORM MITIGATION FEE (TUMF)**

The TUMF program is administered by the WRCOG based upon a regional Nexus Study most recently updated in 2016 to address major changes in right of way acquisition and improvement cost factors. (7) This regional program was put into place to ensure that development pays its fair share and that funding is in place for construction of facilities needed to maintain the requisite level of service and critical to mobility in the region. TUMF is a truly regional mitigation fee program and is imposed and implemented in every jurisdiction in Western Riverside County.

### **8.2 MEASURE A**

Measure A, Riverside County's half-cent sales tax for transportation, was adopted by voters in 1988 and extended in 2002. It will continue to fund transportation improvements through 2039. Measure A funds a wide variety of transportation projects and services throughout the County. RCTC is responsible for administering the program. Measure A dollars are spent in accordance with a voter-approved expenditure plan that was adopted as part of the 1988 election.

### **8.3 FAIR SHARE CONTRIBUTION**

Project improvements may include a combination of fee payments to established programs, construction of specific improvements, payment of a fair share contribution toward future improvements or a combination of these approaches. Improvements constructed by development may be eligible for a fee credit or reimbursement through the program where appropriate (to be determined at the JPA's discretion). When off-site improvements are identified with a minor share of responsibility assigned to proposed development, the approving jurisdiction may elect to collect a fair share contribution or require the development to construct improvements. Detailed fair share calculations, for each peak hour, for the applicable deficient study area intersection are provided in Table 8-1 for Without Heacock Street Extension conditions and Table 8-2 for With Heacock Street Extension conditions. These fees are collected with the proceeds solely used as part of a funding mechanism aimed at ensuring that regional highways and arterial expansions keep pace with the projected population increases.



**TABLE 8-1: PROJECT FAIR SHARE CALCULATIONS FOR INTERSECTIONS – WITHOUT HEACOCK STREET EXTENSION**

#	Intersection		Project		2045 With Project (Non-Peak)	Total New Traffic	Project % of New Traffic
			Existing	(Non-Peak)			
5	Heacock St. & Cactus Av.	AM:	3,662	59	6,839	3,177	<b>1.9%</b>
		PM:	4,196	21	7,751	3,555	0.6%
6	Heacock St. & Meyer Dr./John F. Kennedy Dr.	AM:	1,931	64	3,116	1,185	<b>5.4%</b>
		PM:	2,649	24	4,166	1,517	1.6%
11	Heacock St. & Cardinal Av.	AM:	855	90	2,283	1,428	<b>6.3%</b>
		PM:	1,244	65	2,911	1,667	3.9%
12	Heacock St. & San Michele Rd.	AM:	358	90	2,082	1,724	<b>5.2%</b>
		PM:	713	65	2,719	2,006	3.2%
14	Indian Av. & San Michele Rd.	AM:	722	72	3,957	3,235	<b>2.2%</b>
		PM:	1,581	27	5,142	3,561	0.8%
15	Indian Av. & Nandina Av.	AM:	641	74	3,155	2,514	<b>2.9%</b>
		PM:	1,043	59	3,734	2,691	2.2%
16	Indian Av. & Harley Knox Bl.	AM:	1,696	74	3,191	1,495	<b>4.9%</b>
		PM:	1,649	59	3,207	1,558	3.8%
20	Perris Bl. & Harley Knox Bl.	AM:	2,709	12	4,374	1,665	<b>0.7%</b>
		PM:	2,559	5	4,152	1,593	0.3%

**BOLD** = Denotes highest fair share percentage.

**TABLE 8-2: PROJECT FAIR SHARE CALCULATIONS FOR INTERSECTIONS – WITH HEACOCK STREET EXTENSION**

#	Intersection		Project		2045 With Project (Non-Peak)	Total New Traffic	Project % of New Traffic
			Existing	(Non-Peak)			
5	Heacock St. & Cactus Av.	AM:	3,662	51	6,860	3,198	<b>1.6%</b>
		PM:	4,196	18	7,744	3,548	0.5%
6	Heacock St. & Meyer Dr./John F. Kennedy Dr.	AM:	1,931	56	3,568	1,637	<b>3.4%</b>
		PM:	2,649	21	4,538	1,889	1.1%
8	Heacock St. & Iris Av.	AM:	1,287	72	3,491	2,204	<b>3.3%</b>
		PM:	1,813	27	4,338	2,525	1.1%
11	Heacock St. & Cardinal Av.	AM:	855	98	2,291	1,436	<b>6.8%</b>
		PM:	1,244	68	2,914	1,670	4.1%
12	Heacock St. & San Michele Rd.	AM:	358	98	3,865	3,507	<b>2.8%</b>
		PM:	713	68	4,463	3,750	1.8%
13	Webster Av. & Harley Knox Bl.	AM:	1,614	90	3,963	2,349	<b>3.8%</b>
		PM:	1,412	65	4,076	2,664	2.4%
15	Indian Av. & Nandina Av.	AM:	641	26	3,081	2,440	<b>1.1%</b>
		PM:	1,043	41	3,227	2,184	1.9%
16	Indian Av. & Harley Knox Bl.	AM:	1,696	42	3,530	1,834	<b>2.3%</b>
		PM:	1,649	47	3,941	2,292	2.1%
17	Heacock St. & Nandina Av.	AM:	131	90	2,927	2,796	<b>3.2%</b>
		PM:	309	65	2,522	2,213	2.9%

**BOLD** = Denotes highest fair share percentage.

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## 9 REFERENCES

1. **March JPA.** *Final Traffic Impact Study Preparation Guide.* March JPA : s.n., February 2020.
2. **California Department of Transportation.** *Evaluating Transportation Impacts of State Highway System Projects.* September 2020.
3. **VRPA Technologies, Inc. for Riverside County Transportation Commission.** *Riverside County Long Range Transportation Study.* County of Riverside : VRPA Technologies, Inc., December 2019.
4. **Transportation Research Board.** *Highway Capacity Manual (HCM).* 6th Edition. s.l. : National Academy of Sciences, 2016.
5. **California Department of Transportation.** California Manual on Uniform Traffic Control Devices (CA MUTCD). [book auth.] California Department of Transportation. *California Manual on Uniform Traffic Control Devices (CA MUTCD).* 2014.
6. **Southern California Association of Governments.** *Connect SoCal Regional Transportation Plan/Sustainable Communities Strategy.* September 2020.
7. **Western Riverside Council of Governments.** *TUMF Nexus Study, 2016 Program Update.* July 2017.

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**APPENDIX 1.1:**  
**TRAFFIC STUDY SCOPING AGREEMENT**

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# Appendix C - March Joint Powers Authority Traffic Study Scoping Agreement

## March Joint Powers Authority

### TRAFFIC IMPACT STUDY SCOPING AGREEMENT

This Traffic Study Scoping Agreement specifies March JPA requirements for a Traffic Impact Study (TIS) of the following Project. The TIS must follow and address requirements set forth in the March JPA Traffic Impact Study Preparation Guide dated August 3, 2011. Not all of the request information is relevant to all projects. Please provide relevant information for the Project under consideration.

#### PROJECT OVERVIEW

**Project No.:** Plot Plan 20-06, Zone Change 20-02

**Related Projects:**

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**Project Name:** Meridian D1 - Gateway Aviation Center Project

**Project Address:** West of Heacock Street and south of Krameria Avenue, March ARB

**Project Description:** Gateway air freight cargo center, which consists of constructing a 201,200 square foot industrial warehouse with 9 at-grade loading doors and 42 dock-high door positions and a 69,620 square foot accessory maintenance building with grade level access. Site to provide parking apron sized to accommodate commercial cargo airplanes. Project anticipating 17 flights during the non-peak and 25 flights during the peak season and can park no more than 7 aircraft at any given time.





## Appendix C (continued) - March JPA Traffic Impact Study Scoping Agreement

### CONTACTS

<b>Consultant</b>		<b>Applicant</b>	
<b>Name:</b>	Charlene So, Urban Crossroads		Timothy Reeves, Lewis Retail Centers
<b>Address:</b>	1133 Camelback St. #8329 Newport Beach, CA 92658		1156 N. Mountain Av. Upland, CA 91786
<b>Consultant</b>		<b>Applicant</b>	
<b>Telephone:</b>			
<b>Cellular:</b>	949-861-0177		909-579-1294
<b>Email Address:</b>	cso@urbanxroads.com		timothy.reeves@lewismc.com

### TRIP GENERATION

1. **Source:** ITE \_\_\_\_\_th Edition or Empirical Data (see attached memo and counts)

2. **Land Use/Zoning:**

<b>Proposed Land Use:</b> (land use, acreage, access)	<b>Existing Land Use:</b> (land use, acreage, access)
Aviation - Gateway Airfreight Cargo	Vacant 52-acre parcel
52-Acres	
Access via Heacock	
<b>Proposed Zoning:</b>	<b>Existing Zoning:</b>
Aviation	Not Available

3. **Peak Period(s) to be Analyzed:**

(Check all that apply)  AM  PM  FRI  SAT  SUN





## Appendix C (continued) - March JPA Traffic Impact Study Scoping Agreement

**4. Peak Hours of Generator [List Hour(s)]:**

7-9 AM      4-6 PM

**5. Estimated Trip Generation (Provide acreage, square footage, employees, students, seats):**

Based on Peak Season

<b>AM Trips</b>	166	96	262			
	In	Out	Total	In	Out	Total

**Estimated Trip Generation (continued)**

<b>PM Trips</b>	29	115	144			
	In	Out	Total	In	Out	Total

Internal Trip Allowance		Yes	X	No	( _____ % Trip Discount)
Pass-By Trip Allowance		Yes	X	No	( _____ % Trip Discount)

### TRIP DISTRIBUTION

Varies - see attached memo and exhibits.

N \_\_\_\_\_ %      S \_\_\_\_\_ %      E \_\_\_\_\_ %      W \_\_\_\_\_ %

*(Attach exhibit for detailed assignment as Attachment 2)*

### EXTERNAL FACTORS THAT COULD AFFECT PROJECT

(Planned road improvements, approved nearby development

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### EXISTING TRAFFIC DATA TO BE UTILIZED

Traffic count data must be new or recent. Provide traffic count dates if using other than new counts.

Date of Counts Historic traffic counts to be used due to COVID-19 plus application of 2% per year adjustment to 2020







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## Appendix C (continued) - March JPA Traffic Impact Study Scoping Agreement

### BACKGROUND TRAFFIC

Existing Conditions Year: 2020 (adjusted)  
Opening Day Year: 2023  
Future Year(s) Phases: No Phasing  
Project Build-out Year: 2023  
Annual Ambient Growth Rate %: 2% per year

### OTHER AREA PROJECTS TO BE ANALYZED *(list and expand as Attachment 3)*

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### STUDY INTERSECTIONS *(NOTE: Subject to revision after other projects, trip generation and distribution are determined, or comments are received from other agencies.) Expand if necessary, as Attachment 4*

- |                         |          |
|-------------------------|----------|
| 1. <u>See Exhibit 2</u> | 5. _____ |
| 2. _____                | 6. _____ |
| 3. _____                | 7. _____ |
| 4. _____                | 8. _____ |

### STUDY ROADWAY SEGMENTS *(NOTE: Subject to revision after other projects, trip generation and distribution are determined, or comments are received from other agencies.) Expand if necessary, as Attachment 5*

- |          |          |
|----------|----------|
| 1. _____ | 5. _____ |
| 2. _____ | 6. _____ |
| 3. _____ | 7. _____ |
| 4. _____ | 8. _____ |





## Appendix C (continued) - March JPA Traffic Impact Study Scoping Agreement

### INTERSECTION AND SEGMENT LEVEL OF SERVICE METHODOLOGY

The following software programs shall be used for LOS analysis:

Synchro: Will be used for all intersection operations analyses

HCS: \_\_\_\_\_

Software Programs (continued)

Other (list): \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Peak Hour Factors to be applied include the following:

1. For Existing and Near-Term analysis, the counted Peak Hour Factor shall be used.
2. For Future Year scenarios, a Peak Hour factor of .92 shall be applied.

### ADDITIONAL ANALYSIS REQUIRED (if known)

*[Examples: Queuing, Merging, Signal Actuation/Coordination, Bike/Pedestrian Facilities, Weaving Analysis, Application of Transportation Demand Management Measures, Other (list below)]*

Queuing on off-ramps at I-215 Ramps  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### OTHER JURISDICTIONAL IMPACTS

Is this project within the County or within a City's Sphere of Influence or one-mile radius Of City boundaries?  Yes  No

If so, name of Jurisdiction(s): City of Moreno Valley (scope shared w/ City)  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**SITE PLAN** (please attached reduced copy as Attachment 6)





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## Appendix C (continued) - March JPA Traffic Impact Study Scoping Agreement

**OTHER SPECIFIC ISSUES TO BE ADDRESSED IN THE STUDY** *(in addition to the standard analysis described in the March JPA TIS Preparation Guide)*

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### TRAFFIC STUDY SCOPING AGREEMENT SUBMITTAL

  
\_\_\_\_\_  
Project Applicant or Representative

10/9/2020  
\_\_\_\_\_  
Date

Traffic Study Scoping Agreement Submitted on 7/23/2020  
\_\_\_\_\_  
Date

Revised on 10/9/2020  
\_\_\_\_\_  
Date

### TRAFFIC STUDY SCOPING AGREEMENT APPROVAL

\_\_\_\_\_  
March JPA Representative

\_\_\_\_\_  
Date



October 9, 2020

Mr. Mathew Evans  
March Joint Powers Authority  
14205 Meridian Parkway, Suite 140  
Riverside, California 92518

**SUBJECT: SCOPING ASSUMPTIONS FOR THE GATEWAY AVIATION TRAFFIC IMPACT ANALYSIS**

Dear Mr. Mathew Evans:

The firm of Urban Crossroads, Inc. is pleased to submit this letter documenting the suggested scope of study for the Gateway Aviation development ("Project"), which is located in the southeastern portion of the March Air Reserve Base, west of Heacock Street and south of Krameria Avenue in the jurisdiction of the March Joint Powers Authority (March JPA) in unincorporated Riverside County.

**VEHICLE MILES TRAVELED (VMT)**

For the purposes of CEQA, a VMT analysis will be prepared and presented under separate cover from the LOS-based traffic analysis. The VMT analysis methodology and thresholds identified within the Governor's Office of Planning and Research (OPR) Technical Advisory on Evaluating Transportation Impacts in CEQA (December of 2018) in conjunction with Western Riverside Council of Governments' (WRCOG) Recommended Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment are proposed to be utilized. If the March JPA has adopted or is in the process of adopting their own guidelines and thresholds, then these can be utilized in lieu of the OPR or WRCOG guidelines.

**PROPOSED PROJECT**

The proposed Project (see Exhibit 1) includes the development of a gateway air freight cargo center, which consists of constructing a 201,200 square foot industrial warehouse with 9 at-grade (ground level) loading doors and 42 dock-high door positions and a 69,620 square foot accessory maintenance building with grade level access only. The Project site would have a parking apron sized to accommodate commercial cargo airplanes (see Exhibit 1), paved to meet Federal Aviation Administration (FAA) standards and utilize the existing taxiway to access the March Inland Port Airport runway. The proposed warehouse building can accommodate parking and unloading of a maximum of 7 aircraft at any given time (no more than 7 aircraft can be unloaded at any given time). The Project will also expand and improve the access to the existing taxiway which will be a benefit to both the Project and existing Airport users south of the Project. The proposed Project is anticipated to average 17 flights a day. Flight operations would occur 6 days a week. Generally, inbound flights would occur in the early morning hours and outbound flights would occur in the late evening hours. Inbound flights will approach from the west, over non-residential land uses. During the peak season, increased flight operations would be

The Institute of Transportation Engineers (ITE) Trip Generation Manual (10<sup>th</sup> Edition, 2017) does not currently have any trip generation rates for an air freight facility, as such, trip generation estimates for the proposed Project have been developed using data collected at a similar facility with operations similar to those proposed. The existing facility surveyed does not fly between the hours of 10 PM and 7 AM with 6 flights per day (where one flight equals 1 inbound and 1 outbound), but ground operations function 24-hours a day. The maximum number of aircraft that can be parked and unloaded at any given time is 5. Cargo arrives on the planes and is sorted in the warehouse building to be distributed to off-site distribution centers. Table 1 summarizes the count data collected at the existing facility (the count data is attached to this scoping agreement). Traffic counts were conducted at the existing facility on 3 consecutive days and counts were conducted to capture the trips associated with the air freight portion separately from the high-cube warehouse use that supports the air freight use. Although the traffic counts for the existing facility were conducted during the ongoing COVID-19 pandemic, there is the potential that the trip generation would likely be overstated due to the increase in online shopping in comparison to pre-COVID conditions; however, no adjustments have been made to the empirical data in an effort to determine a conservative trip generation. The average data for all 3 days has been calculated on Table 1.

Table 2 shows the trip generation rates developed for the existing facility which have been calculated based on aircraft parking positions for passenger cars and trucks using the data collected at the site shown on Table 1 (see bottom of Table 1, used the average of the 3 days). The trip generation rates

#### **DEVELOPMENT OF TRIP GENERATION RATES – EMPIRICAL DATA**

Trip generation represents the amount of traffic that is attracted and produced by a development and is based upon the specific land uses planned for a given project.

#### **TRIP GENERATION**

The air freight cargo would be transferred from the planes to the warehouse, where the cargo would be placed onto trucks and conveyed to distribution centers and vice versa from the distribution centers to the air cargo facility. The Project site would include 90 trailer storage positions as well as parking areas for employees and authorized visitors (214 spaces at the warehouse and 42 spaces at the maintenance building). Access to the Project site would be via a proposed signalized entrance on Heacock Street, which is proposed to align with the existing Lowe's facility entrance. The maintenance building would provide mobile maintenance for both planes and trucks. Two shifts for employees are anticipated under typical conditions and three shifts during the peak season (4-weeks only). In the event emergency maintenance is needed, the maintenance building would be capable of servicing a plane. The anticipated Project Opening Year is 2023.

anticipated (estimated at an additional 192 flights over a 4-week period); however, the maximum annual flight operations would not exceed the currently available civilian air cargo operations capacity under the Joint Use Agreement.



- The study area intersections (Exhibit 2) were selected based on the Project's anticipated contribute of 50 or more peak hour trips using the peak season trip generation for the Project.

## INTERSECTIONS

## STUDY AREA

Given these differences between passenger cars and trucks, separate trip distributions were generated for both passenger cars and truck trips. Exhibit 3 illustrates the truck trip distribution patterns. Exhibits 4 and 5 illustrates the trip distribution patterns for passenger cars in E+P/Opening Year and Horizon Year, respectively. Exhibit 4 will also be utilized for Horizon Year traffic conditions without the future Heacock Avenue Extension while Exhibit 5 shows the inclusion of the future Heacock Avenue Extension to Harley Knox Boulevard. These trip distribution patterns are consistent with other March JPA projects.

The Project trip distribution and assignment process represents the directional orientation of traffic to and from the Project site. The trip distribution pattern of passenger cars is heavily influenced by the geographical location of the site, the location of surrounding land uses, and the proximity to the regional freeway system. The trip distribution pattern for truck traffic is also influenced by the local truck routes approved by the March JPA, City of Riverside, City of Moreno Valley, and Caltrans. Passenger car and truck trip distributions are consistent with other March JPA projects within the region.

## TRIP DISTRIBUTION

Based on the calculated trip generation rates for aircraft parking positions shown on Table 2, the Project's trip generation is summarized on Table 3. The proposed Project trip generation is based on the anticipated operations for the site. Specifically, it has been assumed that the building can accommodate 7 aircraft parking positions with approximately 17 flights per day occurring during the typical non-peak season. The typical, non-peak season would only have two employee shifts to support the proposed operations. The Project is anticipated to generate a total of 1,276 trip-ends per day with 178 AM peak hour trips and 98 PM peak hour trips on a typical non-peak season day. The peak season, which only occurs 4 weeks in the year, will include an additional 8 flights per day for a total of 25 flights per day and will also include a 3<sup>rd</sup> shift for warehouse employees (or an increase in 47.1% from the non-peak). The Project is anticipated to generate a total of 1,880 trip-ends per day with 262 AM peak hour trips and 144 PM peak hour trips on a peak season day. Both the non-peak and peak seasons will be evaluated for the purposes of the LOS-based traffic study (however, the study area is based on the trip generation for the peak season).

## PROPOSED PROJECT TRIP GENERATION

were calculated by dividing the average trips (average of 3 days) by the maximum number of aircraft parking positions (which is 5 parking positions).

- Opening Year Cumulative (2023) Without Project
  - Adjusted Existing 2020 counts
  - Ambient growth (6.12%)
  - Cumulative Development traffic

be evaluated in the traffic study.

To assess potential cumulative traffic impacts, Opening Year Cumulative scenarios (identified below) will

### OPENING YEAR CUMULATIVE (2023) ANALYSIS

- Adjusted Existing (2020) traffic
- Proposed Project traffic (non-peak and peak season)

existing network and includes the following traffic components:

Existing plus Project analysis will be performed to determine the effects of the proposed Project on the

### EXISTING PLUS PROJECT (E+P)

counts.

Due to the currently ongoing COVID-19 pandemic, information for Existing (2020) conditions cannot be developed based on current traffic counts. As such, historic traffic count data is proposed to be utilized in conjunction with the application of a growth factor (2% per year) to represent the baseline traffic conditions. Weekday AM peak hour (7 AM – 9 AM) and PM peak hour (4 PM to 6 PM) turning movement counts will be obtained from other studies or as provided by the lead agency or local count companies for the study area intersections shown on Exhibit 2. The traffic counts include the following vehicle classifications: Passenger Cars, 2-Axle Trucks, 3-Axle Trucks, and 4 or More Axle Trucks. Traffic counts used for the purposes of the analysis will ensure that local schools were in session at the time of the traffic counts. Existing ADT volumes will be calculated based upon factored intersection peak hour

### EXISTING CONDITIONS

## **ANALYSIS SCENARIOS**

- Freeway off-ramp queuing analysis will be conducted at the I-215 Freeway at Harley Knox Boulevard interchange.

### FREEWAYS

- A queuing analysis will be performed for the proposed Project driveway on Heacock Street and at the adjacent intersections of Krameria Avenue (North) and Cardinal Avenue to ensure existing/recommended storage lengths can accommodate the 95<sup>th</sup> percentile peak hour queues.

### QUEUING ANALYSIS

To represent the impact large trucks, buses and recreational vehicles have on traffic flow, truck traffic will be accounted for in the analysis as a percentage of total traffic at the study area intersections. In that lane. For all-way stop controlled intersections, LOS is computed for the intersection as a whole.

For approaches composed of a single lane, the delay is computed as the average of all movements in controlled intersections, LOS for the intersection will be the worst LOS of all the individual movements. evaluated using the methodology described in the HCM 6<sup>th</sup> Edition. At two-way or side-street stop- (LOS) operations are based on an intersection's average control delay. Unsignalized intersections will be based on the methodology described in the *Highway Capacity Manual* (HCM 6<sup>th</sup> Edition). Intersection levels of service For the purposes of this analysis, signalized intersection operations analysis will be based on the

## INTERSECTION ANALYSIS METHODOLOGY

- Proposed Project traffic (non-peak and peak season)
- Horizon Year (2040) Without Project (Without Heacock Avenue Extension)
- Horizon Year (2040) With Project – Without Heacock Avenue Extension
  - Horizon Year (2040) baseline traffic forecasts manually developed using Existing baseline volumes, and cumulative development traffic, and growth between 2020 to 2040 (annual growth compounded over 20 years to be based on the average growth for employment, households, and population per the latest SCAG RTP for Riverside County).
  - Horizon Year (2040) Without Project – Without Heacock Avenue Extension
  - Proposed Project traffic (non-peak and peak season)
  - Horizon Year (2040) Without Project (With Heacock Avenue Extension)
  - Horizon Year (2040) With Project – With Heacock Avenue Extension
  - Refined post-processed Horizon Year (2040) baseline traffic forecasts (From RIVTAM)
  - Horizon Year (2040) Without Project – With Heacock Avenue Extension

The Horizon Year (2040) baseline traffic volume forecasts will be derived from the Riverside County Transportation Analysis Model (RIVTAM) using accepted procedures for model forecast refinement and smoothing. Horizon Year scenarios (identified below) will be evaluated in the traffic study. The future extension of Heacock Avenue from its existing terminus to Harley Knox Boulevard is a long-range planned connection. However, Horizon Year (2040) traffic conditions have been evaluated without and with the extension in the event that the connection is not in place by Year 2040.

## HORIZON YEAR (2040) ANALYSIS

- Opening Year Cumulative (2023) With Project
  - Opening Year Cumulative (2023) Without Project
  - Proposed Project traffic (non-peak and peak season)

- LOS C shall apply to all development proposals in any area of the Riverside County not located within the boundaries of an Area Plan, as well as those areas located within the following Area Plans: REMAP, Eastern Coachella Valley, Desert Center, Palo Verde Valley, and those non-Community Development areas of the Elsinore, Lake Mathews/Woodcrest, Mead Valley and Temescal Canyon Area Plans.
- LOS D shall apply to all development proposals located within any of the following Area Plans: Eastvale, Jurupa, Highgrove, Reche Canyon/Badlands, Lakeview/Nuevo, Sun City/Menifee Valley, Harvest Valley/Winchester, Southwest Area, The Pass, San Jacinto Valley, Western Coachella Valley and those Community Development Areas of the Elsinore, Lake Mathews/Woodcrest, Mead Valley and Temescal Canyon Area Plans.

The following minimum target levels of service have been designated for the review of development proposals in the unincorporated areas of Riverside County with respect to transportation impacts on roadways designated in the Riverside County Circulation Plan which are currently maintained, or are intended to be accepted into the County maintained roadway system:

The definition of an intersection deficiency has been obtained from the County of Riverside General Plan. Riverside County General Plan Policy C 2.1 states that the County will maintain the following County-wide target LOS:

#### COUNTY OF RIVERSIDE

Based on the March Joint Powers Authority Traffic Impact Study Preparation Guide (February 10, 2020), all intersections and roadway segments within the March JPA Planning Area shall operate at LOS D or better with limiting circumstances of LOS E to occur. LOS E may also be allowed to the extent that would support transit-oriented development (TOD) and walkable communities. LOS E is also acceptable during peak hours at interchange ramp intersections where ramp metering occurs. The Project is not proposed to be a TOD and neither the Alessandro Boulevard nor Cactus Avenue on-ramps are currently metered, as such, the minimum LOS utilized for the purposes of this analysis is LOS D.

#### MARCH JOINT POWERS AUTHORITY

The definitions of an operational deficiency for each of the applicable jurisdictions are as follows:

### LEVEL OF SERVICE (LOS) CRITERIA

Traffic signal warrant analysis will be conducted for unsignalized intersections operating at LOS E or F. Peak Hour Volume based Warrant 3 based on 2014 California Manual on Uniform Traffic Control Devices (MUTCD) will be utilized to determine whether a signal would be warranted.

### TRAFFIC SIGNAL WARRANTS

other words, the traffic volumes utilized for intersection analyses will utilize the actual vehicle traffic flow and trucks will be reflected in the analysis as a percentage of the total traffic flow, not PCE.

Urban Crossroads, Inc. is pleased to submit this letter documenting the Project trip generation, trip distribution, and the recommended intersection analysis locations for the Gateway Aviation Traffic Impact Study.

## CONCLUSION

Cumulative projects to be included in the analysis are listed in Table 4 and shown on Exhibit 6. The list of cumulative projects and map have been updated based on information provided by March JPA (projects that have been completed or are currently existing have not been included).

## CUMULATIVE DEVELOPMENT PROJECTS

The results of the traffic analysis will be provided to Caltrans for review. It is understood that Caltrans may request improvements related to safety and multimodal transportation facilities. Any requested improvements by Caltrans will be considered in determining project mitigation measures and conditions of approval.

### CALTRANS

- LOS D along all City maintained roads (including intersections) and LOS D along I-215 and SR-74 (including intersections with local streets and roads). An exception to the local road standard is LOS E, at intersections of any Arterials and Expressways with SR-74, the Ramona-Cajalco Expressway, or at I-215 Freeway ramps.
- LOS E may be allowed within the boundaries of the Downtown Specific Plan Area to the extent that it would support transit-oriented development and walkable communities. Increased congestion in this area will facilitate an increase in transit ridership and encourage development of a complementary mix of land uses within a comfortable walking distance from light rail stations.

The definition of an intersection deficiency has been obtained from the City of Perris General Plan:

### CITY OF PERRIS

The Minimum LOS for the City of Moreno Valley is LOS D for intersections and roadway segments that are adjacent to freeway on/off ramps, and/or adjacent to employment generating land uses. LOS C is applicable to all other intersections and roadway segments. Boundary intersections are assumed to be LOS D.

### CITY OF MORENO VALLEY

The applicable minimum LOS utilized for the purposes of this analysis is LOS D per the County-wide target LOS for projects located within the Reche Canyon/Badlands and Mead Valley Area Plans.

- *LOS E may be allowed by the Board of Supervisors within designated areas where transit-oriented development and walkable communities are proposed.*



Charlene So, PE  
Associate Principal



URBAN CROSSROADS, INC.

Respectfully submitted,

If you have any questions, please contact me directly at (949) 861-0177.

Mr. Mathew Evans  
March Joint Powers Authority  
October 9, 2020  
Page 8 of 8

EXHIBIT 1: PRELIMINARY SITE PLAN

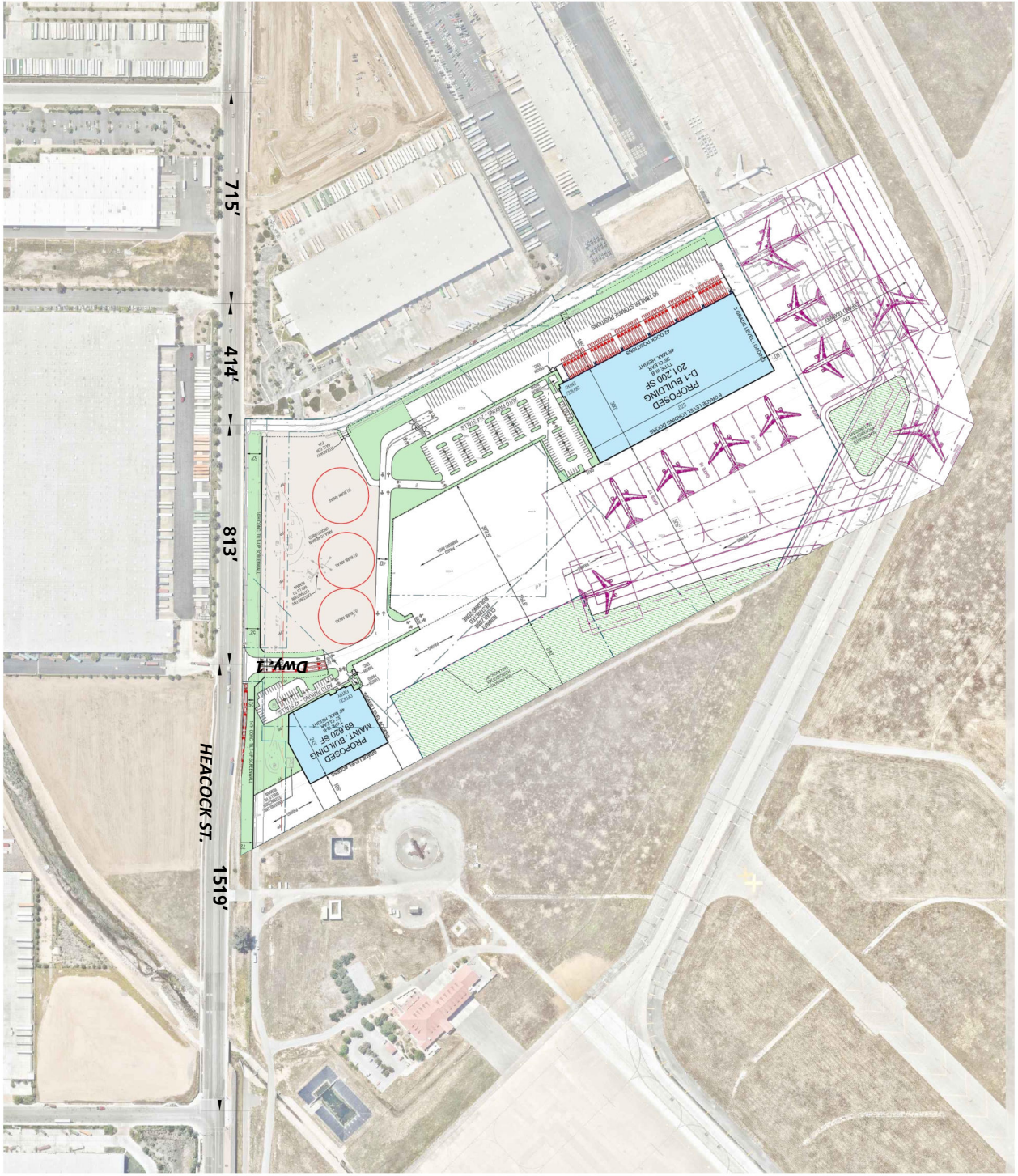




EXHIBIT 2: LOCATION MAP



**LEGEND:**

-  = EXISTING INTERSECTION ANALYSIS LOCATION
-  = FUTURE INTERSECTION ANALYSIS LOCATION





### EXHIBIT 3: PROJECT (TRUCK) TRIP DISTRIBUTION



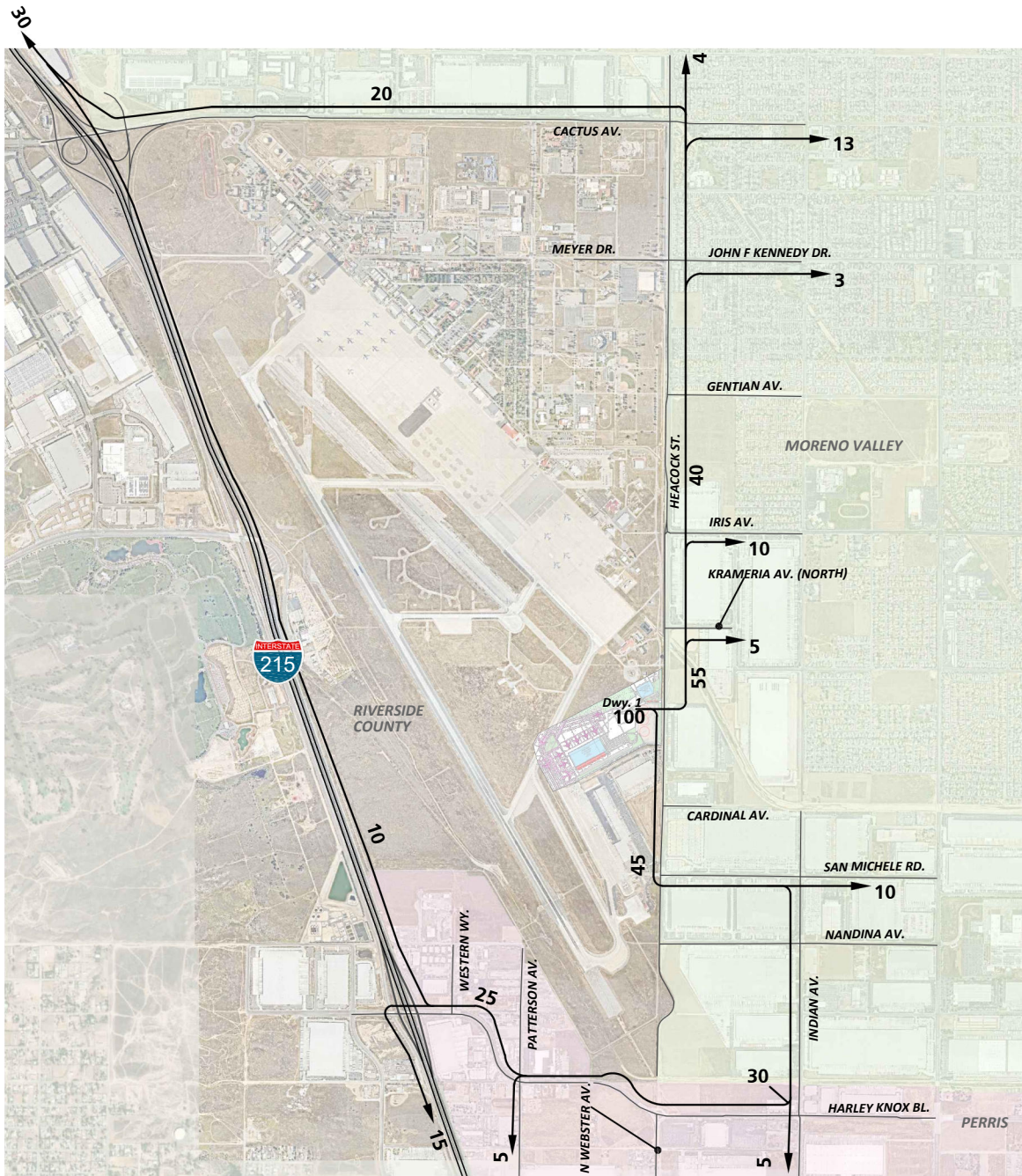
**LEGEND:**

10 = PERCENT TO/FROM PROJECT





**EXHIBIT 4: PROJECT NEAR TERM (PASSENGER CAR) TRIP DISTRIBUTION**



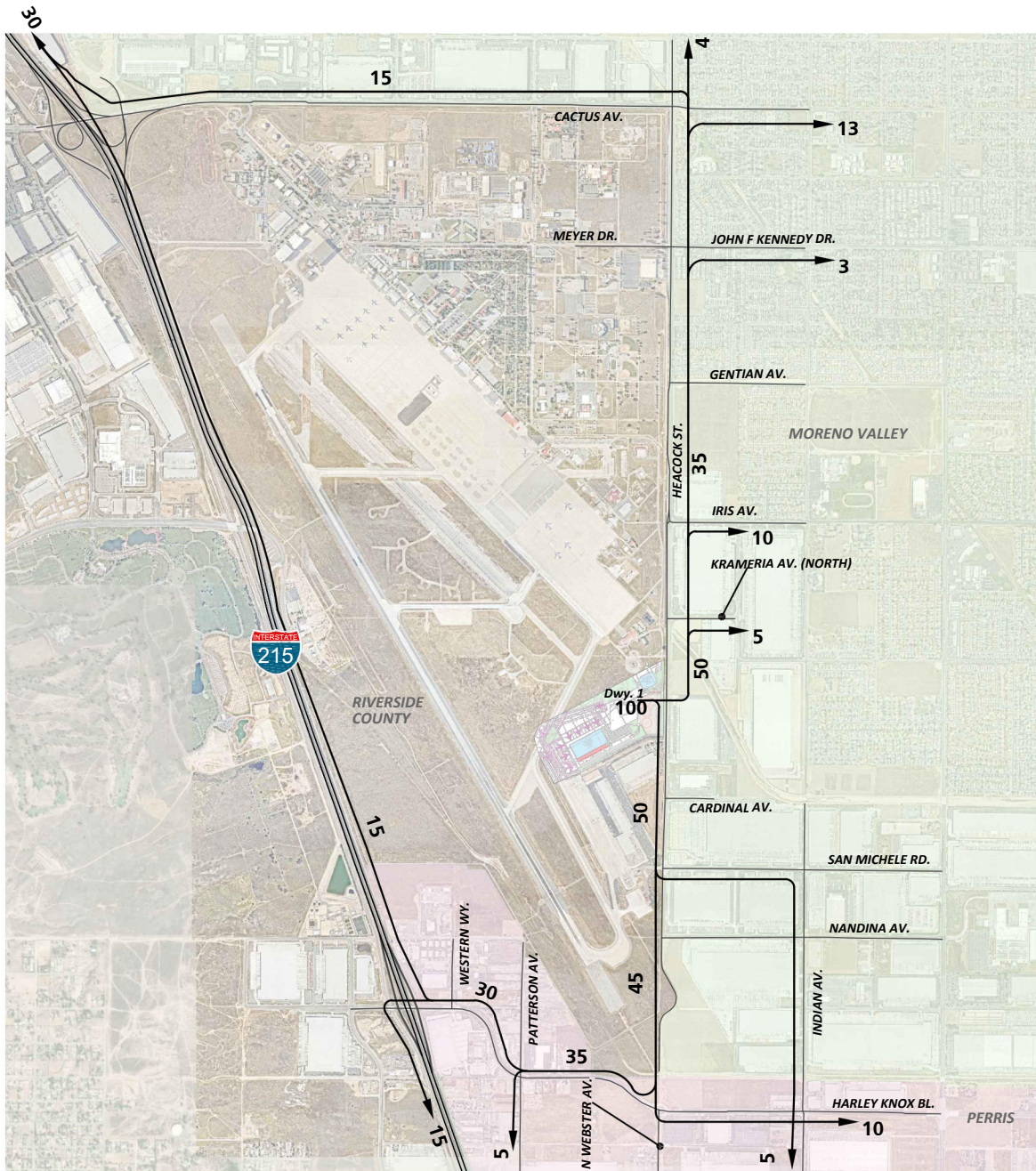
**LEGEND:**

10 = PERCENT TO/FROM PROJECT





**EXHIBIT 5: PROJECT LONG RANGE (PASSENGER CAR) TRIP DISTRIBUTION**



**LEGEND:**

10 = PERCENT TO/FROM PROJECT





EXHIBIT 6: CUMULATIVE DEVELOPMENT LOCATION MAP

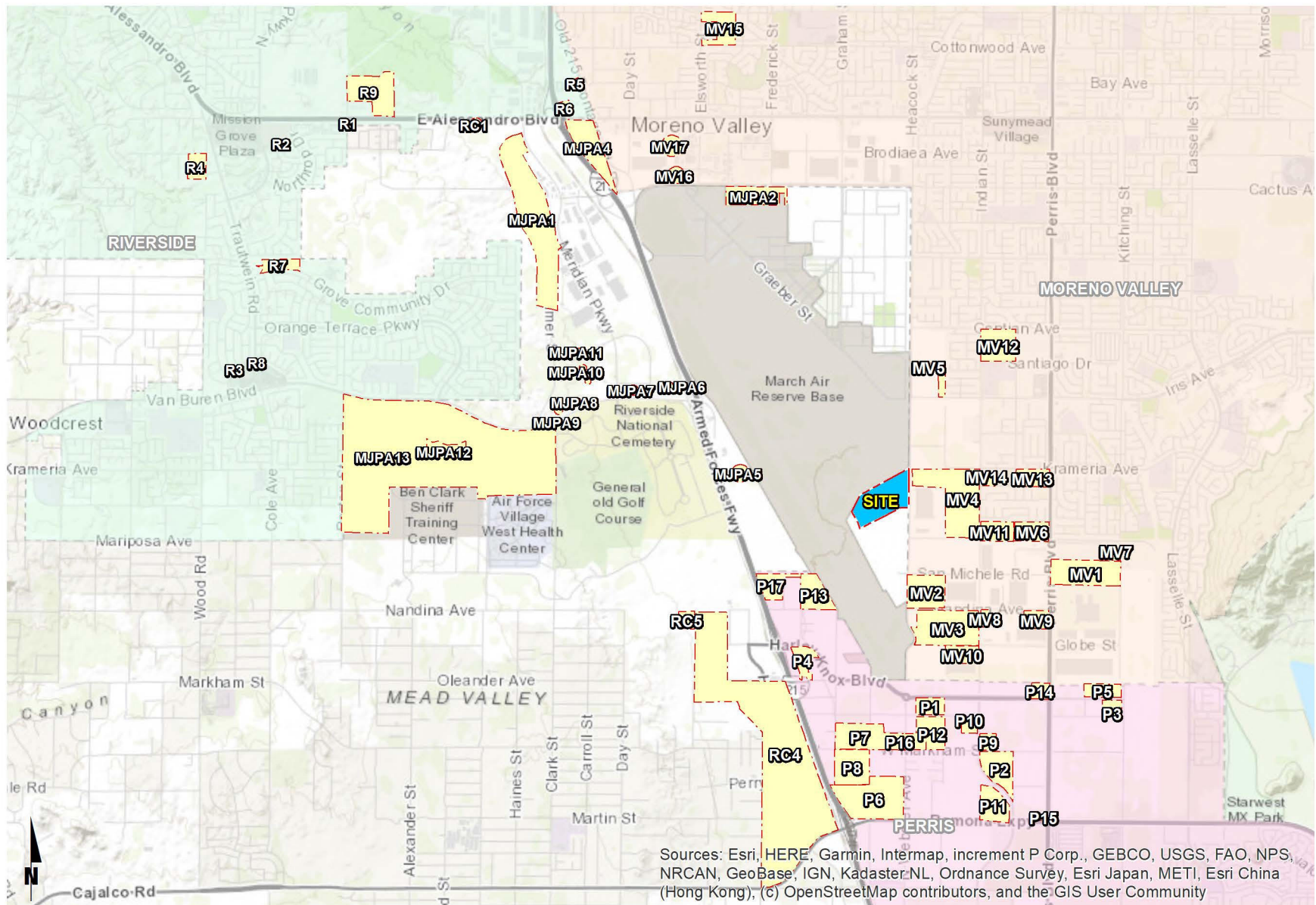


Table 1

Existing Empirical Data

Land Use	Building 1 <sup>2</sup>						Daily
	AM Peak Hour			PM Peak Hour			
	In	Out	Total	In	Out	Total	
Day 1: May 12, 2020							
Passenger Cars:	66	11	77	2	36	38	676
Truck Trips:							
2-axle:	1	0	1	1	2	3	26
3-axle:	1	3	4	4	2	6	63
4+-axle:	3	5	8	8	9	17	115
- Truck Trips	5	8	13	13	13	26	204
<b>TOTAL TRIPS (Actual Vehicles)<sup>1</sup></b>	<b>71</b>	<b>19</b>	<b>90</b>	<b>15</b>	<b>49</b>	<b>64</b>	<b>880</b>
Day 2: May 13, 2020							
Passenger Cars:	80	45	125	2	29	31	740
Truck Trips:							
2-axle:	1	0	1	2	2	4	21
3-axle:	2	4	6	2	1	3	56
4+-axle:	5	2	7	5	11	16	102
- Truck Trips	8	6	14	9	14	23	179
<b>TOTAL TRIPS (Actual Vehicles)<sup>1</sup></b>	<b>88</b>	<b>51</b>	<b>139</b>	<b>11</b>	<b>43</b>	<b>54</b>	<b>919</b>
Day 3: May 14, 2020							
Passenger Cars:	77	65	142	3	57	60	724
Truck Trips:							
2-axle:	0	0	0	2	1	3	12
3-axle:	2	3	5	10	2	12	82
4+-axle:	4	1	5	5	16	21	114
- Truck Trips	6	4	10	17	19	36	208
<b>TOTAL TRIPS (Actual Vehicles)<sup>1</sup></b>	<b>83</b>	<b>69</b>	<b>152</b>	<b>20</b>	<b>76</b>	<b>96</b>	<b>932</b>
<b>Average of 3 Days</b>							
Passenger Cars:	74	40	115	2	41	43	713
Truck Trips:							
2-axle:	1	0	1	2	2	3	20
3-axle:	2	3	5	5	2	7	67
4+-axle:	4	3	7	6	12	18	110
- Truck Trips	6	6	12	13	15	28	197
<b>TOTAL TRIPS (Actual Vehicles)<sup>1</sup></b>	<b>81</b>	<b>46</b>	<b>127</b>	<b>15</b>	<b>56</b>	<b>71</b>	<b>910</b>

\* Note: data collected on May 12 - 14, 2020.

<sup>1</sup> TOTAL TRIPS = Passenger Cars + Truck Trips.

<sup>2</sup> Building 1 calculated by totaling counts from Driveway 1 and Driveway 3 (driveway serving PrimeAir only).

Calculated Trip Generation Rates

Table 2

Daily	AM Peak Hour			PM Peak Hour			Units <sup>1</sup>	APP	Air Freight Cargo Center <sup>2</sup>
	In	Out	Total	In	Out	Total			
142,667	0.467	8.133	8,600	14,867	8,067	22,933	0.467	8,133	8,600
3,933	0.667	0.333	0.667	0.133	0.000	0.133	0.133	0.000	0.667
13,400	1.067	0.333	1,400	0.333	0.667	1,000	0.667	1,000	1,400
22,067	1.200	2.400	3,600	0.800	0.533	1,333	0.800	0.533	1,333

<sup>1</sup> APP = Aircraft Parking Positions

<sup>2</sup> Average trip generation rates developed from empirical data summarized on Table 1.

Calculated by dividing average trips (see bottom of Table 1) by maximum aircraft parking positions (5 APP).

Table 3

Project Trip Generation Summary

Project	Quantity	Units <sup>1</sup>	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
<b>Typical Day (Non-Peak Season, 48 Weeks)</b>									
Gateway Aviation									
Passenger Cars:	7	APP	104	56	160	3	57	60	1,000
Truck Trips:									
2-axle:			1	0	1	2	2	4	28
3-axle:			2	5	7	7	2	9	94
4+-axle:			6	4	10	8	17	25	154
Total Trucks:			9	9	18	17	21	38	276
<b>TOTAL TRIPS (Actual Vehicles)<sup>2</sup></b>			<b>113</b>	<b>65</b>	<b>178</b>	<b>20</b>	<b>78</b>	<b>98</b>	<b>1,276</b>
<b>Peak Season (4-Weeks)</b>									
Gateway Aviation									
Passenger Cars: <sup>3</sup>	7	APP	153	82	235	4	84	88	1,472
Truck Trips:									
2-axle:			1	0	1	3	3	6	42
3-axle:			3	7	10	10	3	13	138
4+-axle:			9	6	15	12	25	37	228
Total Trucks:			13	13	26	25	31	56	408
<b>TOTAL TRIPS (Actual Vehicles)<sup>2</sup></b>			<b>166</b>	<b>96</b>	<b>262</b>	<b>29</b>	<b>115</b>	<b>144</b>	<b>1,880</b>

<sup>1</sup> APP = Aircraft Parking Positions

<sup>2</sup> TOTAL TRIPS = Passenger Cars + Truck Trips.

<sup>3</sup> Non-peak trip generation has been increased by 47.1% to account for increase from 17 flights per day to 25 flights per day during the peak season.

Cumulative Development Land Use Summary

Table 4  
Page 1 of 2

ID	Project Name	Land Use	Quantity	Units <sup>1</sup>
<b>March Joint Powers Authority</b>				
MJPA1	Meridian Business Park (West Campus)	Industrial Park	2,278.852	TSF
MJPA2	K4 Parcel	Warehouse	718.000	TSF
MJPA3	Economic Business Center	Warehouse	124.523	TSF
MJPA4	Freeway Business Center	Warehouse	709	TSF
MJPA5	Veteran's Industrial Plaza/VIP 215	Warehouse	2,000.000	TSF
MJPA6	Veteran's Plaza	Commercial Retail	198.000	TSF
	Veteran's Plaza Phase II	Warehouse	100.000	TSF
MJPA7	MS Van Buren I	Warehouse	176.396	TSF
MJPA8	MS Van Buren II	Warehouse	162.041	TSF
MJPA9	MS Prime Six	General Office	74.922	TSF
MJPA10	Meridian Distribution Center IV	Warehouse	90.000	TSF
MJPA11	Meridian Distribution Center III	Warehouse	262.269	TSF
MJPA12	Eagle Business Park	Business Park	390.480	TSF
MJPA13	Meridian South Campus	Office	388.011	TSF
		Commercial Retail	298.215	TSF
		Business Park	1,764.180	TSF
		Warehousing	774.437	TSF
		High-Cube Cold Storage	700.000	TSF
		High-Cube Transload	800.000	TSF
		LGB6 (Building A)	1,000.000	TSF
		Parcel Delivery	1,000.000	TSF
		Dog Park	6.2	Acres
		Warehouse	48.830	TSF
MJPA14	Meridian U1 L2 Industrial Warehouse	Warehouse	48.830	TSF
MJPA15	March Vets Village - Building 1 (22,349 SF)	Transitional Housing	16	DU
<b>City of Riverside</b>				
R1	P17-0419/20/21	Fast Food w/ Drive Thru	1.857	TSF
R2	P16-0578	Warehouse	82.200	TSF
R3	P19-0151/P19-0152/P19-0153	Health and Fitness Club	21.706	TSF
R4	P13-0665	Single Family Detached	8	DU
R5	P15-1035/P16-0556/P16-0567	Warehouse	176.149	TSF
R6	P14-0841 to P14-0848/P16-0472/P16-0474	Warehouse	73.200	TSF
R7	P14-0472/P14-0473/P15-0321/P15-0322	Single Family Detached	85	DU
R8	P19-0022/P19-0024/P19-0026/P19-0027/P19-0028	Fast Food w/ Drive Thru	4.319	TSF
R9	Sycamore Hills Distribution Center	Warehouse	603.100	TSF
<b>County of Riverside</b>				
RC1	PP 25422	Warehouse	814.000	TSF
RC2	Knox Business Park	Warehouse	1,259.050	TSF
RC3	Oleander Business Park	Warehouse	710.736	TSF
RC4	Majestic Freeway Business Center SP	General Light Industrial	6,200.00	TSF
RC5	Oleander Business Park	High-Cube Warehouse	728.65	TSF



Cumulative Development Land Use Summary

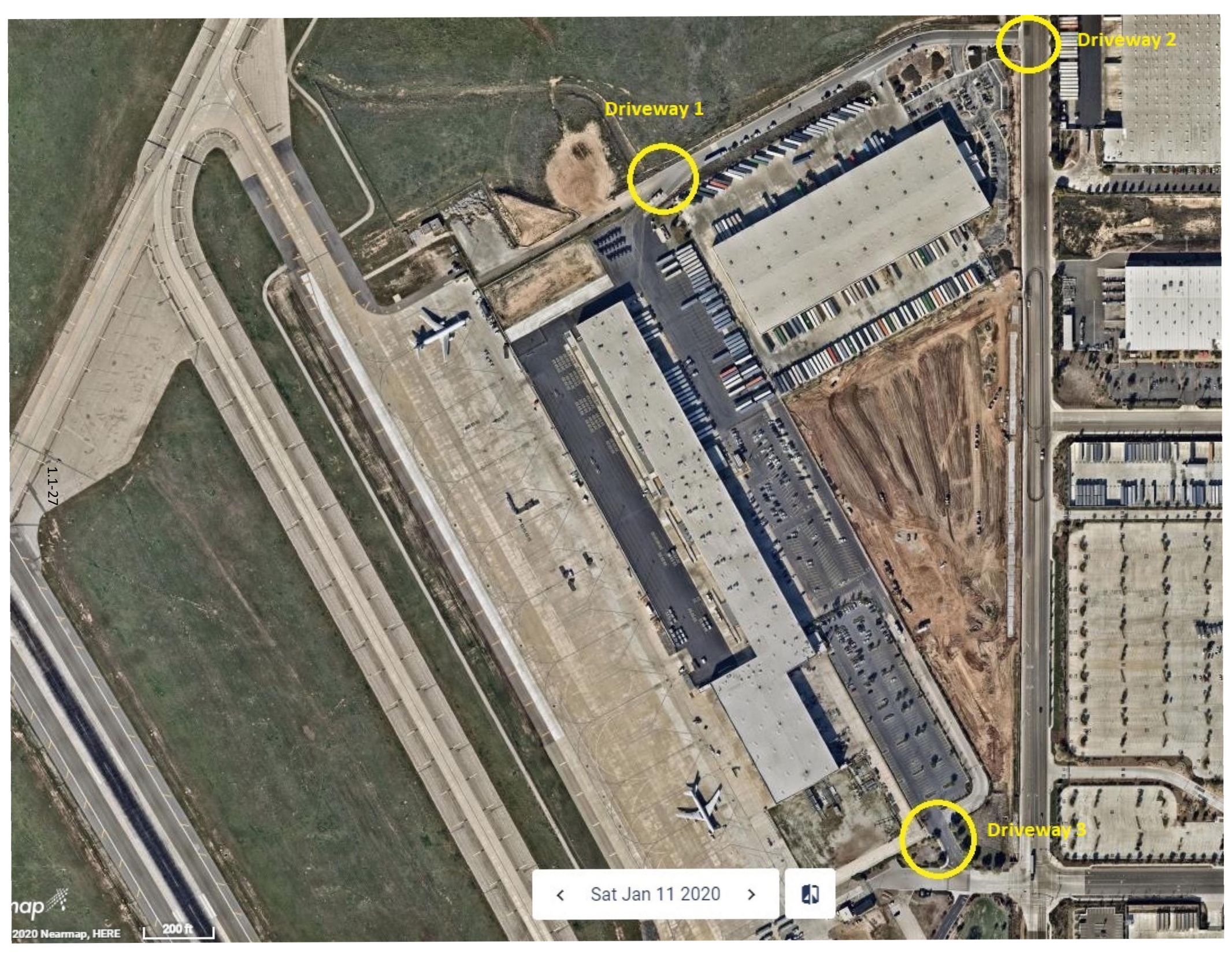
Table 4  
Page 2 of 2

ID	Project Name	Land Use	Quantity	Units <sup>1</sup>
<b>City of Moreno Valley</b>				
MV1	Kearney	High-Cube Warehouse	1,100.00	TSF
MV2	IDS	High-Cube Warehouse	701.00	TSF
MV3	First Industrial	High-Cube Warehouse	1,380.00	TSF
MV4	Prologis 1	High-Cube Warehouse	1,000.00	TSF
MV5	Moreno Valley Industrial Park	High-Cube Warehouse	207.68	TSF
MV6	Tract 31442	Single Family Detached	63	DU
MV7	Moreno Valley Utility Substation	High-Cube Warehouse	PUBLIC	TSF
MV8	Phelan Development	High-Cube Warehouse	98.21	TSF
MV9	Nandina Industrial Center	High-Cube Warehouse	335.97	TSF
MV10	Indian Street Commerce Center	High-Cube Warehouse	433.92	TSF
MV11	Tract 32716	Single Family Detached	57	DU
MV12	Tract 36760	Single Family Detached	221	DU
MV13	PEN18-0042	Single Family Detached	2	DU
MV14	Tract 33024	Single Family Detached	8	DU
MV15	Scottish Village	MultiFamily	194	DU
MV16	Moreno Valley Cactus Center (PEN16-0131)	Warehouse	36.950	TSF
		Fast Food w/ Drive Thru	7.900	TSF
		Gas Station w/ Car Wash	28	VFP
		Hotel	110	Rooms
MV17	PA 08-0047-0052 (Komar Cactus Plaza)	Fast Food w/ Drive Thru	8.000	TSF
		Commercial	42.400	TSF
<b>City of Perris</b>				
P1	Bargemann / DPR 07-09-0018	Warehousing	173.00	TSF
P2	Duke 2 / DPR 16-00008	High-Cube Warehouse	669.00	TSF
P3	Perris Circle 3	Warehousing	210.90	TSF
P4	Gateway / DPR 16-00003	High-Cube Warehouse	400.00	TSF
P5	Harley Knox Commerce Park / DPR 16-004	High-Cube Warehouse	386.28	TSF
P6	OLC 1 / DPR 12-10-0005	High-Cube Warehouse	1,455.00	TSF
P7	OLC2 / DPR 14-01-0015	High-Cube Warehouse	1,037.00	TSF
P8	Duke at Patterson / DPR 17-00001	High-Cube Warehouse	811.00	TSF
P9	Markham Industrial / DPR 16-00015	Warehousing	170.00	TSF
P10	Westcoast Textile / DPR 16-00001	Warehousing	180.00	TSF
P11	Indian/Ramona Warehouse	High-Cube Warehouse	428.73	TSF
P12	1PT Perris DC II	High-Cube Warehouse	273.00	TSF
P13	Western Way/Nandina Warehouse	Cold Storage Warehouse	252.030	TSF
P14	March Plaza / CUP16-05165	Commercial Retail	47.253	TSF
P15	Calli Express Carwash / CUP 16-05258	Carwash	5.600	TSF
P16	Integra Expansion / MMOD 17-05075	High-Cube Warehouse	273.000	TSF

<sup>1</sup> DU = Dwelling Units; TSF = Thousand Square Feet; VFP = Vehicle Fueling Positions

**ATTACHMENT A: EXISTING DRIVEWAY COUNTS – MAY 12-14, 2020**





Driveway 2

Driveway 1

Driveway 3

1.1-27

< Sat Jan 11 2020 >







City: Moreno Valley  
 Location: Driveway 1 - Frontage Road  
 Date: 5/12/2020  
 Count Type: Driveway Classification Counts

	Entering				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
0:00	0	0	0	0	0
0:15	0	0	0	1	1
0:30	0	0	0	0	0
0:45	0	0	0	2	2
1:00	0	0	0	1	1
1:15	0	0	1	0	1
1:30	0	0	0	0	0
1:45	0	0	0	1	1
2:00	0	0	0	1	1
2:15	0	0	0	0	0
2:30	0	0	0	1	1
2:45	0	0	0	0	0
3:00	0	0	0	1	1
3:15	0	0	0	1	1
3:30	0	0	0	0	0
3:45	0	0	0	2	2
4:00	0	0	0	0	0
4:15	0	0	0	0	0
4:30	0	0	0	1	1
4:45	0	0	0	1	1
5:00	0	0	0	1	1
5:15	0	0	0	0	0
5:30	0	0	0	1	1
5:45	0	0	0	1	1
6:00	0	0	0	1	1
6:15	0	0	0	2	2
6:30	0	0	0	0	0
6:45	0	0	0	0	0
7:00	0	0	1	1	2
7:15	0	0	0	1	1
7:30	0	0	0	0	0
7:45	1	0	0	1	2
8:00	0	0	0	0	0
8:15	1	0	0	0	1
8:30	0	0	0	1	1
8:45	0	0	0	0	0
9:00	0	0	1	2	3
9:15	0	1	3	0	4
9:30	0	0	0	0	0
9:45	0	0	0	0	0
10:00	0	3	0	0	3
10:15	1	1	1	0	3
10:30	0	0	0	0	0
10:45	0	1	1	0	2
11:00	0	0	0	2	2
11:15	0	0	1	0	1
11:30	0	1	2	0	3
11:45	0	0	2	0	2

	Exiting				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
0:00	0	0	0	0	0
0:15	0	0	0	0	0
0:30	0	0	0	1	1
0:45	0	0	0	0	0
1:00	0	0	1	1	2
1:15	0	0	0	0	0
1:30	0	0	0	1	1
1:45	0	0	0	0	0
2:00	0	0	0	1	1
2:15	0	0	0	0	0
2:30	0	0	0	1	1
2:45	0	0	0	1	1
3:00	0	0	0	0	0
3:15	0	0	0	2	2
3:30	0	0	0	0	0
3:45	0	0	0	0	0
4:00	0	0	1	1	2
4:15	0	0	0	0	0
4:30	0	0	0	0	0
4:45	0	0	0	1	1
5:00	0	0	0	1	1
5:15	0	0	1	0	1
5:30	0	0	1	0	1
5:45	0	0	0	1	1
6:00	0	0	0	0	0
6:15	0	0	0	3	3
6:30	0	0	0	1	1
6:45	0	0	0	0	0
7:00	0	0	3	0	3
7:15	0	0	0	0	0
7:30	0	0	0	0	0
7:45	0	0	0	1	1
8:00	0	0	0	0	0
8:15	1	0	0	0	1
8:30	1	0	1	1	3
8:45	0	0	0	0	0
9:00	0	0	0	1	1
9:15	0	0	2	1	3
9:30	0	0	0	2	2
9:45	0	0	0	0	0
10:00	0	1	0	0	1
10:15	1	1	0	0	2
10:30	0	0	1	0	1
10:45	0	0	1	1	2
11:00	0	0	1	0	1
11:15	0	0	1	0	1
11:30	0	0	0	0	0
11:45	0	1	1	1	3



City: Moreno Valley  
 Location: Driveway 1 - Frontage Road  
 Date: 5/12/2020  
 Count Type: Driveway Classification Counts

	Entering				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
12:00	0	0	1	0	1
12:15	0	0	0	0	0
12:30	0	0	0	0	0
12:45	0	0	0	0	0
13:00	0	0	0	0	0
13:15	0	1	3	0	4
13:30	0	0	0	1	1
13:45	0	0	1	0	1
14:00	0	0	0	2	2
14:15	0	1	0	1	2
14:30	0	1	0	0	1
14:45	0	0	0	1	1
15:00	0	0	0	1	1
15:15	0	1	2	2	5
15:30	1	0	0	1	2
15:45	0	0	0	3	3
16:00	0	0	2	2	4
16:15	0	0	0	0	0
16:30	0	0	1	1	2
16:45	0	0	0	0	0
17:00	0	0	0	0	0
17:15	0	0	0	0	0
17:30	0	0	0	1	1
17:45	0	0	1	0	1
18:00	0	0	1	1	2
18:15	0	0	1	0	1
18:30	0	0	0	1	1
18:45	0	0	0	0	0
19:00	0	1	0	1	2
19:15	0	0	0	0	0
19:30	0	0	0	0	0
19:45	0	0	0	1	1
20:00	0	0	1	2	3
20:15	0	0	0	0	0
20:30	0	0	0	1	1
20:45	0	0	2	1	3
21:00	0	0	1	0	1
21:15	0	0	0	3	3
21:30	0	0	0	0	0
21:45	0	0	0	0	0
22:00	0	0	0	0	0
22:15	0	0	0	0	0
22:30	0	0	0	0	0
22:45	0	0	0	0	0
23:00	0	0	0	2	2
23:15	0	0	0	0	0
23:30	0	0	1	2	3
23:45	0	0	0	0	0
<b>TOTAL</b>	<b>4</b>	<b>12</b>	<b>31</b>	<b>58</b>	<b>105</b>

	Exiting				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
12:00	0	0	0	0	0
12:15	0	0	0	0	0
12:30	0	0	0	0	0
12:45	0	2	0	0	2
13:00	0	0	0	0	0
13:15	0	0	0	1	1
13:30	0	1	0	1	2
13:45	0	0	0	2	2
14:00	0	0	0	0	0
14:15	0	1	0	1	2
14:30	0	0	0	1	1
14:45	0	0	0	2	2
15:00	0	0	1	0	1
15:15	1	0	0	1	2
15:30	1	1	1	2	5
15:45	0	0	0	3	3
16:00	0	1	1	3	5
16:15	0	0	0	2	2
16:30	0	0	0	2	2
16:45	0	0	0	2	2
17:00	0	0	0	0	0
17:15	0	0	0	0	0
17:30	0	0	0	0	0
17:45	0	0	1	0	1
18:00	0	0	1	0	1
18:15	0	0	0	1	1
18:30	0	0	0	1	1
18:45	0	0	1	0	1
19:00	0	0	1	0	1
19:15	0	0	1	0	1
19:30	0	1	0	0	1
19:45	0	0	0	0	0
20:00	0	0	1	3	4
20:15	0	0	0	0	0
20:30	0	0	0	0	0
20:45	0	0	1	0	1
21:00	0	0	0	0	0
21:15	0	0	0	0	0
21:30	0	0	3	1	4
21:45	0	0	0	0	0
22:00	0	0	0	0	0
22:15	0	0	0	0	0
22:30	0	0	0	0	0
22:45	0	0	0	0	0
23:00	0	0	1	0	1
23:15	0	0	0	0	0
23:30	0	0	0	1	1
23:45	0	0	1	1	2
<b>TOTAL</b>	<b>5</b>	<b>10</b>	<b>30</b>	<b>55</b>	<b>100</b>





City: Moreno Valley  
 Location: Driveway 1 - Frontage Road  
 Date: 5/13/2020  
 Count Type: Driveway Classification Counts

	Entering				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
0:00	0	0	2	1	3
0:15	0	0	0	2	2
0:30	0	0	0	1	1
0:45	0	0	0	0	0
1:00	0	0	0	1	1
1:15	0	0	2	0	2
1:30	0	0	0	1	1
1:45	0	0	0	3	3
2:00	0	0	0	2	2
2:15	0	0	0	3	3
2:30	0	0	0	0	0
2:45	0	0	0	0	0
3:00	0	0	0	0	0
3:15	0	0	0	1	1
3:30	0	0	0	0	0
3:45	0	0	0	3	3
4:00	0	0	0	0	0
4:15	0	0	0	2	2
4:30	0	0	0	0	0
4:45	0	0	0	1	1
5:00	0	0	0	0	0
5:15	0	0	0	0	0
5:30	0	0	0	0	0
5:45	0	0	0	1	1
6:00	0	0	0	2	2
6:15	0	0	0	0	0
6:30	0	0	2	1	3
6:45	0	0	0	2	2
7:00	0	0	0	0	0
7:15	0	0	0	0	0
7:30	0	0	0	0	0
7:45	0	0	0	0	0
8:00	0	0	0	0	0
8:15	0	0	0	0	0
8:30	0	0	0	0	0
8:45	0	0	0	0	0
9:00	0	0	0	0	0
9:15	0	0	1	0	1
9:30	0	0	1	0	1
9:45	1	0	0	0	1
10:00	0	0	0	1	1
10:15	0	1	0	1	2
10:30	0	0	0	0	0
10:45	0	0	0	2	2
11:00	0	0	0	0	0
11:15	0	0	1	0	1
11:30	0	0	0	0	0
11:45	0	0	0	2	2

	Exiting				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
0:00	0	0	0	3	3
0:15	0	0	2	0	2
0:30	0	0	0	1	1
0:45	0	0	1	0	1
1:00	0	0	0	0	0
1:15	0	0	1	0	1
1:30	0	0	0	2	2
1:45	0	0	1	1	2
2:00	0	0	3	1	4
2:15	0	0	0	0	0
2:30	0	0	1	2	3
2:45	0	0	0	1	1
3:00	0	0	1	0	1
3:15	0	0	1	0	1
3:30	0	0	0	0	0
3:45	0	0	0	0	0
4:00	0	0	3	0	3
4:15	0	0	0	0	0
4:30	0	0	1	1	2
4:45	0	0	0	0	0
5:00	0	0	0	0	0
5:15	0	0	0	0	0
5:30	0	0	0	0	0
5:45	0	0	0	1	1
6:00	0	0	1	0	1
6:15	0	0	1	1	2
6:30	0	0	1	1	2
6:45	0	0	1	0	1
7:00	0	0	0	1	1
7:15	0	0	0	0	0
7:30	0	0	0	0	0
7:45	0	0	0	0	0
8:00	0	0	0	0	0
8:15	0	0	0	0	0
8:30	0	0	0	0	0
8:45	0	0	0	0	0
9:00	0	0	0	0	0
9:15	0	0	0	1	1
9:30	0	0	0	0	0
9:45	1	0	0	0	1
10:00	0	0	0	0	0
10:15	0	1	0	0	1
10:30	0	0	0	0	0
10:45	0	0	0	3	3
11:00	0	0	1	0	1
11:15	0	0	0	2	2
11:30	0	0	0	0	0
11:45	0	0	0	0	0



City: Moreno Valley  
 Location: Driveway 1 - Frontage Road  
 Date: 5/13/2020  
 Count Type: Driveway Classification Counts

	Entering				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
12:00	0	0	0	2	2
12:15	0	0	0	0	0
12:30	0	0	1	1	2
12:45	2	0	1	0	3
13:00	0	0	0	0	0
13:15	0	0	0	0	0
13:30	0	0	1	0	1
13:45	0	0	2	0	2
14:00	0	0	0	1	1
14:15	0	0	1	0	1
14:30	0	0	0	1	1
14:45	0	0	0	0	0
15:00	0	0	2	1	3
15:15	0	0	0	2	2
15:30	0	2	1	2	5
15:45	0	0	1	1	2
16:00	0	0	0	0	0
16:15	0	0	1	0	1
16:30	0	0	0	1	1
16:45	0	0	0	0	0
17:00	0	0	0	0	0
17:15	0	0	0	0	0
17:30	0	0	0	0	0
17:45	0	0	0	0	0
18:00	0	0	1	1	2
18:15	0	0	1	1	2
18:30	0	0	0	0	0
18:45	0	0	1	0	1
19:00	0	0	0	0	0
19:15	0	0	0	1	1
19:30	0	0	0	0	0
19:45	0	0	0	0	0
20:00	0	0	1	0	1
20:15	0	0	0	1	1
20:30	0	0	0	0	0
20:45	0	1	0	0	1
21:00	0	0	0	1	1
21:15	0	0	0	0	0
21:30	0	0	0	0	0
21:45	0	0	1	0	1
22:00	0	0	0	1	1
22:15	0	0	0	0	0
22:30	0	0	0	0	0
22:45	0	0	1	0	1
23:00	0	0	0	0	0
23:15	0	0	0	0	0
23:30	0	0	0	0	0
23:45	0	0	0	1	1
<b>TOTAL</b>	<b>3</b>	<b>4</b>	<b>26</b>	<b>52</b>	<b>85</b>

	Exiting				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
12:00	1	0	0	2	3
12:15	0	0	0	1	1
12:30	0	0	0	0	0
12:45	0	0	0	0	0
13:00	0	0	0	2	2
13:15	0	0	0	0	0
13:30	0	0	0	1	1
13:45	0	0	1	1	2
14:00	0	0	0	1	1
14:15	0	0	0	0	0
14:30	2	0	0	0	2
14:45	0	0	0	1	1
15:00	0	0	0	1	1
15:15	0	0	0	1	1
15:30	0	0	1	2	3
15:45	0	1	0	5	6
16:00	0	1	0	3	4
16:15	0	0	0	1	1
16:30	0	0	0	0	0
16:45	0	0	0	0	0
17:00	0	0	0	1	1
17:15	0	0	0	0	0
17:30	0	0	0	0	0
17:45	0	0	0	0	0
18:00	0	0	1	0	1
18:15	0	0	0	1	1
18:30	0	0	0	1	1
18:45	0	0	1	0	1
19:00	0	1	1	0	2
19:15	0	0	0	0	0
19:30	0	0	0	0	0
19:45	0	0	0	0	0
20:00	0	0	1	1	2
20:15	0	0	0	0	0
20:30	0	0	0	0	0
20:45	0	0	1	0	1
21:00	0	0	0	0	0
21:15	0	0	0	0	0
21:30	0	0	1	1	2
21:45	0	0	0	0	0
22:00	0	0	0	0	0
22:15	0	0	1	0	1
22:30	0	0	0	0	0
22:45	0	0	0	0	0
23:00	0	0	0	0	0
23:15	0	0	0	0	0
23:30	0	0	0	1	1
23:45	0	0	1	0	1
<b>TOTAL</b>	<b>4</b>	<b>4</b>	<b>30</b>	<b>50</b>	<b>88</b>



City: Moreno Valley  
 Location: Driveway 1 - Frontage Road  
 Date: 5/14/2020  
 Count Type: Driveway Classification Counts

	Entering				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
0:00	0	0	0	0	0
0:15	0	0	0	0	0
0:30	0	0	0	0	0
0:45	0	0	0	0	0
1:00	0	0	0	0	0
1:15	0	0	0	2	2
1:30	0	0	0	1	1
1:45	0	0	0	0	0
2:00	0	0	0	2	2
2:15	0	0	0	0	0
2:30	0	0	0	1	1
2:45	0	0	0	0	0
3:00	0	0	0	0	0
3:15	0	0	0	2	2
3:30	0	0	0	0	0
3:45	0	0	1	2	3
4:00	0	0	0	0	0
4:15	0	0	0	0	0
4:30	0	0	0	0	0
4:45	0	0	0	1	1
5:00	0	0	1	1	2
5:15	0	0	0	1	1
5:30	0	0	0	1	1
5:45	0	0	0	5	5
6:00	0	0	0	0	0
6:15	0	0	0	2	2
6:30	0	0	0	0	0
6:45	0	0	0	0	0
7:00	0	0	0	1	1
7:15	0	0	0	0	0
7:30	0	0	0	0	0
7:45	0	0	0	1	1
8:00	0	0	0	2	2
8:15	0	0	1	1	2
8:30	1	0	1	0	2
8:45	1	0	0	1	2
9:00	0	0	1	1	2
9:15	0	0	0	2	2
9:30	0	0	0	1	1
9:45	0	0	0	0	0
10:00	1	0	0	2	3
10:15	0	0	1	1	2
10:30	0	0	0	0	0
10:45	0	0	0	0	0
11:00	0	0	0	0	0
11:15	0	0	0	3	3
11:30	0	1	1	0	2
11:45	0	0	0	0	0

	Exiting				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
0:00	0	0	0	1	1
0:15	0	0	0	0	0
0:30	0	0	1	0	1
0:45	0	0	0	0	0
1:00	0	0	0	0	0
1:15	0	0	0	0	0
1:30	0	0	1	0	1
1:45	0	0	0	0	0
2:00	0	0	1	1	2
2:15	0	0	2	0	2
2:30	0	0	2	1	3
2:45	0	0	0	0	0
3:00	0	0	0	0	0
3:15	0	0	1	0	1
3:30	0	0	1	0	1
3:45	0	0	0	0	0
4:00	0	0	2	0	2
4:15	0	0	0	0	0
4:30	0	0	0	1	1
4:45	0	0	1	0	1
5:00	0	0	1	1	2
5:15	0	0	1	0	1
5:30	0	0	0	0	0
5:45	0	0	1	0	1
6:00	0	0	4	0	4
6:15	0	0	2	0	2
6:30	0	0	1	1	2
6:45	0	0	0	0	0
7:00	0	0	0	0	0
7:15	0	0	0	0	0
7:30	0	0	1	0	1
7:45	0	0	1	0	1
8:00	0	0	1	0	1
8:15	0	0	1	0	1
8:30	1	0	0	0	1
8:45	0	0	1	1	2
9:00	0	0	0	1	1
9:15	0	0	1	0	1
9:30	1	0	2	2	5
9:45	0	0	0	0	0
10:00	1	0	1	0	2
10:15	0	0	0	0	0
10:30	0	0	2	0	2
10:45	0	0	0	0	0
11:00	0	0	0	0	0
11:15	0	0	0	2	2
11:30	0	1	1	1	3
11:45	0	0	0	1	1



City: Moreno Valley  
 Location: Driveway 1 - Frontage Road  
 Date: 5/14/2020  
 Count Type: Driveway Classification Counts

	Entering				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
12:00	0	0	0	1	1
12:15	0	0	2	3	5
12:30	0	0	0	0	0
12:45	0	0	2	0	2
13:00	0	0	1	0	1
13:15	0	1	1	1	3
13:30	0	0	1	0	1
13:45	0	0	0	0	0
14:00	0	0	1	0	1
14:15	1	0	1	1	3
14:30	0	0	0	2	2
14:45	0	0	1	1	2
15:00	0	0	3	1	4
15:15	0	1	2	2	5
15:30	0	0	3	0	3
15:45	0	0	2	3	5
16:00	0	1	3	0	4
16:15	0	0	0	0	0
16:30	0	0	0	0	0
16:45	0	0	0	0	0
17:00	0	0	1	0	1
17:15	0	0	2	0	2
17:30	0	0	0	0	0
17:45	0	0	0	0	0
18:00	0	0	0	0	0
18:15	0	0	0	0	0
18:30	0	0	0	0	0
18:45	0	0	0	0	0
19:00	0	0	0	0	0
19:15	0	0	1	0	1
19:30	0	0	0	0	0
19:45	0	0	0	0	0
20:00	0	0	0	0	0
20:15	0	0	0	0	0
20:30	0	0	0	0	0
20:45	0	0	0	1	1
21:00	0	0	0	0	0
21:15	0	0	0	0	0
21:30	0	0	0	1	1
21:45	0	0	0	0	0
22:00	0	0	0	0	0
22:15	0	0	0	0	0
22:30	0	0	0	3	3
22:45	0	0	1	0	1
23:00	0	0	0	1	1
23:15	0	0	0	0	0
23:30	0	0	0	1	1
23:45	0	0	0	1	1
<b>TOTAL</b>	<b>4</b>	<b>4</b>	<b>35</b>	<b>60</b>	<b>103</b>

	Exiting				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
12:00	0	0	0	0	0
12:15	0	0	1	2	3
12:30	0	0	0	2	2
12:45	0	0	0	0	0
13:00	0	0	0	1	1
13:15	0	0	0	1	1
13:30	0	0	1	0	1
13:45	0	0	0	1	1
14:00	1	0	0	1	2
14:15	0	0	0	0	0
14:30	0	1	1	1	3
14:45	0	0	0	1	1
15:00	0	0	1	3	4
15:15	0	0	0	2	2
15:30	0	1	0	2	3
15:45	0	0	0	7	7
16:00	0	0	2	5	7
16:15	0	0	0	1	1
16:30	0	0	0	1	1
16:45	0	1	0	0	1
17:00	0	0	0	1	1
17:15	0	0	0	0	0
17:30	0	0	0	1	1
17:45	0	0	0	1	1
18:00	0	0	0	0	0
18:15	0	0	0	0	0
18:30	0	0	0	0	0
18:45	0	0	0	0	0
19:00	0	0	0	0	0
19:15	0	0	0	1	1
19:30	0	0	0	0	0
19:45	0	0	0	0	0
20:00	0	0	0	0	0
20:15	0	0	0	0	0
20:30	0	0	1	0	1
20:45	0	0	1	0	1
21:00	0	0	0	0	0
21:15	0	0	0	0	0
21:30	0	0	1	1	2
21:45	0	0	1	1	2
22:00	0	0	0	0	0
22:15	0	0	0	0	0
22:30	0	0	0	0	0
22:45	0	0	0	3	3
23:00	0	0	1	0	1
23:15	0	0	0	0	0
23:30	0	0	0	0	0
23:45	0	0	0	0	0
<b>TOTAL</b>	<b>4</b>	<b>4</b>	<b>45</b>	<b>54</b>	<b>107</b>



City: Moreno Valley  
 Location: Heacock - Driveway 2  
 Date: 5/12/2020  
 Count Type: Driveway Classification Counts

	Entering				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
0:00	0	0	2	2	4
0:15	0	0	0	3	3
0:30	0	0	1	1	2
0:45	0	0	2	5	7
1:00	1	0	2	0	3
1:15	0	0	1	3	4
1:30	0	0	3	4	7
1:45	0	0	2	2	4
2:00	0	0	1	3	4
2:15	0	0	1	1	2
2:30	0	0	3	2	5
2:45	1	0	1	0	2
3:00	0	0	0	2	2
3:15	0	0	2	2	4
3:30	2	0	1	1	4
3:45	13	0	0	4	17
4:00	0	0	2	2	4
4:15	0	0	1	2	3
4:30	0	0	2	4	6
4:45	0	0	3	1	4
5:00	0	0	3	4	7
5:15	0	0	2	5	7
5:30	1	0	4	1	6
5:45	10	0	6	3	19
6:00	0	0	2	3	5
6:15	2	0	3	4	9
6:30	2	1	5	0	8
6:45	2	0	2	1	5
7:00	1	1	2	2	6
7:15	0	1	3	1	5
7:30	1	0	1	2	4
7:45	0	0	2	2	4
8:00	4	0	1	1	6
8:15	4	1	2	2	9
8:30	1	1	1	0	3
8:45	1	1	3	2	7
9:00	0	0	2	0	2
9:15	1	1	3	1	6
9:30	1	1	0	0	2
9:45	0	1	0	4	5
10:00	3	2	0	0	5
10:15	4	0	2	1	7
10:30	0	1	2	2	5
10:45	1	1	3	1	6
11:00	1	0	2	3	6
11:15	4	1	3	1	9
11:30	1	0	5	4	10
11:45	0	0	3	1	4

	Exiting				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
0:00	0	0	2	1	3
0:15	0	0	3	4	7
0:30	0	0	2	1	3
0:45	0	0	0	1	1
1:00	0	0	3	3	6
1:15	0	0	2	2	4
1:30	0	0	0	2	2
1:45	0	0	1	2	3
2:00	0	0	2	3	5
2:15	0	0	2	2	4
2:30	0	0	2	4	6
2:45	0	0	1	1	2
3:00	0	0	1	1	2
3:15	1	0	1	2	4
3:30	0	0	1	3	4
3:45	3	0	0	1	4
4:00	0	0	1	2	3
4:15	0	0	3	1	4
4:30	0	0	3	1	4
4:45	0	0	2	3	5
5:00	0	0	0	2	2
5:15	0	0	2	4	6
5:30	0	0	2	1	3
5:45	0	0	4	1	5
6:00	1	0	5	4	10
6:15	0	0	2	3	5
6:30	2	0	8	1	11
6:45	0	0	2	0	2
7:00	1	0	8	0	9
7:15	0	0	4	0	4
7:30	2	2	5	2	11
7:45	0	0	2	2	4
8:00	2	0	1	1	4
8:15	3	0	2	2	7
8:30	1	0	3	3	7
8:45	0	2	0	0	2
9:00	1	0	0	3	4
9:15	1	0	3	1	5
9:30	1	0	1	2	4
9:45	0	1	1	1	3
10:00	1	1	2	1	5
10:15	2	1	3	0	6
10:30	1	0	2	0	3
10:45	0	0	4	1	5
11:00	2	0	4	1	7
11:15	2	1	1	1	5
11:30	1	1	3	1	6
11:45	0	0	4	3	7





City: Moreno Valley  
 Location: Heacock - Driveway 2  
 Date: 5/12/2020  
 Count Type: Driveway Classification Counts

	Entering				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
12:00	0	0	2	3	5
12:15	0	0	3	1	4
12:30	3	0	2	1	6
12:45	10	0	2	1	13
13:00	2	0	2	1	5
13:15	0	1	3	3	7
13:30	0	0	4	3	7
13:45	0	0	1	5	6
14:00	0	0	2	6	8
14:15	1	1	2	4	8
14:30	1	2	0	1	4
14:45	0	1	1	2	4
15:00	0	0	1	6	7
15:15	1	1	3	3	8
15:30	1	0	1	3	5
15:45	1	0	2	7	10
16:00	0	1	2	4	7
16:15	0	0	1	0	1
16:30	2	0	1	2	5
16:45	1	0	0	0	1
17:00	0	0	0	2	2
17:15	1	0	0	2	3
17:30	0	0	0	0	0
17:45	0	0	3	1	4
18:00	0	0	1	2	3
18:15	0	0	1	2	3
18:30	0	0	0	2	2
18:45	0	0	1	1	2
19:00	0	1	0	4	5
19:15	0	0	1	3	4
19:30	1	0	1	1	3
19:45	0	0	1	3	4
20:00	2	0	4	5	11
20:15	0	0	5	1	6
20:30	0	0	1	2	3
20:45	1	0	1	2	4
21:00	1	0	0	4	5
21:15	2	0	1	4	7
21:30	0	0	1	2	3
21:45	3	0	2	2	7
22:00	0	0	1	2	3
22:15	0	0	1	1	2
22:30	0	0	1	2	3
22:45	0	0	2	3	5
23:00	0	0	0	1	1
23:15	0	0	0	3	3
23:30	0	0	1	3	4
23:45	0	0	1	2	3
<b>TOTAL</b>	<b>96</b>	<b>22</b>	<b>163</b>	<b>213</b>	<b>494</b>

	Exiting				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
12:00	1	1	3	0	5
12:15	1	0	2	2	5
12:30	12	0	1	3	16
12:45	5	2	4	1	12
13:00	2	0	2	1	5
13:15	0	0	0	5	5
13:30	2	2	0	4	8
13:45	0	0	3	2	5
14:00	0	0	2	0	2
14:15	0	0	4	3	7
14:30	7	1	3	6	17
14:45	5	1	1	3	10
15:00	1	1	2	1	5
15:15	1	1	3	3	8
15:30	3	1	2	4	10
15:45	0	0	3	4	7
16:00	0	2	2	5	9
16:15	3	0	2	4	9
16:30	2	0	1	6	9
16:45	0	0	0	1	1
17:00	1	0	1	1	3
17:15	0	0	0	0	0
17:30	0	0	0	0	0
17:45	0	0	1	0	1
18:00	0	0	0	3	3
18:15	2	0	2	1	5
18:30	0	0	1	2	3
18:45	0	0	2	0	2
19:00	0	0	0	1	1
19:15	0	0	3	1	4
19:30	0	1	1	2	4
19:45	0	0	1	1	2
20:00	1	0	1	5	7
20:15	1	0	1	2	4
20:30	0	0	1	4	5
20:45	0	0	0	1	1
21:00	2	0	4	2	8
21:15	1	0	3	1	5
21:30	8	0	7	3	18
21:45	4	0	1	0	5
22:00	0	0	1	3	4
22:15	0	0	2	0	2
22:30	0	0	1	2	3
22:45	0	0	1	2	3
23:00	1	0	1	2	4
23:15	0	0	3	0	3
23:30	0	0	1	0	1
23:45	0	0	3	2	5
<b>TOTAL</b>	<b>94</b>	<b>22</b>	<b>193</b>	<b>180</b>	<b>489</b>



City: Moreno Valley  
 Location: Heacock - Driveway 2  
 Date: 5/13/2020  
 Count Type: Driveway Classification Counts

	Entering				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
0:00	0	0	4	0	4
0:15	0	0	0	3	3
0:30	0	0	0	0	0
0:45	0	0	1	4	5
1:00	0	0	0	2	2
1:15	0	0	3	3	6
1:30	0	0	1	2	3
1:45	0	0	6	1	7
2:00	0	0	1	1	2
2:15	0	0	0	5	5
2:30	1	0	1	0	2
2:45	0	0	1	4	5
3:00	0	0	1	1	2
3:15	0	0	0	4	4
3:30	4	0	0	2	6
3:45	11	0	1	4	16
4:00	1	0	0	1	2
4:15	0	0	0	2	2
4:30	0	0	1	0	1
4:45	0	0	2	3	5
5:00	0	0	2	0	2
5:15	0	0	3	2	5
5:30	1	0	3	3	7
5:45	6	0	2	3	11
6:00	2	0	4	3	9
6:15	0	0	1	1	2
6:30	1	0	8	2	11
6:45	0	0	4	3	7
7:00	2	1	3	1	7
7:15	1	0	1	3	5
7:30	0	0	3	4	7
7:45	0	0	2	4	6
8:00	8	0	1	2	11
8:15	4	1	0	1	6
8:30	1	0	4	1	6
8:45	2	0	1	2	5
9:00	0	1	2	3	6
9:15	0	0	3	3	6
9:30	2	0	4	2	8
9:45	3	0	0	3	6
10:00	1	1	4	5	11
10:15	2	0	1	5	8
10:30	0	0	3	5	8
10:45	0	0	5	4	9
11:00	2	0	8	3	13
11:15	3	0	4	1	8
11:30	1	0	2	3	6
11:45	0	0	1	5	6

	Exiting				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
0:00	0	0	0	3	3
0:15	0	0	0	1	1
0:30	0	0	0	2	2
0:45	0	0	1	0	1
1:00	0	0	1	1	2
1:15	0	0	2	0	2
1:30	0	0	2	4	6
1:45	0	0	2	4	6
2:00	0	0	3	3	6
2:15	0	0	1	2	3
2:30	0	0	1	3	4
2:45	0	0	2	2	4
3:00	0	0	4	2	6
3:15	0	0	1	0	1
3:30	0	0	1	0	1
3:45	3	0	0	0	3
4:00	1	0	5	0	6
4:15	0	0	0	0	0
4:30	0	0	1	1	2
4:45	0	0	1	1	2
5:00	0	0	1	0	1
5:15	0	0	0	3	3
5:30	0	0	3	2	5
5:45	0	0	2	3	5
6:00	2	0	1	2	5
6:15	0	0	1	3	4
6:30	0	0	3	3	6
6:45	0	0	2	6	8
7:00	1	0	0	8	9
7:15	0	0	1	5	6
7:30	1	0	3	5	9
7:45	2	0	3	3	8
8:00	1	0	2	5	8
8:15	1	0	0	2	3
8:30	4	1	2	0	7
8:45	0	0	1	5	6
9:00	2	0	2	0	4
9:15	1	0	2	4	7
9:30	0	0	3	3	6
9:45	1	0	1	1	3
10:00	3	1	6	5	15
10:15	2	1	4	3	10
10:30	1	0	2	0	3
10:45	1	0	3	8	12
11:00	3	0	3	3	9
11:15	0	0	3	9	12
11:30	1	0	3	3	7
11:45	4	0	1	5	10



City: Moreno Valley  
 Location: Heacock - Driveway 2  
 Date: 5/13/2020  
 Count Type: Driveway Classification Counts

	Entering				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
12:00	2	0	2	4	8
12:15	3	1	0	2	6
12:30	3	0	2	4	9
12:45	9	0	3	3	15
13:00	3	0	1	5	9
13:15	0	0	1	5	6
13:30	2	1	4	5	12
13:45	1	0	4	2	7
14:00	0	0	3	1	4
14:15	0	0	1	1	2
14:30	0	0	1	1	2
14:45	1	0	1	2	4
15:00	1	1	2	4	8
15:15	0	0	1	6	7
15:30	0	2	0	3	5
15:45	0	0	2	4	6
16:00	0	0	1	2	3
16:15	0	1	1	1	3
16:30	1	0	0	1	2
16:45	1	0	0	2	3
17:00	1	0	2	2	5
17:15	1	0	1	1	3
17:30	0	0	0	1	1
17:45	0	0	0	2	2
18:00	0	2	1	2	5
18:15	0	0	2	2	4
18:30	0	0	2	1	3
18:45	1	0	4	1	6
19:00	0	0	1	2	3
19:15	0	0	1	4	5
19:30	0	0	0	3	3
19:45	0	0	3	3	6
20:00	1	0	1	2	4
20:15	0	0	2	4	6
20:30	0	0	0	2	2
20:45	2	1	0	0	3
21:00	3	0	0	3	6
21:15	2	0	0	0	2
21:30	0	0	1	4	5
21:45	0	0	2	0	2
22:00	2	0	1	4	7
22:15	0	0	0	1	1
22:30	0	0	0	2	2
22:45	0	0	3	2	5
23:00	0	0	0	2	2
23:15	0	0	0	1	1
23:30	0	0	2	1	3
23:45	0	0	2	2	4
<b>TOTAL</b>	<b>99</b>	<b>13</b>	<b>163</b>	<b>231</b>	<b>506</b>

	Exiting				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
12:00	1	0	3	2	6
12:15	3	0	0	2	5
12:30	13	1	3	2	19
12:45	3	0	2	2	7
13:00	1	0	3	3	7
13:15	0	0	4	0	4
13:30	1	0	6	1	8
13:45	0	0	8	2	10
14:00	0	0	6	3	9
14:15	0	0	2	2	4
14:30	11	1	1	1	14
14:45	3	0	0	1	4
15:00	4	2	1	2	9
15:15	0	0	1	4	5
15:30	0	0	4	4	8
15:45	0	1	3	6	10
16:00	1	1	3	5	10
16:15	4	0	1	1	6
16:30	0	0	1	2	3
16:45	1	0	1	1	3
17:00	2	0	0	1	3
17:15	0	0	3	1	4
17:30	0	0	2	2	4
17:45	1	0	1	0	2
18:00	0	1	1	1	3
18:15	0	0	1	1	2
18:30	1	0	1	2	4
18:45	0	1	2	1	4
19:00	0	1	1	4	6
19:15	0	0	1	1	2
19:30	0	0	0	3	3
19:45	0	0	1	1	2
20:00	0	0	4	2	6
20:15	1	0	3	5	9
20:30	0	0	1	2	3
20:45	0	0	2	1	3
21:00	0	0	1	0	1
21:15	1	1	2	0	4
21:30	9	0	2	1	12
21:45	4	0	0	1	5
22:00	3	0	1	3	7
22:15	0	0	3	3	6
22:30	0	0	0	0	0
22:45	0	0	0	1	1
23:00	1	0	0	0	1
23:15	0	0	4	2	6
23:30	0	0	1	2	3
23:45	0	0	1	1	2
<b>TOTAL</b>	<b>104</b>	<b>13</b>	<b>178</b>	<b>216</b>	<b>511</b>



City: Moreno Valley  
 Location: Heacock - Driveway 2  
 Date: 5/14/2020  
 Count Type: Driveway Classification Counts

	Entering				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
0:00	0	0	0	0	0
0:15	0	0	0	2	2
0:30	0	0	1	1	2
0:45	1	0	1	2	4
1:00	0	0	0	0	0
1:15	1	0	0	2	3
1:30	0	0	0	1	1
1:45	1	0	0	1	2
2:00	0	0	0	3	3
2:15	0	1	1	1	3
2:30	0	0	0	1	1
2:45	0	0	0	1	1
3:00	1	0	0	2	3
3:15	0	0	1	1	2
3:30	1	0	0	1	2
3:45	11	0	0	5	16
4:00	0	0	0	0	0
4:15	0	0	0	4	4
4:30	0	0	0	1	1
4:45	0	0	1	4	5
5:00	0	0	4	4	8
5:15	0	0	3	1	4
5:30	2	0	6	3	11
5:45	9	0	2	5	16
6:00	4	1	5	3	13
6:15	1	0	1	3	5
6:30	0	1	4	2	7
6:45	1	0	2	2	5
7:00	0	0	5	1	6
7:15	0	0	2	1	3
7:30	1	1	2	1	5
7:45	3	0	3	2	8
8:00	2	0	3	3	8
8:15	3	1	1	2	7
8:30	3	3	5	2	13
8:45	1	0	1	0	2
9:00	0	0	2	4	6
9:15	3	0	3	5	11
9:30	0	0	1	1	2
9:45	2	0	0	0	2
10:00	2	0	1	1	4
10:15	0	0	2	1	3
10:30	2	0	2	2	6
10:45	4	0	0	1	5
11:00	1	0	4	2	7
11:15	3	0	1	2	6
11:30	4	1	4	3	12
11:45	3	0	2	2	7

	Exiting				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
0:00	0	0	1	1	2
0:15	0	0	1	2	3
0:30	0	0	0	1	1
0:45	0	0	3	1	4
1:00	0	0	0	0	0
1:15	0	0	0	3	3
1:30	2	0	0	1	3
1:45	0	0	0	0	0
2:00	0	0	1	0	1
2:15	0	1	0	1	2
2:30	0	0	3	2	5
2:45	0	0	1	0	1
3:00	0	0	2	1	3
3:15	0	0	0	1	1
3:30	2	0	2	0	4
3:45	1	0	1	1	3
4:00	0	0	2	0	2
4:15	0	0	1	1	2
4:30	0	0	2	1	3
4:45	0	0	2	1	3
5:00	0	0	3	2	5
5:15	0	0	1	0	1
5:30	0	0	5	1	6
5:45	0	0	6	0	6
6:00	0	0	7	1	8
6:15	2	0	3	2	7
6:30	0	1	2	1	4
6:45	0	0	3	2	5
7:00	1	0	1	4	6
7:15	2	1	2	2	7
7:30	0	1	3	2	6
7:45	0	0	3	2	5
8:00	1	0	3	2	6
8:15	0	0	3	3	6
8:30	2	1	2	2	7
8:45	0	0	3	3	6
9:00	1	0	5	4	10
9:15	2	2	3	0	7
9:30	3	0	5	3	11
9:45	1	0	1	2	4
10:00	2	0	2	0	4
10:15	2	0	1	3	6
10:30	0	0	2	0	2
10:45	1	0	1	2	4
11:00	4	0	1	0	5
11:15	5	0	3	3	11
11:30	2	1	2	2	7
11:45	3	0	5	3	11



City: Moreno Valley  
 Location: Heacock - Driveway 2  
 Date: 5/14/2020  
 Count Type: Driveway Classification Counts

	Entering				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
12:00	1	0	0	1	2
12:15	2	0	3	2	7
12:30	4	0	1	3	8
12:45	10	0	6	1	17
13:00	2	0	3	4	9
13:15	0	1	1	0	2
13:30	1	1	3	1	6
13:45	0	0	0	3	3
14:00	0	0	2	1	3
14:15	2	0	3	4	9
14:30	2	1	3	3	9
14:45	0	1	2	3	6
15:00	1	1	2	5	9
15:15	0	1	2	4	7
15:30	0	0	6	1	7
15:45	0	1	2	3	6
16:00	0	1	2	0	3
16:15	0	0	2	2	4
16:30	0	0	0	1	1
16:45	2	0	1	4	7
17:00	0	0	4	1	5
17:15	0	0	1	2	3
17:30	0	0	0	2	2
17:45	0	0	1	0	1
18:00	1	0	0	2	3
18:15	0	0	0	2	2
18:30	0	0	1	5	6
18:45	0	0	0	2	2
19:00	1	0	1	2	4
19:15	0	0	2	3	5
19:30	0	0	1	1	2
19:45	0	0	1	3	4
20:00	0	0	2	0	2
20:15	1	0	1	1	3
20:30	0	0	1	3	4
20:45	1	0	0	3	4
21:00	0	0	1	3	4
21:15	2	0	0	4	6
21:30	3	0	2	3	8
21:45	1	0	0	1	2
22:00	0	0	3	0	3
22:15	0	0	2	4	6
22:30	0	0	1	4	5
22:45	0	0	2	1	3
23:00	0	0	0	1	1
23:15	0	0	1	0	1
23:30	0	0	1	2	3
23:45	0	0	1	3	4
<b>TOTAL</b>	<b>107</b>	<b>17</b>	<b>150</b>	<b>196</b>	<b>470</b>

	Exiting				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
12:00	1	0	1	1	3
12:15	1	0	2	3	6
12:30	10	0	2	2	14
12:45	4	1	2	3	10
13:00	3	0	1	1	5
13:15	2	0	5	3	10
13:30	2	0	1	0	3
13:45	0	1	3	2	6
14:00	1	0	2	1	4
14:15	1	0	1	3	5
14:30	13	2	1	2	18
14:45	3	0	1	4	8
15:00	1	1	1	2	5
15:15	4	1	1	4	10
15:30	1	0	2	3	6
15:45	0	1	3	6	10
16:00	1	1	3	2	7
16:15	1	0	4	6	11
16:30	1	0	1	2	4
16:45	0	1	0	2	3
17:00	0	0	1	3	4
17:15	1	0	4	2	7
17:30	1	0	0	2	3
17:45	0	0	1	1	2
18:00	1	0	0	2	3
18:15	0	0	0	1	1
18:30	1	0	0	2	3
18:45	0	0	2	1	3
19:00	0	0	0	2	2
19:15	1	0	3	2	6
19:30	0	0	1	0	1
19:45	0	0	3	0	3
20:00	0	0	1	2	3
20:15	0	0	3	3	6
20:30	1	0	1	1	3
20:45	0	0	2	1	3
21:00	0	0	1	2	3
21:15	0	0	3	0	3
21:30	10	0	1	2	13
21:45	3	0	3	3	9
22:00	0	0	0	1	1
22:15	0	0	2	1	3
22:30	0	0	2	4	6
22:45	0	0	1	4	5
23:00	1	0	2	0	3
23:15	0	0	0	3	3
23:30	0	0	1	2	3
23:45	0	0	1	1	2
<b>TOTAL</b>	<b>109</b>	<b>17</b>	<b>179</b>	<b>169</b>	<b>474</b>





City: Moreno Valley  
 Location: Heacock - Driveway 3  
 Date: 5/12/2020  
 Count Type: Driveway Classification Counts

	Entering				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
0:00	0	0	0	0	0
0:15	2	0	0	0	2
0:30	1	0	0	0	1
0:45	0	0	0	0	0
1:00	2	0	0	0	2
1:15	1	0	0	0	1
1:30	0	0	0	0	0
1:45	0	0	0	0	0
2:00	1	0	0	0	1
2:15	2	0	0	0	2
2:30	1	0	0	0	1
2:45	0	0	0	0	0
3:00	0	0	0	0	0
3:15	4	0	0	0	4
3:30	19	0	0	0	19
3:45	21	0	0	0	21
4:00	2	0	0	0	2
4:15	4	0	0	0	4
4:30	5	0	0	0	5
4:45	5	0	0	0	5
5:00	7	0	0	0	7
5:15	5	0	0	0	5
5:30	7	0	0	0	7
5:45	35	0	0	0	35
6:00	26	0	0	0	26
6:15	18	0	0	0	18
6:30	9	0	0	0	9
6:45	8	0	0	0	8
7:00	4	0	0	1	5
7:15	17	0	0	0	17
7:30	14	0	0	0	14
7:45	38	0	0	0	38
8:00	9	0	0	0	9
8:15	9	0	0	0	9
8:30	3	0	0	0	3
8:45	4	0	1	0	5
9:00	0	1	0	0	1
9:15	4	0	0	0	4
9:30	2	0	0	0	2
9:45	2	0	0	0	2
10:00	0	0	0	0	0
10:15	3	0	0	0	3
10:30	4	0	0	0	4
10:45	7	1	0	0	8
11:00	7	0	0	0	7
11:15	3	0	0	0	3
11:30	1	1	0	0	2
11:45	4	0	0	0	4

	Exiting				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
0:00	1	0	0	0	1
0:15	0	0	0	0	0
0:30	2	0	0	0	2
0:45	3	0	0	0	3
1:00	3	0	0	0	3
1:15	2	0	0	0	2
1:30	1	0	0	0	1
1:45	1	0	0	0	1
2:00	1	0	0	0	1
2:15	2	0	0	0	2
2:30	2	0	0	0	2
2:45	0	0	0	0	0
3:00	4	0	0	0	4
3:15	2	0	0	0	2
3:30	0	0	0	0	0
3:45	4	0	0	0	4
4:00	2	0	0	0	2
4:15	1	0	0	0	1
4:30	5	0	0	0	5
4:45	2	0	0	0	2
5:00	6	0	0	0	6
5:15	3	0	0	0	3
5:30	3	0	0	0	3
5:45	1	0	0	0	1
6:00	7	0	0	0	7
6:15	3	0	0	0	3
6:30	4	0	0	0	4
6:45	2	0	0	0	2
7:00	2	0	0	0	2
7:15	3	0	0	0	3
7:30	17	0	0	0	17
7:45	8	0	0	0	8
8:00	2	0	0	0	2
8:15	5	0	0	0	5
8:30	3	0	0	0	3
8:45	4	0	0	0	4
9:00	2	0	0	0	2
9:15	4	0	0	0	4
9:30	3	0	0	0	3
9:45	4	0	0	0	4
10:00	0	1	1	0	2
10:15	3	0	0	0	3
10:30	15	0	0	0	15
10:45	0	0	0	0	0
11:00	2	1	0	0	3
11:15	0	0	0	0	0
11:30	6	0	0	0	6
11:45	1	1	0	0	2



City: Moreno Valley  
 Location: Heacock - Driveway 3  
 Date: 5/12/2020  
 Count Type: Driveway Classification Counts

	Entering				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
12:00	3	0	0	0	3
12:15	3	0	0	0	3
12:30	5	1	0	0	6
12:45	7	0	0	0	7
13:00	1	0	0	0	1
13:15	3	0	0	0	3
13:30	2	0	0	0	2
13:45	2	0	0	0	2
14:00	0	2	0	0	2
14:15	0	1	0	0	1
14:30	1	1	0	0	2
14:45	2	0	0	0	2
15:00	0	0	0	0	0
15:15	0	0	0	0	0
15:30	0	0	0	0	0
15:45	0	1	0	0	1
16:00	0	0	0	0	0
16:15	0	0	0	0	0
16:30	1	0	0	0	1
16:45	1	0	0	0	1
17:00	0	0	0	0	0
17:15	3	0	0	0	3
17:30	0	0	1	0	1
17:45	1	0	0	0	1
18:00	1	0	0	0	1
18:15	0	0	0	0	0
18:30	0	0	0	0	0
18:45	0	0	0	0	0
19:00	0	0	0	0	0
19:15	0	0	0	0	0
19:30	1	0	0	0	1
19:45	0	0	0	0	0
20:00	6	0	0	0	6
20:15	1	0	0	0	1
20:30	3	0	0	0	3
20:45	3	0	0	0	3
21:00	0	0	0	0	0
21:15	1	0	0	0	1
21:30	1	0	0	0	1
21:45	6	0	0	0	6
22:00	4	0	0	0	4
22:15	11	0	0	0	11
22:30	23	0	0	0	23
22:45	21	0	0	0	21
23:00	2	0	0	0	2
23:15	3	0	0	0	3
23:30	0	0	0	0	0
23:45	0	0	0	0	0
<b>TOTAL</b>	<b>442</b>	<b>9</b>	<b>2</b>	<b>1</b>	<b>454</b>

	Exiting				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
12:00	0	0	0	0	0
12:15	4	1	0	0	5
12:30	10	0	0	0	10
12:45	8	1	0	0	9
13:00	9	0	0	0	9
13:15	11	0	0	0	11
13:30	28	0	0	0	28
13:45	6	0	0	0	6
14:00	6	0	0	0	6
14:15	11	0	0	2	13
14:30	11	1	0	0	12
14:45	34	0	0	0	34
15:00	18	0	0	0	18
15:15	2	1	0	0	3
15:30	9	0	0	0	9
15:45	19	1	0	0	20
16:00	4	0	0	0	4
16:15	9	0	0	0	9
16:30	20	0	0	0	20
16:45	8	0	0	0	8
17:00	8	0	0	0	8
17:15	2	0	0	0	2
17:30	6	0	1	0	7
17:45	0	0	0	0	0
18:00	3	0	0	0	3
18:15	1	0	0	0	1
18:30	1	0	0	0	1
18:45	1	0	0	0	1
19:00	3	0	0	0	3
19:15	0	0	0	0	0
19:30	1	0	0	0	1
19:45	0	0	0	0	0
20:00	0	0	0	0	0
20:15	1	0	0	0	1
20:30	2	0	0	0	2
20:45	2	0	0	0	2
21:00	2	0	0	0	2
21:15	2	0	0	0	2
21:30	2	0	0	0	2
21:45	2	0	0	0	2
22:00	2	0	0	0	2
22:15	0	0	0	0	0
22:30	3	0	0	0	3
22:45	4	0	0	0	4
23:00	0	0	0	0	0
23:15	0	0	0	0	0
23:30	0	0	0	0	0
23:45	0	0	0	0	0
<b>TOTAL</b>	<b>426</b>	<b>8</b>	<b>2</b>	<b>2</b>	<b>438</b>



City: Moreno Valley  
 Location: Heacock - Driveway 3  
 Date: 5/13/2020  
 Count Type: Driveway Classification Counts

	Entering				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
0:00	1	0	0	0	1
0:15	0	0	0	0	0
0:30	0	0	0	0	0
0:45	0	0	0	0	0
1:00	0	0	0	0	0
1:15	0	0	0	1	1
1:30	1	0	0	0	1
1:45	0	0	0	0	0
2:00	1	0	0	0	1
2:15	0	0	0	0	0
2:30	0	0	0	0	0
2:45	0	0	0	0	0
3:00	1	0	0	0	1
3:15	5	0	0	0	5
3:30	10	0	0	0	10
3:45	30	0	0	0	30
4:00	3	0	0	0	3
4:15	4	0	0	0	4
4:30	4	0	0	0	4
4:45	7	0	0	0	7
5:00	8	0	0	0	8
5:15	6	0	0	0	6
5:30	12	0	0	0	12
5:45	36	0	0	0	36
6:00	24	0	0	0	24
6:15	20	0	0	0	20
6:30	10	0	0	0	10
6:45	7	0	0	0	7
7:00	10	0	0	0	10
7:15	21	0	0	0	21
7:30	24	0	0	0	24
7:45	29	0	0	0	29
8:00	12	1	0	0	13
8:15	8	0	0	0	8
8:30	2	0	0	1	3
8:45	4	0	0	0	4
9:00	1	0	0	0	1
9:15	5	0	0	0	5
9:30	0	0	0	0	0
9:45	3	0	0	0	3
10:00	2	1	0	0	3
10:15	0	0	0	0	0
10:30	1	1	0	0	2
10:45	13	0	0	0	13
11:00	8	1	0	0	9
11:15	3	2	0	0	5
11:30	2	0	0	0	2
11:45	2	0	0	0	2

	Exiting				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
0:00	0	0	0	0	0
0:15	0	0	0	0	0
0:30	0	0	0	0	0
0:45	0	0	0	0	0
1:00	0	0	0	0	0
1:15	0	0	0	1	1
1:30	0	0	0	0	0
1:45	0	0	0	0	0
2:00	1	0	0	0	1
2:15	0	0	0	0	0
2:30	2	0	0	0	2
2:45	1	0	0	0	1
3:00	4	0	0	0	4
3:15	0	0	0	0	0
3:30	2	0	0	0	2
3:45	2	0	0	0	2
4:00	1	0	0	0	1
4:15	1	0	0	0	1
4:30	1	0	0	0	1
4:45	2	0	0	0	2
5:00	7	0	0	0	7
5:15	8	0	0	0	8
5:30	5	0	0	0	5
5:45	6	0	0	0	6
6:00	1	0	0	0	1
6:15	4	0	0	0	4
6:30	3	0	0	0	3
6:45	5	0	0	0	5
7:00	0	0	0	0	0
7:15	9	0	0	0	9
7:30	20	0	0	0	20
7:45	9	0	0	0	9
8:00	11	0	0	0	11
8:15	8	1	0	0	9
8:30	1	0	0	0	1
8:45	5	0	0	0	5
9:00	2	0	0	1	3
9:15	4	0	0	0	4
9:30	2	0	0	0	2
9:45	6	0	0	0	6
10:00	4	1	0	0	5
10:15	3	0	0	0	3
10:30	21	0	0	0	21
10:45	4	1	0	0	5
11:00	4	1	0	0	5
11:15	5	1	0	0	6
11:30	2	2	0	0	4
11:45	6	0	0	0	6



City: Moreno Valley  
 Location: Heacock - Driveway 3  
 Date: 5/13/2020  
 Count Type: Driveway Classification Counts

	Entering				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
12:00	3	0	0	0	3
12:15	3	0	0	0	3
12:30	5	0	0	0	5
12:45	6	0	0	0	6
13:00	3	0	0	0	3
13:15	3	0	0	0	3
13:30	1	1	0	0	2
13:45	0	0	0	0	0
14:00	3	1	0	0	4
14:15	0	0	0	0	0
14:30	1	0	0	0	1
14:45	2	0	0	0	2
15:00	2	1	0	0	3
15:15	1	1	0	0	2
15:30	1	0	0	0	1
15:45	2	0	0	0	2
16:00	0	0	0	0	0
16:15	0	0	0	0	0
16:30	0	0	0	0	0
16:45	0	0	0	0	0
17:00	2	0	0	0	2
17:15	0	0	0	0	0
17:30	0	0	0	0	0
17:45	0	0	0	0	0
18:00	0	0	0	0	0
18:15	0	0	0	0	0
18:30	0	0	0	0	0
18:45	0	0	0	0	0
19:00	0	0	0	0	0
19:15	0	0	0	0	0
19:30	1	0	0	0	1
19:45	0	0	0	0	0
20:00	5	0	0	0	5
20:15	1	0	0	0	1
20:30	5	0	0	0	5
20:45	3	0	0	0	3
21:00	2	0	0	0	2
21:15	2	0	0	1	3
21:30	3	0	0	0	3
21:45	7	0	0	0	7
22:00	4	0	0	0	4
22:15	8	0	0	0	8
22:30	29	0	0	0	29
22:45	27	0	0	0	27
23:00	4	0	0	0	4
23:15	1	0	0	0	1
23:30	0	0	0	0	0
23:45	1	0	0	0	1
<b>TOTAL</b>	<b>481</b>	<b>10</b>	<b>0</b>	<b>3</b>	<b>494</b>

	Exiting				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
12:00	9	0	0	0	9
12:15	3	0	0	0	3
12:30	22	0	0	0	22
12:45	11	0	0	0	11
13:00	6	1	0	0	7
13:15	5	0	0	0	5
13:30	7	0	0	0	7
13:45	14	2	0	0	16
14:00	9	0	0	0	9
14:15	12	0	0	0	12
14:30	19	0	1	0	20
14:45	25	0	0	0	25
15:00	14	1	0	0	15
15:15	4	0	0	0	4
15:30	13	1	0	0	14
15:45	11	1	0	0	12
16:00	5	0	0	0	5
16:15	5	0	0	0	5
16:30	12	0	0	0	12
16:45	14	0	0	0	14
17:00	15	0	0	0	15
17:15	4	0	0	0	4
17:30	2	0	0	0	2
17:45	2	0	0	0	2
18:00	7	0	0	0	7
18:15	0	0	0	0	0
18:30	1	0	0	0	1
18:45	0	0	0	0	0
19:00	1	0	0	0	1
19:15	0	0	0	0	0
19:30	1	0	0	0	1
19:45	2	0	0	0	2
20:00	0	0	0	0	0
20:15	2	0	0	0	2
20:30	2	0	0	0	2
20:45	2	0	0	0	2
21:00	3	0	0	0	3
21:15	2	0	0	0	2
21:30	2	0	0	0	2
21:45	1	0	0	0	1
22:00	0	0	0	0	0
22:15	0	0	0	0	0
22:30	2	0	0	0	2
22:45	7	0	0	0	7
23:00	0	0	0	0	0
23:15	0	0	0	0	0
23:30	0	0	0	0	0
23:45	0	0	0	0	0
<b>TOTAL</b>	<b>460</b>	<b>13</b>	<b>1</b>	<b>2</b>	<b>476</b>



City: Moreno Valley  
 Location: Heacock - Driveway 3  
 Date: 5/14/2020  
 Count Type: Driveway Classification Counts

	Entering				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
0:00	0	0	0	0	0
0:15	1	0	0	0	1
0:30	0	0	0	0	0
0:45	0	0	0	0	0
1:00	1	0	0	0	1
1:15	1	0	0	0	1
1:30	0	0	0	0	0
1:45	0	0	0	0	0
2:00	0	0	0	0	0
2:15	0	0	0	0	0
2:30	2	0	0	0	2
2:45	0	0	0	0	0
3:00	0	0	0	0	0
3:15	5	0	0	0	5
3:30	7	0	0	0	7
3:45	24	0	0	0	24
4:00	2	0	0	0	2
4:15	4	0	0	0	4
4:30	2	0	0	0	2
4:45	6	0	0	0	6
5:00	6	0	0	0	6
5:15	6	0	0	0	6
5:30	14	0	1	0	15
5:45	33	0	0	0	33
6:00	37	0	0	0	37
6:15	20	0	0	0	20
6:30	7	0	0	0	7
6:45	10	0	0	0	10
7:00	10	0	0	0	10
7:15	15	0	0	0	15
7:30	16	0	0	0	16
7:45	39	1	0	0	40
8:00	16	0	0	0	16
8:15	10	0	0	0	10
8:30	2	0	0	0	2
8:45	5	0	0	0	5
9:00	1	0	0	0	1
9:15	2	0	0	0	2
9:30	3	0	0	0	3
9:45	2	1	0	0	3
10:00	1	0	0	1	2
10:15	3	0	0	0	3
10:30	6	0	0	0	6
10:45	9	0	0	0	9
11:00	6	0	0	0	6
11:15	2	1	0	0	3
11:30	3	0	0	0	3
11:45	4	0	0	0	4

	Exiting				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
0:00	0	0	0	0	0
0:15	0	0	0	0	0
0:30	2	0	0	0	2
0:45	0	0	0	0	0
1:00	1	0	0	0	1
1:15	0	0	0	0	0
1:30	1	0	0	0	1
1:45	2	0	0	0	2
2:00	0	0	0	0	0
2:15	0	0	0	0	0
2:30	0	0	0	0	0
2:45	0	0	0	0	0
3:00	2	0	0	0	2
3:15	2	0	0	0	2
3:30	0	0	0	0	0
3:45	0	0	0	0	0
4:00	0	0	0	0	0
4:15	2	0	0	0	2
4:30	2	0	0	0	2
4:45	2	0	0	0	2
5:00	6	0	0	0	6
5:15	1	0	0	0	1
5:30	4	0	1	0	5
5:45	0	0	0	0	0
6:00	6	0	0	0	6
6:15	2	0	0	0	2
6:30	5	0	0	0	5
6:45	4	0	0	0	4
7:00	6	0	0	0	6
7:15	4	0	0	1	5
7:30	26	0	0	0	26
7:45	21	0	0	0	21
8:00	9	1	0	0	10
8:15	12	0	0	0	12
8:30	9	0	0	0	9
8:45	7	0	0	0	7
9:00	4	0	0	0	4
9:15	4	0	0	0	4
9:30	1	0	0	0	1
9:45	0	0	0	0	0
10:00	1	1	0	0	2
10:15	1	0	0	1	2
10:30	19	1	0	1	21
10:45	12	0	0	0	12
11:00	1	0	0	0	1
11:15	3	1	0	0	4
11:30	6	0	0	0	6
11:45	3	0	0	0	3





City: Moreno Valley  
 Location: Heacock - Driveway 3  
 Date: 5/14/2020  
 Count Type: Driveway Classification Counts

	Entering				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
12:00	4	0	0	0	4
12:15	6	0	0	0	6
12:30	5	0	0	0	5
12:45	5	0	0	0	5
13:00	3	0	0	0	3
13:15	2	0	0	0	2
13:30	0	0	0	0	0
13:45	2	0	0	0	2
14:00	1	0	0	0	1
14:15	0	0	0	0	0
14:30	0	0	0	0	0
14:45	3	1	0	0	4
15:00	0	0	0	0	0
15:15	0	0	0	0	0
15:30	2	0	0	0	2
15:45	0	0	0	0	0
16:00	1	0	0	0	1
16:15	0	0	0	0	0
16:30	2	0	0	0	2
16:45	0	0	0	0	0
17:00	2	0	0	0	2
17:15	2	0	0	0	2
17:30	1	1	0	0	2
17:45	0	0	0	0	0
18:00	1	0	0	0	1
18:15	1	0	0	0	1
18:30	0	0	0	0	0
18:45	0	0	0	0	0
19:00	0	0	0	0	0
19:15	0	0	0	0	0
19:30	1	0	0	0	1
19:45	1	0	0	0	1
20:00	3	0	0	0	3
20:15	1	0	0	0	1
20:30	3	0	0	0	3
20:45	3	0	0	0	3
21:00	1	0	0	0	1
21:15	1	0	0	0	1
21:30	0	0	0	0	0
21:45	6	0	0	0	6
22:00	6	0	0	0	6
22:15	12	0	0	0	12
22:30	19	0	0	0	19
22:45	23	0	0	0	23
23:00	5	0	0	0	5
23:15	2	0	0	0	2
23:30	0	0	0	0	0
23:45	0	0	0	0	0
<b>TOTAL</b>	<b>473</b>	<b>5</b>	<b>1</b>	<b>1</b>	<b>480</b>

	Exiting				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
12:00	18	0	0	0	18
12:15	5	0	0	0	5
12:30	40	0	0	0	40
12:45	8	0	0	0	8
13:00	5	0	0	0	5
13:15	3	0	0	0	3
13:30	5	0	0	0	5
13:45	2	0	0	0	2
14:00	4	0	0	0	4
14:15	7	0	0	0	7
14:30	15	0	0	0	15
14:45	17	0	0	0	17
15:00	14	0	0	0	14
15:15	1	0	0	0	1
15:30	7	1	0	0	8
15:45	21	0	0	0	21
16:00	4	0	0	0	4
16:15	8	0	0	0	8
16:30	26	0	0	0	26
16:45	18	0	0	0	18
17:00	20	0	0	0	20
17:15	6	0	0	0	6
17:30	7	1	0	0	8
17:45	2	0	0	0	2
18:00	1	0	0	0	1
18:15	1	0	0	0	1
18:30	1	0	0	0	1
18:45	4	0	0	0	4
19:00	0	0	0	0	0
19:15	3	0	0	0	3
19:30	1	0	0	0	1
19:45	0	0	0	0	0
20:00	0	0	0	0	0
20:15	1	0	0	0	1
20:30	3	0	0	0	3
20:45	1	0	0	0	1
21:00	3	0	0	0	3
21:15	1	0	0	0	1
21:30	2	0	0	0	2
21:45	0	0	0	0	0
22:00	2	0	0	0	2
22:15	0	0	0	0	0
22:30	3	0	0	0	3
22:45	2	0	0	0	2
23:00	2	0	0	0	2
23:15	2	0	0	0	2
23:30	0	0	0	0	0
23:45	0	0	0	0	0
<b>TOTAL</b>	<b>489</b>	<b>6</b>	<b>1</b>	<b>3</b>	<b>499</b>

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**APPENDIX 1.2:**  
**SITE ADJACENT QUEUES**

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Intersection: 10: Heacock Street & Driveway 1

Movement	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	T	TR	T	T	R
Maximum Queue (ft)	46	78	112	124	156	169	158	64
Average Queue (ft)	18	18	42	36	50	77	43	13
95th Queue (ft)	43	52	86	93	116	141	111	45
Link Distance (ft)		565		1875	1875	1473	1473	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	100		100					100
Storage Blk Time (%)		0	1	1		3	1	
Queuing Penalty (veh)		0	4	0		0	0	

Intersection: 11: Heacock Street & Cardinal Avenue

Movement	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	R	T	T	R	L	T	T
Maximum Queue (ft)	54	53	221	164	65	74	156	164
Average Queue (ft)	8	11	72	43	10	30	33	37
95th Queue (ft)	33	40	158	115	43	63	104	120
Link Distance (ft)		1313	1272	1272			1875	1875
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	100				100	140		
Storage Blk Time (%)				1			0	
Queuing Penalty (veh)				1			0	

Network Summary

Network wide Queuing Penalty: 5
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Intersection: 10: Heacock Street & Driveway 1

Movement	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	T	TR	T	T	R
Maximum Queue (ft)	51	52	84	152	166	264	216	10
Average Queue (ft)	18	19	25	59	63	98	60	0
95th Queue (ft)	44	40	70	130	138	190	148	5
Link Distance (ft)		566		1875	1875	732	732	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	100		100					100
Storage Blk Time (%)			0	2		5	2	
Queuing Penalty (veh)			1	0		0	0	

Intersection: 11: Heacock Street & Cardinal Avenue

Movement	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	R	T	T	R	L	T	T
Maximum Queue (ft)	74	66	224	201	51	65	227	220
Average Queue (ft)	33	27	86	48	5	18	93	100
95th Queue (ft)	65	54	169	130	26	48	186	196
Link Distance (ft)		1314	635	635			1875	1875
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	100				100	140		
Storage Blk Time (%)	0	0		1			2	
Queuing Penalty (veh)	0	0		0			0	

Network Summary

Network wide Queuing Penalty: 2
---------------------------------

Intersection: 10: Heacock Street & Driveway 1

Movement	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	T	TR	T	T	R
Maximum Queue (ft)	61	77	114	123	164	170	164	51
Average Queue (ft)	23	26	48	43	57	85	54	18
95th Queue (ft)	52	60	86	100	126	147	126	43
Link Distance (ft)		566		1875	1875	1488	1488	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	100		100					100
Storage Blk Time (%)		0	1	0		4	1	
Queuing Penalty (veh)		0	2	0		0	1	

Intersection: 11: Heacock Street & Cardinal Avenue

Movement	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	R	T	T	R	L	T	T
Maximum Queue (ft)	58	58	234	204	69	73	157	137
Average Queue (ft)	10	11	74	46	10	29	33	35
95th Queue (ft)	38	41	169	130	43	63	104	106
Link Distance (ft)		1313	1260	1260			1875	1875
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	100				100	140		
Storage Blk Time (%)				1			0	
Queuing Penalty (veh)				1			0	

Network Summary

Network wide Queuing Penalty: 4
---------------------------------

Intersection: 10: Heacock Street & Driveway 1

Movement	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	T	TR	T	T	R
Maximum Queue (ft)	68	56	101	134	163	221	190	10
Average Queue (ft)	27	23	36	49	62	103	78	0
95th Queue (ft)	57	48	88	111	133	182	158	5
Link Distance (ft)		566		1875	1875	1510	1510	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	100		100					100
Storage Blk Time (%)	0		1	1		6	2	
Queuing Penalty (veh)	0		3	0		0	0	

Intersection: 11: Heacock Street & Cardinal Avenue

Movement	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	R	T	T	R	L	T	T
Maximum Queue (ft)	91	63	173	142	37	52	218	250
Average Queue (ft)	31	23	83	52	3	15	81	88
95th Queue (ft)	66	52	150	114	19	44	169	186
Link Distance (ft)		1313	1271	1271			1875	1875
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	100				100	140		
Storage Blk Time (%)	0			1			1	
Queuing Penalty (veh)	0			0			0	

Network Summary

Network wide Queuing Penalty: 3
---------------------------------

Intersection: 10: Heacock Street & Driveway 1

Movement	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	T	TR	T	T	R
Maximum Queue (ft)	63	69	96	116	141	166	142	40
Average Queue (ft)	17	20	37	42	52	75	40	10
95th Queue (ft)	45	52	78	99	118	137	97	32
Link Distance (ft)		566		1875	1875	1502	1502	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	100		100					100
Storage Blk Time (%)	0		0	1		3	1	
Queuing Penalty (veh)	0		1	0		0	0	

Intersection: 11: Heacock Street & Cardinal Avenue

Movement	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	R	T	T	R	L	T	T
Maximum Queue (ft)	53	49	164	147	39	77	184	177
Average Queue (ft)	10	13	69	47	8	31	37	43
95th Queue (ft)	36	39	142	117	29	63	115	125
Link Distance (ft)		1314	1246	1246	1246		1875	1875
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	100					140		
Storage Blk Time (%)							0	
Queuing Penalty (veh)							0	

Network Summary

Network wide Queuing Penalty: 2
---------------------------------

Intersection: 10: Heacock Street & Driveway 1

Movement	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	T	TR	T	T	R
Maximum Queue (ft)	54	61	108	162	167	167	154	21
Average Queue (ft)	18	18	26	52	61	88	61	1
95th Queue (ft)	43	42	80	123	135	157	127	10
Link Distance (ft)		566		1875	1875	1552	1552	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	100		100					100
Storage Blk Time (%)			0	1		4	1	
Queuing Penalty (veh)			2	0		0	0	

Intersection: 11: Heacock Street & Cardinal Avenue

Movement	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	R	T	T	R	L	T	T
Maximum Queue (ft)	108	67	171	156	38	56	242	235
Average Queue (ft)	37	24	81	54	4	14	94	101
95th Queue (ft)	78	52	147	118	21	43	191	204
Link Distance (ft)		1313	1238	1238	1238		1875	1875
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	100					140		
Storage Blk Time (%)	1						2	
Queuing Penalty (veh)	0						0	

Network Summary

Network wide Queuing Penalty: 3
---------------------------------



**Intersection: 10: Heacock Street & Driveway 1**

Movement	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	T	TR	T	T	R
Maximum Queue (ft)	68	64	127	130	134	174	154	47
Average Queue (ft)	25	25	54	43	56	89	52	15
95th Queue (ft)	54	55	99	104	121	153	113	38
Link Distance (ft)		566		1875	1875	1507	1507	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	100		100					100
Storage Blk Time (%)			2	1		5	1	
Queuing Penalty (veh)			7	1		0	1	

**Intersection: 11: Heacock Street & Cardinal Avenue**

Movement	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	R	T	T	R	L	T	T
Maximum Queue (ft)	64	50	204	165	32	81	164	162
Average Queue (ft)	10	10	68	43	7	30	33	37
95th Queue (ft)	40	37	152	112	27	63	111	116
Link Distance (ft)		1313	1247	1247			1875	1875
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	100				200	140		
Storage Blk Time (%)							0	
Queuing Penalty (veh)							0	

**Network Summary**

Network wide Queuing Penalty: 8
---------------------------------

Intersection: 10: Heacock Street & Driveway 1

Movement	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	T	TR	T	T	R
Maximum Queue (ft)	59	68	114	137	149	254	217	11
Average Queue (ft)	25	26	38	56	69	118	75	0
95th Queue (ft)	52	52	96	118	136	208	160	6
Link Distance (ft)		566		1875	1875	732	732	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	100		100					100
Storage Blk Time (%)		0	1	1		8	3	
Queuing Penalty (veh)		0	7	0		0	0	

Intersection: 11: Heacock Street & Cardinal Avenue

Movement	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	R	T	T	R	L	T	T
Maximum Queue (ft)	83	82	244	180	37	90	247	248
Average Queue (ft)	34	27	91	49	3	16	90	95
95th Queue (ft)	70	60	176	121	19	56	189	205
Link Distance (ft)		1314	635	635			1875	1875
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	100				200	140		
Storage Blk Time (%)	0	0		0			1	
Queuing Penalty (veh)	0	0		0			0	

Network Summary

Network wide Queuing Penalty: 7
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**APPENDIX 3.1:**

**EXISTING (2020) AND HISTORIC TRAFFIC COUNTS – 2015, 2018 & 2019**

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City of Perris  
 N/S: I-215 Southbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_215S\_Harley Knox AM  
 Site Code : 05119683  
 Start Date : 10/2/2019  
 Page No : 1

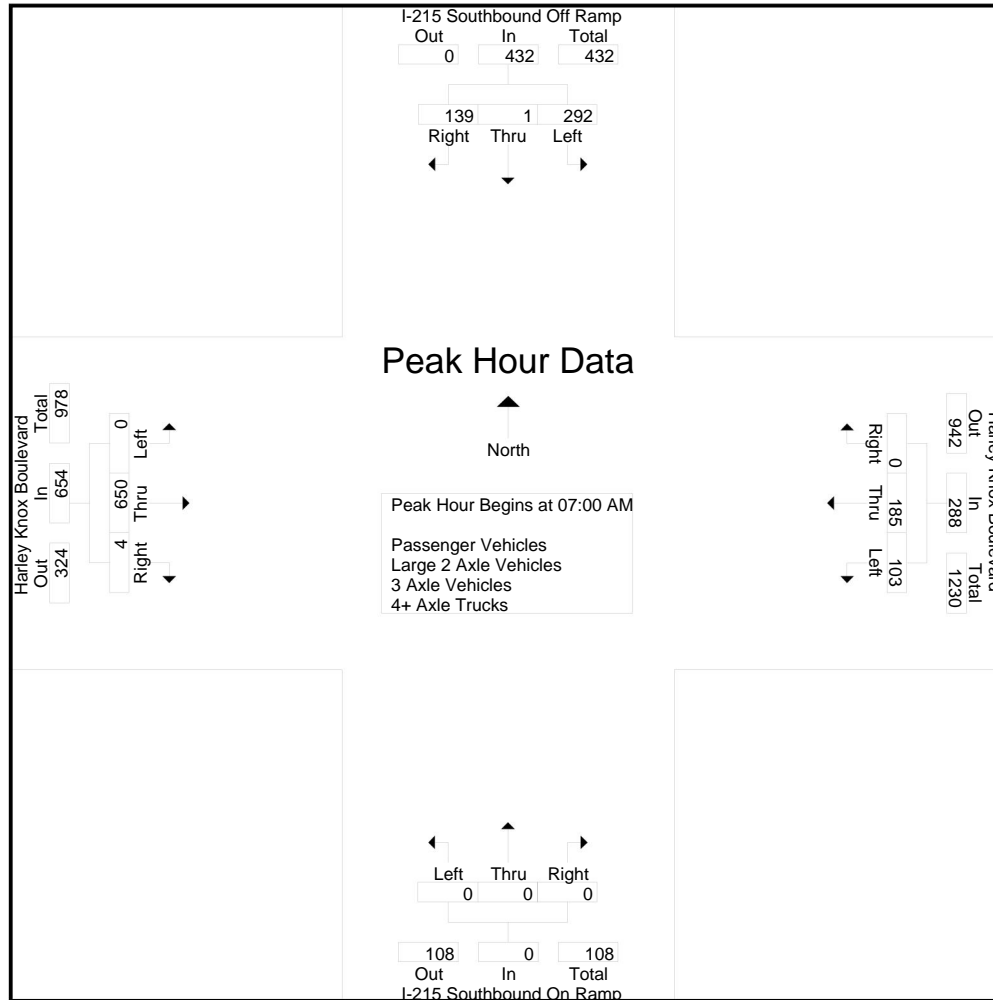
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	I-215 Southbound Off Ramp Southbound					Harley Knox Boulevard Westbound					I-215 Southbound On Ramp Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	84	0	44	4	128	15	51	0	0	66	0	0	0	0	0	0	158	2	0	160	4	354	358
07:15 AM	65	0	31	12	96	25	53	0	0	78	0	0	0	0	0	0	175	0	0	175	12	349	361
07:30 AM	78	1	44	30	123	33	56	0	0	89	0	0	0	0	0	0	160	2	0	162	30	374	404
07:45 AM	65	0	20	15	85	30	25	0	0	55	0	0	0	0	0	0	157	0	0	157	15	297	312
Total	292	1	139	61	432	103	185	0	0	288	0	0	0	0	0	0	650	4	0	654	61	1374	1435
08:00 AM	72	0	26	22	98	35	23	0	0	58	0	0	0	0	0	0	156	3	0	159	22	315	337
08:15 AM	79	1	28	7	108	24	20	0	0	44	0	0	0	0	0	0	84	0	0	84	7	236	243
08:30 AM	80	0	32	18	112	36	21	0	0	57	0	0	0	0	0	0	50	2	1	52	19	221	240
08:45 AM	68	1	14	6	83	26	17	0	0	43	0	0	0	0	0	0	48	0	0	48	6	174	180
Total	299	2	100	53	401	121	81	0	0	202	0	0	0	0	0	0	338	5	1	343	54	946	1000
Grand Total	591	3	239	114	833	224	266	0	0	490	0	0	0	0	0	0	988	9	1	997	115	2320	2435
Apprch %	70.9	0.4	28.7			45.7	54.3	0			0	0	0			0	99.1	0.9					
Total %	25.5	0.1	10.3		35.9	9.7	11.5	0		21.1	0	0	0	0		0	42.6	0.4		43	4.7	95.3	
Passenger Vehicles	379	2	193		670	133	247	0		380	0	0	0	0	0	0	920	6		926	0	0	1976
% Passenger Vehicles	64.1	66.7	80.8	84.2	70.7	59.4	92.9	0	0	77.6	0	0	0	0	0	0	93.1	66.7	0	92.8	0	0	81.1
Large 2 Axle Vehicles	49	0	10		62	12	10	0		22	0	0	0	0	0	0	27	0		27	0	0	111
% Large 2 Axle Vehicles	8.3	0	4.2	2.6	6.5	5.4	3.8	0	0	4.5	0	0	0	0	0	0	2.7	0	0	2.7	0	0	4.6
3 Axle Vehicles	30	0	2		32	22	2	0		24	0	0	0	0	0	0	5	1		6	0	0	62
% 3 Axle Vehicles	5.1	0	0.8	0	3.4	9.8	0.8	0	0	4.9	0	0	0	0	0	0	0.5	11.1	0	0.6	0	0	2.5
4+ Axle Trucks	133	1	34		183	57	7	0		64	0	0	0	0	0	0	36	2		39	0	0	286
% 4+ Axle Trucks	22.5	33.3	14.2	13.2	19.3	25.4	2.6	0	0	13.1	0	0	0	0	0	0	3.6	22.2	100	3.9	0	0	11.7

Start Time	I-215 Southbound Off Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Southbound On Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	84	0	44	128	15	51	0	66	0	0	0	0	0	158	2	160	354
07:15 AM	65	0	31	96	25	53	0	78	0	0	0	0	0	175	0	175	349
07:30 AM	78	1	44	123	33	56	0	89	0	0	0	0	0	160	2	162	374
07:45 AM	65	0	20	85	30	25	0	55	0	0	0	0	0	157	0	157	297
Total Volume	292	1	139	432	103	185	0	288	0	0	0	0	0	650	4	654	1374
% App. Total	67.6	0.2	32.2		35.8	64.2	0		0	0	0		0	99.4	0.6		
PHF	.869	.250	.790	.844	.780	.826	.000	.809	.000	.000	.000	.000	.000	.929	.500	.934	.918

City of Perris  
 N/S: I-215 Southbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_215S\_Harley Knox AM  
 Site Code : 05119683  
 Start Date : 10/2/2019  
 Page No : 2





City of Perris  
 N/S: I-215 Southbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_215S\_Harley Knox AM  
 Site Code : 05119683  
 Start Date : 10/2/2019  
 Page No : 3

Start Time	I-215 Southbound Off Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Southbound On Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	84	0	44	128	15	51	0	66	0	0	0	0	0	158	2	160	
+15 mins.	65	0	31	96	25	53	0	78	0	0	0	0	0	175	0	175	
+30 mins.	78	1	44	123	33	56	0	89	0	0	0	0	0	160	2	162	
+45 mins.	65	0	20	85	30	25	0	55	0	0	0	0	0	157	0	157	
Total Volume	292	1	139	432	103	185	0	288	0	0	0	0	0	650	4	654	
% App. Total	67.6	0.2	32.2		35.8	64.2	0		0	0	0		0	99.4	0.6		
PHF	.869	.250	.790	.844	.780	.826	.000	.809	.000	.000	.000	.000	.000	.929	.500	.934	

City of Perris  
 N/S: I-215 Southbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

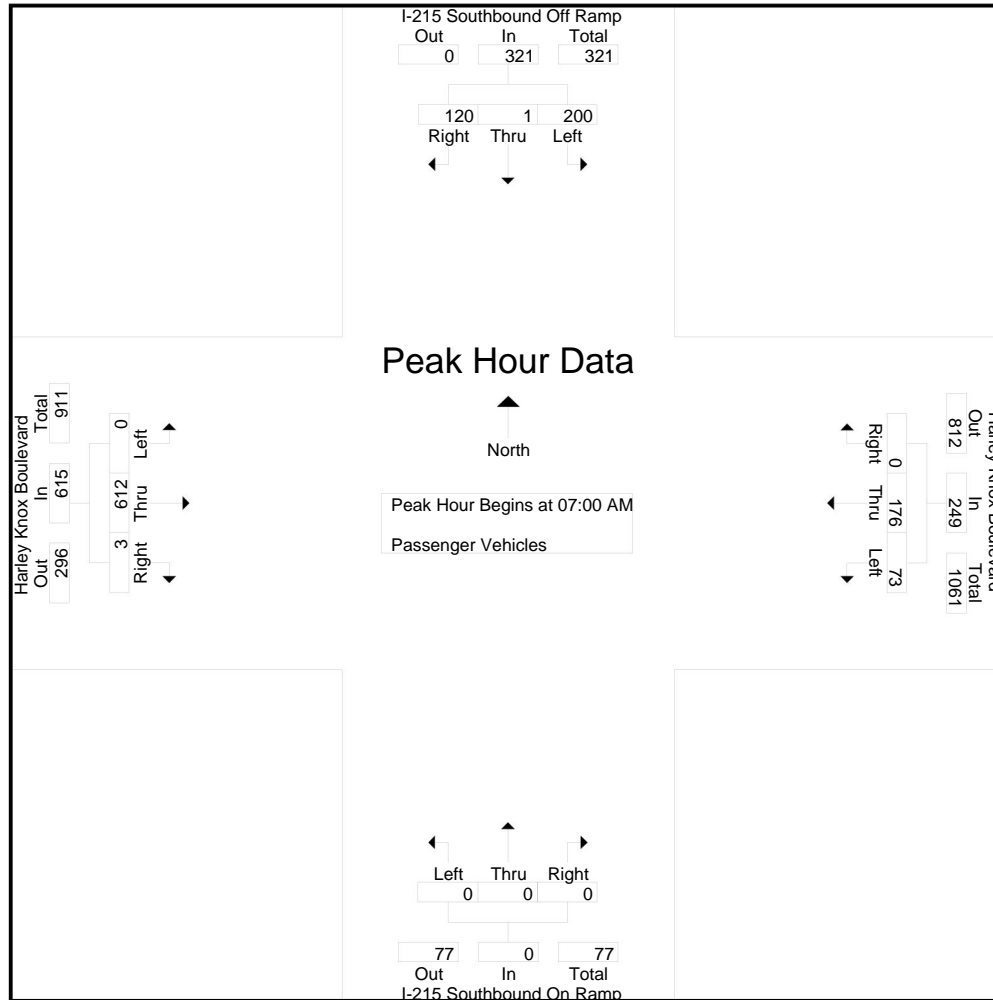
File Name : 01\_PER\_215S\_Harley Knox AM  
 Site Code : 05119683  
 Start Date : 10/2/2019  
 Page No : 1

Groups Printed- Passenger Vehicles

Start Time	I-215 Southbound Off Ramp Southbound					Harley Knox Boulevard Westbound					I-215 Southbound On Ramp Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	55	0	40	3	95	11	47	0	0	58	0	0	0	0	0	0	147	1	0	148	3	301	304
07:15 AM	41	0	25	10	66	21	52	0	0	73	0	0	0	0	0	0	169	0	0	169	10	308	318
07:30 AM	57	1	38	26	96	26	54	0	0	80	0	0	0	0	0	0	146	2	0	148	26	324	350
07:45 AM	47	0	17	13	64	15	23	0	0	38	0	0	0	0	0	0	150	0	0	150	13	252	265
Total	200	1	120	52	321	73	176	0	0	249	0	0	0	0	0	0	612	3	0	615	52	1185	1237
08:00 AM	44	0	22	20	66	21	21	0	0	42	0	0	0	0	0	0	145	3	0	148	20	256	276
08:15 AM	49	1	18	5	68	10	18	0	0	28	0	0	0	0	0	0	77	0	0	77	5	173	178
08:30 AM	51	0	23	14	74	19	17	0	0	36	0	0	0	0	0	0	46	0	0	46	14	156	170
08:45 AM	35	0	10	5	45	10	15	0	0	25	0	0	0	0	0	0	40	0	0	40	5	110	115
Total	179	1	73	44	253	60	71	0	0	131	0	0	0	0	0	0	308	3	0	311	44	695	739
Grand Total	379	2	193	96	574	133	247	0	0	380	0	0	0	0	0	0	920	6	0	926	96	1880	1976
Apprch %	66	0.3	33.6			35	65	0			0	0	0			0	99.4	0.6					
Total %	20.2	0.1	10.3		30.5	7.1	13.1	0		20.2	0	0	0			0	48.9	0.3		49.3	4.9	95.1	

3.1-4

Start Time	I-215 Southbound Off Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Southbound On Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	55	0	<b>40</b>	95	11	47	0	58	0	0	0	0	0	147	1	148	301
07:15 AM	41	0	25	66	21	52	0	73	0	0	0	0	0	<b>169</b>	0	<b>169</b>	308
07:30 AM	<b>57</b>	<b>1</b>	<b>38</b>	<b>96</b>	<b>26</b>	<b>54</b>	0	<b>80</b>	0	0	0	0	0	146	<b>2</b>	148	<b>324</b>
07:45 AM	47	0	17	64	15	23	0	38	0	0	0	0	0	150	0	150	252
Total Volume	200	1	120	321	73	176	0	249	0	0	0	0	0	612	3	615	1185
% App. Total	62.3	0.3	37.4		29.3	70.7	0		0	0	0		0	99.5	0.5		
PHF	.877	.250	.750	.836	.702	.815	.000	.778	.000	.000	.000	.000	.000	.905	.375	.910	.914



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: I-215 Southbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_215S\_Harley Knox AM  
 Site Code : 05119683  
 Start Date : 10/2/2019  
 Page No : 3

Start Time	I-215 Southbound Off Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Southbound On Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	55	0	<b>40</b>	95	11	47	0	58	0	0	0	0	0	147	1	148	
+15 mins.	41	0	25	66	21	52	0	73	0	0	0	0	0	<b>169</b>	0	<b>169</b>	
+30 mins.	<b>57</b>	<b>1</b>	38	<b>96</b>	<b>26</b>	<b>54</b>	0	<b>80</b>	0	0	0	0	0	146	<b>2</b>	148	
+45 mins.	47	0	17	64	15	23	0	38	0	0	0	0	0	150	0	150	
Total Volume	200	1	120	321	73	176	0	249	0	0	0	0	0	612	3	615	
% App. Total	62.3	0.3	37.4		29.3	70.7	0		0	0	0		0	99.5	0.5		
PHF	.877	.250	.750	.836	.702	.815	.000	.778	.000	.000	.000	.000	.000	.905	.375	.910	

City of Perris  
 N/S: I-215 Southbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

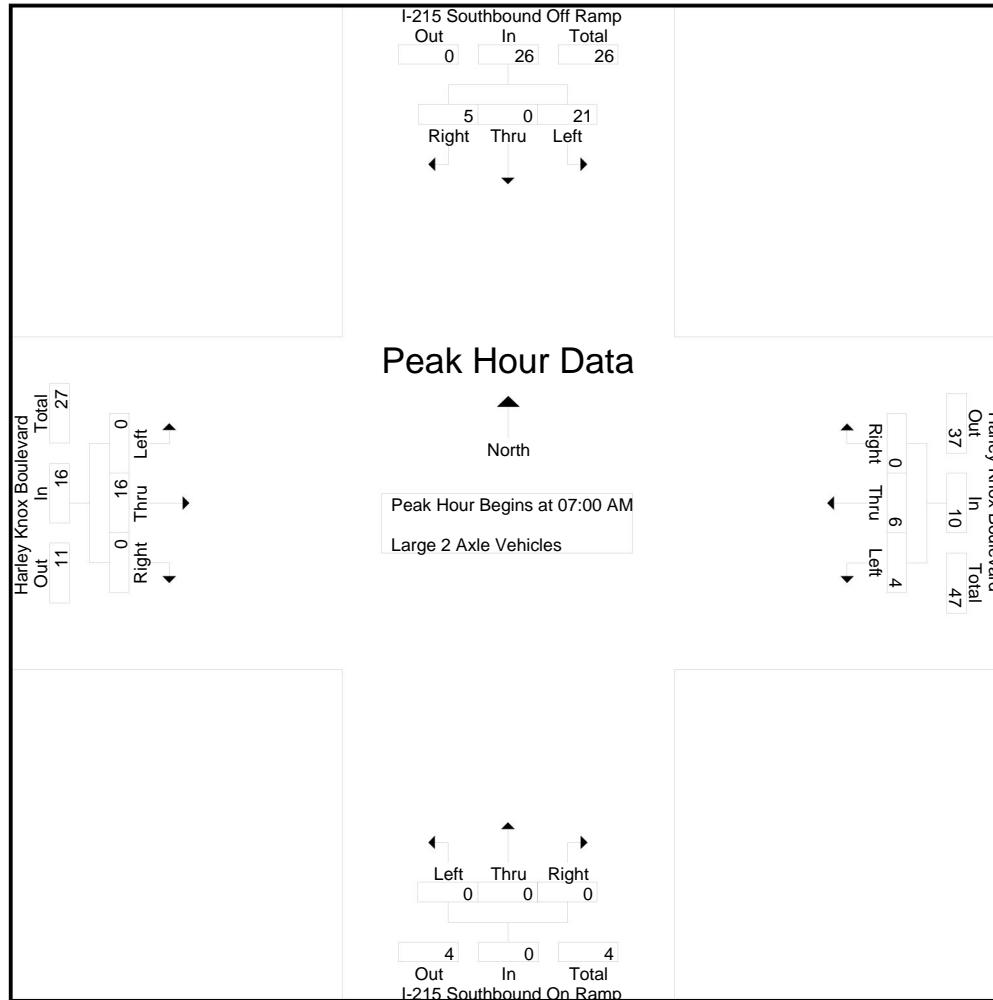
File Name : 01\_PER\_215S\_Harley Knox AM  
 Site Code : 05119683  
 Start Date : 10/2/2019  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

Start Time	I-215 Southbound Off Ramp Southbound					Harley Knox Boulevard Westbound					I-215 Southbound On Ramp Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	9	0	1	0	10	0	2	0	0	2	0	0	0	0	0	0	4	0	0	4	0	16	16
07:15 AM	5	0	1	1	6	1	1	0	0	2	0	0	0	0	0	0	2	0	0	2	1	10	11
07:30 AM	2	0	1	1	3	1	2	0	0	3	0	0	0	0	0	0	7	0	0	7	1	13	14
07:45 AM	5	0	2	1	7	2	1	0	0	3	0	0	0	0	0	0	3	0	0	3	1	13	14
Total	21	0	5	3	26	4	6	0	0	10	0	0	0	0	0	0	16	0	0	16	3	52	55
08:00 AM	6	0	0	0	6	1	0	0	0	1	0	0	0	0	0	0	5	0	0	5	0	12	12
08:15 AM	5	0	2	0	7	2	0	0	0	2	0	0	0	0	0	0	4	0	0	4	0	13	13
08:30 AM	9	0	3	0	12	4	2	0	0	6	0	0	0	0	0	0	1	0	0	1	0	19	19
08:45 AM	8	0	0	0	8	1	2	0	0	3	0	0	0	0	0	0	1	0	0	1	0	12	12
Total	28	0	5	0	33	8	4	0	0	12	0	0	0	0	0	0	11	0	0	11	0	56	56
Grand Total	49	0	10	3	59	12	10	0	0	22	0	0	0	0	0	0	27	0	0	27	3	108	111
Apprch %	83.1	0	16.9			54.5	45.5	0			0	0	0			0	100	0					
Total %	45.4	0	9.3		54.6	11.1	9.3	0		20.4	0	0	0			0	25	0		25	2.7	97.3	

3.1-7

Start Time	I-215 Southbound Off Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Southbound On Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	9	0	1	10	0	2	0	2	0	0	0	0	0	4	0	4	16
07:15 AM	5	0	1	6	1	1	0	2	0	0	0	0	0	2	0	2	10
07:30 AM	2	0	1	3	1	2	0	3	0	0	0	0	0	7	0	7	13
07:45 AM	5	0	2	7	2	1	0	3	0	0	0	0	0	3	0	3	13
Total Volume	21	0	5	26	4	6	0	10	0	0	0	0	0	16	0	16	52
% App. Total	80.8	0	19.2		40	60	0		0	0	0		0	100	0		
PHF	.583	.000	.625	.650	.500	.750	.000	.833	.000	.000	.000	.000	.000	.571	.000	.571	.813





Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: I-215 Southbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_215S\_Harley Knox AM  
 Site Code : 05119683  
 Start Date : 10/2/2019  
 Page No : 3

Start Time	I-215 Southbound Off Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Southbound On Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	9	0	1	10	0	2	0	2	0	0	0	0	0	4	0	4	
+15 mins.	5	0	1	6	1	1	0	2	0	0	0	0	0	2	0	2	
+30 mins.	2	0	1	3	1	2	0	3	0	0	0	0	0	7	0	7	
+45 mins.	5	0	2	7	2	1	0	3	0	0	0	0	0	3	0	3	
Total Volume	21	0	5	26	4	6	0	10	0	0	0	0	0	16	0	16	
% App. Total	80.8	0	19.2		40	60	0		0	0	0		0	100	0		
PHF	.583	.000	.625	.650	.500	.750	.000	.833	.000	.000	.000	.000	.000	.571	.000	.571	

City of Perris  
 N/S: I-215 Southbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

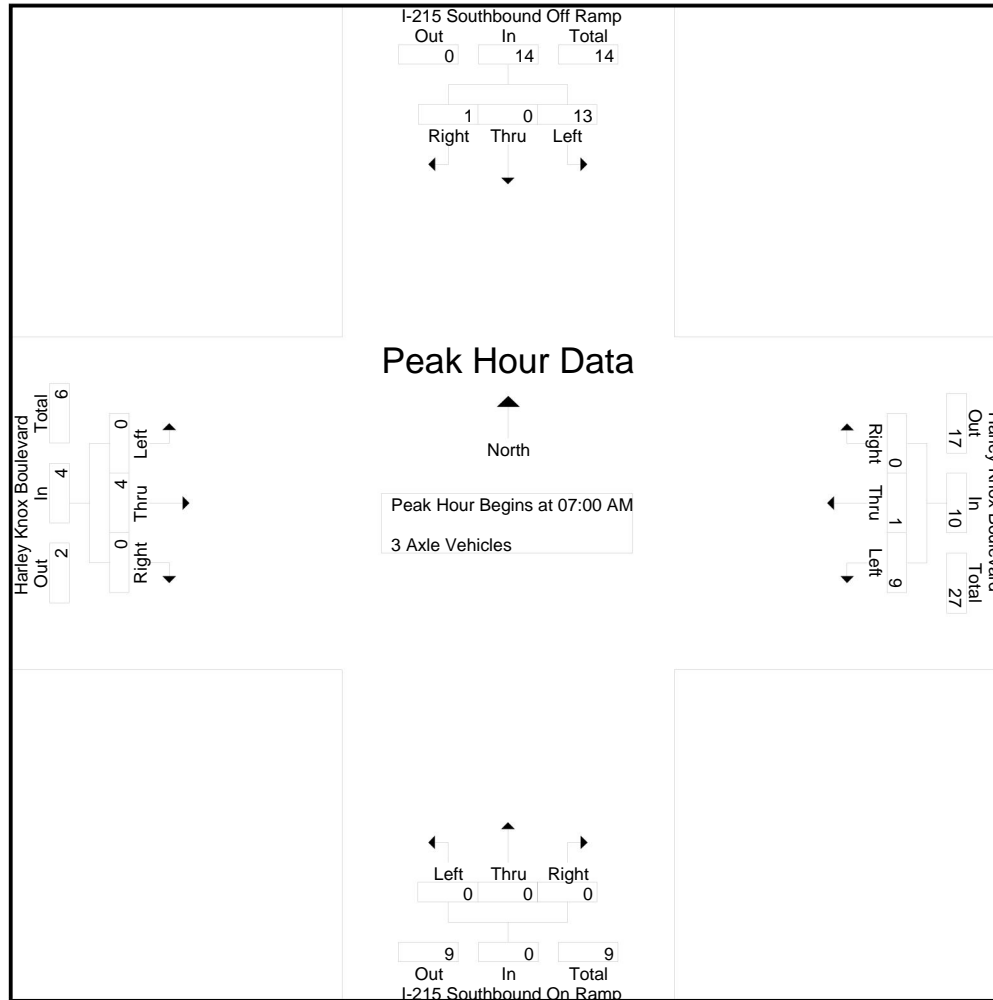
File Name : 01\_PER\_215S\_Harley Knox AM  
 Site Code : 05119683  
 Start Date : 10/2/2019  
 Page No : 1

Groups Printed- 3 Axle Vehicles

Start Time	I-215 Southbound Off Ramp Southbound					Harley Knox Boulevard Westbound					I-215 Southbound On Ramp Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total	
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total				
07:00 AM	4	0	0	0	4	2	1	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	8	8
07:15 AM	4	0	1	0	5	2	0	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	9	9
07:30 AM	4	0	0	0	4	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	5	5
07:45 AM	1	0	0	0	1	4	0	0	0	4	0	0	0	0	0	0	1	0	0	1	0	0	6	6
Total	13	0	1	0	14	9	1	0	0	10	0	0	0	0	0	0	4	0	0	4	0	0	28	28
08:00 AM	8	0	0	0	8	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	9	9
08:15 AM	4	0	1	0	5	6	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	11	11
08:30 AM	3	0	0	0	3	1	1	0	0	2	0	0	0	0	0	0	0	1	0	1	0	0	6	6
08:45 AM	2	0	0	0	2	5	0	0	0	5	0	0	0	0	0	0	1	0	0	1	0	0	8	8
Total	17	0	1	0	18	13	1	0	0	14	0	0	0	0	0	0	1	1	0	2	0	0	34	34
Grand Total	30	0	2	0	32	22	2	0	0	24	0	0	0	0	0	0	5	1	0	6	0	0	62	62
Apprch %	93.8	0	6.2			91.7	8.3	0			0	0	0			0	83.3	16.7						
Total %	48.4	0	3.2		51.6	35.5	3.2	0		38.7	0	0	0			0	8.1	1.6		9.7	0	0	100	

3.1-10

Start Time	I-215 Southbound Off Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Southbound On Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	4	0	0	4	2	1	0	3	0	0	0	0	0	1	0	1	8
07:15 AM	4	0	1	5	2	0	0	2	0	0	0	0	0	2	0	2	9
07:30 AM	4	0	0	4	1	0	0	1	0	0	0	0	0	0	0	0	5
07:45 AM	1	0	0	1	4	0	0	4	0	0	0	0	0	1	0	1	6
Total Volume	13	0	1	14	9	1	0	10	0	0	0	0	0	4	0	4	28
% App. Total	92.9	0	7.1		90	10	0		0	0	0		0	100	0		
PHF	.813	.000	.250	.700	.563	.250	.000	.625	.000	.000	.000	.000	.000	.500	.000	.500	.778



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: I-215 Southbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_215S\_Harley Knox AM  
 Site Code : 05119683  
 Start Date : 10/2/2019  
 Page No : 3

Start Time	I-215 Southbound Off Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Southbound On Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	4	0	0	4	2	1	0	3	0	0	0	0	0	1	0	1	
+15 mins.	4	0	1	5	2	0	0	2	0	0	0	0	0	2	0	2	
+30 mins.	4	0	0	4	1	0	0	1	0	0	0	0	0	0	0	0	
+45 mins.	1	0	0	1	4	0	0	4	0	0	0	0	0	1	0	1	
Total Volume	13	0	1	14	9	1	0	10	0	0	0	0	0	4	0	4	
% App. Total	92.9	0	7.1		90	10	0		0	0	0		0	100	0		
PHF	.813	.000	.250	.700	.563	.250	.000	.625	.000	.000	.000	.000	.000	.500	.000	.500	

City of Perris  
 N/S: I-215 Southbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_215S\_Harley Knox AM  
 Site Code : 05119683  
 Start Date : 10/2/2019  
 Page No : 1

Groups Printed- 4+ Axle Trucks

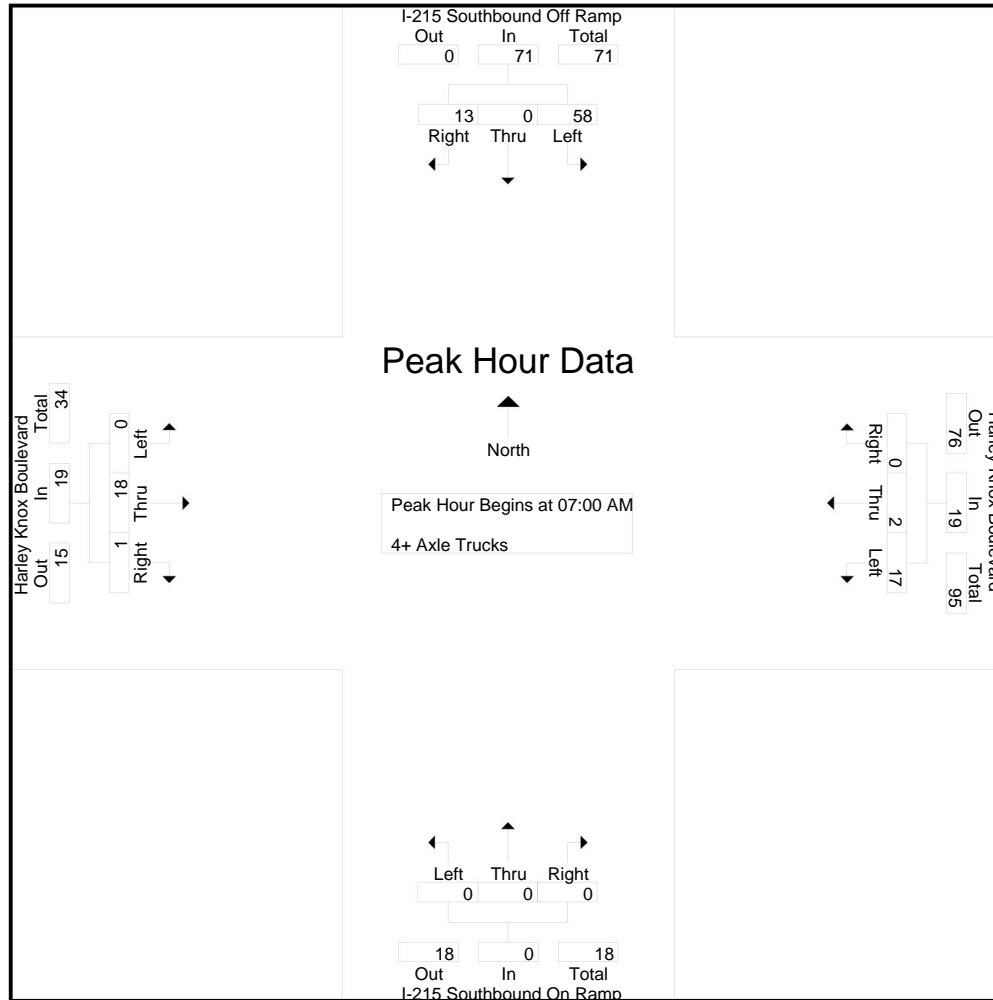
Start Time	I-215 Southbound Off Ramp Southbound					Harley Knox Boulevard Westbound					I-215 Southbound On Ramp Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	16	0	3	1	19	2	1	0	0	3	0	0	0	0	0	0	6	1	0	7	1	29	30
07:15 AM	15	0	4	1	19	1	0	0	0	1	0	0	0	0	0	0	2	0	0	2	1	22	23
07:30 AM	15	0	5	3	20	5	0	0	0	5	0	0	0	0	0	0	7	0	0	7	3	32	35
07:45 AM	12	0	1	1	13	9	1	0	0	10	0	0	0	0	0	0	3	0	0	3	1	26	27
Total	58	0	13	6	71	17	2	0	0	19	0	0	0	0	0	0	18	1	0	19	6	109	115
08:00 AM	14	0	4	2	18	12	2	0	0	14	0	0	0	0	0	0	6	0	0	6	2	38	40
08:15 AM	21	0	7	2	28	6	2	0	0	8	0	0	0	0	0	0	3	0	0	3	2	39	41
08:30 AM	17	0	6	4	23	12	1	0	0	13	0	0	0	0	0	0	3	1	1	4	5	40	45
08:45 AM	23	1	4	1	28	10	0	0	0	10	0	0	0	0	0	0	6	0	0	6	1	44	45
Total	75	1	21	9	97	40	5	0	0	45	0	0	0	0	0	0	18	1	1	19	10	161	171
Grand Total	133	1	34	15	168	57	7	0	0	64	0	0	0	0	0	0	36	2	1	38	16	270	286
Apprch %	79.2	0.6	20.2			89.1	10.9	0			0	0	0			0	94.7	5.3					
Total %	49.3	0.4	12.6		62.2	21.1	2.6	0		23.7	0	0	0			0	13.3	0.7		14.1	5.6	94.4	

3.1-13

Start Time	I-215 Southbound Off Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Southbound On Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	16	0	3	19	2	1	0	3	0	0	0	0	0	6	1	7	29
07:15 AM	15	0	4	19	1	0	0	1	0	0	0	0	0	2	0	2	22
07:30 AM	15	0	5	20	5	0	0	5	0	0	0	0	0	7	0	7	32
07:45 AM	12	0	1	13	9	1	0	10	0	0	0	0	0	3	0	3	26
Total Volume	58	0	13	71	17	2	0	19	0	0	0	0	0	18	1	19	109
% App. Total	81.7	0	18.3		89.5	10.5	0		0	0	0		0	94.7	5.3		
PHF	.906	.000	.650	.888	.472	.500	.000	.475	.000	.000	.000	.000	.000	.643	.250	.679	.852

City of Perris  
 N/S: I-215 Southbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_215S\_Harley Knox AM  
 Site Code : 05119683  
 Start Date : 10/2/2019  
 Page No : 2





City of Perris  
 N/S: I-215 Southbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_215S\_Harley Knox AM  
 Site Code : 05119683  
 Start Date : 10/2/2019  
 Page No : 3

Start Time	I-215 Southbound Off Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Southbound On Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	16	0	3	19	2	1	0	3	0	0	0	0	0	6	1	7	
+15 mins.	15	0	4	19	1	0	0	1	0	0	0	0	0	2	0	2	
+30 mins.	15	0	5	20	5	0	0	5	0	0	0	0	0	7	0	7	
+45 mins.	12	0	1	13	9	1	0	10	0	0	0	0	0	3	0	3	
Total Volume	58	0	13	71	17	2	0	19	0	0	0	0	0	18	1	19	
% App. Total	81.7	0	18.3		89.5	10.5	0		0	0	0		0	94.7	5.3		
PHF	.906	.000	.650	.888	.472	.500	.000	.475	.000	.000	.000	.000	.000	.643	.250	.679	

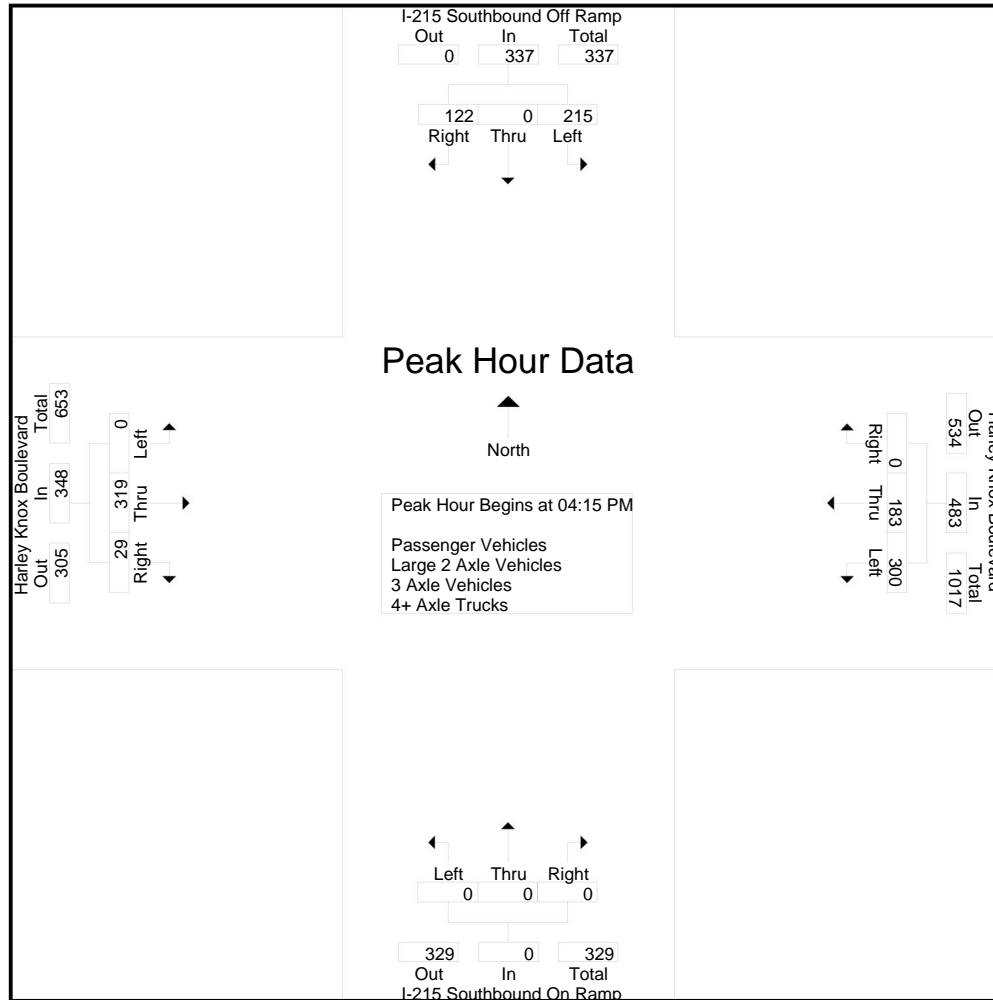
City of Perris  
 N/S: I-215 Southbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_215S\_Harley Knox PM  
 Site Code : 05119683  
 Start Date : 10/2/2019  
 Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	I-215 Southbound Off Ramp Southbound					Harley Knox Boulevard Westbound					I-215 Southbound On Ramp Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	57	2	26	12	85	57	32	0	0	89	0	0	0	0	0	0	86	9	3	95	15	269	284
04:15 PM	49	0	31	18	80	61	38	0	0	99	0	0	0	0	0	0	81	4	1	85	19	264	283
04:30 PM	48	0	29	14	77	76	50	0	0	126	0	0	0	0	0	0	86	11	4	97	18	300	318
04:45 PM	64	0	38	17	102	87	54	0	0	141	0	0	0	0	0	0	81	7	2	88	19	331	350
Total	218	2	124	61	344	281	174	0	0	455	0	0	0	0	0	0	334	31	10	365	71	1164	1235
05:00 PM	54	0	24	17	78	76	41	0	0	117	0	0	0	0	0	0	71	7	3	78	20	273	293
05:15 PM	53	0	22	11	75	49	18	1	0	68	0	0	0	0	0	0	65	9	2	74	13	217	230
05:30 PM	49	0	29	5	78	54	25	0	0	79	0	0	0	0	0	0	49	4	0	53	5	210	215
05:45 PM	52	1	25	11	78	45	17	0	0	62	0	0	0	0	0	0	69	7	3	76	14	216	230
Total	208	1	100	44	309	224	101	1	0	326	0	0	0	0	0	0	254	27	8	281	52	916	968
Grand Total	426	3	224	105	653	505	275	1	0	781	0	0	0	0	0	0	588	58	18	646	123	2080	2203
Apprch %	65.2	0.5	34.3			64.7	35.2	0.1			0	0	0			0	91	9					
Total %	20.5	0.1	10.8		31.4	24.3	13.2	0		37.5	0	0	0		0	0	28.3	2.8		31.1	5.6	94.4	
% Passenger Vehicles	337	2	188		619	479	255	1		735	0	0	0		0	0	536	56		608	0	0	1962
% Large 2 Axle Vehicles	79.1	66.7	83.9	87.6	81.7	94.9	92.7	100	0	94.1	0	0	0	0	0	0	91.2	96.6	88.9	91.6	0	0	89.1
% 3 Axle Vehicles	15	0	7		24	6	7	0		13	0	0	0		0	0	13	0		13	0	0	50
% 4+ Axle Trucks	3.5	0	3.1	1.9	3.2	1.2	2.5	0	0	1.7	0	0	0	0	0	0	2.2	0	0	2	0	0	2.3
% 3 Axle Vehicles	14	0	7		24	6	2	0		8	0	0	0		0	0	14	1		16	0	0	48
% 3 Axle Vehicles	3.3	0	3.1	2.9	3.2	1.2	0.7	0	0	1	0	0	0	0	0	0	2.4	1.7	5.6	2.4	0	0	2.2
4+ Axle Trucks	60	1	22		91	14	11	0		25	0	0	0		0	0	25	1		27	0	0	143
% 4+ Axle Trucks	14.1	33.3	9.8	7.6	12	2.8	4	0	0	3.2	0	0	0	0	0	0	4.3	1.7	5.6	4.1	0	0	6.5

Start Time	I-215 Southbound Off Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Southbound On Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	49	0	31	80	61	38	0	99	0	0	0	0	0	81	4	85	264
04:30 PM	48	0	29	77	76	50	0	126	0	0	0	0	0	86	11	97	300
04:45 PM	64	0	38	102	87	54	0	141	0	0	0	0	0	81	7	88	331
05:00 PM	54	0	24	78	76	41	0	117	0	0	0	0	0	71	7	78	273
Total Volume	215	0	122	337	300	183	0	483	0	0	0	0	0	319	29	348	1168
% App. Total	63.8	0	36.2		62.1	37.9	0		0	0	0		0	91.7	8.3		
PHF	.840	.000	.803	.826	.862	.847	.000	.856	.000	.000	.000	.000	.000	.927	.659	.897	.882



Counts Unlimited  
 PO Box 1178  
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City of Perris  
 N/S: I-215 Southbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_215S\_Harley Knox PM  
 Site Code : 05119683  
 Start Date : 10/2/2019  
 Page No : 3

Start Time	I-215 Southbound Off Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Southbound On Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:00 PM				04:15 PM				04:00 PM				04:00 PM				
+0 mins.	57	2	26	85	61	38	0	99	0	0	0	0	0	86	9	95	
+15 mins.	49	0	31	80	76	50	0	126	0	0	0	0	0	81	4	85	
+30 mins.	48	0	29	77	87	54	0	141	0	0	0	0	0	86	11	97	
+45 mins.	64	0	38	102	76	41	0	117	0	0	0	0	0	81	7	88	
Total Volume	218	2	124	344	300	183	0	483	0	0	0	0	0	334	31	365	
% App. Total	63.4	0.6	36		62.1	37.9	0		0	0	0		0	91.5	8.5		
PHF	.852	.250	.816	.843	.862	.847	.000	.856	.000	.000	.000	.000	.000	.971	.705	.941	

City of Perris  
 N/S: I-215 Southbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

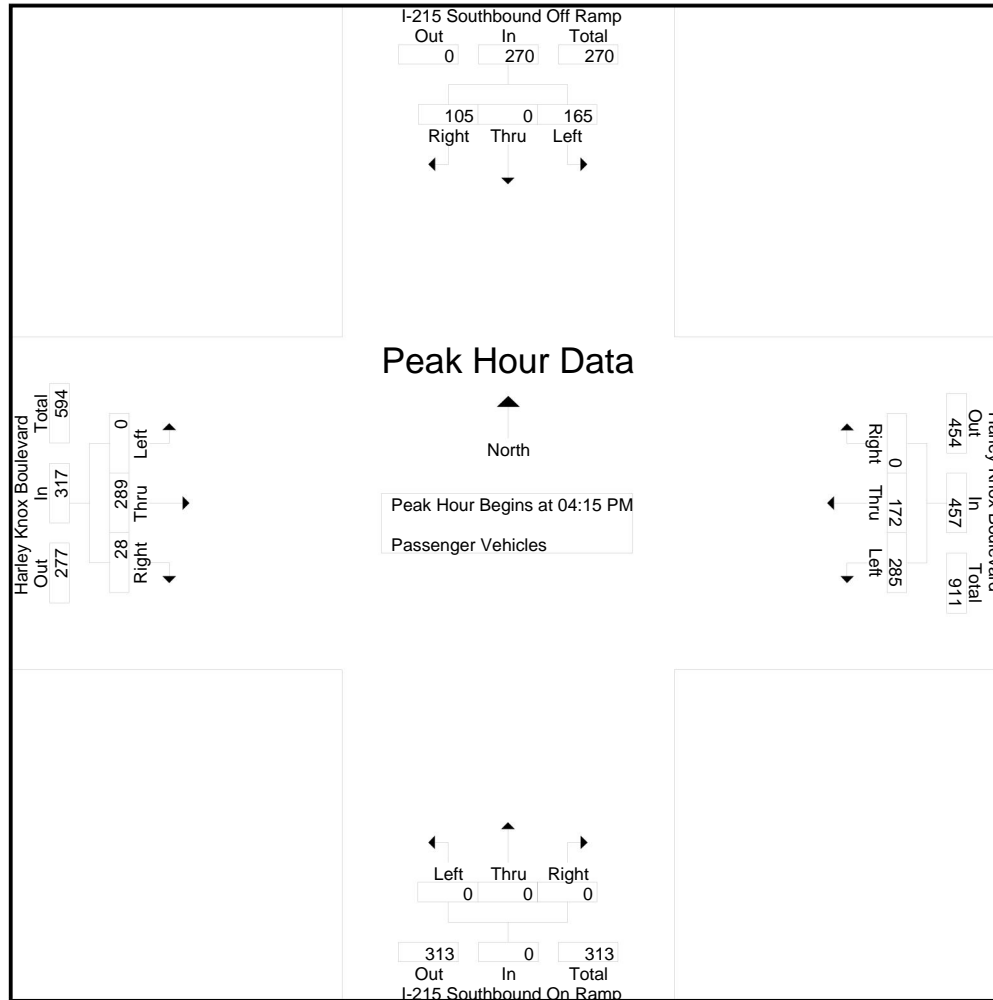
File Name : 01\_PER\_215S\_Harley Knox PM  
 Site Code : 05119683  
 Start Date : 10/2/2019  
 Page No : 1

Groups Printed- Passenger Vehicles

Start Time	I-215 Southbound Off Ramp Southbound					Harley Knox Boulevard Westbound					I-215 Southbound On Ramp Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	48	2	18	10	68	54	30	0	0	84	0	0	0	0	0	0	81	8	2	89	12	241	253
04:15 PM	37	0	24	13	61	60	35	0	0	95	0	0	0	0	0	0	73	4	1	77	14	233	247
04:30 PM	31	0	25	13	56	74	47	0	0	121	0	0	0	0	0	0	80	11	4	91	17	268	285
04:45 PM	55	0	33	15	88	78	51	0	0	129	0	0	0	0	0	0	73	6	1	79	16	296	312
Total	171	2	100	51	273	266	163	0	0	429	0	0	0	0	0	0	307	29	8	336	59	1038	1097
05:00 PM	42	0	23	17	65	73	39	0	0	112	0	0	0	0	0	0	63	7	3	70	20	247	267
05:15 PM	46	0	18	10	64	46	14	1	0	61	0	0	0	0	0	0	57	9	2	66	12	191	203
05:30 PM	36	0	24	3	60	50	22	0	0	72	0	0	0	0	0	0	47	4	0	51	3	183	186
05:45 PM	42	0	23	11	65	44	17	0	0	61	0	0	0	0	0	0	62	7	3	69	14	195	209
Total	166	0	88	41	254	213	92	1	0	306	0	0	0	0	0	0	229	27	8	256	49	816	865
Grand Total	337	2	188	92	527	479	255	1	0	735	0	0	0	0	0	0	536	56	16	592	108	1854	1962
Apprch %	63.9	0.4	35.7			65.2	34.7	0.1			0	0	0			0	90.5	9.5					
Total %	18.2	0.1	10.1		28.4	25.8	13.8	0.1		39.6	0	0	0		0	0	28.9	3		31.9	5.5	94.5	

3.1-19

Start Time	I-215 Southbound Off Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Southbound On Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	37	0	24	61	60	35	0	95	0	0	0	0	0	73	4	77	233
04:30 PM	31	0	25	56	74	47	0	121	0	0	0	0	0	80	11	91	268
04:45 PM	55	0	33	88	78	51	0	129	0	0	0	0	0	73	6	79	296
05:00 PM	42	0	23	65	73	39	0	112	0	0	0	0	0	63	7	70	247
Total Volume	165	0	105	270	285	172	0	457	0	0	0	0	0	289	28	317	1044
% App. Total	61.1	0	38.9		62.4	37.6	0		0	0	0		0	91.2	8.8		
PHF	.750	.000	.795	.767	.913	.843	.000	.886	.000	.000	.000	.000	.000	.903	.636	.871	.882





Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: I-215 Southbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_215S\_Harley Knox PM  
 Site Code : 05119683  
 Start Date : 10/2/2019  
 Page No : 3

Start Time	I-215 Southbound Off Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Southbound On Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:15 PM				04:15 PM				04:15 PM				04:15 PM				
+0 mins.	37	0	24	61	60	35	0	95	0	0	0	0	0	73	4	77	
+15 mins.	31	0	25	56	74	47	0	121	0	0	0	0	0	<b>80</b>	<b>11</b>	<b>91</b>	
+30 mins.	<b>55</b>	0	<b>33</b>	<b>88</b>	<b>78</b>	<b>51</b>	0	<b>129</b>	0	0	0	0	0	73	6	79	
+45 mins.	42	0	23	65	73	39	0	112	0	0	0	0	0	63	7	70	
Total Volume	165	0	105	270	285	172	0	457	0	0	0	0	0	289	28	317	
% App. Total	61.1	0	38.9		62.4	37.6	0		0	0	0		0	91.2	8.8		
PHF	.750	.000	.795	.767	.913	.843	.000	.886	.000	.000	.000	.000	.000	.903	.636	.871	

3.1-21

City of Perris  
 N/S: I-215 Southbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_215S\_Harley Knox PM  
 Site Code : 05119683  
 Start Date : 10/2/2019  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

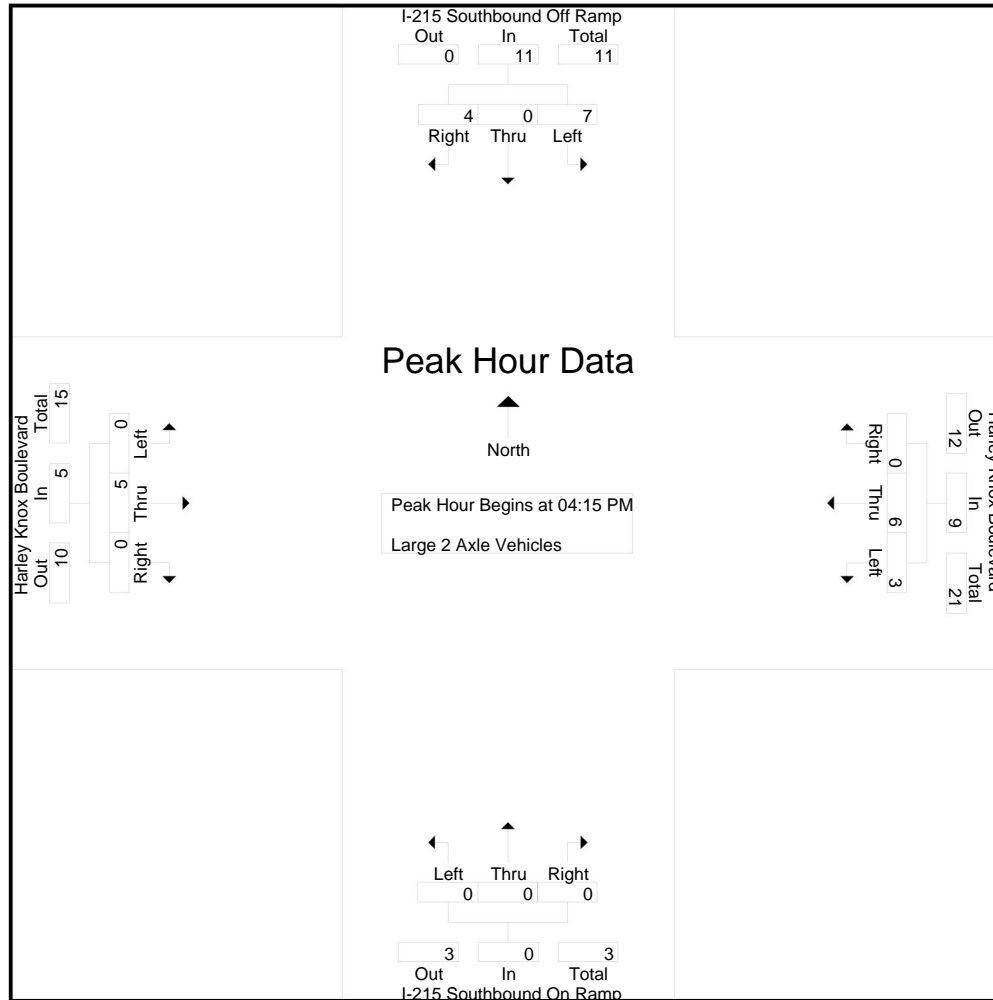
Start Time	I-215 Southbound Off Ramp Southbound					Harley Knox Boulevard Westbound					I-215 Southbound On Ramp Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	3	0	1	1	4	1	1	0	0	2	0	0	0	0	0	0	3	0	0	3	1	9	10
04:15 PM	3	0	1	1	4	1	1	0	0	2	0	0	0	0	0	0	1	0	0	1	1	7	8
04:30 PM	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	0	5	5
04:45 PM	1	0	2	0	3	1	1	0	0	2	0	0	0	0	0	0	3	0	0	3	0	8	8
Total	8	0	4	2	12	3	6	0	0	9	0	0	0	0	0	0	8	0	0	8	2	29	31
05:00 PM	2	0	1	0	3	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	5	5
05:15 PM	2	0	1	0	3	1	0	0	0	1	0	0	0	0	0	0	2	0	0	2	0	6	6
05:30 PM	2	0	0	0	2	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	4	4
05:45 PM	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	4	4
Total	7	0	3	0	10	3	1	0	0	4	0	0	0	0	0	0	5	0	0	5	0	19	19
Grand Total	15	0	7	2	22	6	7	0	0	13	0	0	0	0	0	0	13	0	0	13	2	48	50
Apprch %	68.2	0	31.8			46.2	53.8	0			0	0	0			0	100	0					
Total %	31.2	0	14.6		45.8	12.5	14.6	0		27.1	0	0	0		0	0	27.1	0		27.1	4	96	

3.1-22

Start Time	I-215 Southbound Off Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Southbound On Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	3	0	1	4	1	1	0	2	0	0	0	0	0	1	0	1	7
04:30 PM	1	0	0	1	0	3	0	3	0	0	0	0	0	1	0	1	5
04:45 PM	1	0	2	3	1	1	0	2	0	0	0	0	0	3	0	3	8
05:00 PM	2	0	1	3	1	1	0	2	0	0	0	0	0	0	0	0	5
Total Volume	7	0	4	11	3	6	0	9	0	0	0	0	0	5	0	5	25
% App. Total	63.6	0	36.4		33.3	66.7	0		0	0	0		0	100	0		
PHF	.583	.000	.500	.688	.750	.500	.000	.750	.000	.000	.000	.000	.000	.417	.000	.417	.781

City of Perris  
 N/S: I-215 Southbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_215S\_Harley Knox PM  
 Site Code : 05119683  
 Start Date : 10/2/2019  
 Page No : 2



City of Perris  
 N/S: I-215 Southbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_215S\_Harley Knox PM  
 Site Code : 05119683  
 Start Date : 10/2/2019  
 Page No : 3

Start Time	I-215 Southbound Off Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Southbound On Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:15 PM				04:15 PM				04:15 PM				04:15 PM				
+0 mins.	3	0	1	4	1	1	0	2	0	0	0	0	0	1	0	1	
+15 mins.	1	0	0	1	0	3	0	3	0	0	0	0	0	1	0	1	
+30 mins.	1	0	2	3	1	1	0	2	0	0	0	0	0	3	0	3	
+45 mins.	2	0	1	3	1	1	0	2	0	0	0	0	0	0	0	0	
Total Volume	7	0	4	11	3	6	0	9	0	0	0	0	0	5	0	5	
% App. Total	63.6	0	36.4		33.3	66.7	0		0	0	0		0	100	0		
PHF	.583	.000	.500	.688	.750	.500	.000	.750	.000	.000	.000	.000	.000	.417	.000	.417	

City of Perris  
 N/S: I-215 Southbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

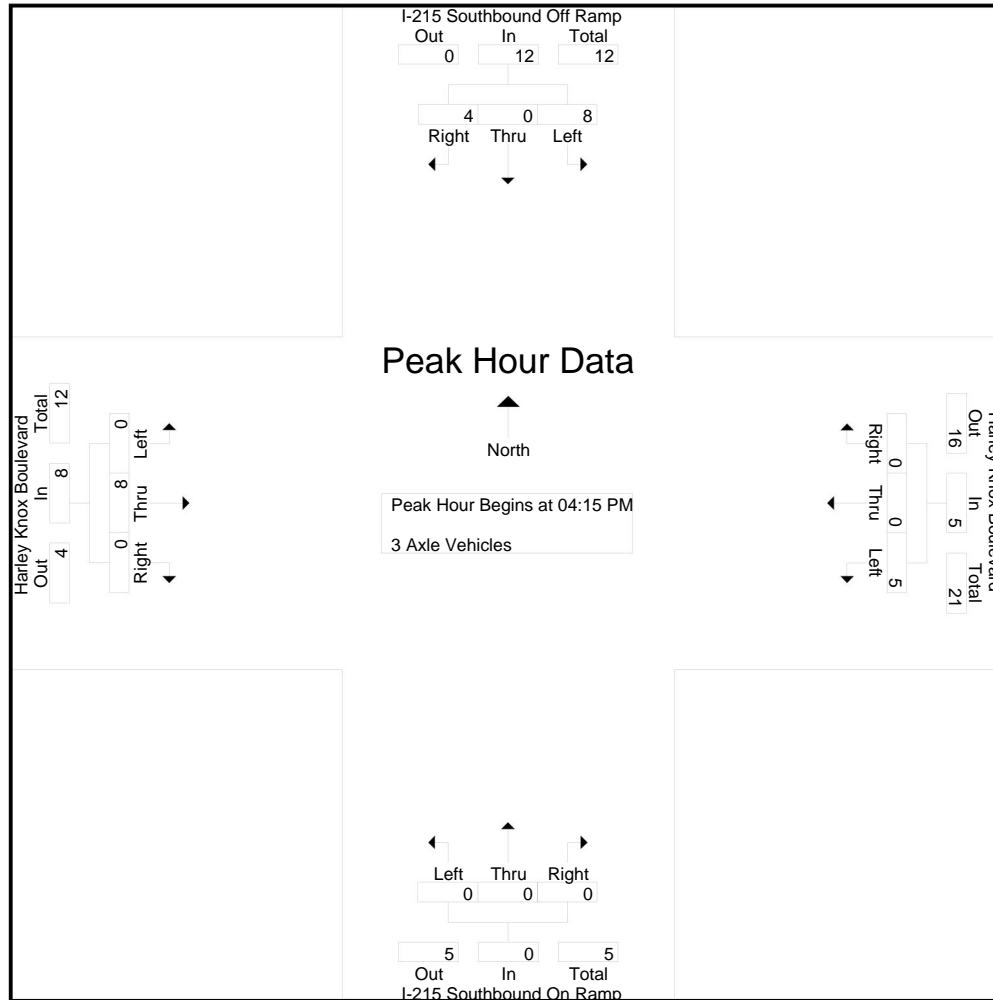
File Name : 01\_PER\_215S\_Harley Knox PM  
 Site Code : 05119683  
 Start Date : 10/2/2019  
 Page No : 1

Groups Printed- 3 Axle Vehicles

Start Time	I-215 Southbound Off Ramp Southbound					Harley Knox Boulevard Westbound					I-215 Southbound On Ramp Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	1	0	3	1	4	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	2	5	7
04:15 PM	1	0	2	2	3	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2	5	7
04:30 PM	2	0	2	0	4	1	0	0	0	1	0	0	0	0	0	0	2	0	0	2	0	7	7
04:45 PM	2	0	0	0	2	4	0	0	0	4	0	0	0	0	0	0	2	0	0	2	0	8	8
Total	6	0	7	3	13	5	0	0	0	5	0	0	0	0	0	0	6	1	1	7	4	25	29
05:00 PM	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	5	5
05:15 PM	2	0	0	0	2	0	2	0	0	2	0	0	0	0	0	0	4	0	0	4	0	8	8
05:30 PM	2	0	0	0	2	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	4	4
05:45 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	2	2
Total	8	0	0	0	8	1	2	0	0	3	0	0	0	0	0	0	8	0	0	8	0	19	19
Grand Total	14	0	7	3	21	6	2	0	0	8	0	0	0	0	0	0	14	1	1	15	4	44	48
Apprch %	66.7	0	33.3			75	25	0			0	0	0			0	93.3	6.7					
Total %	31.8	0	15.9		47.7	13.6	4.5	0		18.2	0	0	0		0	0	31.8	2.3		34.1	8.3	91.7	

3.1-25

Start Time	I-215 Southbound Off Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Southbound On Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	1	0	2	3	0	0	0	0	0	0	0	0	0	2	0	2	5
04:30 PM	2	0	2	4	1	0	0	1	0	0	0	0	0	2	0	2	7
04:45 PM	2	0	0	2	4	0	0	4	0	0	0	0	0	2	0	2	8
05:00 PM	3	0	0	3	0	0	0	0	0	0	0	0	0	2	0	2	5
Total Volume	8	0	4	12	5	0	0	5	0	0	0	0	0	8	0	8	25
% App. Total	66.7	0	33.3		100	0	0		0	0	0		0	100	0		
PHF	.667	.000	.500	.750	.313	.000	.000	.313	.000	.000	.000	.000	.000	1.00	.000	1.00	.781





Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: I-215 Southbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_215S\_Harley Knox PM  
 Site Code : 05119683  
 Start Date : 10/2/2019  
 Page No : 3

Start Time	I-215 Southbound Off Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Southbound On Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:15 PM				04:15 PM				04:15 PM				04:15 PM				
+0 mins.	1	0	2	3	0	0	0	0	0	0	0	0	0	2	0	2	
+15 mins.	2	0	2	4	1	0	0	1	0	0	0	0	0	2	0	2	
+30 mins.	2	0	0	2	4	0	0	4	0	0	0	0	0	2	0	2	
+45 mins.	3	0	0	3	0	0	0	0	0	0	0	0	0	2	0	2	
Total Volume	8	0	4	12	5	0	0	5	0	0	0	0	0	8	0	8	
% App. Total	66.7	0	33.3		100	0	0		0	0	0		0	100	0		
PHF	.667	.000	.500	.750	.313	.000	.000	.313	.000	.000	.000	.000	.000	1.000	.000	1.000	

3.1-27

City of Perris  
 N/S: I-215 Southbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_215S\_Harley Knox PM  
 Site Code : 05119683  
 Start Date : 10/2/2019  
 Page No : 1

Groups Printed- 4+ Axle Trucks

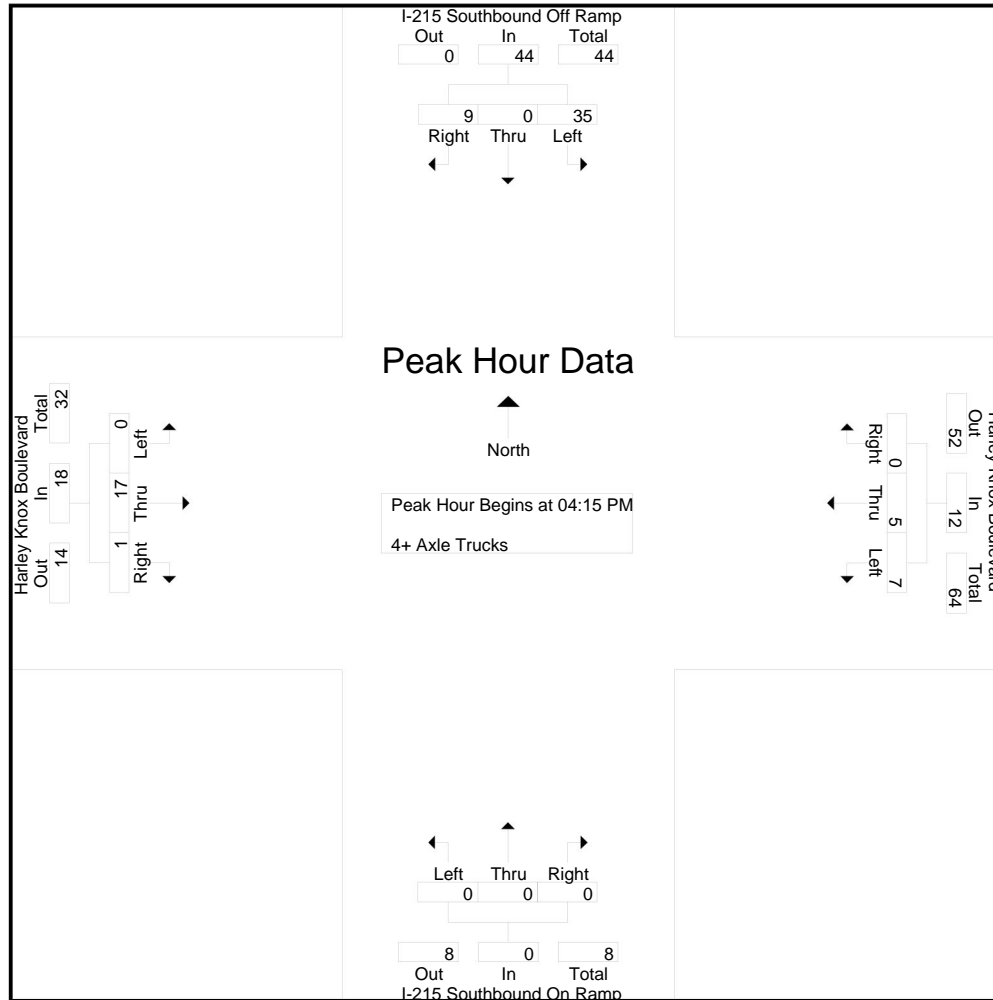
Start Time	I-215 Southbound Off Ramp Southbound					Harley Knox Boulevard Westbound					I-215 Southbound On Ramp Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	5	0	4	0	9	2	1	0	0	3	0	0	0	0	0	0	2	0	0	2	0	14	14
04:15 PM	8	0	4	2	12	0	2	0	0	2	0	0	0	0	0	0	5	0	0	5	2	19	21
04:30 PM	14	0	2	1	16	1	0	0	0	1	0	0	0	0	0	0	3	0	0	3	1	20	21
04:45 PM	6	0	3	2	9	4	2	0	0	6	0	0	0	0	0	0	3	1	1	4	3	19	22
Total	33	0	13	5	46	7	5	0	0	12	0	0	0	0	0	0	13	1	1	14	6	72	78
05:00 PM	7	0	0	0	7	2	1	0	0	3	0	0	0	0	0	0	6	0	0	6	0	16	16
05:15 PM	3	0	3	1	6	2	2	0	0	4	0	0	0	0	0	0	2	0	0	2	1	12	13
05:30 PM	9	0	5	2	14	2	3	0	0	5	0	0	0	0	0	0	0	0	0	0	2	19	21
05:45 PM	8	1	1	0	10	1	0	0	0	1	0	0	0	0	0	0	4	0	0	4	0	15	15
Total	27	1	9	3	37	7	6	0	0	13	0	0	0	0	0	0	12	0	0	12	3	62	65
Grand Total	60	1	22	8	83	14	11	0	0	25	0	0	0	0	0	0	25	1	1	26	9	134	143
Apprch %	72.3	1.2	26.5			56	44	0			0	0	0			0	96.2	3.8					
Total %	44.8	0.7	16.4		61.9	10.4	8.2	0		18.7	0	0	0		0	0	18.7	0.7		19.4	6.3	93.7	

3.1-28

Start Time	I-215 Southbound Off Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Southbound On Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	8	0	4	12	0	2	0	2	0	0	0	0	0	5	0	5	19
04:30 PM	14	0	2	16	1	0	0	1	0	0	0	0	0	3	0	3	20
04:45 PM	6	0	3	9	4	2	0	6	0	0	0	0	0	3	1	4	19
05:00 PM	7	0	0	7	2	1	0	3	0	0	0	0	0	6	0	6	16
Total Volume	35	0	9	44	7	5	0	12	0	0	0	0	0	17	1	18	74
% App. Total	79.5	0	20.5		58.3	41.7	0		0	0	0		0	94.4	5.6		
PHF	.625	.000	.563	.688	.438	.625	.000	.500	.000	.000	.000	.000	.000	.708	.250	.750	.925

City of Perris  
 N/S: I-215 Southbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_215S\_Harley Knox PM  
 Site Code : 05119683  
 Start Date : 10/2/2019  
 Page No : 2



City of Perris  
 N/S: I-215 Southbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_215S\_Harley Knox PM  
 Site Code : 05119683  
 Start Date : 10/2/2019  
 Page No : 3

Start Time	I-215 Southbound Off Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Southbound On Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:15 PM				04:15 PM				04:15 PM				04:15 PM				
+0 mins.	8	0	4	12	0	2	0	2	0	0	0	0	0	5	0	5	
+15 mins.	14	0	2	16	1	0	0	1	0	0	0	0	0	3	0	3	
+30 mins.	6	0	3	9	4	2	0	6	0	0	0	0	0	3	1	4	
+45 mins.	7	0	0	7	2	1	0	3	0	0	0	0	0	6	0	6	
Total Volume	35	0	9	44	7	5	0	12	0	0	0	0	0	17	1	18	
% App. Total	79.5	0	20.5		58.3	41.7	0		0	0	0		0	94.4	5.6		
PHF	.625	.000	.563	.688	.438	.625	.000	.500	.000	.000	.000	.000	.000	.708	.250	.750	

Location: Perris  
 N/S: I-215 Southbound Ramps  
 E/W: Harley Knox Boulevard



Date: 10/2/2019  
 Day: Wednesday

PEDESTRIANS

	North Leg I-215 Southbound Ramps	East Leg Harley Knox Boulevard	South Leg I-215 Southbound Ramps	West Leg Harley Knox Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg I-215 Southbound Ramps	East Leg Harley Knox Boulevard	South Leg I-215 Southbound Ramps	West Leg Harley Knox Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	1	0	1
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	1	0	1

Location: Perris  
 N/S: I-215 Southbound Ramps  
 E/W: Harley Knox Boulevard



Date: 10/2/2019  
 Day: Wednesday

BICYCLES

	Southbound I-215 Southbound Ramps			Westbound Harley Knox Boulevard			Northbound I-215 Southbound Ramps			Eastbound Harley Knox Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
TOTAL VOLUMES:	0	0	0	0	1	0	0	0	0	0	1	0	2

	Southbound I-215 Southbound Ramps			Westbound Harley Knox Boulevard			Northbound I-215 Southbound Ramps			Eastbound Harley Knox Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	1	0	0	0	0	0	0	0	1



City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 02\_PER\_215N\_Harley Knox AM  
 Site Code : 05119683  
 Start Date : 10/2/2019  
 Page No : 1

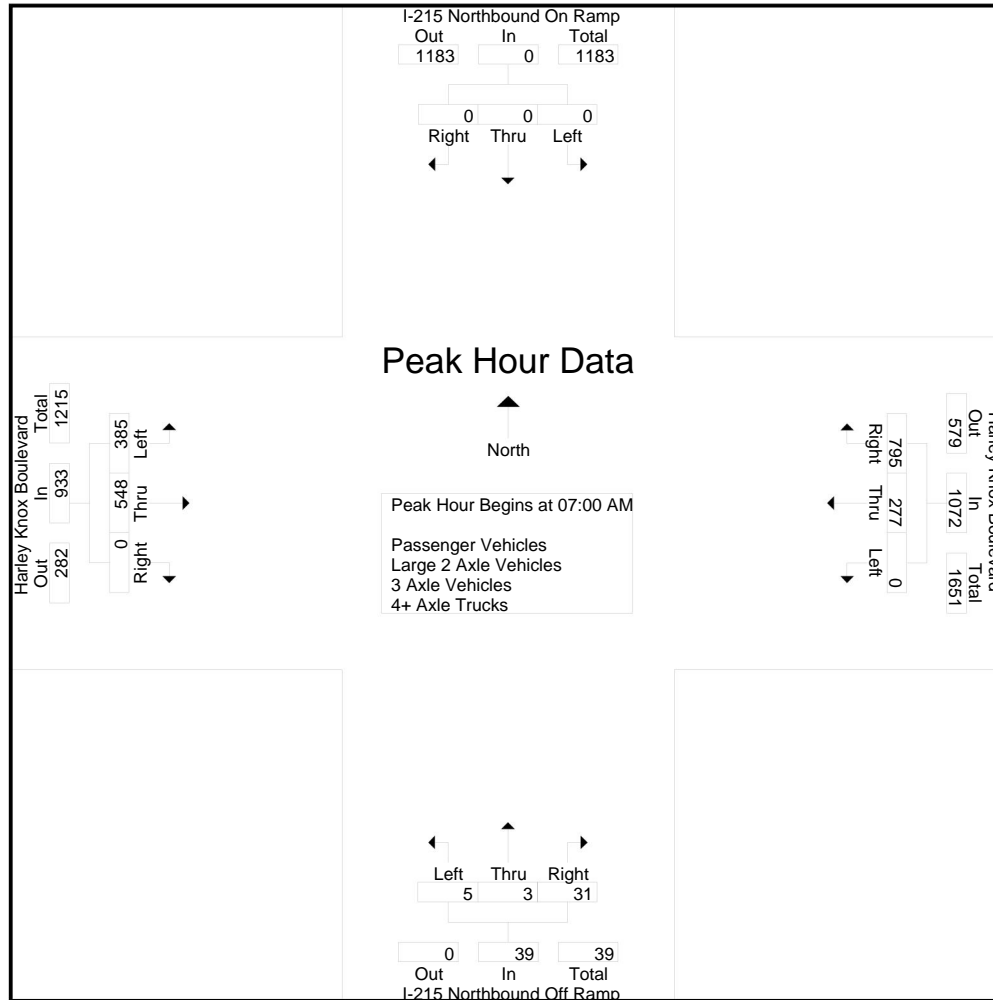
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	I-215 Northbound On Ramp Southbound					Harley Knox Boulevard Westbound					I-215 Northbound Off Ramp Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	0	0	0	0	0	0	62	237	19	299	1	0	4	4	5	93	141	0	0	234	23	538	561
07:15 AM	0	0	0	0	0	0	89	215	25	304	0	0	5	5	5	107	140	0	0	247	30	556	586
07:30 AM	0	0	0	0	0	0	78	190	15	268	1	1	5	4	7	98	139	0	0	237	19	512	531
07:45 AM	0	0	0	0	0	0	48	153	22	201	3	2	17	14	22	87	128	0	0	215	36	438	474
Total	0	0	0	0	0	0	277	795	81	1072	5	3	31	27	39	385	548	0	0	933	108	2044	2152
08:00 AM	0	0	0	0	0	0	54	153	9	207	4	1	31	26	36	102	130	0	0	232	35	475	510
08:15 AM	0	0	0	0	0	0	37	113	7	150	3	2	20	18	25	69	104	0	0	173	25	348	373
08:30 AM	0	0	0	0	0	0	60	82	2	142	1	1	15	14	17	36	96	0	0	132	16	291	307
08:45 AM	0	0	0	0	0	0	33	82	5	115	4	1	16	15	21	33	88	0	0	121	20	257	277
Total	0	0	0	0	0	0	184	430	23	614	12	5	82	73	99	240	418	0	0	658	96	1371	1467
Grand Total	0	0	0	0	0	0	461	1225	104	1686	17	8	113	100	138	625	966	0	0	1591	204	3415	3619
Apprch %	0	0	0			0	27.3	72.7			12.3	5.8	81.9			39.3	60.7	0					
Total %	0	0	0			0	13.5	35.9		49.4	0.5	0.2	3.3		4	18.3	28.3	0		46.6	5.6	94.4	
% Passenger Vehicles	0	0	0			0	363	1037		1496	16	8	86		188	575	751	0		1326	0	0	3010
% Large 2 Axle Vehicles	0	0	0			0	78.7	84.7	92.3	83.6	94.1	100	76.1	78	79	92	77.7	0	0	83.3	0	0	83.2
% 3 Axle Vehicles	0	0	0			0	16	30		51	1	0	8		15	16	50	0		66	0	0	132
% 4+ Axle Trucks	0	0	0			0	3.5	2.4	4.8	2.8	5.9	0	7.1	6	6.3	2.6	5.2	0	0	4.1	0	0	3.6
3 Axle Vehicles	0	0	0			0	22	36		58	0	0	6		11	3	29	0		32	0	0	101
% 3 Axle Vehicles	0	0	0			0	4.8	2.9	0	3.2	0	0	5.3	5	4.6	0.5	3	0	0	2	0	0	2.8
4+ Axle Trucks	0	0	0			0	60	122		185	0	0	13		24	31	136	0		167	0	0	376
% 4+ Axle Trucks	0	0	0			0	13	10	2.9	10.3	0	0	11.5	11	10.1	5	14.1	0	0	10.5	0	0	10.4

Start Time	I-215 Northbound On Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Northbound Off Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	62	237	299	1	0	4	5	93	141	0	234	538
07:15 AM	0	0	0	0	0	89	215	304	0	0	5	5	107	140	0	247	556
07:30 AM	0	0	0	0	0	78	190	268	1	1	5	7	98	139	0	237	512
07:45 AM	0	0	0	0	0	48	153	201	3	2	17	22	87	128	0	215	438
Total Volume	0	0	0	0	0	277	795	1072	5	3	31	39	385	548	0	933	2044
% App. Total	0	0	0		0	25.8	74.2		12.8	7.7	79.5		41.3	58.7	0		
PHF	.000	.000	.000	.000	.000	.778	.839	.882	.417	.375	.456	.443	.900	.972	.000	.944	.919

City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 02\_PER\_215N\_Harley Knox AM  
 Site Code : 05119683  
 Start Date : 10/2/2019  
 Page No : 2



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 02\_PER\_215N\_Harley Knox AM  
 Site Code : 05119683  
 Start Date : 10/2/2019  
 Page No : 3

Start Time	I-215 Northbound On Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Northbound Off Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:45 AM				07:00 AM				
+0 mins.	0	0	0	0	0	62	<b>237</b>	299	3	<b>2</b>	17	22	93	<b>141</b>	0	234	
+15 mins.	0	0	0	0	0	<b>89</b>	215	<b>304</b>	<b>4</b>	1	<b>31</b>	<b>36</b>	<b>107</b>	140	0	<b>247</b>	
+30 mins.	0	0	0	0	0	78	190	268	3	2	20	25	98	139	0	237	
+45 mins.	0	0	0	0	0	48	153	201	1	1	15	17	87	128	0	215	
Total Volume	0	0	0	0	0	277	795	1072	11	6	83	100	385	548	0	933	
% App. Total	0	0	0	0	0	25.8	74.2		11	6	83		41.3	58.7	0		
PHF	.000	.000	.000	.000	.000	.778	.839	.882	.688	.750	.669	.694	.900	.972	.000	.944	

3.1-35

City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 02\_PER\_215N\_Harley Knox AM  
 Site Code : 05119683  
 Start Date : 10/2/2019  
 Page No : 1

Groups Printed- Passenger Vehicles

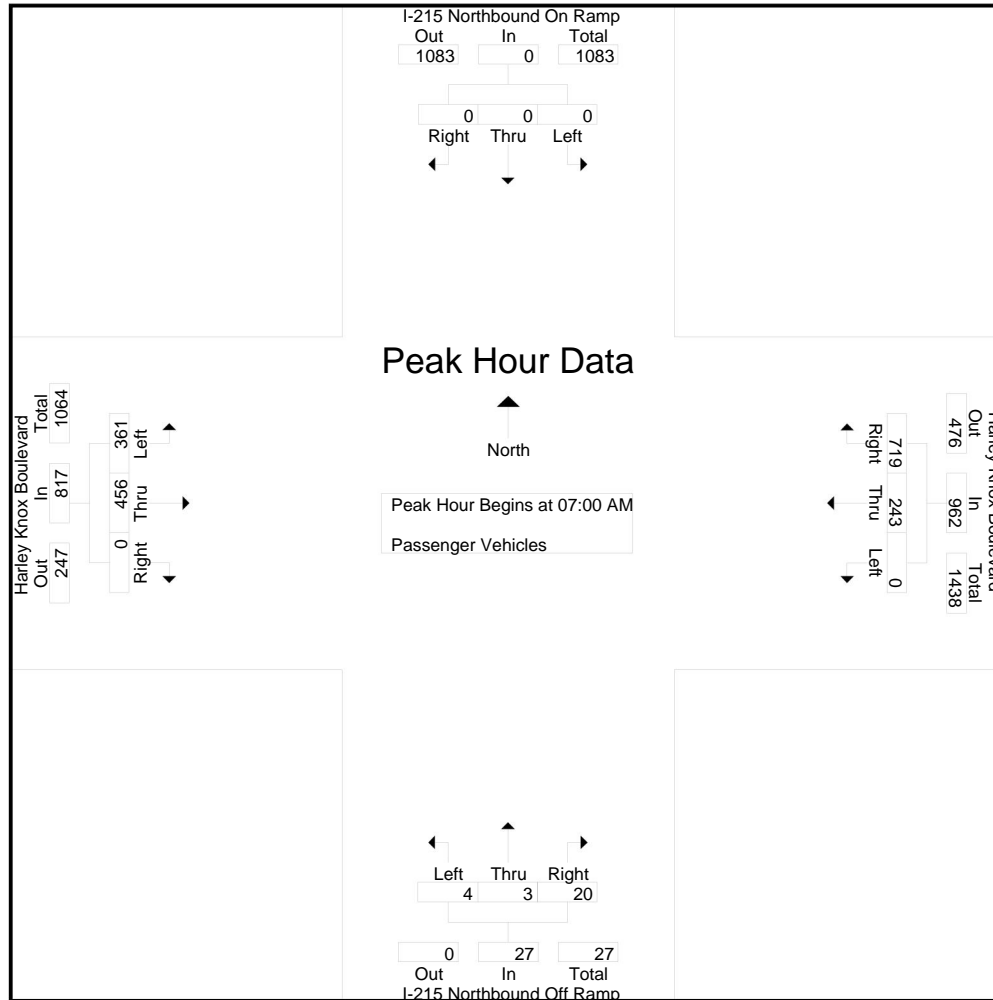
Start Time	I-215 Northbound On Ramp Southbound					Harley Knox Boulevard Westbound					I-215 Northbound Off Ramp Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	0	0	0	0	0	0	55	227	18	282	1	0	1	1	2	88	114	0	0	202	19	486	505
07:15 AM	0	0	0	0	0	0	82	193	24	275	0	0	3	3	3	102	116	0	0	218	27	496	523
07:30 AM	0	0	0	0	0	0	72	161	14	233	1	1	2	2	4	88	115	0	0	203	16	440	456
07:45 AM	0	0	0	0	0	0	34	138	20	172	2	2	14	12	18	83	111	0	0	194	32	384	416
Total	0	0	0	0	0	0	243	719	76	962	4	3	20	18	27	361	456	0	0	817	94	1806	1900
08:00 AM	0	0	0	0	0	0	38	128	8	166	4	1	26	23	31	90	103	0	0	193	31	390	421
08:15 AM	0	0	0	0	0	0	23	87	6	110	3	2	16	14	21	63	70	0	0	133	20	264	284
08:30 AM	0	0	0	0	0	0	41	55	2	96	1	1	11	10	13	34	68	0	0	102	12	211	223
08:45 AM	0	0	0	0	0	0	18	48	4	66	4	1	13	13	18	27	54	0	0	81	17	165	182
Total	0	0	0	0	0	0	120	318	20	438	12	5	66	60	83	214	295	0	0	509	80	1030	1110
Grand Total	0	0	0	0	0	0	363	1037	96	1400	16	8	86	78	110	575	751	0	0	1326	174	2836	3010
Apprch %	0	0	0			0	25.9	74.1			14.5	7.3	78.2			43.4	56.6	0					
Total %	0	0	0		0	0	12.8	36.6		49.4	0.6	0.3	3		3.9	20.3	26.5	0		46.8	5.8	94.2	

3.1-36

Start Time	I-215 Northbound On Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Northbound Off Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	55	<b>227</b>	<b>282</b>	1	0	1	2	88	114	0	202	486
07:15 AM	0	0	0	0	0	<b>82</b>	193	275	0	0	3	3	<b>102</b>	<b>116</b>	0	<b>218</b>	<b>496</b>
07:30 AM	0	0	0	0	0	72	161	233	1	1	2	4	88	115	0	203	440
07:45 AM	0	0	0	0	0	34	138	172	<b>2</b>	<b>2</b>	<b>14</b>	<b>18</b>	83	111	0	194	384
Total Volume	0	0	0	0	0	243	719	962	4	3	20	27	361	456	0	817	1806
% App. Total	0	0	0		0	25.3	74.7		14.8	11.1	74.1		44.2	55.8	0		
PHF	.000	.000	.000	.000	.000	.741	.792	.853	.500	.375	.357	.375	.885	.983	.000	.937	.910

City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 02\_PER\_215N\_Harley Knox AM  
 Site Code : 05119683  
 Start Date : 10/2/2019  
 Page No : 2



City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 02\_PER\_215N\_Harley Knox AM  
 Site Code : 05119683  
 Start Date : 10/2/2019  
 Page No : 3

Start Time	I-215 Northbound On Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Northbound Off Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	0	0	0	0	55	<b>227</b>	<b>282</b>	1	0	1	2	88	114	0	202	
+15 mins.	0	0	0	0	0	<b>82</b>	193	275	0	0	3	3	<b>102</b>	<b>116</b>	0	<b>218</b>	
+30 mins.	0	0	0	0	0	72	161	233	1	1	2	4	88	115	0	203	
+45 mins.	0	0	0	0	0	34	138	172	<b>2</b>	<b>2</b>	<b>14</b>	<b>18</b>	83	111	0	194	
Total Volume	0	0	0	0	0	243	719	962	4	3	20	27	361	456	0	817	
% App. Total	0	0	0	0	0	25.3	74.7		14.8	11.1	74.1		44.2	55.8	0		
PHF	.000	.000	.000	.000	.000	.741	.792	.853	.500	.375	.357	.375	.885	.983	.000	.937	



City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

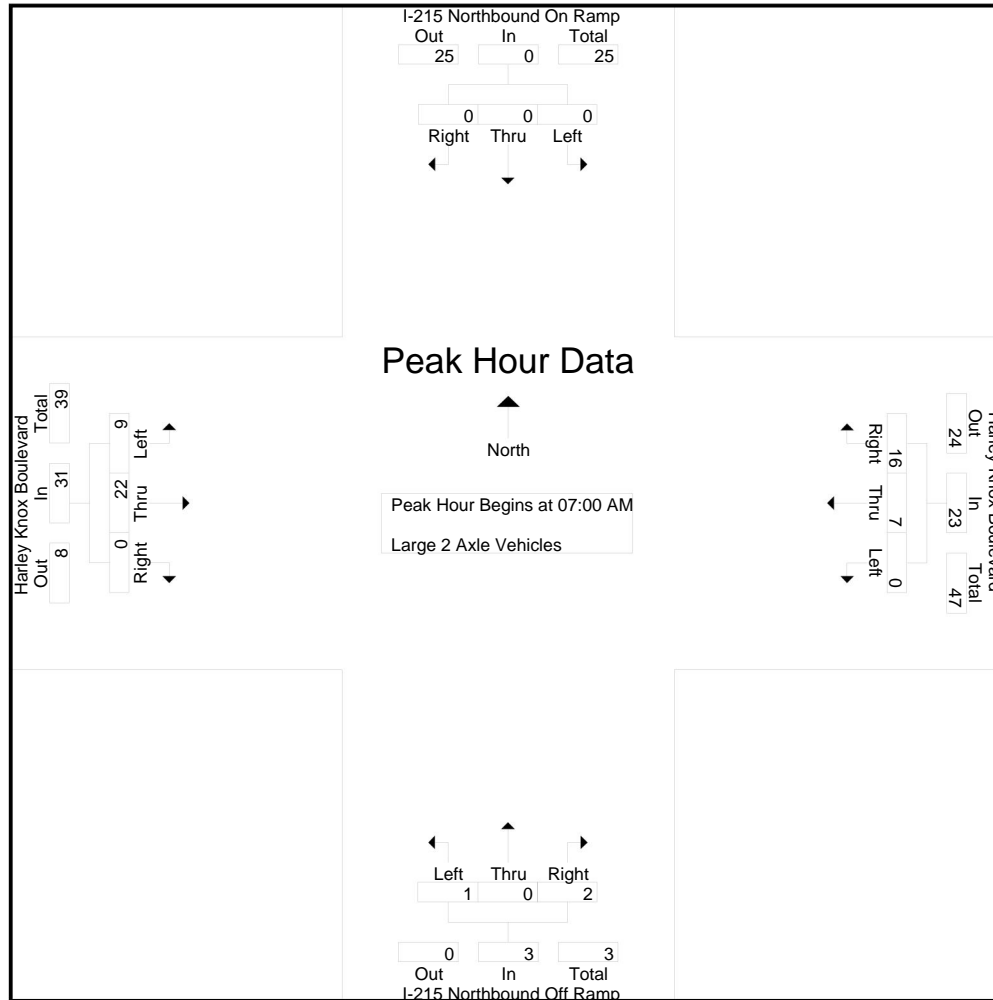
File Name : 02\_PER\_215N\_Harley Knox AM  
 Site Code : 05119683  
 Start Date : 10/2/2019  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

Start Time	I-215 Northbound On Ramp Southbound					Harley Knox Boulevard Westbound					I-215 Northbound Off Ramp Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	0	0	0	0	0	0	2	2	0	4	0	0	0	0	0	1	9	0	0	10	0	14	14
07:15 AM	0	0	0	0	0	0	3	3	1	6	0	0	0	0	0	2	5	0	0	7	1	13	14
07:30 AM	0	0	0	0	0	0	1	6	1	7	0	0	0	0	0	4	5	0	0	9	1	16	17
07:45 AM	0	0	0	0	0	0	1	5	2	6	1	0	2	2	3	2	3	0	0	5	4	14	18
Total	0	0	0	0	0	0	7	16	4	23	1	0	2	2	3	9	22	0	0	31	6	57	63
08:00 AM	0	0	0	0	0	0	1	4	0	5	0	0	4	2	4	4	4	0	0	8	2	17	19
08:15 AM	0	0	0	0	0	0	2	3	0	5	0	0	0	0	0	3	9	0	0	12	0	17	17
08:30 AM	0	0	0	0	0	0	4	2	0	6	0	0	1	1	1	0	8	0	0	8	1	15	16
08:45 AM	0	0	0	0	0	0	2	5	1	7	0	0	1	1	1	0	7	0	0	7	2	15	17
Total	0	0	0	0	0	0	9	14	1	23	0	0	6	4	6	7	28	0	0	35	5	64	69
Grand Total	0	0	0	0	0	0	16	30	5	46	1	0	8	6	9	16	50	0	0	66	11	121	132
Apprch %	0	0	0			0	34.8	65.2			11.1	0	88.9			24.2	75.8	0					
Total %	0	0	0		0	0	13.2	24.8		38	0.8	0	6.6		7.4	13.2	41.3	0		54.5	8.3	91.7	

3.1-39

Start Time	I-215 Northbound On Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Northbound Off Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	2	2	4	0	0	0	0	1	9	0	10	14
07:15 AM	0	0	0	0	0	3	3	6	0	0	0	0	2	5	0	7	13
07:30 AM	0	0	0	0	0	1	6	7	0	0	0	0	4	5	0	9	16
07:45 AM	0	0	0	0	0	1	5	6	1	0	2	3	2	3	0	5	14
Total Volume	0	0	0	0	0	7	16	23	1	0	2	3	9	22	0	31	57
% App. Total	0	0	0		0	30.4	69.6		33.3	0	66.7		29	71	0		
PHF	.000	.000	.000	.000	.000	.583	.667	.821	.250	.000	.250	.250	.563	.611	.000	.775	.891



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 02\_PER\_215N\_Harley Knox AM  
 Site Code : 05119683  
 Start Date : 10/2/2019  
 Page No : 3

Start Time	I-215 Northbound On Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Northbound Off Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	0	0	0	0	2	2	4	0	0	0	0	1	9	0	10	
+15 mins.	0	0	0	0	0	3	3	6	0	0	0	0	2	5	0	7	
+30 mins.	0	0	0	0	0	1	6	7	0	0	0	0	4	5	0	9	
+45 mins.	0	0	0	0	0	1	5	6	1	0	2	3	2	3	0	5	
Total Volume	0	0	0	0	0	7	16	23	1	0	2	3	9	22	0	31	
% App. Total	0	0	0	0	0	30.4	69.6		33.3	0	66.7		29	71	0		
PHF	.000	.000	.000	.000	.000	.583	.667	.821	.250	.000	.250	.250	.563	.611	.000	.775	

3.1-41

City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

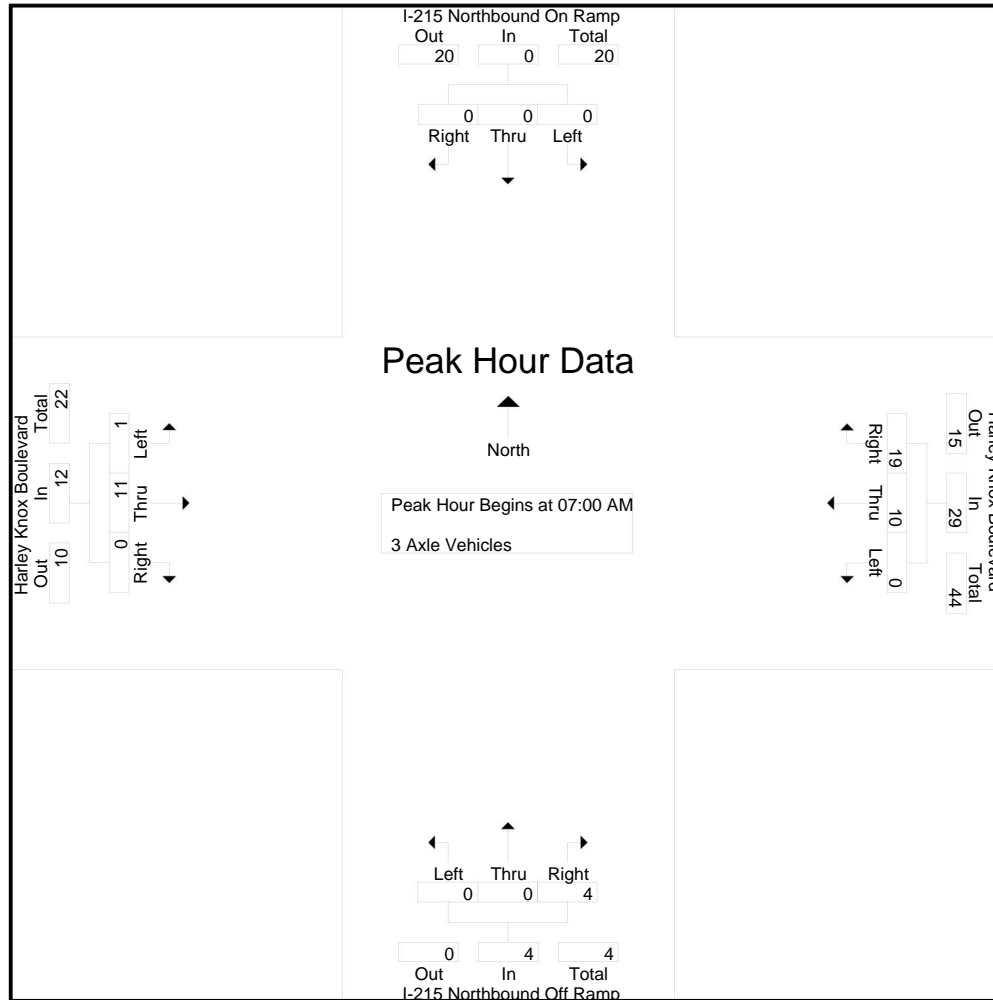
File Name : 02\_PER\_215N\_Harley Knox AM  
 Site Code : 05119683  
 Start Date : 10/2/2019  
 Page No : 1

Groups Printed- 3 Axle Vehicles

Start Time	I-215 Northbound On Ramp Southbound					Harley Knox Boulevard Westbound					I-215 Northbound Off Ramp Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	0	0	0	0	0	0	3	2	0	5	0	0	1	1	1	0	4	0	0	4	1	10	11
07:15 AM	0	0	0	0	0	0	2	8	0	10	0	0	1	1	1	1	3	0	0	4	1	15	16
07:30 AM	0	0	0	0	0	0	0	7	0	7	0	0	1	1	1	0	3	0	0	3	1	11	12
07:45 AM	0	0	0	0	0	0	5	2	0	7	0	0	1	0	1	0	1	0	0	1	0	9	9
Total	0	0	0	0	0	0	10	19	0	29	0	0	4	3	4	1	11	0	0	12	3	45	48
08:00 AM	0	0	0	0	0	0	1	5	0	6	0	0	0	0	0	2	8	0	0	10	0	16	16
08:15 AM	0	0	0	0	0	0	5	4	0	9	0	0	1	1	1	0	4	0	0	4	1	14	15
08:30 AM	0	0	0	0	0	0	3	1	0	4	0	0	1	1	1	0	3	0	0	3	1	8	9
08:45 AM	0	0	0	0	0	0	3	7	0	10	0	0	0	0	0	0	3	0	0	3	0	13	13
Total	0	0	0	0	0	0	12	17	0	29	0	0	2	2	2	2	18	0	0	20	2	51	53
Grand Total	0	0	0	0	0	0	22	36	0	58	0	0	6	5	6	3	29	0	0	32	5	96	101
Apprch %	0	0	0			0	37.9	62.1			0	0	100			9.4	90.6	0					
Total %	0	0	0		0	0	22.9	37.5		60.4	0	0	6.2		6.2	3.1	30.2	0		33.3	5	95	

3.1-42

Start Time	I-215 Northbound On Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Northbound Off Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	3	2	5	0	0	1	1	0	4	0	4	10
07:15 AM	0	0	0	0	0	2	8	10	0	0	1	1	1	3	0	4	15
07:30 AM	0	0	0	0	0	0	7	7	0	0	1	1	0	3	0	3	11
07:45 AM	0	0	0	0	0	5	2	7	0	0	1	1	0	1	0	1	9
Total Volume	0	0	0	0	0	10	19	29	0	0	4	4	1	11	0	12	45
% App. Total	0	0	0		0	34.5	65.5		0	0	100		8.3	91.7	0		
PHF	.000	.000	.000	.000	.000	.500	.594	.725	.000	.000	1.00	1.00	.250	.688	.000	.750	.750



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 02\_PER\_215N\_Harley Knox AM  
 Site Code : 05119683  
 Start Date : 10/2/2019  
 Page No : 3

Start Time	I-215 Northbound On Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Northbound Off Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	0	0	0	0	3	2	5	0	0	1	1	0	4	0	4	
+15 mins.	0	0	0	0	0	2	8	10	0	0	1	1	1	3	0	4	
+30 mins.	0	0	0	0	0	0	7	7	0	0	1	1	0	3	0	3	
+45 mins.	0	0	0	0	0	5	2	7	0	0	1	1	0	1	0	1	
Total Volume	0	0	0	0	0	10	19	29	0	0	4	4	1	11	0	12	
% App. Total	0	0	0	0	0	34.5	65.5		0	0	100		8.3	91.7	0		
PHF	.000	.000	.000	.000	.000	.500	.594	.725	.000	.000	1.000	1.000	.250	.688	.000	.750	

City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 02\_PER\_215N\_Harley Knox AM  
 Site Code : 05119683  
 Start Date : 10/2/2019  
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	I-215 Northbound On Ramp Southbound					Harley Knox Boulevard Westbound					I-215 Northbound Off Ramp Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	0	0	0	0	0	0	2	6	1	8	0	0	2	2	2	4	14	0	0	18	3	28	31
07:15 AM	0	0	0	0	0	0	2	11	0	13	0	0	1	1	1	2	16	0	0	18	1	32	33
07:30 AM	0	0	0	0	0	0	5	16	0	21	0	0	2	1	2	6	16	0	0	22	1	45	46
07:45 AM	0	0	0	0	0	0	8	8	0	16	0	0	0	0	0	2	13	0	0	15	0	31	31
Total	0	0	0	0	0	0	17	41	1	58	0	0	5	4	5	14	59	0	0	73	5	136	141
08:00 AM	0	0	0	0	0	0	14	16	1	30	0	0	1	1	1	6	15	0	0	21	2	52	54
08:15 AM	0	0	0	0	0	0	7	19	1	26	0	0	3	3	3	3	21	0	0	24	4	53	57
08:30 AM	0	0	0	0	0	0	12	24	0	36	0	0	2	2	2	2	17	0	0	19	2	57	59
08:45 AM	0	0	0	0	0	0	10	22	0	32	0	0	2	1	2	6	24	0	0	30	1	64	65
Total	0	0	0	0	0	0	43	81	2	124	0	0	8	7	8	17	77	0	0	94	9	226	235
Grand Total	0	0	0	0	0	0	60	122	3	182	0	0	13	11	13	31	136	0	0	167	14	362	376
Apprch %	0	0	0			0	33	67			0	0	100			18.6	81.4	0					
Total %	0	0	0		0	0	16.6	33.7		50.3	0	0	3.6		3.6	8.6	37.6	0		46.1	3.7	96.3	

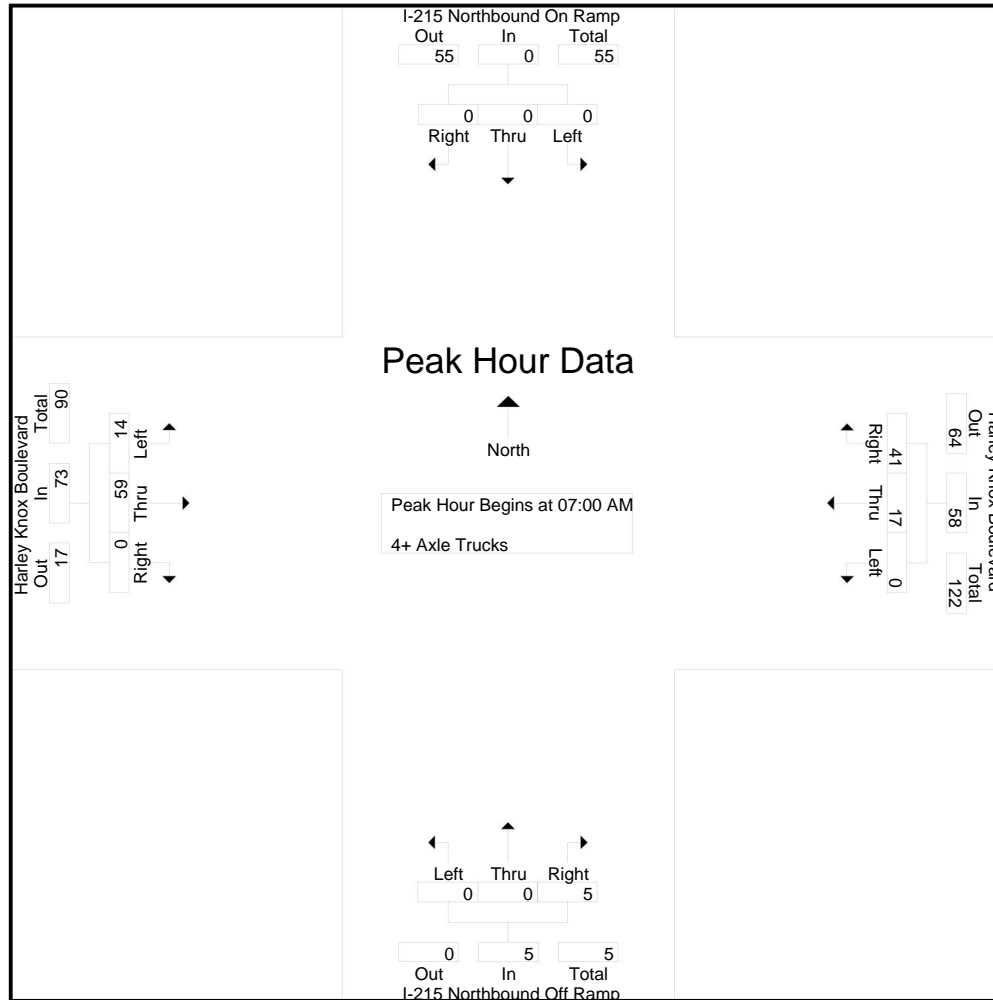
3.1-45

Start Time	I-215 Northbound On Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Northbound Off Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	2	6	8	0	0	2	2	4	14	0	18	28
07:15 AM	0	0	0	0	0	2	11	13	0	0	1	1	2	16	0	18	32
07:30 AM	0	0	0	0	0	5	16	21	0	0	2	2	6	16	0	22	45
07:45 AM	0	0	0	0	0	8	8	16	0	0	0	0	2	13	0	15	31
Total Volume	0	0	0	0	0	17	41	58	0	0	5	5	14	59	0	73	136
% App. Total	0	0	0		0	29.3	70.7		0	0	100		19.2	80.8	0		
PHF	.000	.000	.000	.000	.000	.531	.641	.690	.000	.000	.625	.625	.583	.922	.000	.830	.756



City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 02\_PER\_215N\_Harley Knox AM  
 Site Code : 05119683  
 Start Date : 10/2/2019  
 Page No : 2



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 02\_PER\_215N\_Harley Knox AM  
 Site Code : 05119683  
 Start Date : 10/2/2019  
 Page No : 3

Start Time	I-215 Northbound On Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Northbound Off Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	0	0	0	0	2	6	8	0	0	2	2	4	14	0	18	
+15 mins.	0	0	0	0	0	2	11	13	0	0	1	1	2	16	0	18	
+30 mins.	0	0	0	0	0	5	16	21	0	0	2	2	6	16	0	22	
+45 mins.	0	0	0	0	0	8	8	16	0	0	0	0	2	13	0	15	
Total Volume	0	0	0	0	0	17	41	58	0	0	5	5	14	59	0	73	
% App. Total	0	0	0	0	0	29.3	70.7		0	0	100		19.2	80.8	0		
PHF	.000	.000	.000	.000	.000	.531	.641	.690	.000	.000	.625	.625	.583	.922	.000	.830	

3.1-47

City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 02\_PER\_215N\_Harley Knox PM  
 Site Code : 05119683  
 Start Date : 10/2/2019  
 Page No : 1

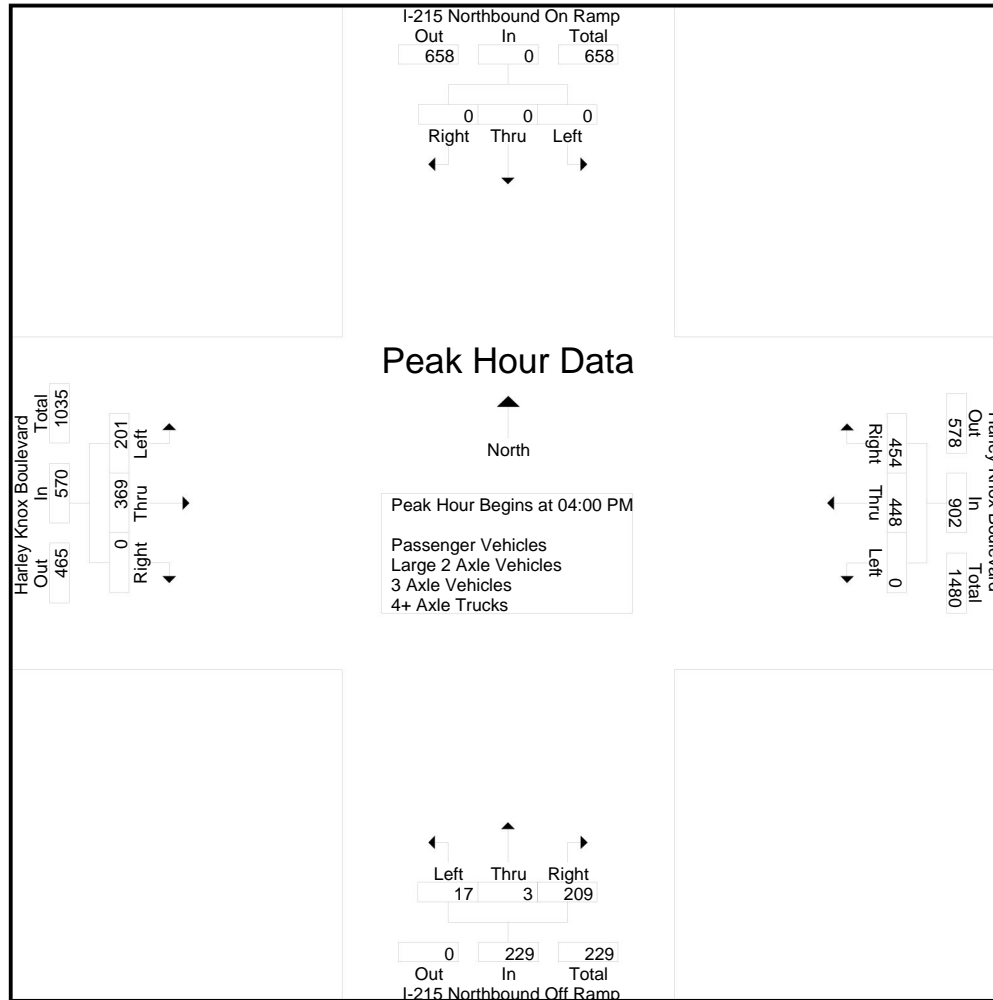
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	I-215 Northbound On Ramp Southbound					Harley Knox Boulevard Westbound					I-215 Northbound Off Ramp Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	0	0	0	0	0	0	87	126	16	213	6	0	44	32	50	53	97	0	0	150	48	413	461
04:15 PM	0	0	0	0	0	0	93	97	7	190	4	2	57	46	63	42	85	0	0	127	53	380	433
04:30 PM	0	0	0	0	0	0	125	120	11	245	3	1	57	48	61	46	95	0	0	141	59	447	506
04:45 PM	0	0	0	0	0	0	143	111	16	254	4	0	51	47	55	60	92	0	0	152	63	461	524
<b>Total</b>	0	0	0	0	0	0	448	454	50	902	17	3	209	173	229	201	369	0	0	570	223	1701	1924
05:00 PM	0	0	0	0	0	0	114	85	10	199	3	2	43	41	48	47	84	0	0	131	51	378	429
05:15 PM	0	0	0	0	0	0	67	20	9	87	1	1	38	31	40	50	76	0	0	126	40	253	293
05:30 PM	0	0	0	0	0	0	78	11	6	89	3	0	30	26	33	29	76	0	0	105	32	227	259
05:45 PM	0	0	0	0	0	0	64	12	8	76	1	0	51	42	52	37	89	0	0	126	50	254	304
<b>Total</b>	0	0	0	0	0	0	323	128	33	451	8	3	162	140	173	163	325	0	0	488	173	1112	1285
<b>Grand Total</b>	0	0	0	0	0	0	771	582	83	1353	25	6	371	313	402	364	694	0	0	1058	396	2813	3209
<b>Apprch %</b>	0	0	0			0	57	43			6.2	1.5	92.3			34.4	65.6	0					
<b>Total %</b>	0	0	0			0	27.4	20.7		48.1	0.9	0.2	13.2		14.3	12.9	24.7	0		37.6	12.3	87.7	
<b>Passenger Vehicles</b>	0	0	0			0	730	493		1299	22	6	314		609	335	578	0		913	0	0	2821
<b>% Passenger Vehicles</b>	0	0	0	0	0	0	94.7	84.7	91.6	90.5	88	100	84.6	85.3	85.2	92	83.3	0	0	86.3	0	0	87.9
<b>Large 2 Axle Vehicles</b>	0	0	0			0	10	12		23	0	0	13		23	5	19	0		24	0	0	70
<b>% Large 2 Axle Vehicles</b>	0	0	0	0	0	0	1.3	2.1	1.2	1.6	0	0	3.5	3.2	3.2	1.4	2.7	0	0	2.3	0	0	2.2
<b>3 Axle Vehicles</b>	0	0	0			0	8	16		24	0	0	36		67	2	27	0		29	0	0	120
<b>% 3 Axle Vehicles</b>	0	0	0	0	0	0	1	2.7	0	1.7	0	0	9.7	9.9	9.4	0.5	3.9	0	0	2.7	0	0	3.7
<b>4+ Axle Trucks</b>	0	0	0			0	23	61		90	3	0	8		16	22	70	0		92	0	0	198
<b>% 4+ Axle Trucks</b>	0	0	0	0	0	0	3	10.5	7.2	6.3	12	0	2.2	1.6	2.2	6	10.1	0	0	8.7	0	0	6.2

Start Time	I-215 Northbound On Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Northbound Off Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	87	126	213	6	0	44	50	53	97	0	150	413
04:15 PM	0	0	0	0	0	93	97	190	4	2	57	63	42	85	0	127	380
04:30 PM	0	0	0	0	0	125	120	245	3	1	57	61	46	95	0	141	447
04:45 PM	0	0	0	0	0	143	111	254	4	0	51	55	60	92	0	152	461
<b>Total Volume</b>	0	0	0	0	0	448	454	902	17	3	209	229	201	369	0	570	1701
<b>% App. Total</b>	0	0	0		0	49.7	50.3		7.4	1.3	91.3		35.3	64.7	0		
<b>PHF</b>	.000	.000	.000	.000	.000	.783	.901	.888	.708	.375	.917	.909	.838	.951	.000	.938	.922

City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 02\_PER\_215N\_Harley Knox PM  
 Site Code : 05119683  
 Start Date : 10/2/2019  
 Page No : 2



City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 02\_PER\_215N\_Harley Knox PM  
 Site Code : 05119683  
 Start Date : 10/2/2019  
 Page No : 3

Start Time	I-215 Northbound On Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Northbound Off Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:00 PM				04:00 PM				04:00 PM				04:00 PM				
+0 mins.	0	0	0	0	0	87	<b>126</b>	213	<b>6</b>	0	44	50	53	<b>97</b>	0	150	
+15 mins.	0	0	0	0	0	93	97	190	4	<b>2</b>	<b>57</b>	<b>63</b>	42	85	0	127	
+30 mins.	0	0	0	0	0	125	120	245	3	1	57	61	46	95	0	141	
+45 mins.	0	0	0	0	0	<b>143</b>	111	<b>254</b>	4	0	51	55	<b>60</b>	92	0	<b>152</b>	
Total Volume	0	0	0	0	0	448	454	902	17	3	209	229	201	369	0	570	
% App. Total	0	0	0	0	0	49.7	50.3		7.4	1.3	91.3		35.3	64.7	0		
PHF	.000	.000	.000	.000	.000	.783	.901	.888	.708	.375	.917	.909	.838	.951	.000	.938	

City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

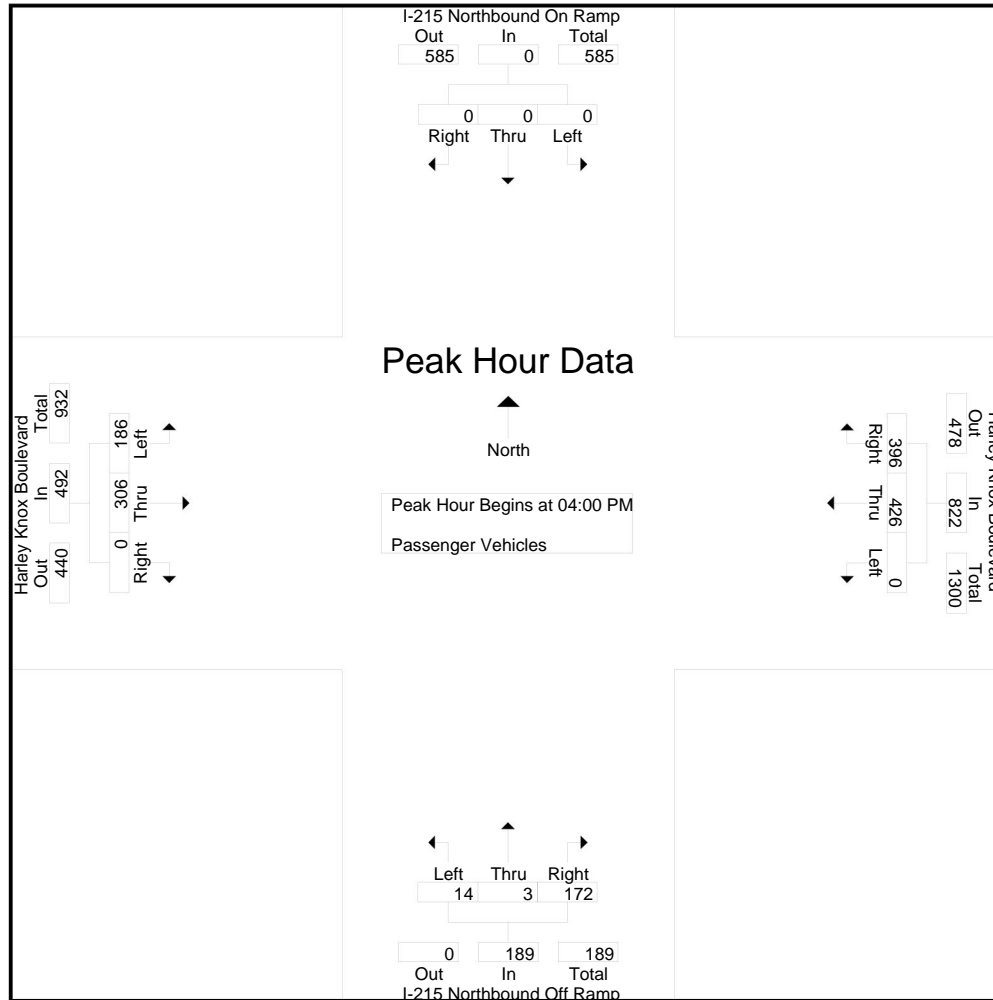
File Name : 02\_PER\_215N\_Harley Knox PM  
 Site Code : 05119683  
 Start Date : 10/2/2019  
 Page No : 1

Groups Printed- Passenger Vehicles

Start Time	I-215 Northbound On Ramp Southbound					Harley Knox Boulevard Westbound					I-215 Northbound Off Ramp Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	0	0	0	0	0	0	80	106	15	186	6	0	39	29	45	51	83	0	0	134	44	365	409
04:15 PM	0	0	0	0	0	0	92	82	7	174	3	2	47	41	52	37	69	0	0	106	48	332	380
04:30 PM	0	0	0	0	0	0	121	109	10	230	3	1	47	39	51	44	74	0	0	118	49	399	448
04:45 PM	0	0	0	0	0	0	133	99	12	232	2	0	39	36	41	54	80	0	0	134	48	407	455
Total	0	0	0	0	0	0	426	396	44	822	14	3	172	145	189	186	306	0	0	492	189	1503	1692
05:00 PM	0	0	0	0	0	0	109	68	10	177	3	2	36	35	41	41	68	0	0	109	45	327	372
05:15 PM	0	0	0	0	0	0	61	15	9	76	1	1	31	24	33	47	64	0	0	111	33	220	253
05:30 PM	0	0	0	0	0	0	71	7	6	78	3	0	28	24	31	28	63	0	0	91	30	200	230
05:45 PM	0	0	0	0	0	0	63	7	7	70	1	0	47	39	48	33	77	0	0	110	46	228	274
Total	0	0	0	0	0	0	304	97	32	401	8	3	142	122	153	149	272	0	0	421	154	975	1129
Grand Total	0	0	0	0	0	0	730	493	76	1223	22	6	314	267	342	335	578	0	0	913	343	2478	2821
Apprch %	0	0	0			0	59.7	40.3			6.4	1.8	91.8			36.7	63.3	0					
Total %	0	0	0		0	0	29.5	19.9		49.4	0.9	0.2	12.7		13.8	13.5	23.3	0		36.8	12.2	87.8	

3.1-51

Start Time	I-215 Northbound On Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Northbound Off Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	80	106	186	6	0	39	45	51	83	0	134	365
04:15 PM	0	0	0	0	0	92	82	174	3	2	47	52	37	69	0	106	332
04:30 PM	0	0	0	0	0	121	109	230	3	1	47	51	44	74	0	118	399
04:45 PM	0	0	0	0	0	133	99	232	2	0	39	41	54	80	0	134	407
Total Volume	0	0	0	0	0	426	396	822	14	3	172	189	186	306	0	492	1503
% App. Total	0	0	0		0	51.8	48.2		7.4	1.6	91		37.8	62.2	0		
PHF	.000	.000	.000	.000	.000	.801	.908	.886	.583	.375	.915	.909	.861	.922	.000	.918	.923





City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 02\_PER\_215N\_Harley Knox PM  
 Site Code : 05119683  
 Start Date : 10/2/2019  
 Page No : 3

Start Time	I-215 Northbound On Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Northbound Off Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:00 PM				04:00 PM				04:00 PM				04:00 PM				
+0 mins.	0	0	0	0	0	80	106	186	6	0	39	45	51	83	0	134	
+15 mins.	0	0	0	0	0	92	82	174	3	2	47	52	37	69	0	106	
+30 mins.	0	0	0	0	0	121	109	230	3	1	47	51	44	74	0	118	
+45 mins.	0	0	0	0	0	133	99	232	2	0	39	41	54	80	0	134	
Total Volume	0	0	0	0	0	426	396	822	14	3	172	189	186	306	0	492	
% App. Total	0	0	0	0	0	51.8	48.2		7.4	1.6	91		37.8	62.2	0		
PHF	.000	.000	.000	.000	.000	.801	.908	.886	.583	.375	.915	.909	.861	.922	.000	.918	

City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

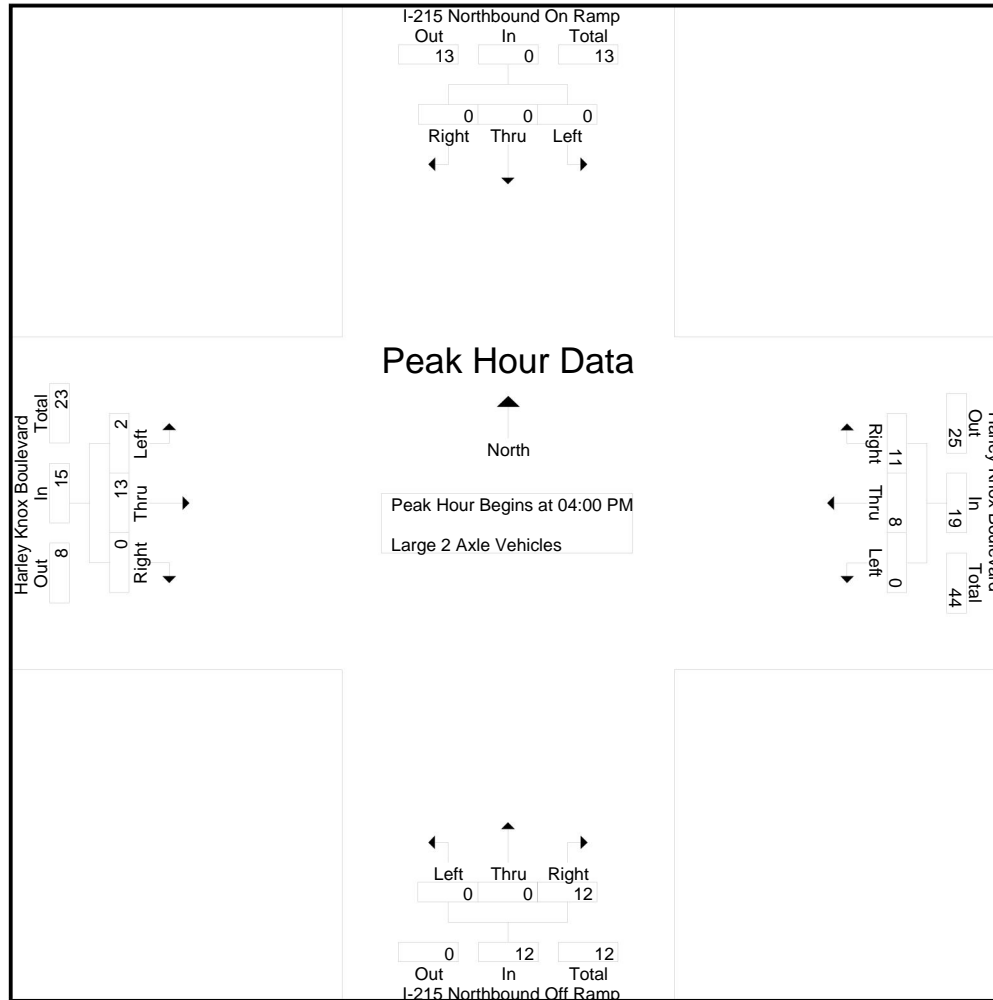
File Name : 02\_PER\_215N\_Harley Knox PM  
 Site Code : 05119683  
 Start Date : 10/2/2019  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

Start Time	I-215 Northbound On Ramp Southbound					Harley Knox Boulevard Westbound					I-215 Northbound Off Ramp Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	0	0	0	0	0	0	4	5	0	9	0	0	2	1	2	0	5	0	0	5	1	16	17
04:15 PM	0	0	0	0	0	0	0	3	0	3	0	0	5	4	5	0	5	0	0	5	4	13	17
04:30 PM	0	0	0	0	0	0	2	1	0	3	0	0	3	2	3	1	1	0	0	2	2	8	10
04:45 PM	0	0	0	0	0	0	2	2	1	4	0	0	2	2	2	1	2	0	0	3	3	9	12
Total	0	0	0	0	0	0	8	11	1	19	0	0	12	9	12	2	13	0	0	15	10	46	56
05:00 PM	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	2	0	0	2	0	4	4
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	3	0	3	3
05:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	2	0	0	3	0	4	4
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1	0	0	1	1	2	3
Total	0	0	0	0	0	0	2	1	0	3	0	0	1	1	1	3	6	0	0	9	1	13	14
Grand Total	0	0	0	0	0	0	10	12	1	22	0	0	13	10	13	5	19	0	0	24	11	59	70
Apprch %	0	0	0			0	45.5	54.5			0	0	100			20.8	79.2	0					
Total %	0	0	0		0	0	16.9	20.3		37.3	0	0	22		22	8.5	32.2	0		40.7	15.7	84.3	

3.1-54

Start Time	I-215 Northbound On Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Northbound Off Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	4	5	9	0	0	2	2	0	5	0	5	16
04:15 PM	0	0	0	0	0	0	3	3	0	0	5	5	0	5	0	5	13
04:30 PM	0	0	0	0	0	2	1	3	0	0	3	3	1	1	0	2	8
04:45 PM	0	0	0	0	0	2	2	4	0	0	2	2	1	2	0	3	9
Total Volume	0	0	0	0	0	8	11	19	0	0	12	12	2	13	0	15	46
% App. Total	0	0	0		0	42.1	57.9		0	0	100		13.3	86.7	0		
PHF	.000	.000	.000	.000	.000	.500	.550	.528	.000	.000	.600	.600	.500	.650	.000	.750	.719



3.1-55

City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 02\_PER\_215N\_Harley Knox PM  
 Site Code : 05119683  
 Start Date : 10/2/2019  
 Page No : 3

Start Time	I-215 Northbound On Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Northbound Off Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:00 PM				04:00 PM				04:00 PM				04:00 PM				
+0 mins.	0	0	0	0	0	4	5	9	0	0	2	2	0	5	0	5	
+15 mins.	0	0	0	0	0	0	3	3	0	0	5	5	0	5	0	5	
+30 mins.	0	0	0	0	0	2	1	3	0	0	3	3	1	1	0	2	
+45 mins.	0	0	0	0	0	2	2	4	0	0	2	2	1	2	0	3	
Total Volume	0	0	0	0	0	8	11	19	0	0	12	12	2	13	0	15	
% App. Total	0	0	0	0	0	42.1	57.9		0	0	100		13.3	86.7	0		
PHF	.000	.000	.000	.000	.000	.500	.550	.528	.000	.000	.600	.600	.500	.650	.000	.750	

City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 02\_PER\_215N\_Harley Knox PM  
 Site Code : 05119683  
 Start Date : 10/2/2019  
 Page No : 1

Groups Printed- 3 Axle Vehicles

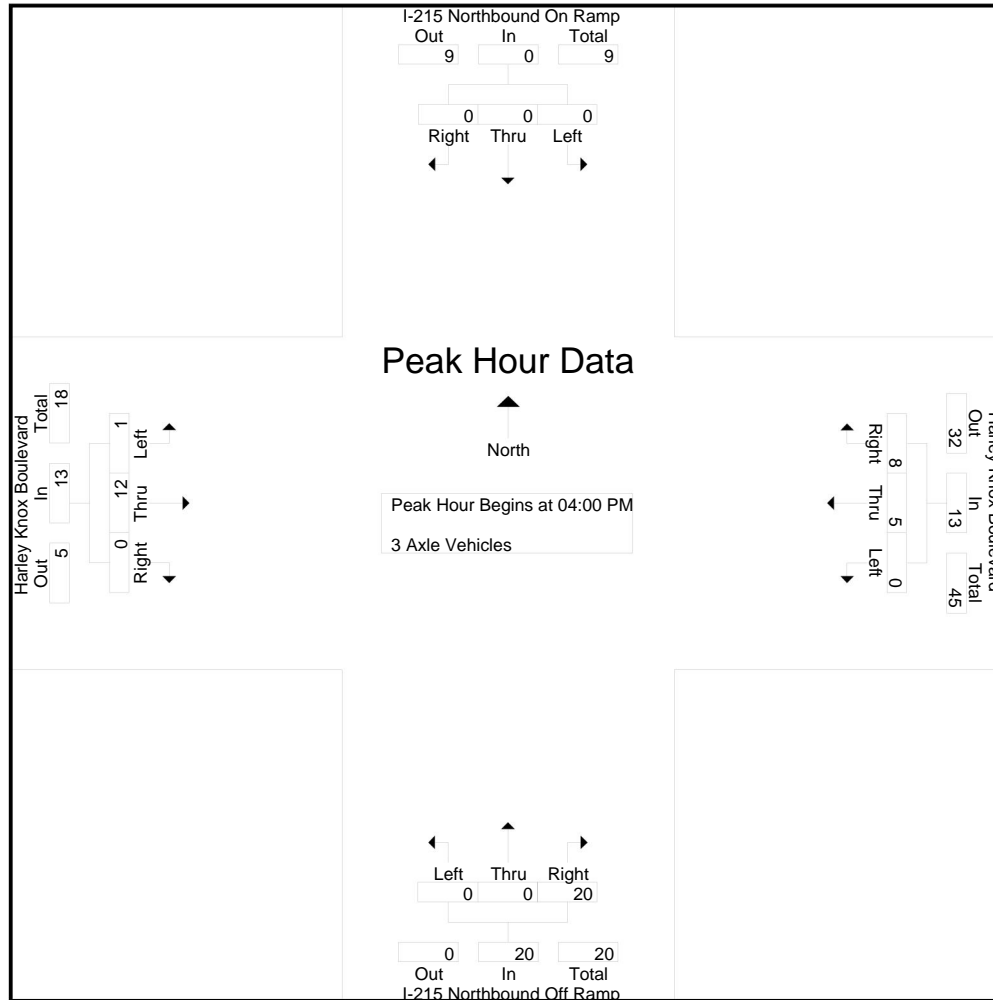
Start Time	I-215 Northbound On Ramp Southbound					Harley Knox Boulevard Westbound					I-215 Northbound Off Ramp Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	0	0	0	0	0	0	0	4	0	4	0	0	1	1	1	0	2	0	0	2	1	7	8
04:15 PM	0	0	0	0	0	0	0	1	0	1	0	0	4	1	4	0	3	0	0	3	1	8	9
04:30 PM	0	0	0	0	0	0	1	2	0	3	0	0	6	6	6	0	4	0	0	4	6	13	19
04:45 PM	0	0	0	0	0	0	4	1	0	5	0	0	9	8	9	1	3	0	0	4	8	18	26
Total	0	0	0	0	0	0	5	8	0	13	0	0	20	16	20	1	12	0	0	13	16	46	62
05:00 PM	0	0	0	0	0	0	0	3	0	3	0	0	7	6	7	1	4	0	0	5	6	15	21
05:15 PM	0	0	0	0	0	0	2	1	0	3	0	0	5	5	5	0	7	0	0	7	5	15	20
05:30 PM	0	0	0	0	0	0	1	3	0	4	0	0	2	2	2	0	2	0	0	2	2	8	10
05:45 PM	0	0	0	0	0	0	0	1	0	1	0	0	2	2	2	0	2	0	0	2	2	5	7
Total	0	0	0	0	0	0	3	8	0	11	0	0	16	15	16	1	15	0	0	16	15	43	58
Grand Total	0	0	0	0	0	0	8	16	0	24	0	0	36	31	36	2	27	0	0	29	31	89	120
Apprch %	0	0	0			0	33.3	66.7			0	0	100			6.9	93.1	0					
Total %	0	0	0			0	9	18		27	0	0	40.4		40.4	2.2	30.3	0		32.6	25.8	74.2	

3.1-57

Start Time	I-215 Northbound On Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Northbound Off Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	0	4	4	0	0	1	1	0	2	0	2	7
04:15 PM	0	0	0	0	0	0	1	1	0	0	4	4	0	3	0	3	8
04:30 PM	0	0	0	0	0	1	2	3	0	0	6	6	0	4	0	4	13
04:45 PM	0	0	0	0	0	4	1	5	0	0	9	9	1	3	0	4	18
Total Volume	0	0	0	0	0	5	8	13	0	0	20	20	1	12	0	13	46
% App. Total	0	0	0		0	38.5	61.5		0	0	100		7.7	92.3	0		
PHF	.000	.000	.000	.000	.000	.313	.500	.650	.000	.000	.556	.556	.250	.750	.000	.813	.639

City of Perris  
N/S: I-215 Northbound Ramps  
E/W: Harley Knox Boulevard  
Weather: Clear

File Name : 02\_PER\_215N\_Harley Knox PM  
Site Code : 05119683  
Start Date : 10/2/2019  
Page No : 2



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 02\_PER\_215N\_Harley Knox PM  
 Site Code : 05119683  
 Start Date : 10/2/2019  
 Page No : 3

Start Time	I-215 Northbound On Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Northbound Off Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:00 PM				04:00 PM				04:00 PM				04:00 PM				
+0 mins.	0	0	0	0	0	0	4	4	0	0	1	1	0	2	0	2	
+15 mins.	0	0	0	0	0	0	1	1	0	0	4	4	0	3	0	3	
+30 mins.	0	0	0	0	0	1	2	3	0	0	6	6	0	4	0	4	
+45 mins.	0	0	0	0	0	4	1	5	0	0	9	9	1	3	0	4	
Total Volume	0	0	0	0	0	5	8	13	0	0	20	20	1	12	0	13	
% App. Total	0	0	0		0	38.5	61.5		0	0	100		7.7	92.3	0		
PHF	.000	.000	.000	.000	.000	.313	.500	.650	.000	.000	.556	.556	.250	.750	.000	.813	

3.1-59



City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

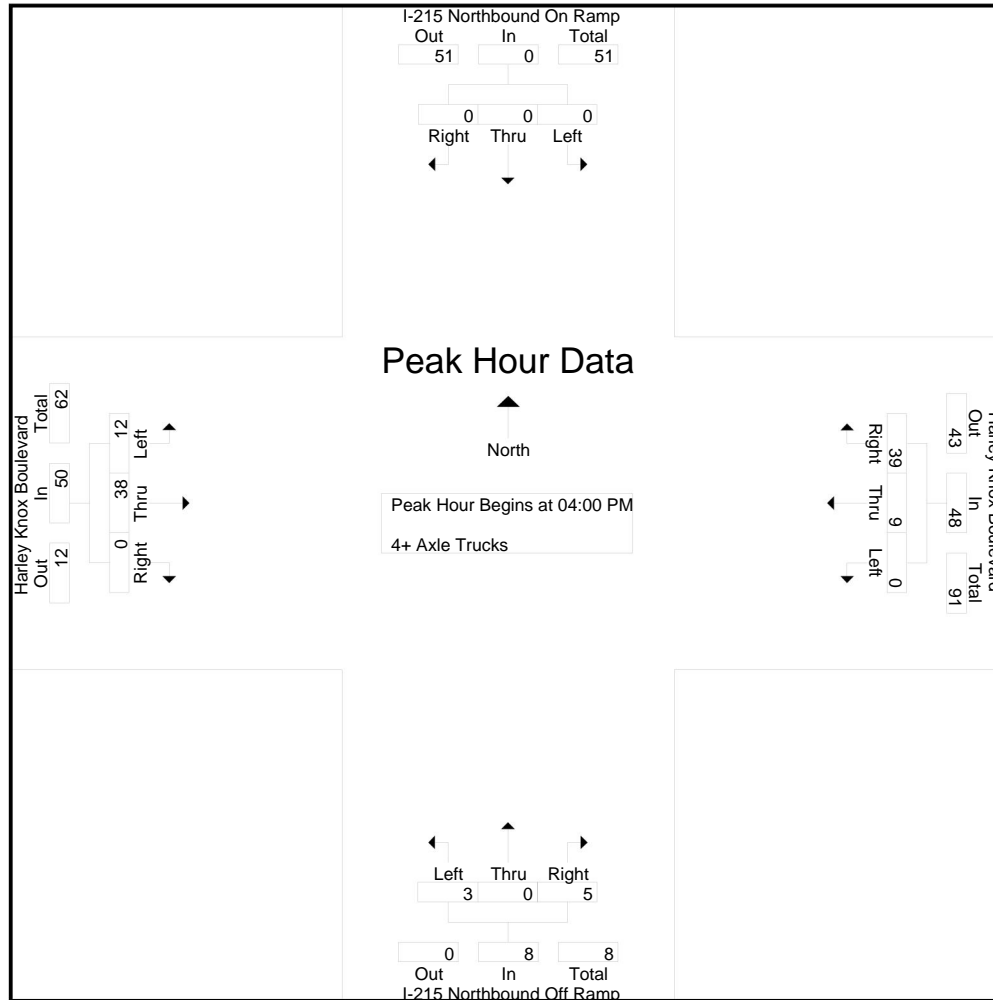
File Name : 02\_PER\_215N\_Harley Knox PM  
 Site Code : 05119683  
 Start Date : 10/2/2019  
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	I-215 Northbound On Ramp Southbound					Harley Knox Boulevard Westbound					I-215 Northbound Off Ramp Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	0	0	0	0	0	0	3	11	1	14	0	0	2	1	2	2	7	0	0	9	2	25	27
04:15 PM	0	0	0	0	0	0	1	11	0	12	1	0	1	0	2	5	8	0	0	13	0	27	27
04:30 PM	0	0	0	0	0	0	1	8	1	9	0	0	1	1	1	1	16	0	0	17	2	27	29
04:45 PM	0	0	0	0	0	0	4	9	3	13	2	0	1	1	3	4	7	0	0	11	4	27	31
Total	0	0	0	0	0	0	9	39	5	48	3	0	5	3	8	12	38	0	0	50	8	106	114
05:00 PM	0	0	0	0	0	0	4	13	0	17	0	0	0	0	0	5	10	0	0	15	0	32	32
05:15 PM	0	0	0	0	0	0	4	4	0	8	0	0	2	2	2	1	4	0	0	5	2	15	17
05:30 PM	0	0	0	0	0	0	5	1	0	6	0	0	0	0	0	0	9	0	0	9	0	15	15
05:45 PM	0	0	0	0	0	0	1	4	1	5	0	0	1	0	1	4	9	0	0	13	1	19	20
Total	0	0	0	0	0	0	14	22	1	36	0	0	3	2	3	10	32	0	0	42	3	81	84
Grand Total	0	0	0	0	0	0	23	61	6	84	3	0	8	5	11	22	70	0	0	92	11	187	198
Apprch %	0	0	0			0	27.4	72.6			27.3	0	72.7			23.9	76.1	0					
Total %	0	0	0		0	0	12.3	32.6		44.9	1.6	0	4.3		5.9	11.8	37.4	0		49.2	5.6	94.4	

3.1-60

Start Time	I-215 Northbound On Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Northbound Off Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	3	11	14	0	0	2	2	2	7	0	9	25
04:15 PM	0	0	0	0	0	1	11	12	1	0	1	2	5	8	0	13	27
04:30 PM	0	0	0	0	0	1	8	9	0	0	1	1	1	16	0	17	27
04:45 PM	0	0	0	0	0	4	9	13	2	0	1	3	4	7	0	11	27
Total Volume	0	0	0	0	0	9	39	48	3	0	5	8	12	38	0	50	106
% App. Total	0	0	0		0	18.8	81.2		37.5	0	62.5		24	76	0		
PHF	.000	.000	.000	.000	.000	.563	.886	.857	.375	.000	.625	.667	.600	.594	.000	.735	.981



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 02\_PER\_215N\_Harley Knox PM  
 Site Code : 05119683  
 Start Date : 10/2/2019  
 Page No : 3

Start Time	I-215 Northbound On Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Northbound Off Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:00 PM				04:00 PM				04:00 PM				04:00 PM				
+0 mins.	0	0	0	0	0	3	11	14	0	0	2	2	2	7	0	9	
+15 mins.	0	0	0	0	0	1	11	12	1	0	1	2	5	8	0	13	
+30 mins.	0	0	0	0	0	1	8	9	0	0	1	1	1	16	0	17	
+45 mins.	0	0	0	0	0	4	9	13	2	0	1	3	4	7	0	11	
Total Volume	0	0	0	0	0	9	39	48	3	0	5	8	12	38	0	50	
% App. Total	0	0	0	0	0	18.8	81.2		37.5	0	62.5		24	76	0		
PHF	.000	.000	.000	.000	.000	.563	.886	.857	.375	.000	.625	.667	.600	.594	.000	.735	

3.1-62

Location: Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Harley Knox Boulevard



Date: 10/2/2019  
 Day: Wednesday

PEDESTRIANS

	North Leg I-215 Northbound Ramps	East Leg Harley Knox Boulevard	South Leg I-215 Northbound Ramps	West Leg Harley Knox Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	1	0	1
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	1	0	1

	North Leg I-215 Northbound Ramps	East Leg Harley Knox Boulevard	South Leg I-215 Northbound Ramps	West Leg Harley Knox Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

Location: Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Harley Knox Boulevard



Date: 10/2/2019  
 Day: Wednesday

BICYCLES

	Southbound I-215 Northbound Ramps			Westbound Harley Knox Boulevard			Northbound I-215 Northbound Ramps			Eastbound Harley Knox Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	1	0	0	0	0	0	0	0	1

	Southbound I-215 Northbound Ramps			Westbound Harley Knox Boulevard			Northbound I-215 Northbound Ramps			Eastbound Harley Knox Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
TOTAL VOLUMES:	0	0	0	0	1	0	0	0	0	0	1	0	2

City of Perris  
 N/S: Western Way  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 03\_PER\_Western\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

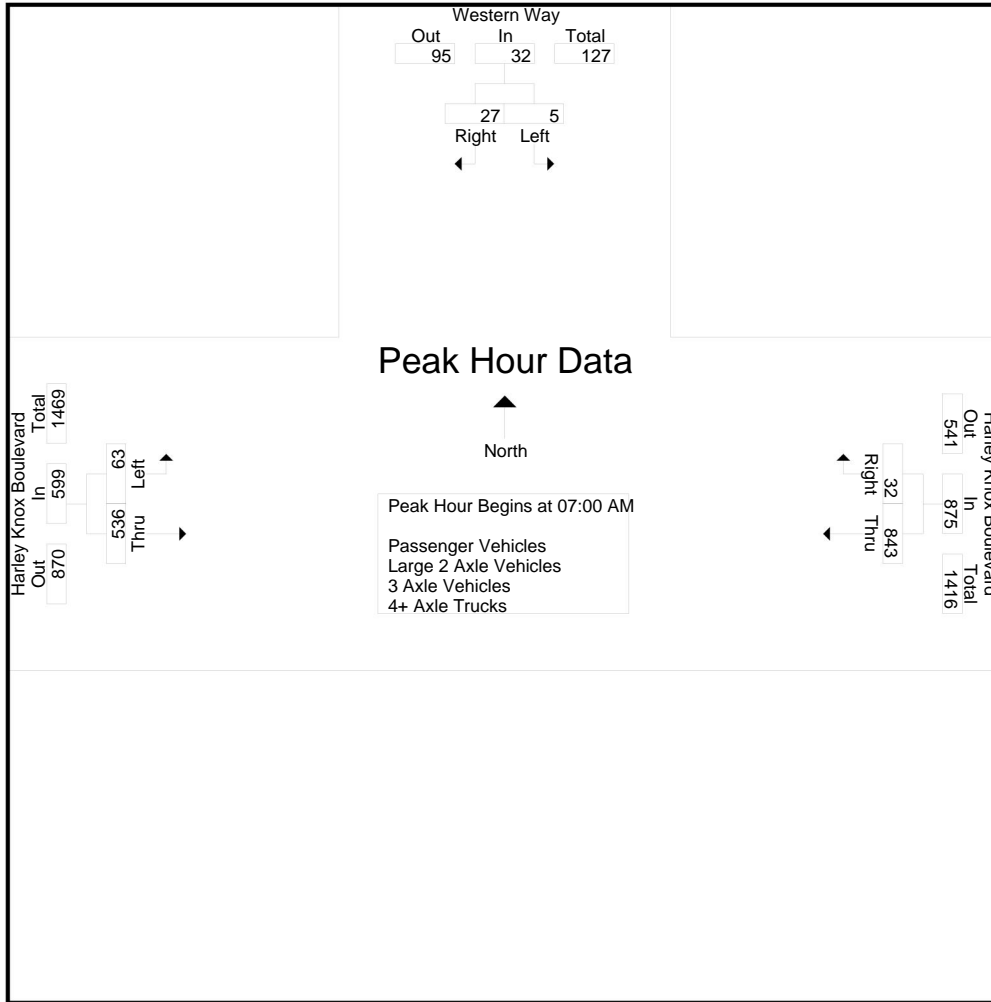
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Western Way Southbound			Harley Knox Boulevard Westbound			Harley Knox Boulevard Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:00 AM	1	6	7	249	8	257	11	130	141	405
07:15 AM	1	9	10	230	3	233	9	123	132	375
07:30 AM	2	4	6	188	8	196	17	162	179	381
07:45 AM	1	8	9	176	13	189	26	121	147	345
Total	5	27	32	843	32	875	63	536	599	1506
08:00 AM	4	10	14	133	7	140	14	110	124	278
08:15 AM	3	14	17	104	12	116	18	96	114	247
08:30 AM	7	15	22	89	6	95	20	93	113	230
08:45 AM	3	6	9	87	6	93	12	111	123	225
Total	17	45	62	413	31	444	64	410	474	980
Grand Total	22	72	94	1256	63	1319	127	946	1073	2486
Apprch %	23.4	76.6		95.2	4.8		11.8	88.2		
Total %	0.9	2.9	3.8	50.5	2.5	53.1	5.1	38.1	43.2	
Passenger Vehicles	19	42	61	1086	56	1142	103	764	867	2070
% Passenger Vehicles	86.4	58.3	64.9	86.5	88.9	86.6	81.1	80.8	80.8	83.3
Large 2 Axle Vehicles	2	18	20	36	5	41	15	46	61	122
% Large 2 Axle Vehicles	9.1	25	21.3	2.9	7.9	3.1	11.8	4.9	5.7	4.9
3 Axle Vehicles	0	5	5	47	1	48	4	38	42	95
% 3 Axle Vehicles	0	6.9	5.3	3.7	1.6	3.6	3.1	4	3.9	3.8
4+ Axle Trucks	1	7	8	87	1	88	5	98	103	199
% 4+ Axle Trucks	4.5	9.7	8.5	6.9	1.6	6.7	3.9	10.4	9.6	8

Start Time	Western Way Southbound			Harley Knox Boulevard Westbound			Harley Knox Boulevard Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	1	6	7	249	8	257	11	130	141	405
07:15 AM	1	9	10	230	3	233	9	123	132	375
07:30 AM	2	4	6	188	8	196	17	162	179	381
07:45 AM	1	8	9	176	13	189	26	121	147	345
Total Volume	5	27	32	843	32	875	63	536	599	1506
% App. Total	15.6	84.4		96.3	3.7		10.5	89.5		
PHF	.625	.750	.800	.846	.615	.851	.606	.827	.837	.930

City of Perris  
 N/S: Western Way  
 E/W: Harley Knox Boulevard  
 Weather: Clear

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Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:45 AM			07:00 AM			07:00 AM		
+0 mins.	1	8	9	<b>249</b>	8	<b>257</b>	11	130	141
+15 mins.	4	10	14	230	3	233	9	123	132
+30 mins.	3	14	17	188	8	196	17	<b>162</b>	<b>179</b>
+45 mins.	<b>7</b>	<b>15</b>	<b>22</b>	176	<b>13</b>	189	<b>26</b>	121	147
Total Volume	15	47	62	843	32	875	63	536	599
% App. Total	24.2	75.8		96.3	3.7		10.5	89.5	
PHF	.536	.783	.705	.846	.615	.851	.606	.827	.837



City of Perris  
 N/S: Western Way  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 03\_PER\_Western\_Harley Knox AM  
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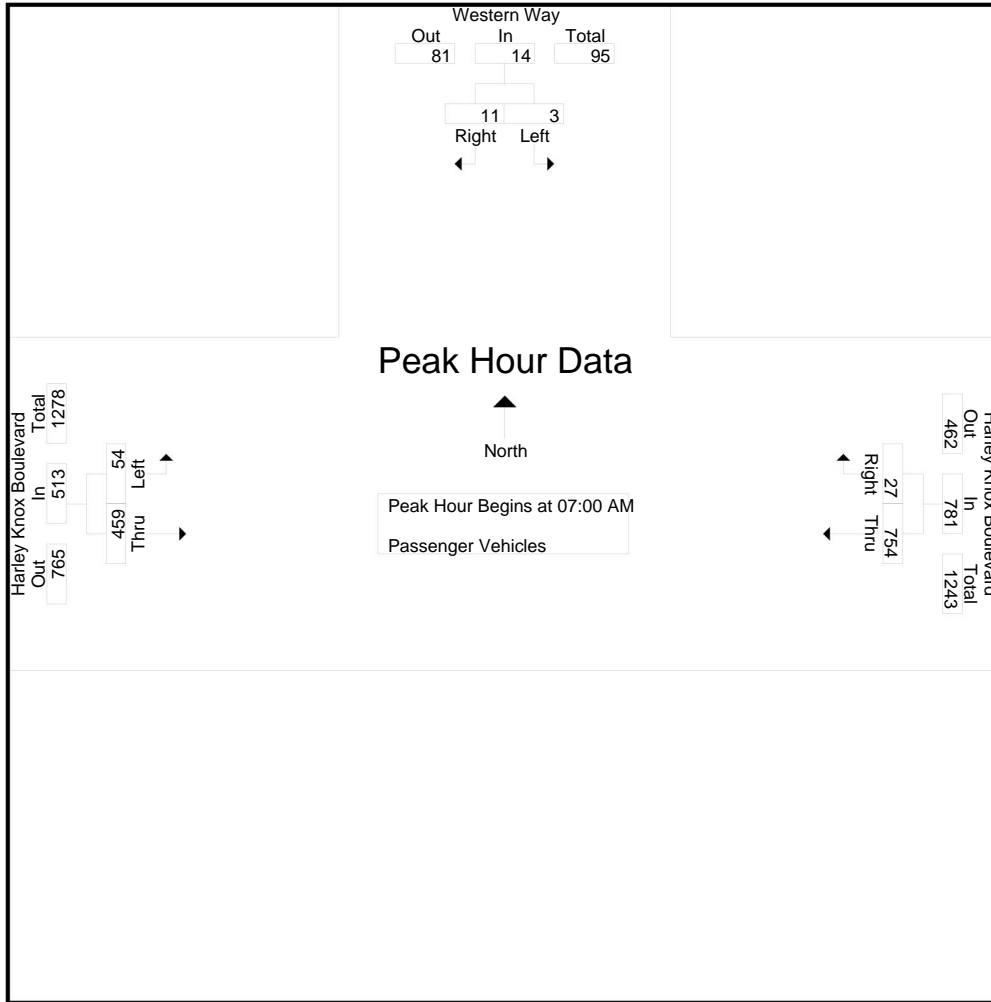
Groups Printed- Passenger Vehicles

Start Time	Western Way Southbound			Harley Knox Boulevard Westbound			Harley Knox Boulevard Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:00 AM	1	3	4	224	6	230	9	110	119	353
07:15 AM	1	3	4	213	2	215	6	108	114	333
07:30 AM	1	0	1	162	7	169	13	139	152	322
07:45 AM	0	5	5	155	12	167	26	102	128	300
Total	3	11	14	754	27	781	54	459	513	1308
08:00 AM	4	7	11	107	7	114	9	84	93	218
08:15 AM	3	10	13	84	11	95	15	70	85	193
08:30 AM	7	11	18	74	6	80	16	72	88	186
08:45 AM	2	3	5	67	5	72	9	79	88	165
Total	16	31	47	332	29	361	49	305	354	762
Grand Total	19	42	61	1086	56	1142	103	764	867	2070
Apprch %	31.1	68.9		95.1	4.9		11.9	88.1		
Total %	0.9	2	2.9	52.5	2.7	55.2	5	36.9	41.9	

Start Time	Western Way Southbound			Harley Knox Boulevard Westbound			Harley Knox Boulevard Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	<b>1</b>	3	4	<b>224</b>	6	<b>230</b>	9	110	119	<b>353</b>
07:15 AM	1	3	4	213	2	215	6	108	114	333
07:30 AM	1	0	1	162	7	169	13	<b>139</b>	<b>152</b>	322
07:45 AM	0	<b>5</b>	<b>5</b>	155	<b>12</b>	167	<b>26</b>	102	128	300
Total Volume	3	11	14	754	27	781	54	459	513	1308
% App. Total	21.4	78.6		96.5	3.5		10.5	89.5		
PHF	.750	.550	.700	.842	.563	.849	.519	.826	.844	.926

City of Perris  
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Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	1	3	4	<b>224</b>	6	<b>230</b>	9	110	119
+15 mins.	1	3	4	213	2	215	6	108	114
+30 mins.	1	0	1	162	7	169	13	<b>139</b>	<b>152</b>
+45 mins.	0	<b>5</b>	<b>5</b>	155	<b>12</b>	167	<b>26</b>	102	128
Total Volume	3	11	14	754	27	781	54	459	513
% App. Total	21.4	78.6		96.5	3.5		10.5	89.5	
PHF	.750	.550	.700	.842	.563	.849	.519	.826	.844

City of Perris  
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 Weather: Clear

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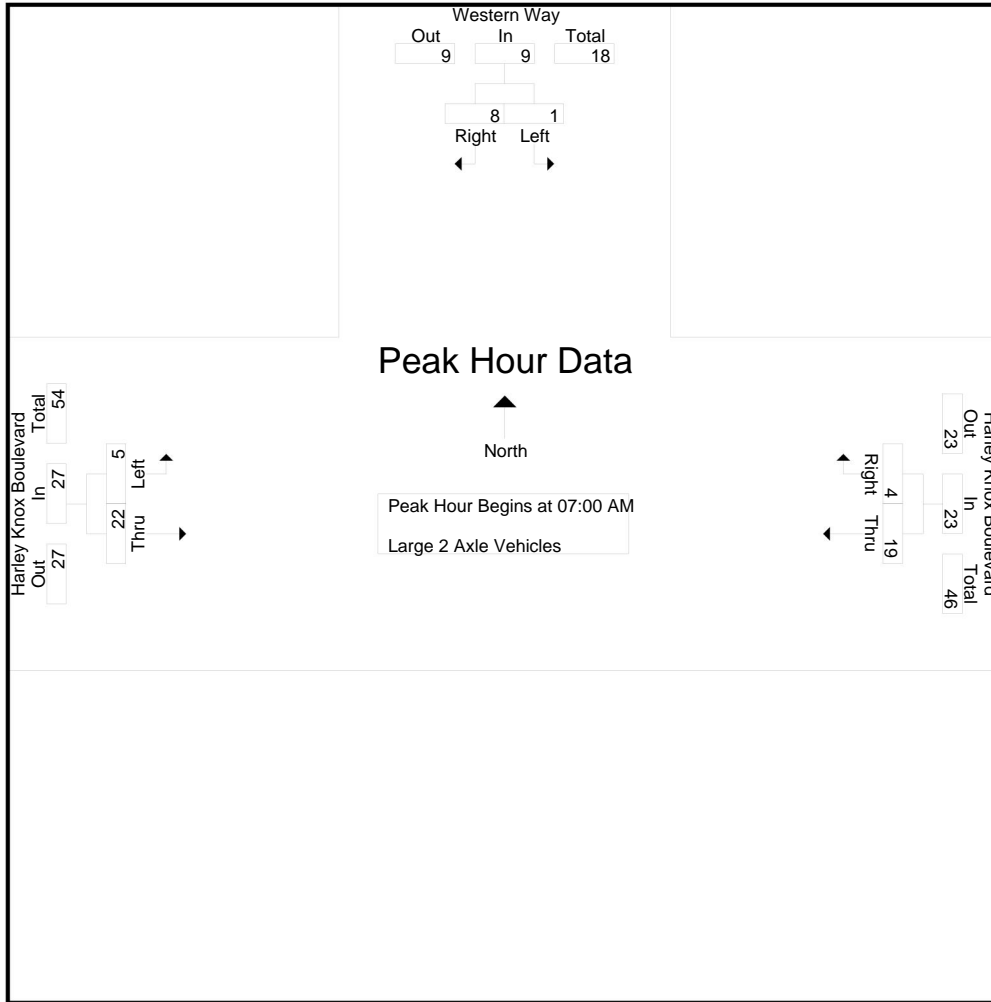
Groups Printed- Large 2 Axle Vehicles

Start Time	Western Way Southbound			Harley Knox Boulevard Westbound			Harley Knox Boulevard Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:00 AM	0	3	3	10	2	12	1	6	7	22
07:15 AM	0	3	3	2	1	3	0	7	7	13
07:30 AM	0	0	0	4	0	4	4	2	6	10
07:45 AM	1	2	3	3	1	4	0	7	7	14
Total	1	8	9	19	4	23	5	22	27	59
08:00 AM	0	3	3	4	0	4	3	7	10	17
08:15 AM	0	2	2	3	1	4	2	8	10	16
08:30 AM	0	3	3	4	0	4	3	5	8	15
08:45 AM	1	2	3	6	0	6	2	4	6	15
Total	1	10	11	17	1	18	10	24	34	63
Grand Total	2	18	20	36	5	41	15	46	61	122
Apprch %	10	90		87.8	12.2		24.6	75.4		
Total %	1.6	14.8	16.4	29.5	4.1	33.6	12.3	37.7	50	

Start Time	Western Way Southbound			Harley Knox Boulevard Westbound			Harley Knox Boulevard Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	3	3	10	2	12	1	6	7	22
07:15 AM	0	3	3	2	1	3	0	7	7	13
07:30 AM	0	0	0	4	0	4	4	2	6	10
07:45 AM	1	2	3	3	1	4	0	7	7	14
Total Volume	1	8	9	19	4	23	5	22	27	59
% App. Total	11.1	88.9		82.6	17.4		18.5	81.5		
PHF	.250	.667	.750	.475	.500	.479	.313	.786	.964	.670

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Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	<b>3</b>	<b>3</b>	<b>10</b>	<b>2</b>	<b>12</b>	1	6	<b>7</b>
+15 mins.	0	3	3	2	1	3	0	7	7
+30 mins.	0	0	0	4	0	4	4	2	6
+45 mins.	<b>1</b>	2	3	3	1	4	0	7	7
Total Volume	1	8	9	19	4	23	5	22	27
% App. Total	11.1	88.9		82.6	17.4		18.5	81.5	
PHF	.250	.667	.750	.475	.500	.479	.313	.786	.964

City of Perris  
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 E/W: Harley Knox Boulevard  
 Weather: Clear

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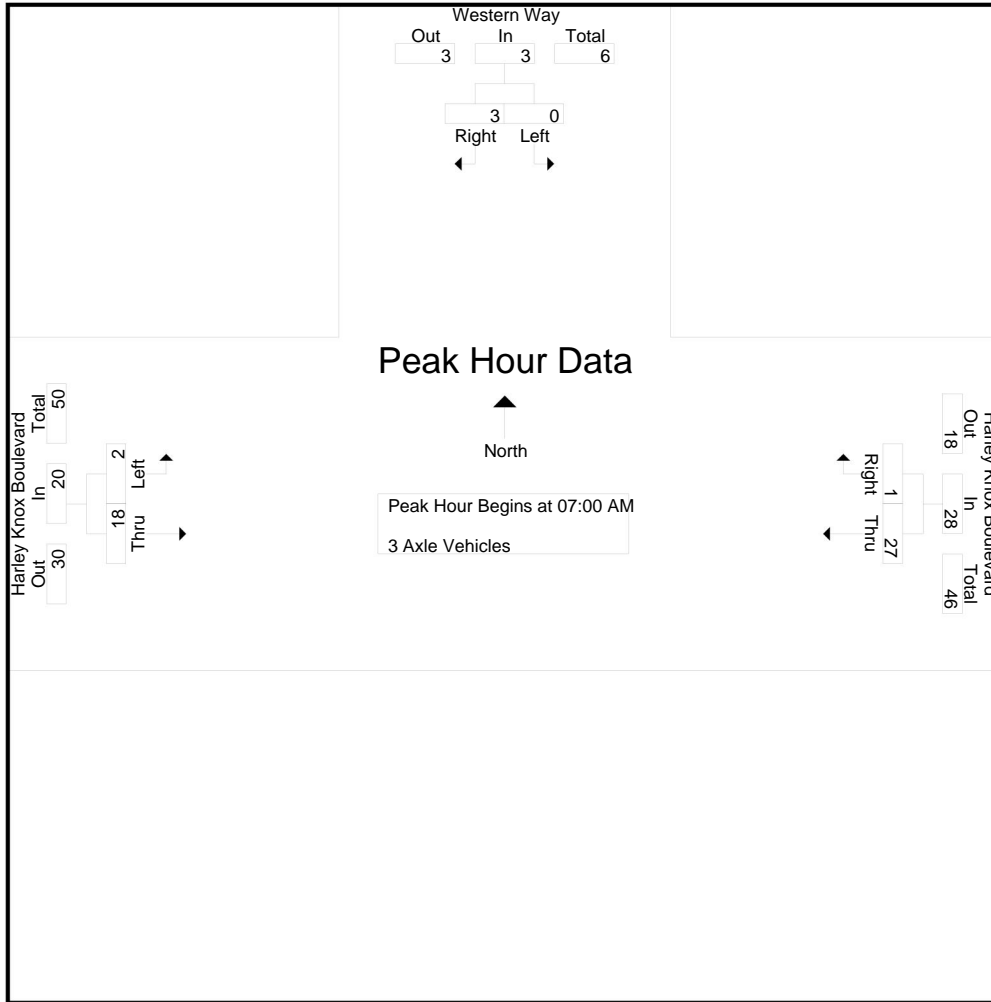
Groups Printed- 3 Axle Vehicles

Start Time	Western Way Southbound			Harley Knox Boulevard Westbound			Harley Knox Boulevard Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:00 AM	0	0	0	7	0	7	1	3	4	11
07:15 AM	0	1	1	6	0	6	1	1	2	9
07:30 AM	0	1	1	9	1	10	0	8	8	19
07:45 AM	0	1	1	5	0	5	0	6	6	12
Total	0	3	3	27	1	28	2	18	20	51
08:00 AM	0	0	0	7	0	7	1	6	7	14
08:15 AM	0	1	1	9	0	9	1	4	5	15
08:30 AM	0	1	1	2	0	2	0	2	2	5
08:45 AM	0	0	0	2	0	2	0	8	8	10
Total	0	2	2	20	0	20	2	20	22	44
Grand Total	0	5	5	47	1	48	4	38	42	95
Apprch %	0	100		97.9	2.1		9.5	90.5		
Total %	0	5.3	5.3	49.5	1.1	50.5	4.2	40	44.2	

Start Time	Western Way Southbound			Harley Knox Boulevard Westbound			Harley Knox Boulevard Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	0	0	7	0	7	1	3	4	11
07:15 AM	0	1	1	6	0	6	1	1	2	9
07:30 AM	0	1	1	9	1	10	0	8	8	19
07:45 AM	0	1	1	5	0	5	0	6	6	12
Total Volume	0	3	3	27	1	28	2	18	20	51
% App. Total	0	100		96.4	3.6		10	90		
PHF	.000	.750	.750	.750	.250	.700	.500	.563	.625	.671

City of Perris  
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Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	0	0	7	0	7	1	3	4
+15 mins.	0	1	1	6	0	6	1	1	2
+30 mins.	0	1	1	9	1	10	0	8	8
+45 mins.	0	1	1	5	0	5	0	6	6
Total Volume	0	3	3	27	1	28	2	18	20
% App. Total	0	100	3	96.4	3.6	10	10	90	20
PHF	.000	.750	.750	.750	.250	.700	.500	.563	.625

City of Perris  
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Groups Printed- 4+ Axle Trucks

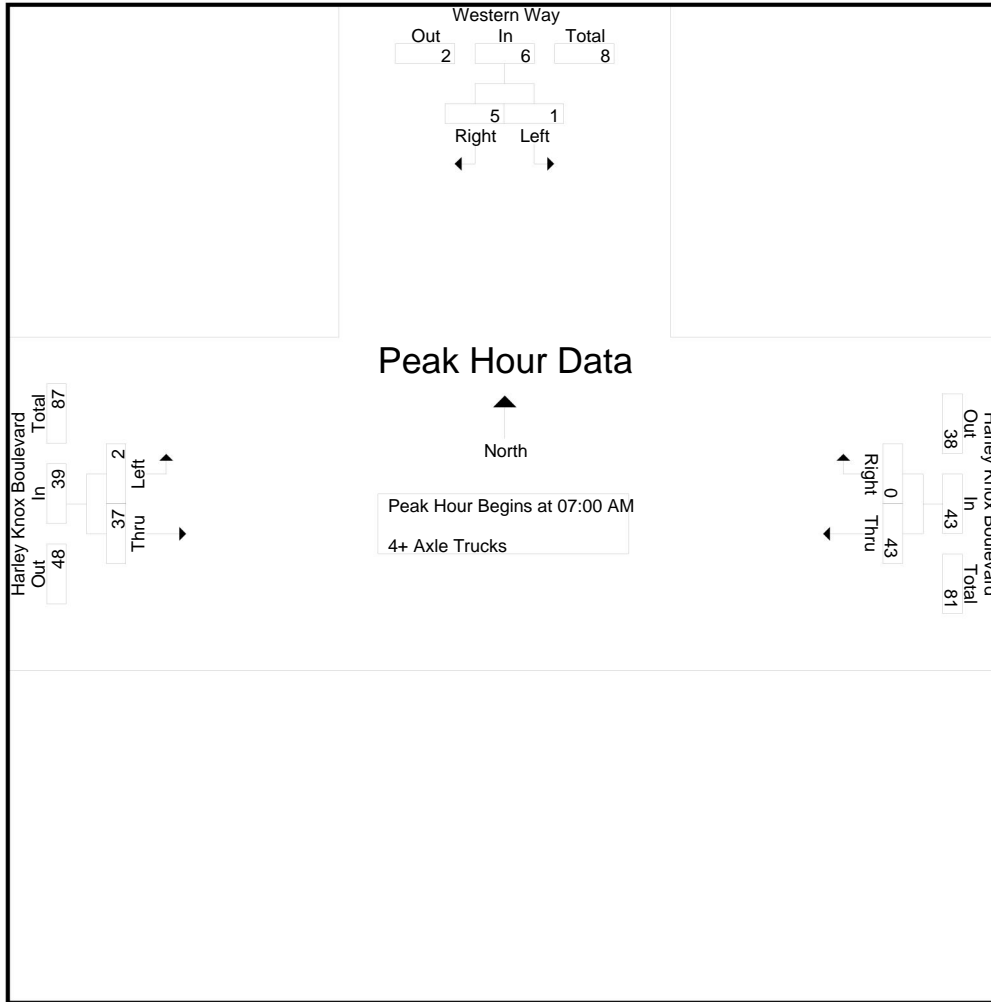
Start Time	Western Way Southbound			Harley Knox Boulevard Westbound			Harley Knox Boulevard Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:00 AM	0	0	0	8	0	8	0	11	11	19
07:15 AM	0	2	2	9	0	9	2	7	9	20
07:30 AM	1	3	4	13	0	13	0	13	13	30
07:45 AM	0	0	0	13	0	13	0	6	6	19
Total	1	5	6	43	0	43	2	37	39	88
08:00 AM	0	0	0	15	0	15	1	13	14	29
08:15 AM	0	1	1	8	0	8	0	14	14	23
08:30 AM	0	0	0	9	0	9	1	14	15	24
08:45 AM	0	1	1	12	1	13	1	20	21	35
Total	0	2	2	44	1	45	3	61	64	111
Grand Total	1	7	8	87	1	88	5	98	103	199
Apprch %	12.5	87.5		98.9	1.1		4.9	95.1		
Total %	0.5	3.5	4	43.7	0.5	44.2	2.5	49.2	51.8	

Start Time	Western Way Southbound			Harley Knox Boulevard Westbound			Harley Knox Boulevard Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	0	0	8	0	8	0	11	11	19
07:15 AM	0	2	2	9	0	9	2	7	9	20
07:30 AM	1	3	4	13	0	13	0	13	13	30
07:45 AM	0	0	0	13	0	13	0	6	6	19
Total Volume	1	5	6	43	0	43	2	37	39	88
% App. Total	16.7	83.3		100	0		5.1	94.9		
PHF	.250	.417	.375	.827	.000	.827	.250	.712	.750	.733



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Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	0	0	8	0	8	0	11	11
+15 mins.	0	2	2	9	0	9	2	7	9
+30 mins.	1	3	4	13	0	13	0	13	13
+45 mins.	0	0	0	13	0	13	0	6	6
Total Volume	1	5	6	43	0	43	2	37	39
% App. Total	16.7	83.3		100	0		5.1	94.9	
PHF	.250	.417	.375	.827	.000	.827	.250	.712	.750

City of Perris  
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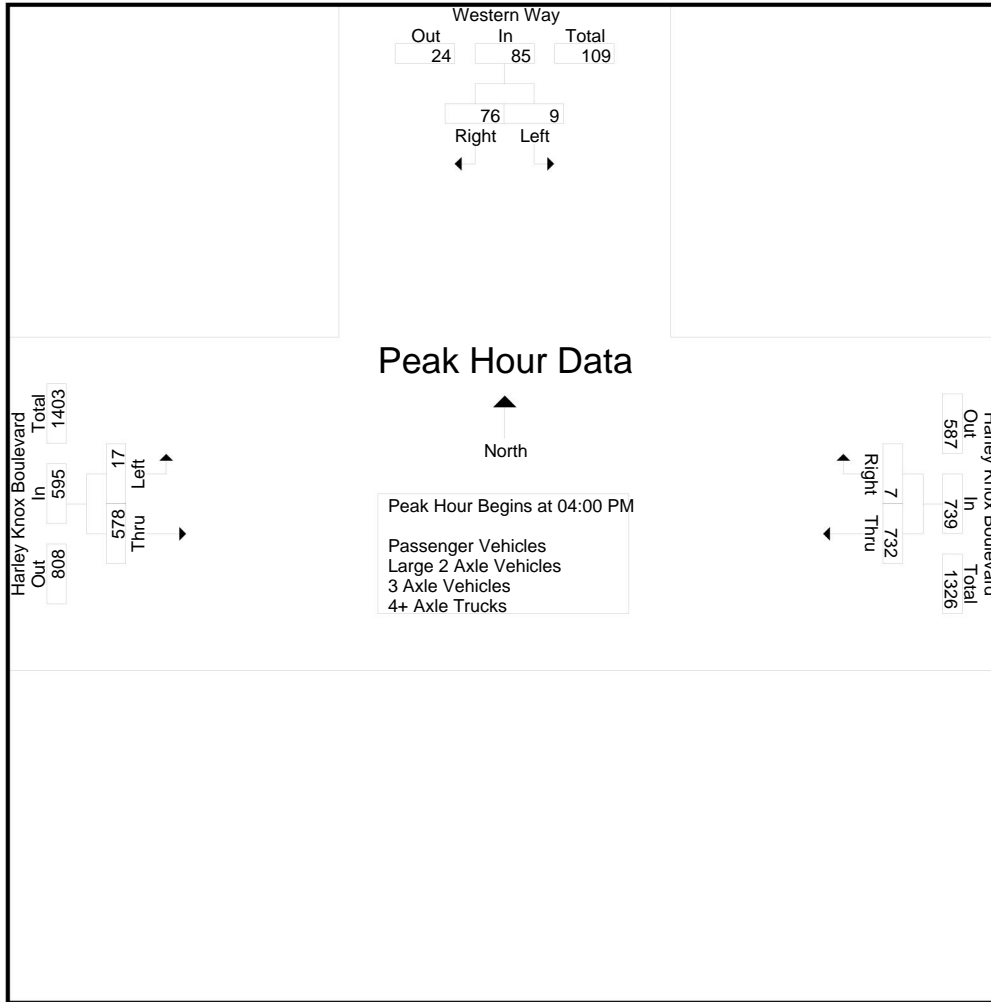
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Western Way Southbound			Harley Knox Boulevard Westbound			Harley Knox Boulevard Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:00 PM	1	18	19	157	2	159	4	152	156	334
04:15 PM	1	10	11	132	2	134	8	149	157	302
04:30 PM	3	36	39	235	2	237	4	145	149	425
04:45 PM	4	12	16	208	1	209	1	132	133	358
Total	9	76	85	732	7	739	17	578	595	1419
05:00 PM	4	18	22	144	3	147	2	110	112	281
05:15 PM	0	7	7	135	2	137	1	127	128	272
05:30 PM	0	7	7	150	0	150	1	117	118	275
05:45 PM	0	6	6	106	0	106	3	113	116	228
Total	4	38	42	535	5	540	7	467	474	1056
Grand Total	13	114	127	1267	12	1279	24	1045	1069	2475
Apprch %	10.2	89.8		99.1	0.9		2.2	97.8		
Total %	0.5	4.6	5.1	51.2	0.5	51.7	1	42.2	43.2	
Passenger Vehicles	11	106	117	1127	7	1134	14	893	907	2158
% Passenger Vehicles	84.6	93	92.1	89	58.3	88.7	58.3	85.5	84.8	87.2
Large 2 Axle Vehicles	2	6	8	28	5	33	3	26	29	70
% Large 2 Axle Vehicles	15.4	5.3	6.3	2.2	41.7	2.6	12.5	2.5	2.7	2.8
3 Axle Vehicles	0	0	0	22	0	22	2	58	60	82
% 3 Axle Vehicles	0	0	0	1.7	0	1.7	8.3	5.6	5.6	3.3
4+ Axle Trucks	0	2	2	90	0	90	5	68	73	165
% 4+ Axle Trucks	0	1.8	1.6	7.1	0	7	20.8	6.5	6.8	6.7

Start Time	Western Way Southbound			Harley Knox Boulevard Westbound			Harley Knox Boulevard Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:00 PM	1	18	19	157	2	159	4	152	156	334
04:15 PM	1	10	11	132	2	134	8	149	157	302
04:30 PM	3	36	39	235	2	237	4	145	149	425
04:45 PM	4	12	16	208	1	209	1	132	133	358
Total Volume	9	76	85	732	7	739	17	578	595	1419
% App. Total	10.6	89.4		99.1	0.9		2.9	97.1		
PHF	.563	.528	.545	.779	.875	.780	.531	.951	.947	.835

City of Perris  
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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:15 PM			04:00 PM			04:00 PM		
+0 mins.	1	10	11	157	2	159	4	<b>152</b>	156
+15 mins.	3	<b>36</b>	<b>39</b>	132	2	134	<b>8</b>	149	<b>157</b>
+30 mins.	<b>4</b>	12	16	<b>235</b>	2	<b>237</b>	4	145	149
+45 mins.	4	18	22	208	1	209	1	132	133
Total Volume	12	76	88	732	7	739	17	578	595
% App. Total	13.6	86.4		99.1	0.9		2.9	97.1	
PHF	.750	.528	.564	.779	.875	.780	.531	.951	.947

City of Perris  
 N/S: Western Way  
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 Weather: Clear

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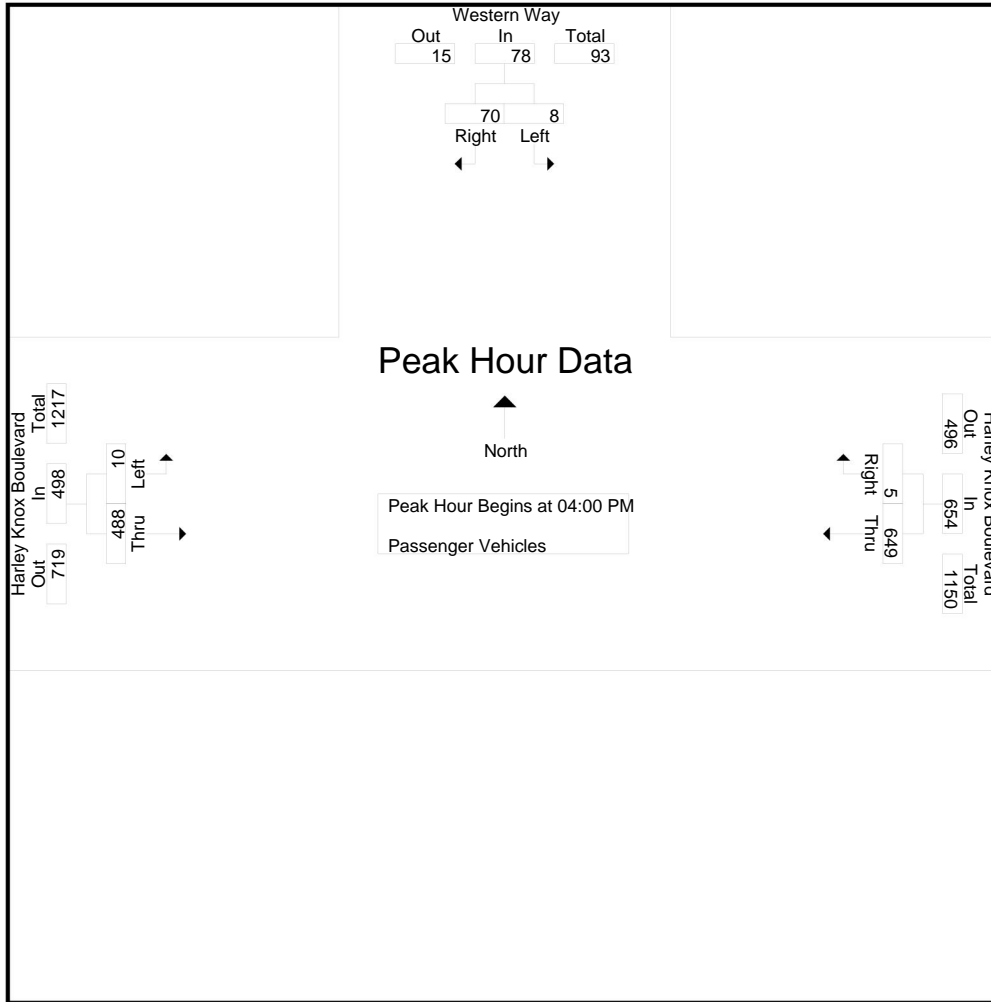
Groups Printed- Passenger Vehicles

Start Time	Western Way Southbound			Harley Knox Boulevard Westbound			Harley Knox Boulevard Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:00 PM	1	18	19	139	0	139	3	134	137	295
04:15 PM	0	9	9	109	2	111	4	120	124	244
04:30 PM	3	35	38	215	2	217	2	122	124	379
04:45 PM	4	8	12	186	1	187	1	112	113	312
Total	8	70	78	649	5	654	10	488	498	1230
05:00 PM	3	17	20	133	0	133	1	95	96	249
05:15 PM	0	6	6	116	2	118	0	102	102	226
05:30 PM	0	7	7	137	0	137	0	106	106	250
05:45 PM	0	6	6	92	0	92	3	102	105	203
Total	3	36	39	478	2	480	4	405	409	928
Grand Total	11	106	117	1127	7	1134	14	893	907	2158
Apprch %	9.4	90.6		99.4	0.6		1.5	98.5		
Total %	0.5	4.9	5.4	52.2	0.3	52.5	0.6	41.4	42	

Start Time	Western Way Southbound			Harley Knox Boulevard Westbound			Harley Knox Boulevard Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	1	18	19	139	0	139	3	<b>134</b>	<b>137</b>	295
04:15 PM	0	9	9	109	2	111	4	120	124	244
04:30 PM	3	<b>35</b>	<b>38</b>	<b>215</b>	2	<b>217</b>	2	122	124	<b>379</b>
04:45 PM	4	8	12	186	1	187	1	112	113	312
Total Volume	8	70	78	649	5	654	10	488	498	1230
% App. Total	10.3	89.7		99.2	0.8		2	98		
PHF	.500	.500	.513	.755	.625	.753	.625	.910	.909	.811

City of Perris  
 N/S: Western Way  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 03\_PER\_Western\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
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Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:00 PM			04:00 PM			04:00 PM		
+0 mins.	1	18	19	139	0	139	3	<b>134</b>	<b>137</b>
+15 mins.	0	9	9	109	<b>2</b>	111	<b>4</b>	120	124
+30 mins.	3	<b>35</b>	<b>38</b>	<b>215</b>	2	<b>217</b>	2	122	124
+45 mins.	<b>4</b>	8	12	186	1	187	1	112	113
Total Volume	8	70	78	649	5	654	10	488	498
% App. Total	10.3	89.7		99.2	0.8		2	98	
PHF	.500	.500	.513	.755	.625	.753	.625	.910	.909

City of Perris  
 N/S: Western Way  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 03\_PER\_Western\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

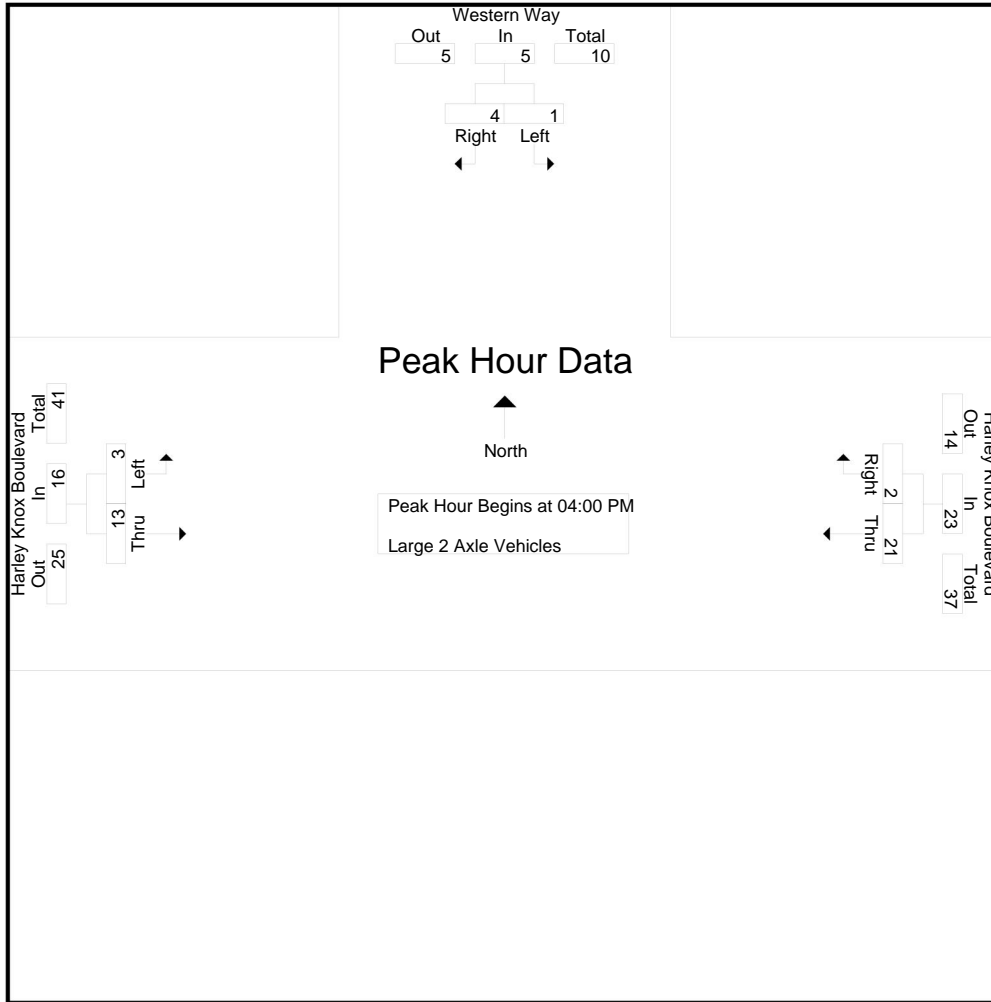
Groups Printed- Large 2 Axle Vehicles

Start Time	Western Way Southbound			Harley Knox Boulevard Westbound			Harley Knox Boulevard Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:00 PM	0	0	0	6	2	8	0	5	5	13
04:15 PM	1	1	2	4	0	4	1	3	4	10
04:30 PM	0	1	1	3	0	3	2	2	4	8
04:45 PM	0	2	2	8	0	8	0	3	3	13
Total	1	4	5	21	2	23	3	13	16	44
05:00 PM	1	1	2	3	3	6	0	2	2	10
05:15 PM	0	1	1	2	0	2	0	3	3	6
05:30 PM	0	0	0	1	0	1	0	5	5	6
05:45 PM	0	0	0	1	0	1	0	3	3	4
Total	1	2	3	7	3	10	0	13	13	26
Grand Total	2	6	8	28	5	33	3	26	29	70
Apprch %	25	75		84.8	15.2		10.3	89.7		
Total %	2.9	8.6	11.4	40	7.1	47.1	4.3	37.1	41.4	

Start Time	Western Way Southbound			Harley Knox Boulevard Westbound			Harley Knox Boulevard Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	0	0	0	6	2	8	0	5	5	13
04:15 PM	1	1	2	4	0	4	1	3	4	10
04:30 PM	0	1	1	3	0	3	2	2	4	8
04:45 PM	0	2	2	8	0	8	0	3	3	13
Total Volume	1	4	5	21	2	23	3	13	16	44
% App. Total	20	80		91.3	8.7		18.8	81.2		
PHF	.250	.500	.625	.656	.250	.719	.375	.650	.800	.846

City of Perris  
 N/S: Western Way  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 03\_PER\_Western\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
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Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:00 PM			04:00 PM			04:00 PM		
+0 mins.	0	0	0	6	2	8	0	5	5
+15 mins.	1	1	2	4	0	4	1	3	4
+30 mins.	0	1	1	3	0	3	2	2	4
+45 mins.	0	2	2	8	0	8	0	3	3
Total Volume	1	4	5	21	2	23	3	13	16
% App. Total	20	80		91.3	8.7		18.8	81.2	
PHF	.250	.500	.625	.656	.250	.719	.375	.650	.800



City of Perris  
 N/S: Western Way  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 03\_PER\_Western\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

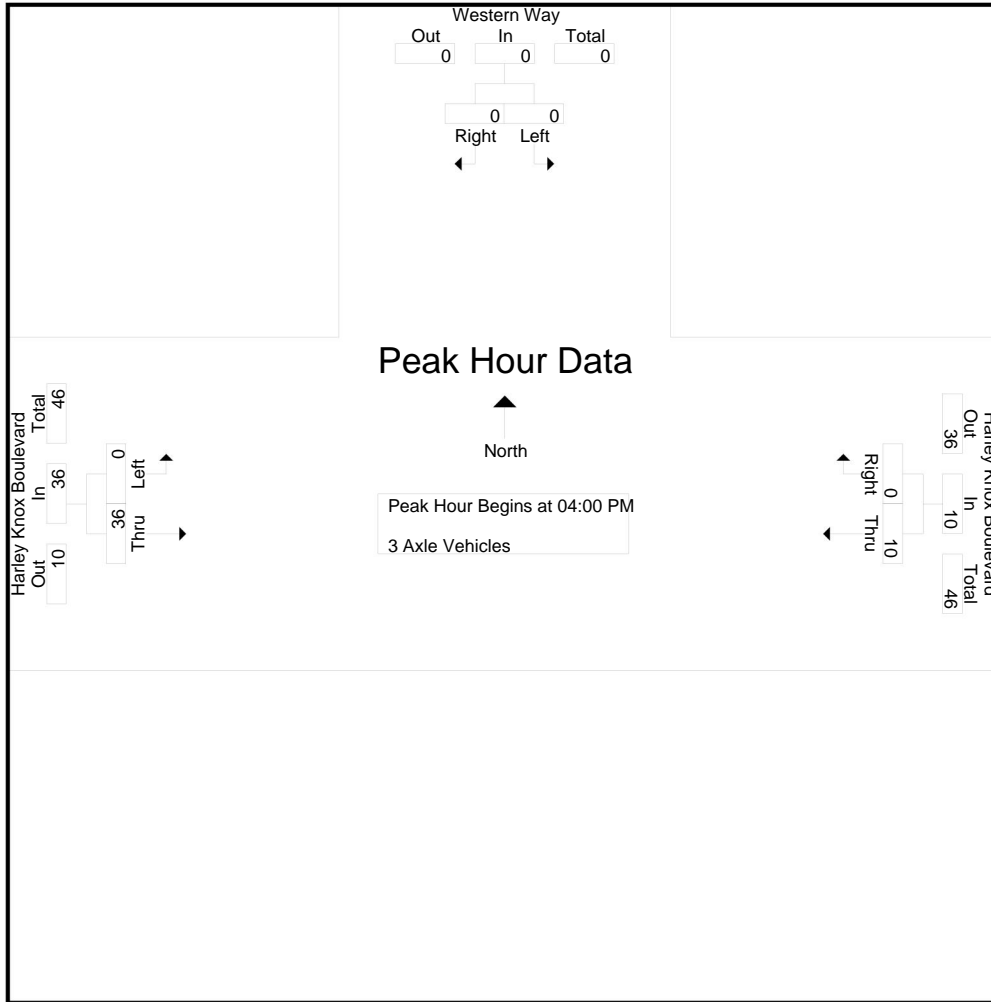
Groups Printed- 3 Axle Vehicles

Start Time	Western Way Southbound			Harley Knox Boulevard Westbound			Harley Knox Boulevard Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:00 PM	0	0	0	1	0	1	0	3	3	4
04:15 PM	0	0	0	4	0	4	0	13	13	17
04:30 PM	0	0	0	2	0	2	0	11	11	13
04:45 PM	0	0	0	3	0	3	0	9	9	12
Total	0	0	0	10	0	10	0	36	36	46
05:00 PM	0	0	0	2	0	2	1	6	7	9
05:15 PM	0	0	0	3	0	3	1	12	13	16
05:30 PM	0	0	0	3	0	3	0	1	1	4
05:45 PM	0	0	0	4	0	4	0	3	3	7
Total	0	0	0	12	0	12	2	22	24	36
Grand Total	0	0	0	22	0	22	2	58	60	82
Apprch %	0	0		100	0		3.3	96.7		
Total %	0	0		26.8	0	26.8	2.4	70.7	73.2	

Start Time	Western Way Southbound			Harley Knox Boulevard Westbound			Harley Knox Boulevard Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	0	0	0	1	0	1	0	3	3	4
04:15 PM	0	0	0	4	0	4	0	13	13	17
04:30 PM	0	0	0	2	0	2	0	11	11	13
04:45 PM	0	0	0	3	0	3	0	9	9	12
Total Volume	0	0	0	10	0	10	0	36	36	46
% App. Total	0	0		100	0		0	100		
PHF	.000	.000	.000	.625	.000	.625	.000	.692	.692	.676

City of Perris  
 N/S: Western Way  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 03\_PER\_Western\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
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Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:00 PM			04:00 PM			04:00 PM		
+0 mins.	0	0	0	1	0	1	0	3	3
+15 mins.	0	0	0	4	0	4	0	13	13
+30 mins.	0	0	0	2	0	2	0	11	11
+45 mins.	0	0	0	3	0	3	0	9	9
Total Volume	0	0	0	10	0	10	0	36	36
% App. Total	0	0	0	100	0	100	0	100	100
PHF	.000	.000	.000	.625	.000	.625	.000	.692	.692

City of Perris  
 N/S: Western Way  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 03\_PER\_Western\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

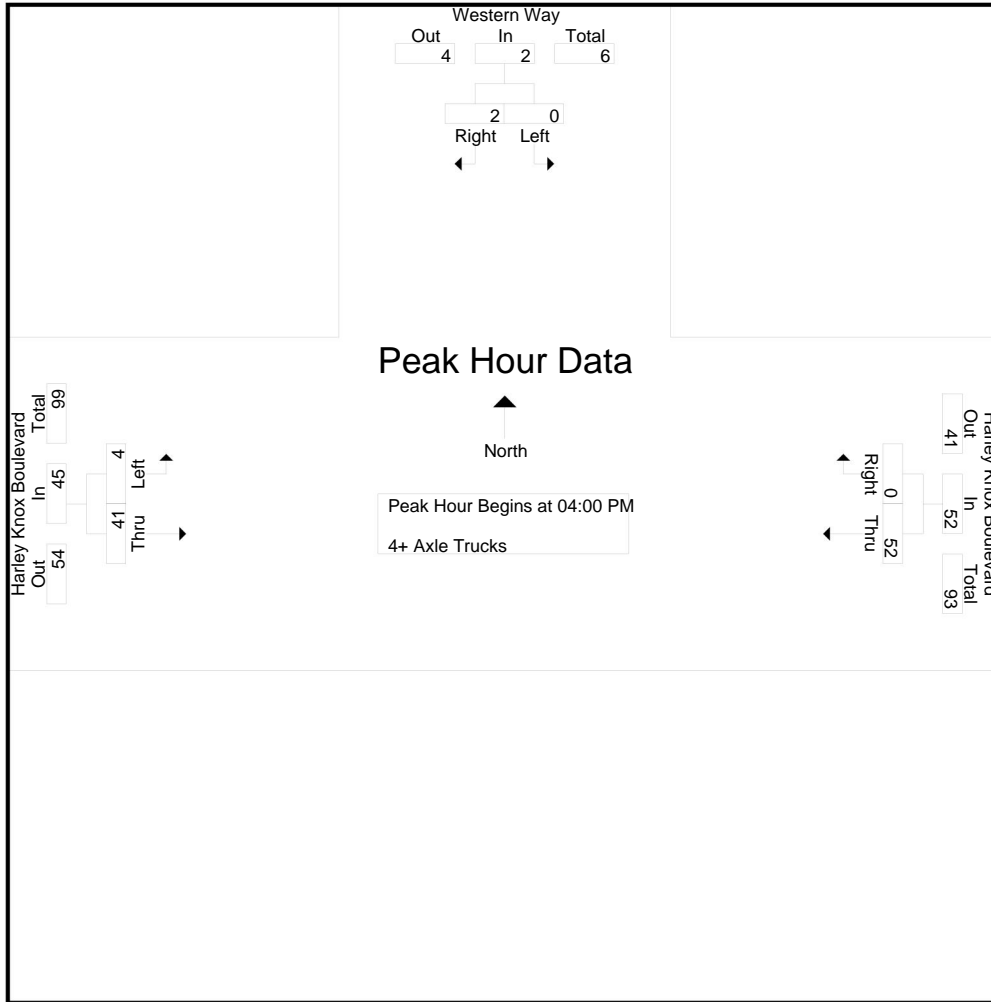
Groups Printed- 4+ Axle Trucks

Start Time	Western Way Southbound			Harley Knox Boulevard Westbound			Harley Knox Boulevard Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:00 PM	0	0	0	11	0	11	1	10	11	22
04:15 PM	0	0	0	15	0	15	3	13	16	31
04:30 PM	0	0	0	15	0	15	0	10	10	25
04:45 PM	0	2	2	11	0	11	0	8	8	21
Total	0	2	2	52	0	52	4	41	45	99
05:00 PM	0	0	0	6	0	6	0	7	7	13
05:15 PM	0	0	0	14	0	14	0	10	10	24
05:30 PM	0	0	0	9	0	9	1	5	6	15
05:45 PM	0	0	0	9	0	9	0	5	5	14
Total	0	0	0	38	0	38	1	27	28	66
Grand Total	0	2	2	90	0	90	5	68	73	165
Apprch %	0	100		100	0		6.8	93.2		
Total %	0	1.2	1.2	54.5	0	54.5	3	41.2	44.2	

Start Time	Western Way Southbound			Harley Knox Boulevard Westbound			Harley Knox Boulevard Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	0	0	0	11	0	11	1	10	11	22
04:15 PM	0	0	0	15	0	15	3	13	16	31
04:30 PM	0	0	0	15	0	15	0	10	10	25
04:45 PM	0	2	2	11	0	11	0	8	8	21
Total Volume	0	2	2	52	0	52	4	41	45	99
% App. Total	0	100		100	0		8.9	91.1		
PHF	.000	.250	.250	.867	.000	.867	.333	.788	.703	.798

City of Perris  
 N/S: Western Way  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 03\_PER\_Western\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:00 PM			04:00 PM			04:00 PM		
+0 mins.	0	0	0	11	0	11	1	10	11
+15 mins.	0	0	0	15	0	15	3	13	16
+30 mins.	0	0	0	15	0	15	0	10	10
+45 mins.	0	2	2	11	0	11	0	8	8
Total Volume	0	2	2	52	0	52	4	41	45
% App. Total	0	100		100	0		8.9	91.1	
PHF	.000	.250	.250	.867	.000	.867	.333	.788	.703

Location: Perris  
 N/S: Western Way  
 E/W: Harley Knox Boulevard



Date: 5/24/2018  
 Day: Thursday

PEDESTRIANS

	North Leg Western Way	East Leg Harley Knox Boulevard	South Leg Western Way	West Leg Harley Knox Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	1	0	0	1
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	1

	North Leg Western Way	East Leg Harley Knox Boulevard	South Leg Western Way	West Leg Harley Knox Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	1	0	0	0	1
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	1	0	0	0	1

Location: Perris  
 N/S: Western Way  
 E/W: Harley Knox Boulevard



Date: 5/24/2018  
 Day: Thursday

BICYCLES

	Southbound Western Way			Westbound Harley Knox Boulevard			Northbound Western Way			Eastbound Harley Knox Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound Western Way			Westbound Harley Knox Boulevard			Northbound Western Way			Eastbound Harley Knox Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	1	0	0	0	0	0	0	0	1

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cactus Avenue  
 Weather: Clear

File Name : 06\_MRV\_Heacock\_Cactus AM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
 Page No : 1

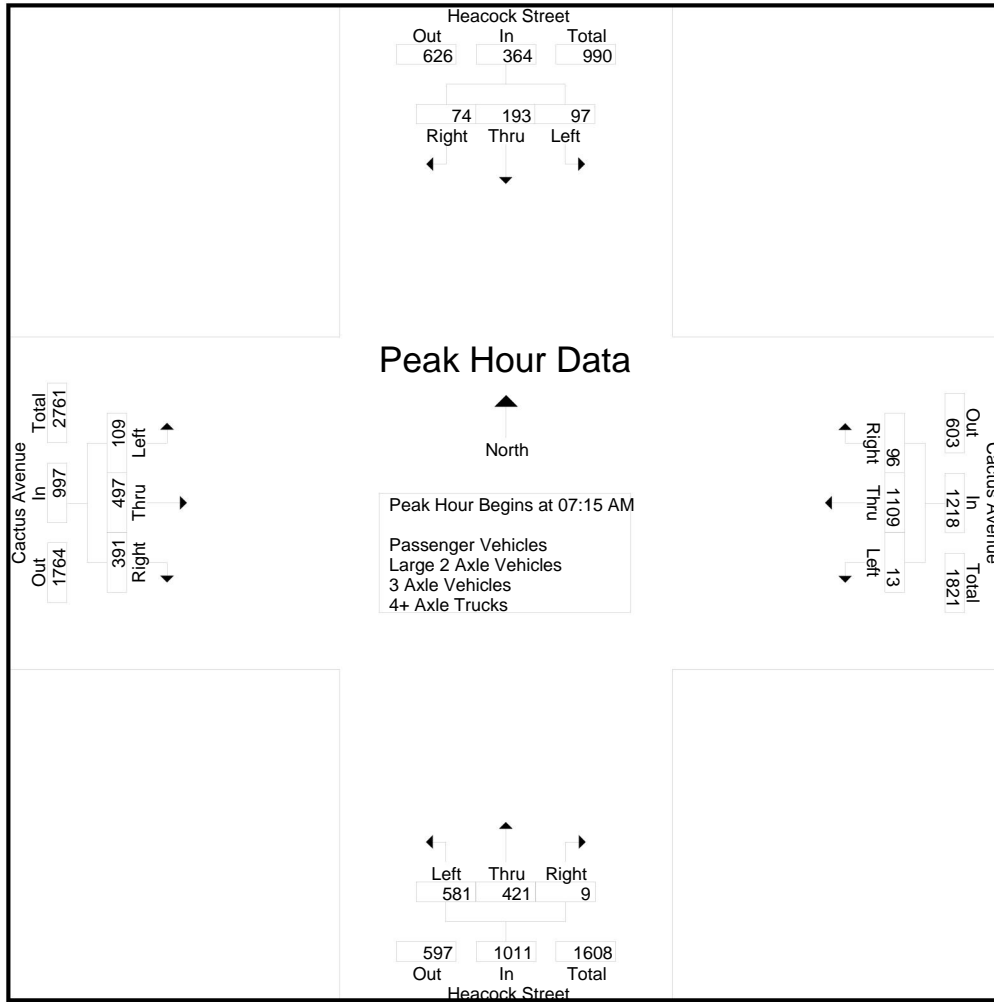
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Heacock Street Southbound				Cactus Avenue Westbound				Heacock Street Northbound				Cactus Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	10	42	7	59	1	302	17	320	173	67	2	242	18	92	114	224	845
07:15 AM	22	60	19	101	3	259	24	286	155	97	0	252	11	100	106	217	856
07:30 AM	26	45	23	94	3	295	22	320	120	84	0	204	27	166	103	296	914
07:45 AM	29	37	17	83	5	312	22	339	142	111	7	260	35	122	93	250	932
<b>Total</b>	<b>87</b>	<b>184</b>	<b>66</b>	<b>337</b>	<b>12</b>	<b>1168</b>	<b>85</b>	<b>1265</b>	<b>590</b>	<b>359</b>	<b>9</b>	<b>958</b>	<b>91</b>	<b>480</b>	<b>416</b>	<b>987</b>	<b>3547</b>
08:00 AM	20	51	15	86	2	243	28	273	164	129	2	295	36	109	89	234	888
08:15 AM	19	33	11	63	2	233	17	252	134	72	2	208	20	126	57	203	726
08:30 AM	17	30	14	61	2	240	24	266	135	66	1	202	22	134	68	224	753
08:45 AM	19	31	10	60	2	184	22	208	92	59	6	157	20	110	61	191	616
<b>Total</b>	<b>75</b>	<b>145</b>	<b>50</b>	<b>270</b>	<b>8</b>	<b>900</b>	<b>91</b>	<b>999</b>	<b>525</b>	<b>326</b>	<b>11</b>	<b>862</b>	<b>98</b>	<b>479</b>	<b>275</b>	<b>852</b>	<b>2983</b>
<b>Grand Total</b>	<b>162</b>	<b>329</b>	<b>116</b>	<b>607</b>	<b>20</b>	<b>2068</b>	<b>176</b>	<b>2264</b>	<b>1115</b>	<b>685</b>	<b>20</b>	<b>1820</b>	<b>189</b>	<b>959</b>	<b>691</b>	<b>1839</b>	<b>6530</b>
Apprch %	26.7	54.2	19.1		0.9	91.3	7.8		61.3	37.6	1.1		10.3	52.1	37.6		
Total %	2.5	5	1.8	9.3	0.3	31.7	2.7	34.7	17.1	10.5	0.3	27.9	2.9	14.7	10.6	28.2	
Passenger Vehicles	159	304	114	577	18	2037	170	2225	1041	646	16	1703	186	931	589	1706	6211
% Passenger Vehicles	98.1	92.4	98.3	95.1	90	98.5	96.6	98.3	93.4	94.3	80	93.6	98.4	97.1	85.2	92.8	95.1
Large 2 Axle Vehicles	3	10	0	13	2	17	6	25	14	14	3	31	2	24	26	52	121
% Large 2 Axle Vehicles	1.9	3	0	2.1	10	0.8	3.4	1.1	1.3	2	15	1.7	1.1	2.5	3.8	2.8	1.9
3 Axle Vehicles	0	4	2	6	0	5	0	5	19	7	1	27	1	0	29	30	68
% 3 Axle Vehicles	0	1.2	1.7	1	0	0.2	0	0.2	1.7	1	5	1.5	0.5	0	4.2	1.6	1
4+ Axle Trucks	0	11	0	11	0	9	0	9	41	18	0	59	0	4	47	51	130
% 4+ Axle Trucks	0	3.3	0	1.8	0	0.4	0	0.4	3.7	2.6	0	3.2	0	0.4	6.8	2.8	2

Start Time	Heacock Street Southbound				Cactus Avenue Westbound				Heacock Street Northbound				Cactus Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	22	<b>60</b>	19	<b>101</b>	3	259	24	286	155	97	0	252	11	100	<b>106</b>	217	856
07:30 AM	26	45	<b>23</b>	94	3	295	22	320	120	84	0	204	27	<b>166</b>	<b>103</b>	<b>296</b>	914
07:45 AM	<b>29</b>	37	17	83	<b>5</b>	<b>312</b>	22	<b>339</b>	142	111	<b>7</b>	260	35	122	93	250	<b>932</b>
08:00 AM	20	51	15	86	2	243	<b>28</b>	273	<b>164</b>	<b>129</b>	2	<b>295</b>	<b>36</b>	109	89	234	888
Total Volume	97	193	74	364	13	1109	96	1218	581	421	9	1011	109	497	391	997	3590
% App. Total	26.6	53	20.3		1.1	91.1	7.9		57.5	41.6	0.9		10.9	49.8	39.2		
PHF	.836	.804	.804	.901	.650	.889	.857	.898	.886	.816	.321	.857	.757	.748	.922	.842	.963

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cactus Avenue  
 Weather: Clear

File Name : 06\_MRV\_Heacock\_Cactus AM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:15 AM				07:00 AM				07:15 AM				07:15 AM			
+0 mins.	22	<b>60</b>	19	<b>101</b>	1	302	17	320	155	97	0	252	11	100	<b>106</b>	217
+15 mins.	26	45	<b>23</b>	94	3	259	<b>24</b>	286	120	84	0	204	27	<b>166</b>	103	<b>296</b>
+30 mins.	<b>29</b>	37	17	83	3	295	22	320	142	111	<b>7</b>	260	35	122	93	250
+45 mins.	20	51	15	86	<b>5</b>	<b>312</b>	22	<b>339</b>	<b>164</b>	<b>129</b>	2	<b>295</b>	<b>36</b>	109	89	234
Total Volume	97	193	74	364	12	1168	85	1265	581	421	9	1011	109	497	391	997
% App. Total	26.6	53	20.3		0.9	92.3	6.7		57.5	41.6	0.9		10.9	49.8	39.2	
PHF	.836	.804	.804	.901	.600	.936	.885	.933	.886	.816	.321	.857	.757	.748	.922	.842



City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cactus Avenue  
 Weather: Clear

File Name : 06\_MRV\_Heacock\_Cactus AM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
 Page No : 1

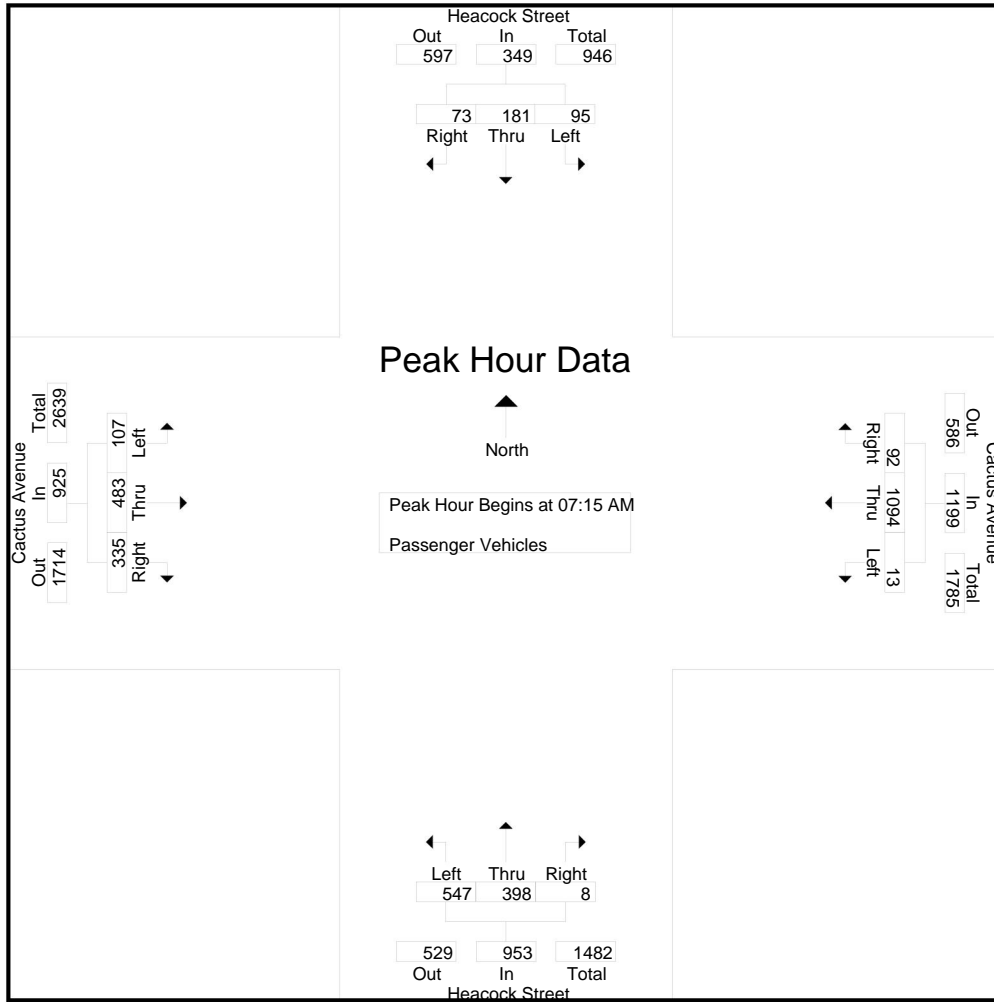
Groups Printed- Passenger Vehicles

Start Time	Heacock Street Southbound				Cactus Avenue Westbound				Heacock Street Northbound				Cactus Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	9	37	7	53	0	297	17	314	162	64	1	227	18	89	100	207	801
07:15 AM	21	57	19	97	3	256	24	283	151	90	0	241	11	98	88	197	818
07:30 AM	25	43	23	91	3	290	21	314	109	79	0	188	25	159	90	274	867
07:45 AM	29	34	16	79	5	309	20	334	136	105	6	247	35	121	86	242	902
Total	84	171	65	320	11	1152	82	1245	558	338	7	903	89	467	364	920	3388
08:00 AM	20	47	15	82	2	239	27	268	151	124	2	277	36	105	71	212	839
08:15 AM	19	31	11	61	2	232	17	251	128	66	1	195	19	119	47	185	692
08:30 AM	17	29	13	59	1	235	23	259	123	63	1	187	22	133	54	209	714
08:45 AM	19	26	10	55	2	179	21	202	81	55	5	141	20	107	53	180	578
Total	75	133	49	257	7	885	88	980	483	308	9	800	97	464	225	786	2823
Grand Total	159	304	114	577	18	2037	170	2225	1041	646	16	1703	186	931	589	1706	6211
Apprch %	27.6	52.7	19.8		0.8	91.6	7.6		61.1	37.9	0.9		10.9	54.6	34.5		
Total %	2.6	4.9	1.8	9.3	0.3	32.8	2.7	35.8	16.8	10.4	0.3	27.4	3	15	9.5	27.5	

Start Time	Heacock Street Southbound				Cactus Avenue Westbound				Heacock Street Northbound				Cactus Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	21	<b>57</b>	19	<b>97</b>	3	256	24	283	<b>151</b>	90	0	241	11	98	88	197	818
07:30 AM	25	43	<b>23</b>	91	3	290	21	314	109	79	0	188	25	<b>159</b>	<b>90</b>	<b>274</b>	867
07:45 AM	<b>29</b>	34	16	79	<b>5</b>	<b>309</b>	20	<b>334</b>	136	105	<b>6</b>	247	35	121	86	242	<b>902</b>
08:00 AM	20	47	15	82	2	239	<b>27</b>	268	151	<b>124</b>	2	<b>277</b>	<b>36</b>	105	71	212	839
Total Volume	95	181	73	349	13	1094	92	1199	547	398	8	953	107	483	335	925	3426
% App. Total	27.2	51.9	20.9		1.1	91.2	7.7		57.4	41.8	0.8		11.6	52.2	36.2		
PHF	.819	.794	.793	.899	.650	.885	.852	.897	.906	.802	.333	.860	.743	.759	.931	.844	.950

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cactus Avenue  
 Weather: Clear

File Name : 06\_MRV\_Heacock\_Cactus AM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
 Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	21	<b>57</b>	19	<b>97</b>	3	256	24	283	<b>151</b>	90	0	241	11	98	88	197
+15 mins.	25	43	<b>23</b>	91	3	290	21	314	109	79	0	188	25	<b>159</b>	<b>90</b>	<b>274</b>
+30 mins.	<b>29</b>	34	16	79	<b>5</b>	<b>309</b>	20	<b>334</b>	136	105	<b>6</b>	247	35	121	86	242
+45 mins.	20	47	15	82	2	239	<b>27</b>	268	151	<b>124</b>	2	<b>277</b>	<b>36</b>	105	71	212
Total Volume	95	181	73	349	13	1094	92	1199	547	398	8	953	107	483	335	925
% App. Total	27.2	51.9	20.9		1.1	91.2	7.7		57.4	41.8	0.8		11.6	52.2	36.2	
PHF	.819	.794	.793	.899	.650	.885	.852	.897	.906	.802	.333	.860	.743	.759	.931	.844

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cactus Avenue  
 Weather: Clear

File Name : 06\_MRV\_Heacock\_Cactus AM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
 Page No : 1

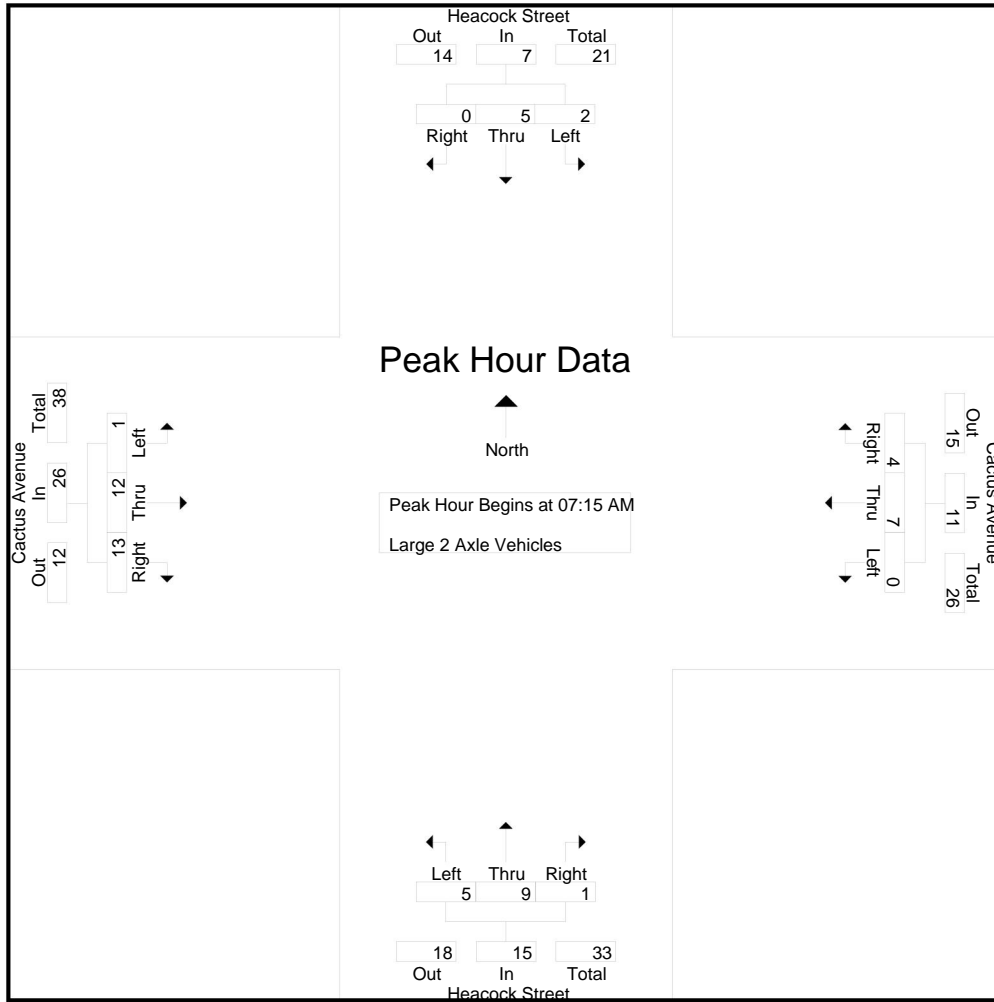
Groups Printed- Large 2 Axle Vehicles

Start Time	Heacock Street Southbound				Cactus Avenue Westbound				Heacock Street Northbound				Cactus Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	1	2	0	3	1	3	0	4	1	2	0	3	0	2	3	5	15
07:15 AM	1	1	0	2	0	0	0	0	1	4	0	5	0	1	4	5	12
07:30 AM	1	1	0	2	0	2	1	3	3	1	0	4	1	6	2	9	18
07:45 AM	0	1	0	1	0	1	2	3	1	1	1	3	0	1	2	3	10
<b>Total</b>	<b>3</b>	<b>5</b>	<b>0</b>	<b>8</b>	<b>1</b>	<b>6</b>	<b>3</b>	<b>10</b>	<b>6</b>	<b>8</b>	<b>1</b>	<b>15</b>	<b>1</b>	<b>10</b>	<b>11</b>	<b>22</b>	<b>55</b>
08:00 AM	0	2	0	2	0	4	1	5	0	3	0	3	0	4	5	9	19
08:15 AM	0	1	0	1	0	1	0	1	4	1	1	6	1	6	2	9	17
08:30 AM	0	0	0	0	1	2	1	4	1	1	0	2	0	1	6	7	13
08:45 AM	0	2	0	2	0	4	1	5	3	1	1	5	0	3	2	5	17
<b>Total</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>5</b>	<b>1</b>	<b>11</b>	<b>3</b>	<b>15</b>	<b>8</b>	<b>6</b>	<b>2</b>	<b>16</b>	<b>1</b>	<b>14</b>	<b>15</b>	<b>30</b>	<b>66</b>
<b>Grand Total</b>	<b>3</b>	<b>10</b>	<b>0</b>	<b>13</b>	<b>2</b>	<b>17</b>	<b>6</b>	<b>25</b>	<b>14</b>	<b>14</b>	<b>3</b>	<b>31</b>	<b>2</b>	<b>24</b>	<b>26</b>	<b>52</b>	<b>121</b>
Apprch %	23.1	76.9	0		8	68	24		45.2	45.2	9.7		3.8	46.2	50		
Total %	2.5	8.3	0	10.7	1.7	14	5	20.7	11.6	11.6	2.5	25.6	1.7	19.8	21.5	43	

Start Time	Heacock Street Southbound				Cactus Avenue Westbound				Heacock Street Northbound				Cactus Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	1	1	0	2	0	0	0	0	1	4	0	5	0	1	4	5	12
07:30 AM	1	1	0	2	0	2	1	3	3	1	0	4	1	6	2	9	18
07:45 AM	0	1	0	1	0	1	2	3	1	1	1	3	0	1	2	3	10
08:00 AM	0	2	0	2	0	4	1	5	0	3	0	3	0	4	5	9	19
Total Volume	2	5	0	7	0	7	4	11	5	9	1	15	1	12	13	26	59
% App. Total	28.6	71.4	0		0	63.6	36.4		33.3	60	6.7		3.8	46.2	50		
PHF	.500	.625	.000	.875	.000	.438	.500	.550	.417	.563	.250	.750	.250	.500	.650	.722	.776

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cactus Avenue  
 Weather: Clear

File Name : 06\_MRV\_Heacock\_Cactus AM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
 Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	1	1	0	2	0	0	0	0	1	4	0	5	0	1	4	5
+15 mins.	1	1	0	2	0	2	1	3	3	1	0	4	1	6	2	9
+30 mins.	0	1	0	1	0	1	2	3	1	1	1	3	0	1	2	3
+45 mins.	0	2	0	2	0	4	1	5	0	3	0	3	0	4	5	9
Total Volume	2	5	0	7	0	7	4	11	5	9	1	15	1	12	13	26
% App. Total	28.6	71.4	0	0	63.6	36.4	0	0	33.3	60	6.7	0	3.8	46.2	50	0
PHF	.500	.625	.000	.875	.000	.438	.500	.550	.417	.563	.250	.750	.250	.500	.650	.722

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cactus Avenue  
 Weather: Clear

File Name : 06\_MRV\_Heacock\_Cactus AM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
 Page No : 1

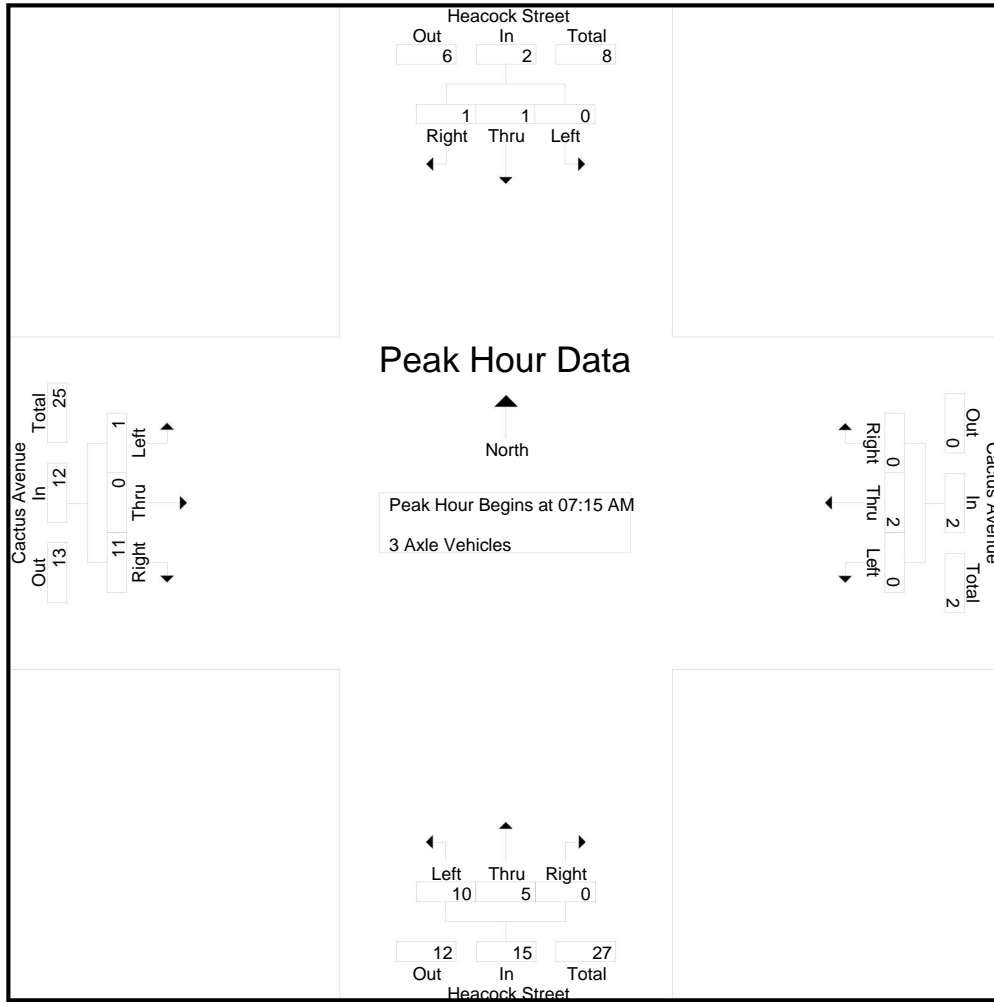
Groups Printed- 3 Axle Vehicles

Start Time	Heacock Street Southbound				Cactus Avenue Westbound				Heacock Street Northbound				Cactus Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	1	0	1	0	1	0	1	3	0	1	4	0	0	7	7	13
07:15 AM	0	0	0	0	0	1	0	1	1	1	0	2	0	0	5	5	8
07:30 AM	0	0	0	0	0	0	0	0	2	1	0	3	1	0	3	4	7
07:45 AM	0	0	1	1	0	1	0	1	3	3	0	6	0	0	0	0	8
Total	0	1	1	2	0	3	0	3	9	5	1	15	1	0	15	16	36
08:00 AM	0	1	0	1	0	0	0	0	4	0	0	4	0	0	3	3	8
08:15 AM	0	0	0	0	0	0	0	0	1	1	0	2	0	0	4	4	6
08:30 AM	0	0	1	1	0	2	0	2	2	0	0	2	0	0	2	2	7
08:45 AM	0	2	0	2	0	0	0	0	3	1	0	4	0	0	5	5	11
Total	0	3	1	4	0	2	0	2	10	2	0	12	0	0	14	14	32
Grand Total	0	4	2	6	0	5	0	5	19	7	1	27	1	0	29	30	68
Apprch %	0	66.7	33.3		0	100	0		70.4	25.9	3.7		3.3	0	96.7		
Total %	0	5.9	2.9	8.8	0	7.4	0	7.4	27.9	10.3	1.5	39.7	1.5	0	42.6	44.1	

Start Time	Heacock Street Southbound				Cactus Avenue Westbound				Heacock Street Northbound				Cactus Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	1	0	1	1	1	0	2	0	0	5	5	8
07:30 AM	0	0	0	0	0	0	0	0	2	1	0	3	1	0	3	4	7
07:45 AM	0	0	1	1	0	1	0	1	3	3	0	6	0	0	0	0	8
08:00 AM	0	1	0	1	0	0	0	0	4	0	0	4	0	0	3	3	8
Total Volume	0	1	1	2	0	2	0	2	10	5	0	15	1	0	11	12	31
% App. Total	0	50	50		0	100	0		66.7	33.3	0		8.3	0	91.7		
PHF	.000	.250	.250	.500	.000	.500	.000	.500	.625	.417	.000	.625	.250	.000	.550	.600	.969

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cactus Avenue  
 Weather: Clear

File Name : 06\_MRV\_Heacock\_Cactus AM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
 Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	1	0	1	1	1	0	2	0	0	5	5
+15 mins.	0	0	0	0	0	0	0	0	2	1	0	3	1	0	3	4
+30 mins.	0	0	1	1	0	1	0	1	3	3	0	6	0	0	0	0
+45 mins.	0	1	0	1	0	0	0	0	4	0	0	4	0	0	3	3
Total Volume	0	1	1	2	0	2	0	2	10	5	0	15	1	0	11	12
% App. Total	0	50	50		0	100	0		66.7	33.3	0		8.3	0	91.7	
PHF	.000	.250	.250	.500	.000	.500	.000	.500	.625	.417	.000	.625	.250	.000	.550	.600

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cactus Avenue  
 Weather: Clear

File Name : 06\_MRV\_Heacock\_Cactus AM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
 Page No : 1

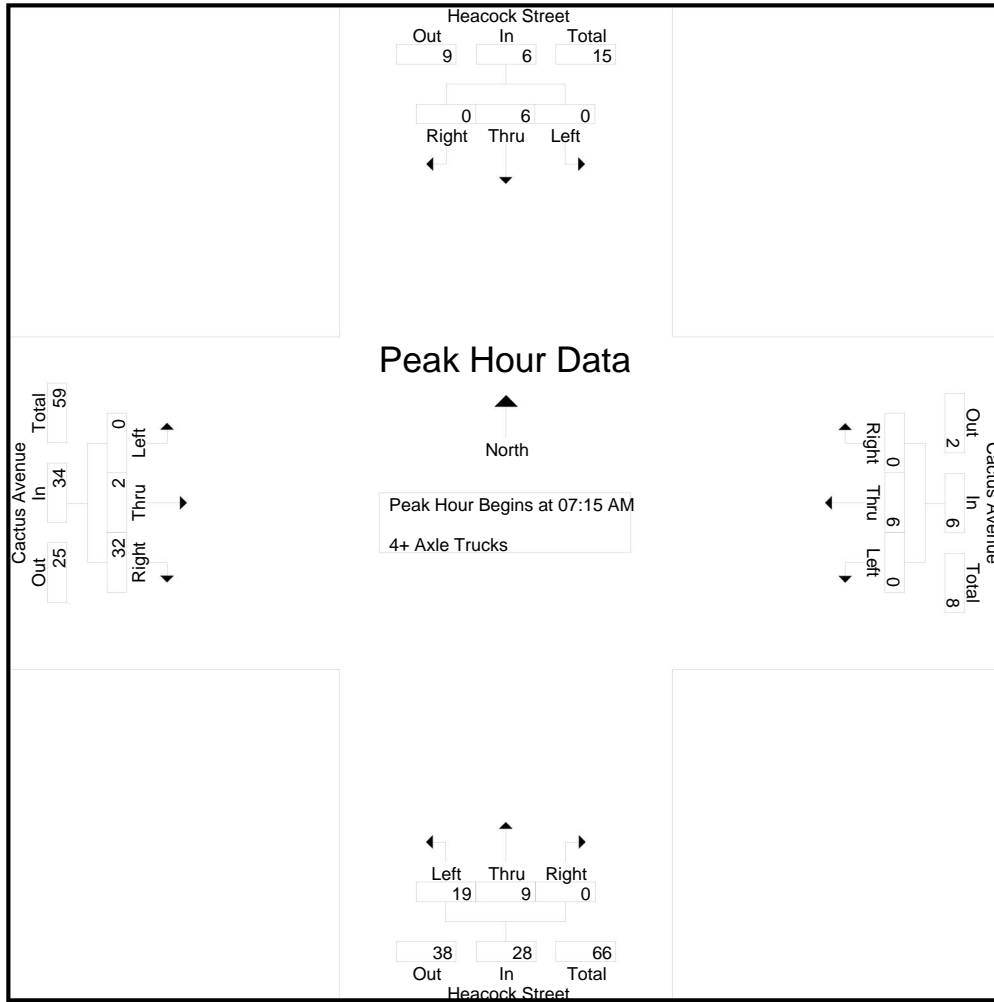
Groups Printed- 4+ Axle Trucks

Start Time	Heacock Street Southbound				Cactus Avenue Westbound				Heacock Street Northbound				Cactus Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	2	0	2	0	1	0	1	7	1	0	8	0	1	4	5	16
07:15 AM	0	2	0	2	0	2	0	2	2	2	0	4	0	1	9	10	18
07:30 AM	0	1	0	1	0	3	0	3	6	3	0	9	0	1	8	9	22
07:45 AM	0	2	0	2	0	1	0	1	2	2	0	4	0	0	5	5	12
Total	0	7	0	7	0	7	0	7	17	8	0	25	0	3	26	29	68
08:00 AM	0	1	0	1	0	0	0	0	9	2	0	11	0	0	10	10	22
08:15 AM	0	1	0	1	0	0	0	0	1	4	0	5	0	1	4	5	11
08:30 AM	0	1	0	1	0	1	0	1	9	2	0	11	0	0	6	6	19
08:45 AM	0	1	0	1	0	1	0	1	5	2	0	7	0	0	1	1	10
Total	0	4	0	4	0	2	0	2	24	10	0	34	0	1	21	22	62
Grand Total	0	11	0	11	0	9	0	9	41	18	0	59	0	4	47	51	130
Apprch %	0	100	0		0	100	0		69.5	30.5	0		0	7.8	92.2		
Total %	0	8.5	0	8.5	0	6.9	0	6.9	31.5	13.8	0	45.4	0	3.1	36.2	39.2	

Start Time	Heacock Street Southbound				Cactus Avenue Westbound				Heacock Street Northbound				Cactus Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	2	0	2	0	2	0	2	2	2	0	4	0	1	9	10	18
07:30 AM	0	1	0	1	0	3	0	3	6	3	0	9	0	1	8	9	22
07:45 AM	0	2	0	2	0	1	0	1	2	2	0	4	0	0	5	5	12
08:00 AM	0	1	0	1	0	0	0	0	9	2	0	11	0	0	10	10	22
Total Volume	0	6	0	6	0	6	0	6	19	9	0	28	0	2	32	34	74
% App. Total	0	100	0		0	100	0		67.9	32.1	0		0	5.9	94.1		
PHF	.000	.750	.000	.750	.000	.500	.000	.500	.528	.750	.000	.636	.000	.500	.800	.850	.841

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cactus Avenue  
 Weather: Clear

File Name : 06\_MRV\_Heacock\_Cactus AM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
 Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	2	0	2	0	2	0	2	2	2	0	4	0	1	9	10
+15 mins.	0	1	0	1	0	3	0	3	6	3	0	9	0	1	8	9
+30 mins.	0	2	0	2	0	1	0	1	2	2	0	4	0	0	5	5
+45 mins.	0	1	0	1	0	0	0	0	9	2	0	11	0	0	10	10
Total Volume	0	6	0	6	0	6	0	6	19	9	0	28	0	2	32	34
% App. Total	0	100	0	0	0	100	0	0	67.9	32.1	0	0	0	5.9	94.1	0
PHF	.000	.750	.000	.750	.000	.500	.000	.500	.528	.750	.000	.636	.000	.500	.800	.850



City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cactus Avenue  
 Weather: Clear

File Name : 06\_MRV\_Heacock\_Cactus PM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
 Page No : 1

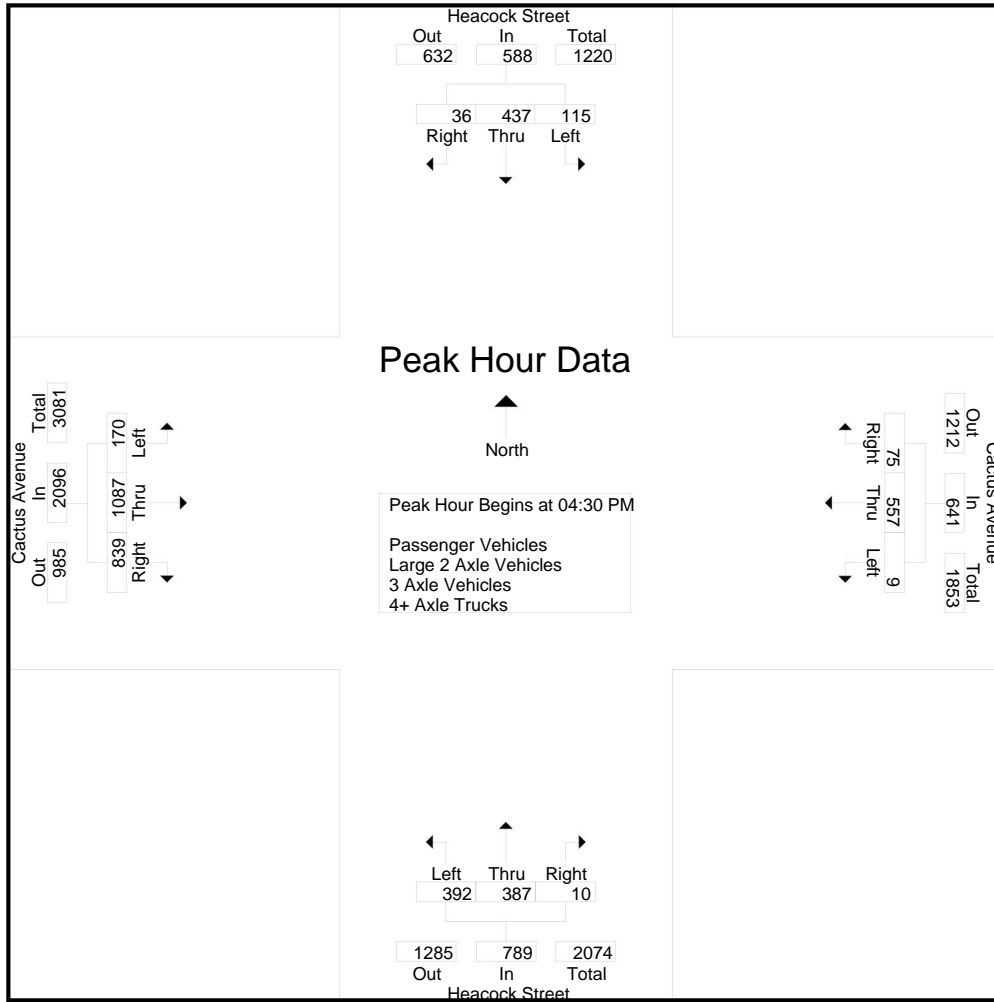
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Heacock Street Southbound				Cactus Avenue Westbound				Heacock Street Northbound				Cactus Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	25	98	12	135	4	184	29	217	113	90	3	206	36	227	199	462	1020
04:15 PM	21	95	14	130	4	145	14	163	69	98	2	169	36	228	201	465	927
04:30 PM	28	118	8	154	1	139	17	157	124	108	2	234	46	267	211	524	1069
04:45 PM	25	121	11	157	4	149	25	178	109	122	3	234	43	248	190	481	1050
<b>Total</b>	<b>99</b>	<b>432</b>	<b>45</b>	<b>576</b>	<b>13</b>	<b>617</b>	<b>85</b>	<b>715</b>	<b>415</b>	<b>418</b>	<b>10</b>	<b>843</b>	<b>161</b>	<b>970</b>	<b>801</b>	<b>1932</b>	<b>4066</b>
05:00 PM	35	94	13	142	3	130	13	146	75	81	2	158	34	267	212	513	959
05:15 PM	27	104	4	135	1	139	20	160	84	76	3	163	47	305	226	578	1036
05:30 PM	26	93	12	131	4	152	14	170	106	92	0	198	26	278	214	518	1017
05:45 PM	20	89	9	118	2	130	14	146	86	79	5	170	47	285	216	548	982
<b>Total</b>	<b>108</b>	<b>380</b>	<b>38</b>	<b>526</b>	<b>10</b>	<b>551</b>	<b>61</b>	<b>622</b>	<b>351</b>	<b>328</b>	<b>10</b>	<b>689</b>	<b>154</b>	<b>1135</b>	<b>868</b>	<b>2157</b>	<b>3994</b>
<b>Grand Total</b>	<b>207</b>	<b>812</b>	<b>83</b>	<b>1102</b>	<b>23</b>	<b>1168</b>	<b>146</b>	<b>1337</b>	<b>766</b>	<b>746</b>	<b>20</b>	<b>1532</b>	<b>315</b>	<b>2105</b>	<b>1669</b>	<b>4089</b>	<b>8060</b>
Apprch %	18.8	73.7	7.5		1.7	87.4	10.9		50	48.7	1.3		7.7	51.5	40.8		
Total %	2.6	10.1	1	13.7	0.3	14.5	1.8	16.6	9.5	9.3	0.2	19	3.9	26.1	20.7	50.7	
Passenger Vehicles	207	784	82	1073	22	1149	143	1314	707	725	19	1451	315	2081	1576	3972	7810
% Passenger Vehicles	100	96.6	98.8	97.4	95.7	98.4	97.9	98.3	92.3	97.2	95	94.7	100	98.9	94.4	97.1	96.9
Large 2 Axle Vehicles	0	8	0	8	0	16	3	19	7	3	1	11	0	20	26	46	84
% Large 2 Axle Vehicles	0	1	0	0.7	0	1.4	2.1	1.4	0.9	0.4	5	0.7	0	1	1.6	1.1	1
3 Axle Vehicles	0	4	0	4	0	0	0	0	4	8	0	12	0	0	18	18	34
% 3 Axle Vehicles	0	0.5	0	0.4	0	0	0	0	0.5	1.1	0	0.8	0	0	1.1	0.4	0.4
4+ Axle Trucks	0	16	1	17	1	3	0	4	48	10	0	58	0	4	49	53	132
% 4+ Axle Trucks	0	2	1.2	1.5	4.3	0.3	0	0.3	6.3	1.3	0	3.8	0	0.2	2.9	1.3	1.6

Start Time	Heacock Street Southbound				Cactus Avenue Westbound				Heacock Street Northbound				Cactus Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	28	118	8	154	1	139	17	157	<b>124</b>	108	2	<b>234</b>	46	267	211	524	<b>1069</b>
04:45 PM	25	<b>121</b>	11	<b>157</b>	<b>4</b>	<b>149</b>	<b>25</b>	<b>178</b>	109	<b>122</b>	<b>3</b>	<b>234</b>	43	248	190	481	1050
05:00 PM	<b>35</b>	94	<b>13</b>	142	3	130	13	146	75	81	2	158	34	267	212	513	959
05:15 PM	27	104	4	135	1	139	20	160	84	76	3	163	<b>47</b>	<b>305</b>	<b>226</b>	<b>578</b>	1036
Total Volume	115	437	36	588	9	557	75	641	392	387	10	789	170	1087	839	2096	4114
% App. Total	19.6	74.3	6.1		1.4	86.9	11.7		49.7	49	1.3		8.1	51.9	40		
PHF	.821	.903	.692	.936	.563	.935	.750	.900	.790	.793	.833	.843	.904	.891	.928	.907	.962

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cactus Avenue  
 Weather: Clear

File Name : 06\_MRV\_Heacock\_Cactus PM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:30 PM				04:00 PM				04:00 PM				05:00 PM			
+0 mins.	28	118	8	154	<b>4</b>	<b>184</b>	<b>29</b>	<b>217</b>	113	90	<b>3</b>	206	34	267	212	513
+15 mins.	25	<b>121</b>	11	<b>157</b>	4	145	14	163	69	98	2	169	<b>47</b>	<b>305</b>	<b>226</b>	<b>578</b>
+30 mins.	<b>35</b>	94	<b>13</b>	142	1	139	17	157	<b>124</b>	108	2	<b>234</b>	26	278	214	518
+45 mins.	27	104	4	135	4	149	25	178	109	<b>122</b>	3	234	47	285	216	548
Total Volume	115	437	36	588	13	617	85	715	415	418	10	843	154	1135	868	2157
% App. Total	19.6	74.3	6.1		1.8	86.3	11.9		49.2	49.6	1.2		7.1	52.6	40.2	
PHF	.821	.903	.692	.936	.813	.838	.733	.824	.837	.857	.833	.901	.819	.930	.960	.933

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cactus Avenue  
 Weather: Clear

File Name : 06\_MR\_V\_Heacock\_Cactus PM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
 Page No : 1

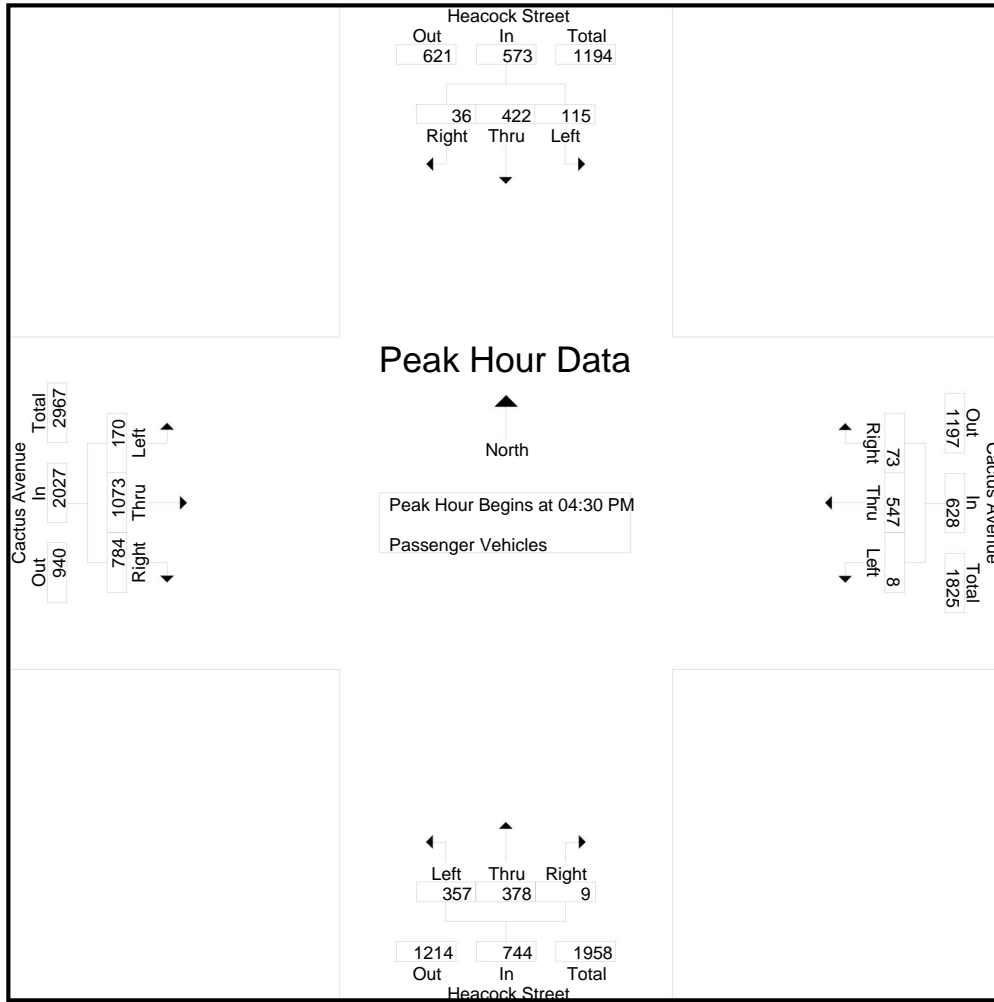
Groups Printed- Passenger Vehicles

Start Time	Heacock Street Southbound				Cactus Avenue Westbound				Heacock Street Northbound				Cactus Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	25	94	12	131	4	180	28	212	106	85	3	194	36	223	182	441	978
04:15 PM	21	92	13	126	4	145	14	163	65	93	2	160	36	225	192	453	902
04:30 PM	28	111	8	147	1	136	17	154	114	107	2	223	46	262	201	509	1033
04:45 PM	25	118	11	154	4	147	25	176	101	119	3	223	43	244	178	465	1018
Total	99	415	44	558	13	608	84	705	386	404	10	800	161	954	753	1868	3931
05:00 PM	35	90	13	138	2	129	12	143	65	78	2	145	34	265	198	497	923
05:15 PM	27	103	4	134	1	135	19	155	77	74	2	153	47	302	207	556	998
05:30 PM	26	90	12	128	4	148	14	166	98	90	0	188	26	277	209	512	994
05:45 PM	20	86	9	115	2	129	14	145	81	79	5	165	47	283	209	539	964
Total	108	369	38	515	9	541	59	609	321	321	9	651	154	1127	823	2104	3879
Grand Total	207	784	82	1073	22	1149	143	1314	707	725	19	1451	315	2081	1576	3972	7810
Apprch %	19.3	73.1	7.6		1.7	87.4	10.9		48.7	50	1.3		7.9	52.4	39.7		
Total %	2.7	10	1	13.7	0.3	14.7	1.8	16.8	9.1	9.3	0.2	18.6	4	26.6	20.2	50.9	

Start Time	Heacock Street Southbound				Cactus Avenue Westbound				Heacock Street Northbound				Cactus Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	28	111	8	147	1	136	17	154	<b>114</b>	107	2	<b>223</b>	46	262	201	509	<b>1033</b>
04:45 PM	25	<b>118</b>	11	<b>154</b>	<b>4</b>	<b>147</b>	<b>25</b>	<b>176</b>	101	<b>119</b>	<b>3</b>	223	43	244	178	465	1018
05:00 PM	<b>35</b>	90	<b>13</b>	138	2	129	12	143	65	78	2	145	34	265	198	497	923
05:15 PM	27	103	4	134	1	135	19	155	77	74	2	153	<b>47</b>	<b>302</b>	<b>207</b>	<b>556</b>	998
Total Volume	115	422	36	573	8	547	73	628	357	378	9	744	170	1073	784	2027	3972
% App. Total	20.1	73.6	6.3		1.3	87.1	11.6		48	50.8	1.2		8.4	52.9	38.7		
PHF	.821	.894	.692	.930	.500	.930	.730	.892	.783	.794	.750	.834	.904	.888	.947	.911	.961

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cactus Avenue  
 Weather: Clear

File Name : 06\_MRV\_Heacock\_Cactus PM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
 Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	28	111	8	147	1	136	17	154	114	107	2	223	46	262	201	509
+15 mins.	25	118	11	154	4	147	25	176	101	119	3	223	43	244	178	465
+30 mins.	35	90	13	138	2	129	12	143	65	78	2	145	34	265	198	497
+45 mins.	27	103	4	134	1	135	19	155	77	74	2	153	47	302	207	556
Total Volume	115	422	36	573	8	547	73	628	357	378	9	744	170	1073	784	2027
% App. Total	20.1	73.6	6.3		1.3	87.1	11.6		48	50.8	1.2		8.4	52.9	38.7	
PHF	.821	.894	.692	.930	.500	.930	.730	.892	.783	.794	.750	.834	.904	.888	.947	.911

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cactus Avenue  
 Weather: Clear

File Name : 06\_MRV\_Heacock\_Cactus PM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
 Page No : 1

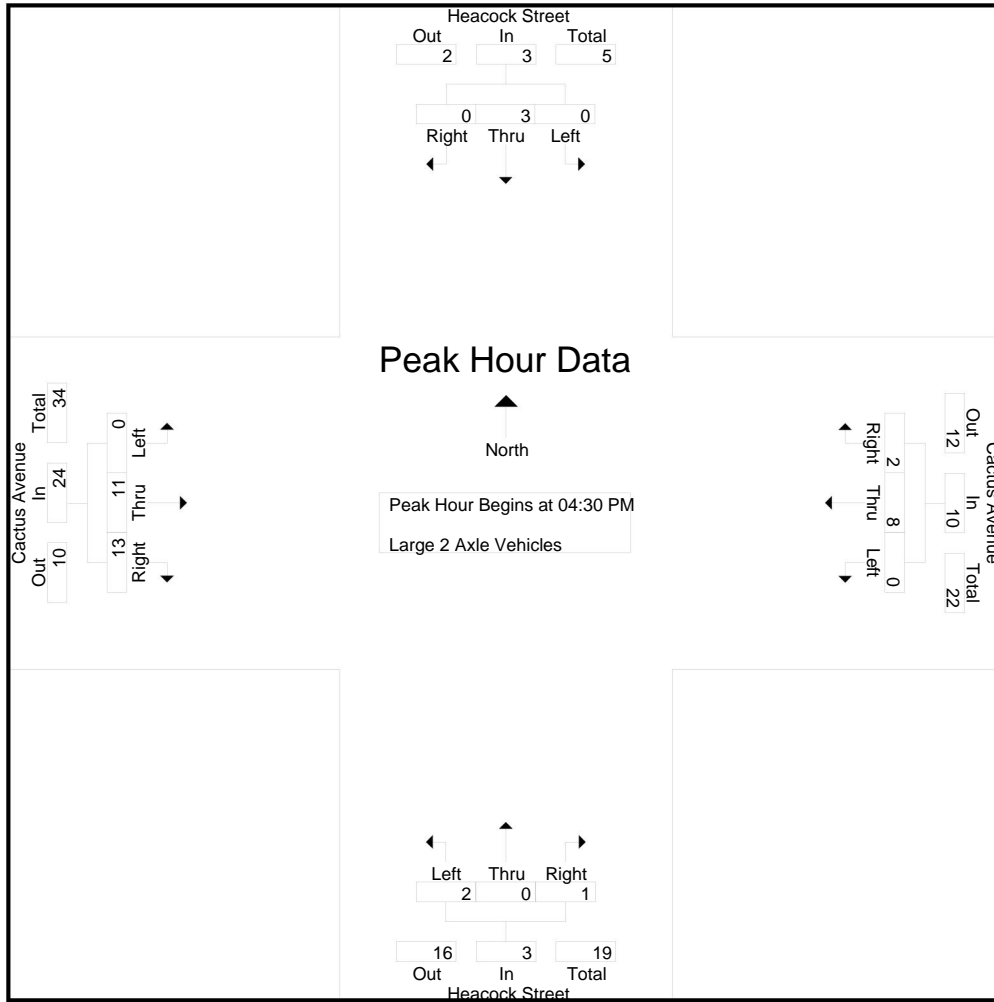
Groups Printed- Large 2 Axle Vehicles

Start Time	Heacock Street Southbound				Cactus Avenue Westbound				Heacock Street Northbound				Cactus Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	1	0	1	0	3	1	4	1	1	0	2	0	4	8	12	19
04:15 PM	0	2	0	2	0	0	0	0	0	1	0	1	0	2	4	6	9
04:30 PM	0	1	0	1	0	3	0	3	0	0	0	0	0	4	4	8	12
04:45 PM	0	1	0	1	0	2	0	2	0	0	0	0	0	4	4	8	11
Total	0	5	0	5	0	8	1	9	1	2	0	3	0	14	20	34	51
05:00 PM	0	0	0	0	0	0	1	1	1	0	0	1	0	2	2	4	6
05:15 PM	0	1	0	1	0	3	1	4	1	0	1	2	0	1	3	4	11
05:30 PM	0	0	0	0	0	4	0	4	4	1	0	5	0	1	0	1	10
05:45 PM	0	2	0	2	0	1	0	1	0	0	0	0	0	2	1	3	6
Total	0	3	0	3	0	8	2	10	6	1	1	8	0	6	6	12	33
Grand Total	0	8	0	8	0	16	3	19	7	3	1	11	0	20	26	46	84
Apprch %	0	100	0		0	84.2	15.8		63.6	27.3	9.1		0	43.5	56.5		
Total %	0	9.5	0	9.5	0	19	3.6	22.6	8.3	3.6	1.2	13.1	0	23.8	31	54.8	

Start Time	Heacock Street Southbound				Cactus Avenue Westbound				Heacock Street Northbound				Cactus Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	1	0	1	0	3	0	3	0	0	0	0	0	4	4	8	12
04:45 PM	0	1	0	1	0	2	0	2	0	0	0	0	0	4	4	8	11
05:00 PM	0	0	0	0	0	0	1	1	1	0	0	1	0	2	2	4	6
05:15 PM	0	1	0	1	0	3	1	4	1	0	1	2	0	1	3	4	11
Total Volume	0	3	0	3	0	8	2	10	2	0	1	3	0	11	13	24	40
% App. Total	0	100	0		0	80	20		66.7	0	33.3		0	45.8	54.2		
PHF	.000	.750	.000	.750	.000	.667	.500	.625	.500	.000	.250	.375	.000	.688	.813	.750	.833

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cactus Avenue  
 Weather: Clear

File Name : 06\_MRV\_Heacock\_Cactus PM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
 Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	1	0	1	0	3	0	3	0	0	0	0	0	4	4	8
+15 mins.	0	1	0	1	0	2	0	2	0	0	0	0	0	4	4	8
+30 mins.	0	0	0	0	0	0	1	1	1	0	0	1	0	2	2	4
+45 mins.	0	1	0	1	0	3	1	4	1	0	1	2	0	1	3	4
Total Volume	0	3	0	3	0	8	2	10	2	0	1	3	0	11	13	24
% App. Total	0	100	0	0	0	80	20	0	66.7	0	33.3	0	0	45.8	54.2	0
PHF	.000	.750	.000	.750	.000	.667	.500	.625	.500	.000	.250	.375	.000	.688	.813	.750

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cactus Avenue  
 Weather: Clear

File Name : 06\_MRV\_Heacock\_Cactus PM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
 Page No : 1

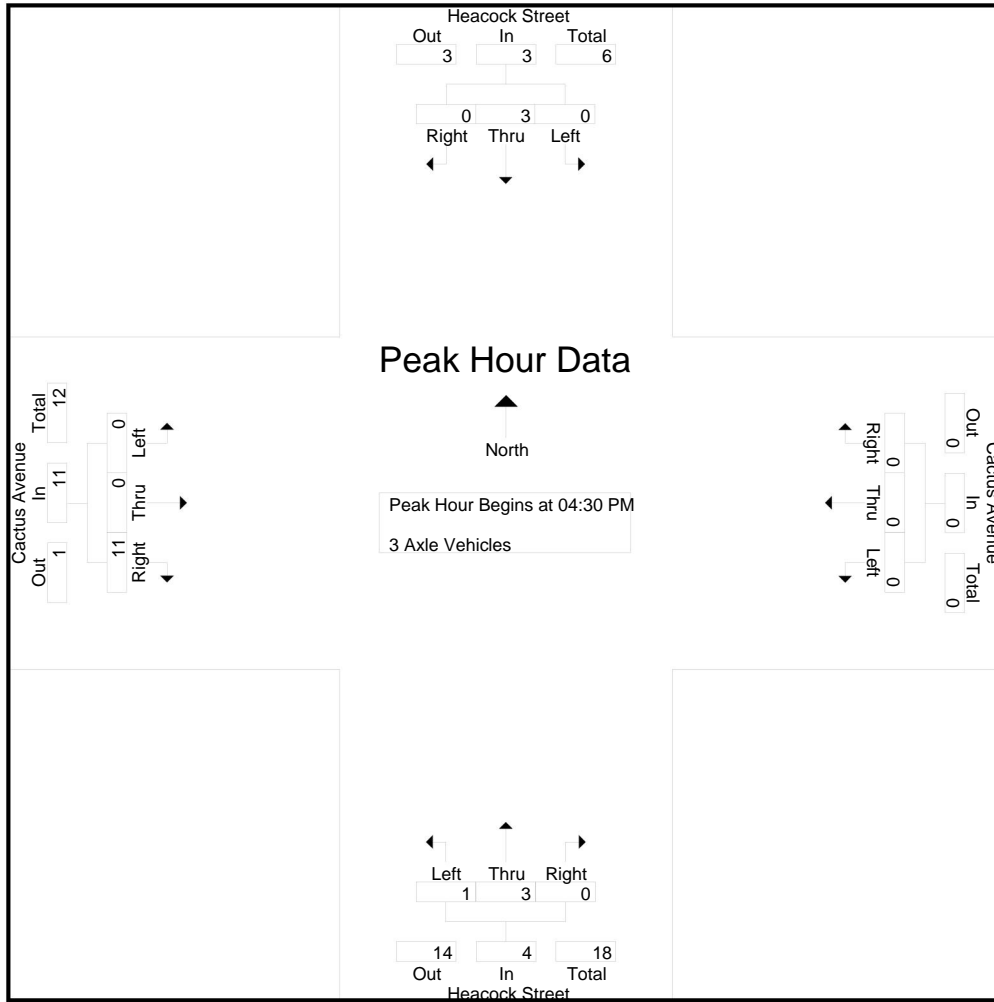
Groups Printed- 3 Axle Vehicles

Start Time	Heacock Street Southbound				Cactus Avenue Westbound				Heacock Street Northbound				Cactus Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	1	1	0	2	0	0	4	4	6
04:15 PM	0	0	0	0	0	0	0	0	1	3	0	4	0	0	0	0	4
04:30 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	1	1	3
04:45 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	2	2	4
Total	0	3	0	3	0	0	0	0	2	5	0	7	0	0	7	7	17
05:00 PM	0	0	0	0	0	0	0	0	1	1	0	2	0	0	4	4	6
05:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	4	4	5
05:30 PM	0	1	0	1	0	0	0	0	1	1	0	2	0	0	1	1	4
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2
Total	0	1	0	1	0	0	0	0	2	3	0	5	0	0	11	11	17
Grand Total	0	4	0	4	0	0	0	0	4	8	0	12	0	0	18	18	34
Apprch %	0	100	0		0	0	0		33.3	66.7	0		0	0	100		
Total %	0	11.8	0	11.8	0	0	0	0	11.8	23.5	0	35.3	0	0	52.9	52.9	

Start Time	Heacock Street Southbound				Cactus Avenue Westbound				Heacock Street Northbound				Cactus Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	1	1	3
04:45 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	2	2	4
05:00 PM	0	0	0	0	0	0	0	0	1	1	0	2	0	0	4	4	6
05:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	4	4	5
Total Volume	0	3	0	3	0	0	0	0	1	3	0	4	0	0	11	11	18
% App. Total	0	100	0		0	0	0		25	75	0		0	0	100		
PHF	.000	.375	.000	.375	.000	.000	.000	.000	.250	.750	.000	.500	.000	.000	.688	.688	.750

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cactus Avenue  
 Weather: Clear

File Name : 06\_MRV\_Heacock\_Cactus PM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
 Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM				
+0 mins.	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	1	1
+15 mins.	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	2	2
+30 mins.	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	4	4
+45 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	4	4
Total Volume	0	3	0	3	0	0	0	0	1	3	0	4	0	0	0	11	11
% App. Total	0	100	0	0	0	0	0	0	25	75	0	0	0	0	0	100	100
PHF	.000	.375	.000	.375	.000	.000	.000	.000	.250	.750	.000	.500	.000	.000	.688	.688	



City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cactus Avenue  
 Weather: Clear

File Name : 06\_MRV\_Heacock\_Cactus PM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
 Page No : 1

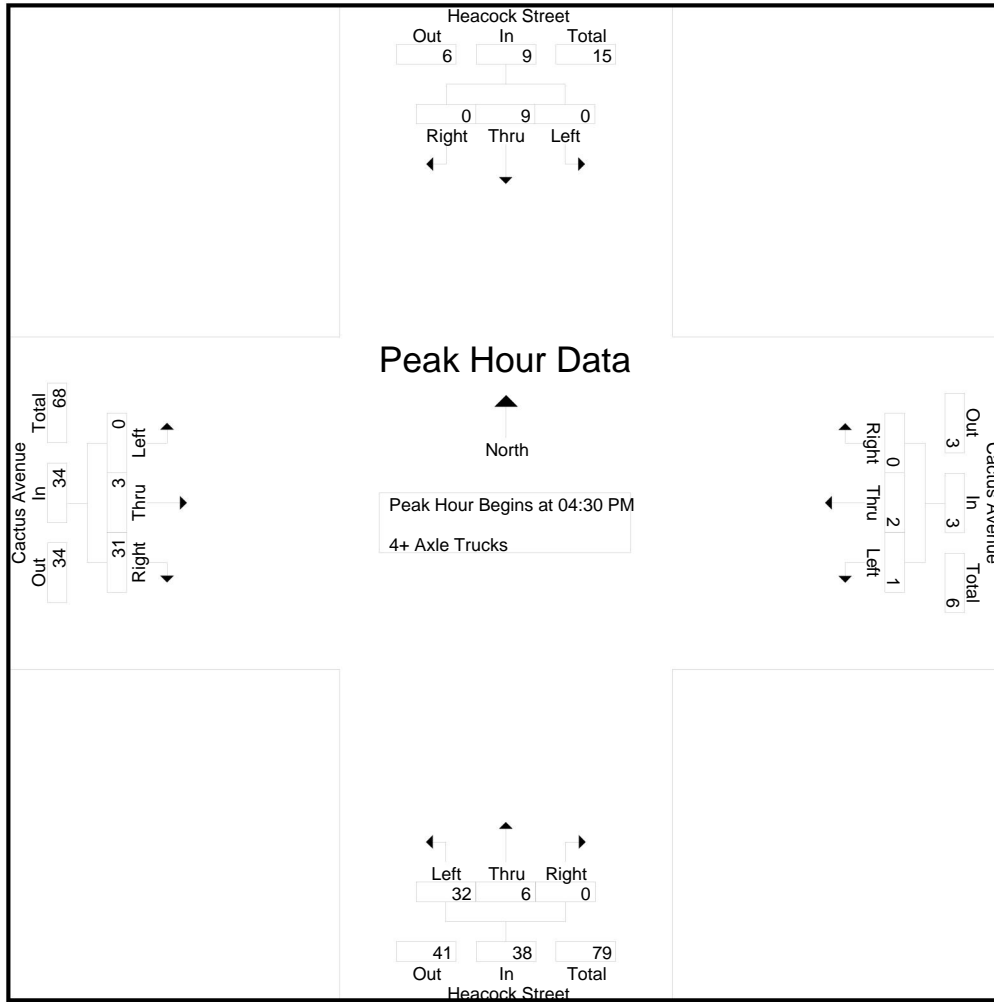
Groups Printed- 4+ Axle Trucks

Start Time	Heacock Street Southbound				Cactus Avenue Westbound				Heacock Street Northbound				Cactus Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	3	0	3	0	1	0	1	5	3	0	8	0	0	5	5	17
04:15 PM	0	1	1	2	0	0	0	0	3	1	0	4	0	1	5	6	12
04:30 PM	0	4	0	4	0	0	0	0	10	1	0	11	0	1	5	6	21
04:45 PM	0	1	0	1	0	0	0	0	8	2	0	10	0	0	6	6	17
Total	0	9	1	10	0	1	0	1	26	7	0	33	0	2	21	23	67
05:00 PM	0	4	0	4	1	1	0	2	8	2	0	10	0	0	8	8	24
05:15 PM	0	0	0	0	0	1	0	1	6	1	0	7	0	2	12	14	22
05:30 PM	0	2	0	2	0	0	0	0	3	0	0	3	0	0	4	4	9
05:45 PM	0	1	0	1	0	0	0	0	5	0	0	5	0	0	4	4	10
Total	0	7	0	7	1	2	0	3	22	3	0	25	0	2	28	30	65
Grand Total	0	16	1	17	1	3	0	4	48	10	0	58	0	4	49	53	132
Apprch %	0	94.1	5.9		25	75	0		82.8	17.2	0		0	7.5	92.5		
Total %	0	12.1	0.8	12.9	0.8	2.3	0	3	36.4	7.6	0	43.9	0	3	37.1	40.2	

Start Time	Heacock Street Southbound				Cactus Avenue Westbound				Heacock Street Northbound				Cactus Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	4	0	4	0	0	0	0	10	1	0	11	0	1	5	6	21
04:45 PM	0	1	0	1	0	0	0	0	8	2	0	10	0	0	6	6	17
05:00 PM	0	4	0	4	1	1	0	2	8	2	0	10	0	0	8	8	24
05:15 PM	0	0	0	0	0	1	0	1	6	1	0	7	0	2	12	14	22
Total Volume	0	9	0	9	1	2	0	3	32	6	0	38	0	3	31	34	84
% App. Total	0	100	0		33.3	66.7	0		84.2	15.8	0		0	8.8	91.2		
PHF	.000	.563	.000	.563	.250	.500	.000	.375	.800	.750	.000	.864	.000	.375	.646	.607	.875

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cactus Avenue  
 Weather: Clear

File Name : 06\_MRV\_Heacock\_Cactus PM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
 Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	4	0	4	0	0	0	0	10	1	0	11	0	1	5	6
+15 mins.	0	1	0	1	0	0	0	0	8	2	0	10	0	0	6	6
+30 mins.	0	4	0	4	1	1	0	2	8	2	0	10	0	0	8	8
+45 mins.	0	0	0	0	0	1	0	1	6	1	0	7	0	2	12	14
Total Volume	0	9	0	9	1	2	0	3	32	6	0	38	0	3	31	34
% App. Total	0	100	0		33.3	66.7	0		84.2	15.8	0		0	8.8	91.2	
PHF	.000	.563	.000	.563	.250	.500	.000	.375	.800	.750	.000	.864	.000	.375	.646	.607

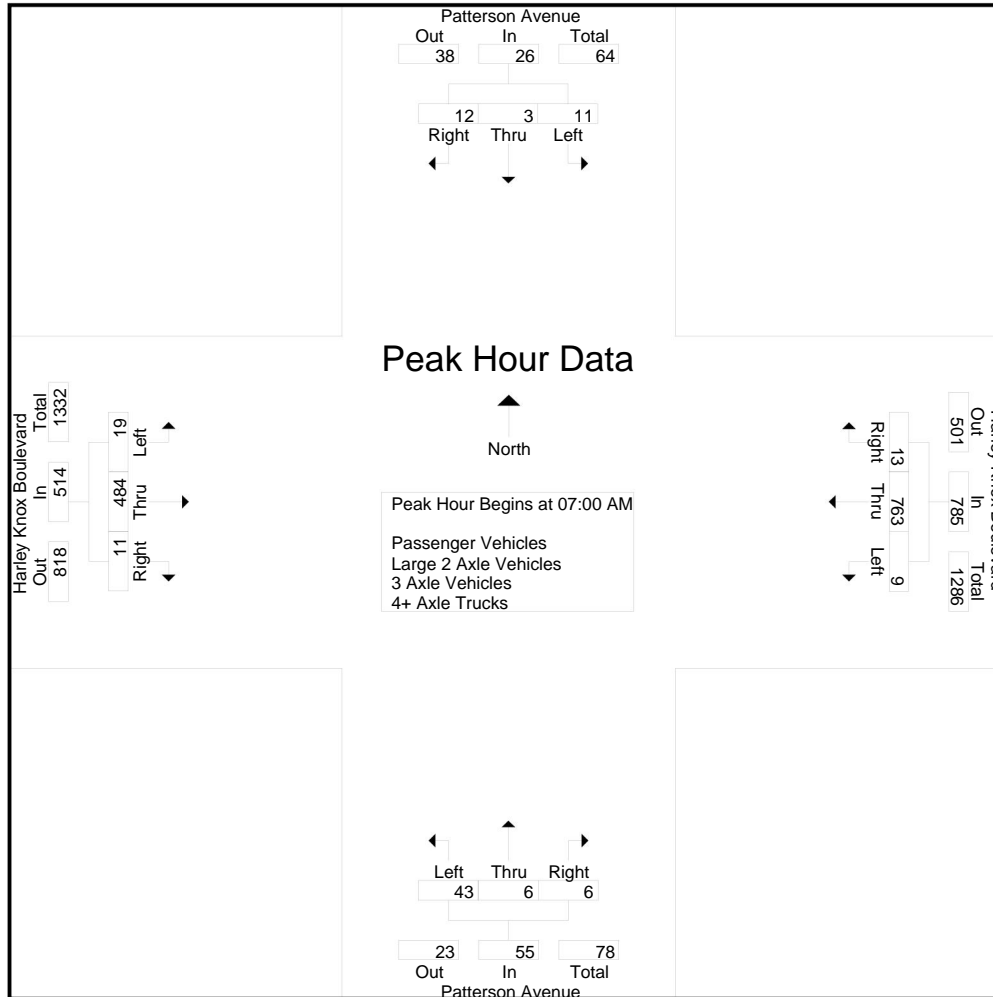
City of Perris  
 N/S: Patterson Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 04\_PER\_Patterson\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Patterson Avenue Southbound					Harley Knox Boulevard Westbound					Patterson Avenue Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	5	1	1	0	7	1	223	4	0	228	14	2	1	0	17	7	116	1	1	124	1	376	377
07:15 AM	1	1	2	0	4	1	202	3	0	206	12	1	1	0	14	1	112	5	0	118	0	342	342
07:30 AM	1	1	1	0	3	4	177	2	0	183	10	3	1	0	14	5	139	5	0	149	0	349	349
07:45 AM	4	0	8	3	12	3	161	4	0	168	7	0	3	2	10	6	117	0	0	123	5	313	318
<b>Total</b>	<b>11</b>	<b>3</b>	<b>12</b>	<b>3</b>	<b>26</b>	<b>9</b>	<b>763</b>	<b>13</b>	<b>0</b>	<b>785</b>	<b>43</b>	<b>6</b>	<b>6</b>	<b>2</b>	<b>55</b>	<b>19</b>	<b>484</b>	<b>11</b>	<b>1</b>	<b>514</b>	<b>6</b>	<b>1380</b>	<b>1386</b>
08:00 AM	0	2	3	1	5	1	125	5	0	131	8	1	0	0	9	7	98	0	0	105	1	250	251
08:15 AM	0	0	1	0	1	3	110	7	0	120	6	0	4	1	10	1	86	5	1	92	2	223	225
08:30 AM	7	0	3	0	10	2	78	4	0	84	6	0	1	1	7	1	88	6	0	95	1	196	197
08:45 AM	3	1	3	0	7	2	83	9	0	94	7	3	3	1	13	4	92	8	2	104	3	218	221
<b>Total</b>	<b>10</b>	<b>3</b>	<b>10</b>	<b>1</b>	<b>23</b>	<b>8</b>	<b>396</b>	<b>25</b>	<b>0</b>	<b>429</b>	<b>27</b>	<b>4</b>	<b>8</b>	<b>3</b>	<b>39</b>	<b>13</b>	<b>364</b>	<b>19</b>	<b>3</b>	<b>396</b>	<b>7</b>	<b>887</b>	<b>894</b>
<b>Grand Total</b>	<b>21</b>	<b>6</b>	<b>22</b>	<b>4</b>	<b>49</b>	<b>17</b>	<b>1159</b>	<b>38</b>	<b>0</b>	<b>1214</b>	<b>70</b>	<b>10</b>	<b>14</b>	<b>5</b>	<b>94</b>	<b>32</b>	<b>848</b>	<b>30</b>	<b>4</b>	<b>910</b>	<b>13</b>	<b>2267</b>	<b>2280</b>
Apprch %	42.9	12.2	44.9			1.4	95.5	3.1			74.5	10.6	14.9			3.5	93.2	3.3					
Total %	0.9	0.3	1		2.2	0.7	51.1	1.7		53.6	3.1	0.4	0.6		4.1	1.4	37.4	1.3		40.1	0.6	99.4	
Passenger Vehicles	8	2	10		22	4	1021	16		1041	52	6	5		64	21	683	24		729	0	0	1856
% Passenger Vehicles	38.1	33.3	45.5	50	41.5	23.5	88.1	42.1	0	85.7	74.3	60	35.7	20	64.6	65.6	80.5	80	25	79.8	0	0	81.4
Large 2 Axle Vehicles	3	2	2		9	3	36	3		42	3	3	4		11	5	45	4		55	0	0	117
% Large 2 Axle Vehicles	14.3	33.3	9.1	50	17	17.6	3.1	7.9	0	3.5	4.3	30	28.6	20	11.1	15.6	5.3	13.3	25	6	0	0	5.1
3 Axle Vehicles	0	2	1		3	3	36	2		41	6	0	0		6	0	33	1		35	0	0	85
% 3 Axle Vehicles	0	33.3	4.5	0	5.7	17.6	3.1	5.3	0	3.4	8.6	0	0	0	6.1	0	3.9	3.3	25	3.8	0	0	3.7
4+ Axle Trucks	10	0	9		19	7	66	17		90	9	1	5		18	6	87	1		95	0	0	222
% 4+ Axle Trucks	47.6	0	40.9	0	35.8	41.2	5.7	44.7	0	7.4	12.9	10	35.7	60	18.2	18.8	10.3	3.3	25	10.4	0	0	9.7

Start Time	Patterson Avenue Southbound				Harley Knox Boulevard Westbound				Patterson Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	5	1	1	7	1	223	4	228	14	2	1	17	7	116	1	124	376
07:15 AM	1	1	2	4	1	202	3	206	12	1	1	14	1	112	5	118	342
07:30 AM	1	1	1	3	4	177	2	183	10	3	1	14	5	139	5	149	349
07:45 AM	4	0	8	12	3	161	4	168	7	0	3	10	6	117	0	123	313
<b>Total Volume</b>	<b>11</b>	<b>3</b>	<b>12</b>	<b>26</b>	<b>9</b>	<b>763</b>	<b>13</b>	<b>785</b>	<b>43</b>	<b>6</b>	<b>6</b>	<b>55</b>	<b>19</b>	<b>484</b>	<b>11</b>	<b>514</b>	<b>1380</b>
<b>% App. Total</b>	<b>42.3</b>	<b>11.5</b>	<b>46.2</b>		<b>1.1</b>	<b>97.2</b>	<b>1.7</b>		<b>78.2</b>	<b>10.9</b>	<b>10.9</b>		<b>3.7</b>	<b>94.2</b>	<b>2.1</b>		
<b>PHF</b>	<b>.550</b>	<b>.750</b>	<b>.375</b>	<b>.542</b>	<b>.563</b>	<b>.855</b>	<b>.813</b>	<b>.861</b>	<b>.768</b>	<b>.500</b>	<b>.500</b>	<b>.809</b>	<b>.679</b>	<b>.871</b>	<b>.550</b>	<b>.862</b>	<b>.918</b>



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Patterson Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 04\_PER\_Patterson\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Patterson Avenue Southbound				Harley Knox Boulevard Westbound				Patterson Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:45 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	4	0	8	12	1	223	4	228	14	2	1	17	7	116	1	124	
+15 mins.	0	2	3	5	1	202	3	206	12	1	1	14	1	112	5	118	
+30 mins.	0	0	1	1	4	177	2	183	10	3	1	14	5	139	5	149	
+45 mins.	7	0	3	10	3	161	4	168	7	0	3	10	6	117	0	123	
Total Volume	11	2	15	28	9	763	13	785	43	6	6	55	19	484	11	514	
% App. Total	39.3	7.1	53.6		1.1	97.2	1.7		78.2	10.9	10.9		3.7	94.2	2.1		
PHF	.393	.250	.469	.583	.563	.855	.813	.861	.768	.500	.500	.809	.679	.871	.550	.862	

City of Perris  
 N/S: Patterson Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 04\_PER\_Patterson\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Passenger Vehicles

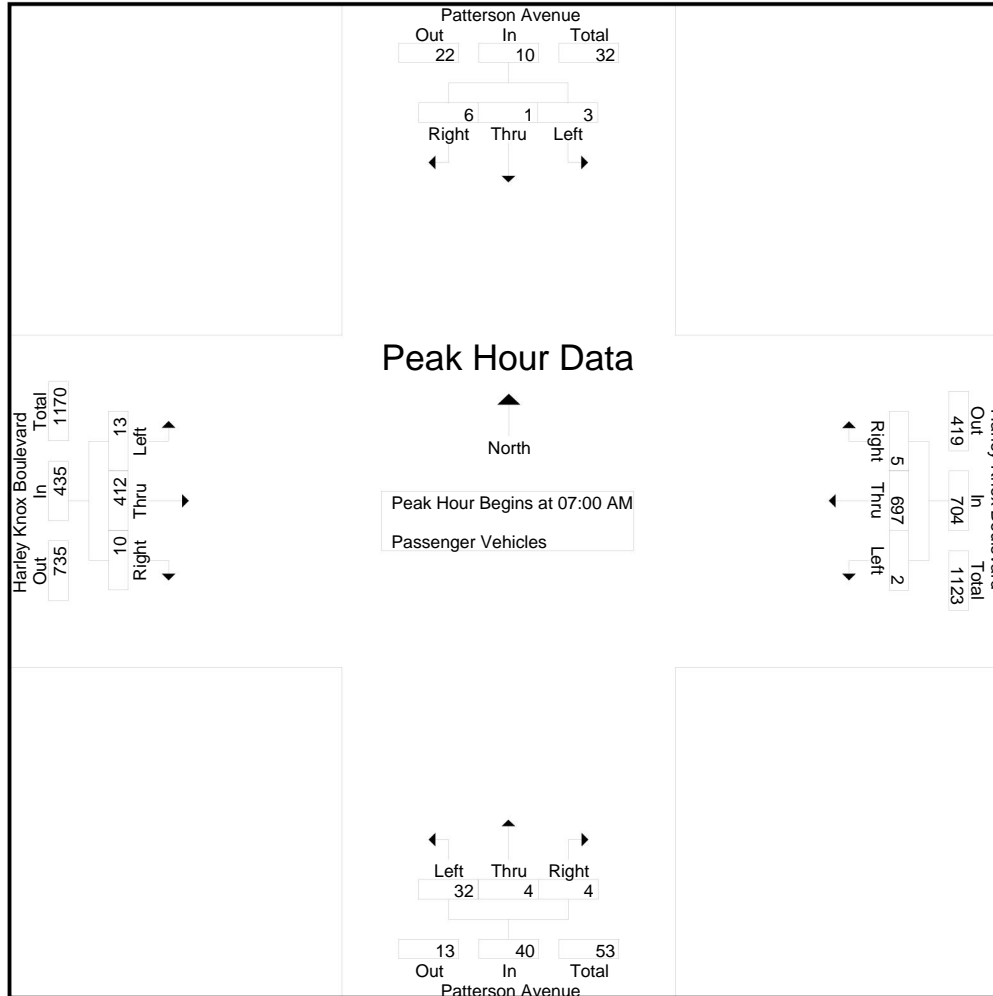
Start Time	Patterson Avenue Southbound					Harley Knox Boulevard Westbound					Patterson Avenue Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total	
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total				
07:00 AM	2	0	1	0	3	0	205	0	0	205	9	2	1	0	12	5	95	0	0	100			320	320
07:15 AM	0	1	0	0	1	0	191	2	0	193	10	1	1	0	12	0	98	5	0	103	0		309	309
07:30 AM	0	0	0	0	0	1	154	1	0	156	7	1	1	0	9	3	119	5	0	127	0		292	292
07:45 AM	1	0	5	2	6	1	147	2	0	150	6	0	1	1	7	5	100	0	0	105	3		268	271
Total	3	1	6	2	10	2	697	5	0	704	32	4	4	1	40	13	412	10	0	435	3		1189	1192
08:00 AM	0	0	0	0	0	0	102	5	0	107	5	0	0	0	5	4	76	0	0	80	0		192	192
08:15 AM	0	0	1	0	1	2	94	3	0	99	4	0	0	0	4	1	62	2	0	65	0		169	169
08:30 AM	3	0	2	0	5	0	63	2	0	65	5	0	0	0	5	1	69	5	0	75	0		150	150
08:45 AM	2	1	1	0	4	0	65	1	0	66	6	2	1	0	9	2	64	7	1	73	1		152	153
Total	5	1	4	0	10	2	324	11	0	337	20	2	1	0	23	8	271	14	1	293	1		663	664
Grand Total	8	2	10	2	20	4	1021	16	0	1041	52	6	5	1	63	21	683	24	1	728	4		1852	1856
Apprch %	40	10	50			0.4	98.1	1.5			82.5	9.5	7.9			2.9	93.8	3.3						
Total %	0.4	0.1	0.5		1.1	0.2	55.1	0.9		56.2	2.8	0.3	0.3		3.4	1.1	36.9	1.3		39.3	0.2		99.8	

3.1-110

Start Time	Patterson Avenue Southbound				Harley Knox Boulevard Westbound				Patterson Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	2	0	1	3	0	205	0	205	9	2	1	12	5	95	0	100	320
07:15 AM	0	1	0	1	0	191	2	193	10	1	1	12	0	98	5	103	309
07:30 AM	0	0	0	0	1	154	1	156	7	1	1	9	3	119	5	127	292
07:45 AM	1	0	5	6	1	147	2	150	6	0	1	7	5	100	0	105	268
Total Volume	3	1	6	10	2	697	5	704	32	4	4	40	13	412	10	435	1189
% App. Total	30	10	60		0.3	99	0.7		80	10	10		3	94.7	2.3		
PHF	.375	.250	.300	.417	.500	.850	.625	.859	.800	.500	1.00	.833	.650	.866	.500	.856	.929

City of Perris  
 N/S: Patterson Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 04\_PER\_Patterson\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



3.1-111

City of Perris  
 N/S: Patterson Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 04\_PER\_Patterson\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Patterson Avenue Southbound				Harley Knox Boulevard Westbound				Patterson Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	2	0	1	3	0	205	0	205	9	2	1	12	5	95	0	100	
+15 mins.	0	1	0	1	0	191	2	193	10	1	1	12	0	98	5	103	
+30 mins.	0	0	0	0	1	154	1	156	7	1	1	9	3	119	5	127	
+45 mins.	1	0	5	6	1	147	2	150	6	0	1	7	5	100	0	105	
Total Volume	3	1	6	10	2	697	5	704	32	4	4	40	13	412	10	435	
% App. Total	30	10	60		0.3	99	0.7		80	10	10		3	94.7	2.3		
PHF	.375	.250	.300	.417	.500	.850	.625	.859	.800	.500	1.000	.833	.650	.866	.500	.856	



City of Perris  
 N/S: Patterson Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

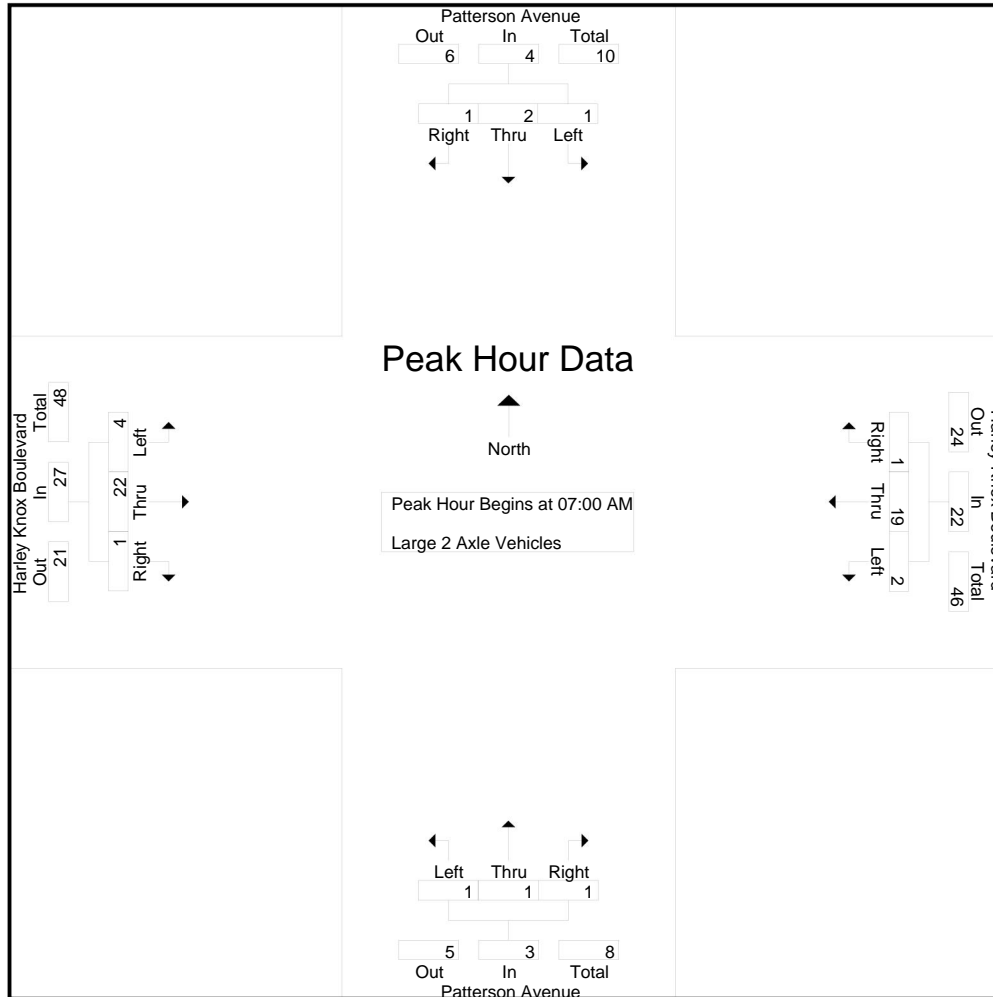
File Name : 04\_PER\_Patterson\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

Start Time	Patterson Avenue Southbound					Harley Knox Boulevard Westbound					Patterson Avenue Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	0	1	0	0	1	0	9	1	0	10	1	0	0	0	1	2	8	1	1	11	1	23	24
07:15 AM	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	0	8	0	0	8	0	11	11
07:30 AM	0	1	0	0	1	1	5	0	0	6	0	1	0	0	1	1	2	0	0	3	0	11	11
07:45 AM	0	0	1	1	1	1	3	0	0	4	0	0	1	0	1	1	4	0	0	5	1	11	12
Total	1	2	1	1	4	2	19	1	0	22	1	1	1	0	3	4	22	1	1	27	2	56	58
08:00 AM	0	0	1	1	1	0	4	0	0	4	0	1	0	0	1	1	7	0	0	8	1	14	15
08:15 AM	0	0	0	0	0	0	3	2	0	5	0	0	1	0	1	0	7	2	0	9	0	15	15
08:30 AM	2	0	0	0	2	1	4	0	0	5	1	0	1	1	2	0	4	1	0	5	1	14	15
08:45 AM	0	0	0	0	0	0	6	0	0	6	1	1	1	0	3	0	5	0	0	5	0	14	14
Total	2	0	1	1	3	1	17	2	0	20	2	2	3	1	7	1	23	3	0	27	2	57	59
Grand Total	3	2	2	2	7	3	36	3	0	42	3	3	4	1	10	5	45	4	1	54	4	113	117
Apprch %	42.9	28.6	28.6			7.1	85.7	7.1			30	30	40			9.3	83.3	7.4					
Total %	2.7	1.8	1.8		6.2	2.7	31.9	2.7		37.2	2.7	2.7	3.5		8.8	4.4	39.8	3.5		47.8	3.4	96.6	

3.1-113

Start Time	Patterson Avenue Southbound				Harley Knox Boulevard Westbound				Patterson Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	1	0	1	0	9	1	10	1	0	0	1	2	8	1	11	23
07:15 AM	1	0	0	1	0	2	0	2	0	0	0	0	0	8	0	8	11
07:30 AM	0	1	0	1	1	5	0	6	0	1	0	1	1	2	0	3	11
07:45 AM	0	0	1	1	1	3	0	4	0	0	1	1	1	4	0	5	11
Total Volume	1	2	1	4	2	19	1	22	1	1	1	3	4	22	1	27	56
% App. Total	25	50	25		9.1	86.4	4.5		33.3	33.3	33.3		14.8	81.5	3.7		
PHF	.250	.500	.250	1.00	.500	.528	.250	.550	.250	.250	.250	.750	.500	.688	.250	.614	.609



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Patterson Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 04\_PER\_Patterson\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Patterson Avenue Southbound				Harley Knox Boulevard Westbound				Patterson Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	1	0	1	0	9	1	10	1	0	0	1	2	8	1	11	
+15 mins.	1	0	0	1	0	2	0	2	0	0	0	0	0	8	0	8	
+30 mins.	0	1	0	1	1	5	0	6	0	1	0	1	1	2	0	3	
+45 mins.	0	0	1	1	1	3	0	4	0	0	1	1	1	4	0	5	
Total Volume	1	2	1	4	2	19	1	22	1	1	1	3	4	22	1	27	
% App. Total	25	50	25		9.1	86.4	4.5		33.3	33.3	33.3		14.8	81.5	3.7		
PHF	.250	.500	.250	1.000	.500	.528	.250	.550	.250	.250	.250	.750	.500	.688	.250	.614	

3.1-115

City of Perris  
 N/S: Patterson Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 04\_PER\_Patterson\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- 3 Axle Vehicles

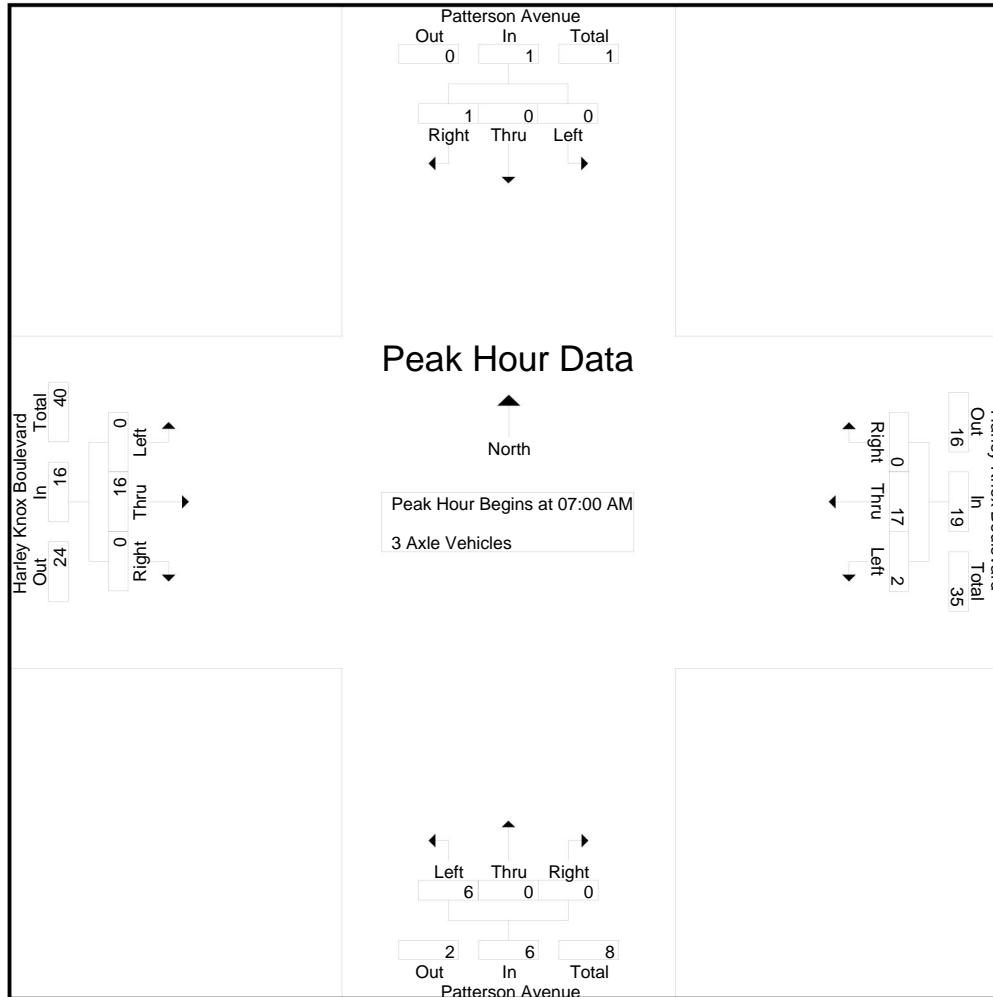
Start Time	Patterson Avenue Southbound					Harley Knox Boulevard Westbound					Patterson Avenue Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	0	0	0	0	0	1	3	0	0	4	3	0	0	0	3	0	3	0	0	3	0	10	10
07:15 AM	0	0	1	0	1	0	3	0	0	3	1	0	0	0	1	0	1	0	0	1	0	6	6
07:30 AM	0	0	0	0	0	1	7	0	0	8	1	0	0	0	1	0	5	0	0	5	0	14	14
07:45 AM	0	0	0	0	0	0	4	0	0	4	1	0	0	0	1	0	7	0	0	7	0	12	12
Total	0	0	1	0	1	2	17	0	0	19	6	0	0	0	6	0	16	0	0	16	0	42	42
08:00 AM	0	2	0	0	2	0	8	0	0	8	0	0	0	0	0	0	4	0	0	4	0	14	14
08:15 AM	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	4	1	1	5	1	13	14
08:30 AM	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0	0	2	0	0	2	0	5	5
08:45 AM	0	0	0	0	0	1	1	1	0	3	0	0	0	0	0	0	7	0	0	7	0	10	10
Total	0	2	0	0	2	1	19	2	0	22	0	0	0	0	0	0	17	1	1	18	1	42	43
Grand Total	0	2	1	0	3	3	36	2	0	41	6	0	0	0	6	0	33	1	1	34	1	84	85
Apprch %	0	66.7	33.3			7.3	87.8	4.9			100	0	0			0	97.1	2.9					
Total %	0	2.4	1.2		3.6	3.6	42.9	2.4		48.8	7.1	0	0		7.1	0	39.3	1.2		40.5	1.2	98.8	

3.1-116

Start Time	Patterson Avenue Southbound				Harley Knox Boulevard Westbound				Patterson Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	1	3	0	4	3	0	0	3	0	3	0	3	10
07:15 AM	0	0	1	1	0	3	0	3	1	0	0	1	0	1	0	1	6
07:30 AM	0	0	0	0	1	7	0	8	1	0	0	1	0	5	0	5	14
07:45 AM	0	0	0	0	0	4	0	4	1	0	0	1	0	7	0	7	12
Total Volume	0	0	1	1	2	17	0	19	6	0	0	6	0	16	0	16	42
% App. Total	0	0	100		10.5	89.5	0		100	0	0		0	100	0		
PHF	.000	.000	.250	.250	.500	.607	.000	.594	.500	.000	.000	.500	.000	.571	.000	.571	.750

City of Perris  
 N/S: Patterson Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 04\_PER\_Patterson\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



3.1-117

Counts Unlimited  
 PO Box 1178  
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 (951) 268-6268

City of Perris  
 N/S: Patterson Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 04\_PER\_Patterson\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Patterson Avenue Southbound				Harley Knox Boulevard Westbound				Patterson Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	0	0	0	1	3	0	4	3	0	0	3	0	3	0	3	
+15 mins.	0	0	1	1	0	3	0	3	1	0	0	1	0	1	0	1	
+30 mins.	0	0	0	0	1	7	0	8	1	0	0	1	0	5	0	5	
+45 mins.	0	0	0	0	0	4	0	4	1	0	0	1	0	7	0	7	
Total Volume	0	0	1	1	2	17	0	19	6	0	0	6	0	16	0	16	
% App. Total	0	0	100		10.5	89.5	0		100	0	0		0	100	0		
PHF	.000	.000	.250	.250	.500	.607	.000	.594	.500	.000	.000	.500	.000	.571	.000	.571	

3.1-118

City of Perris  
 N/S: Patterson Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

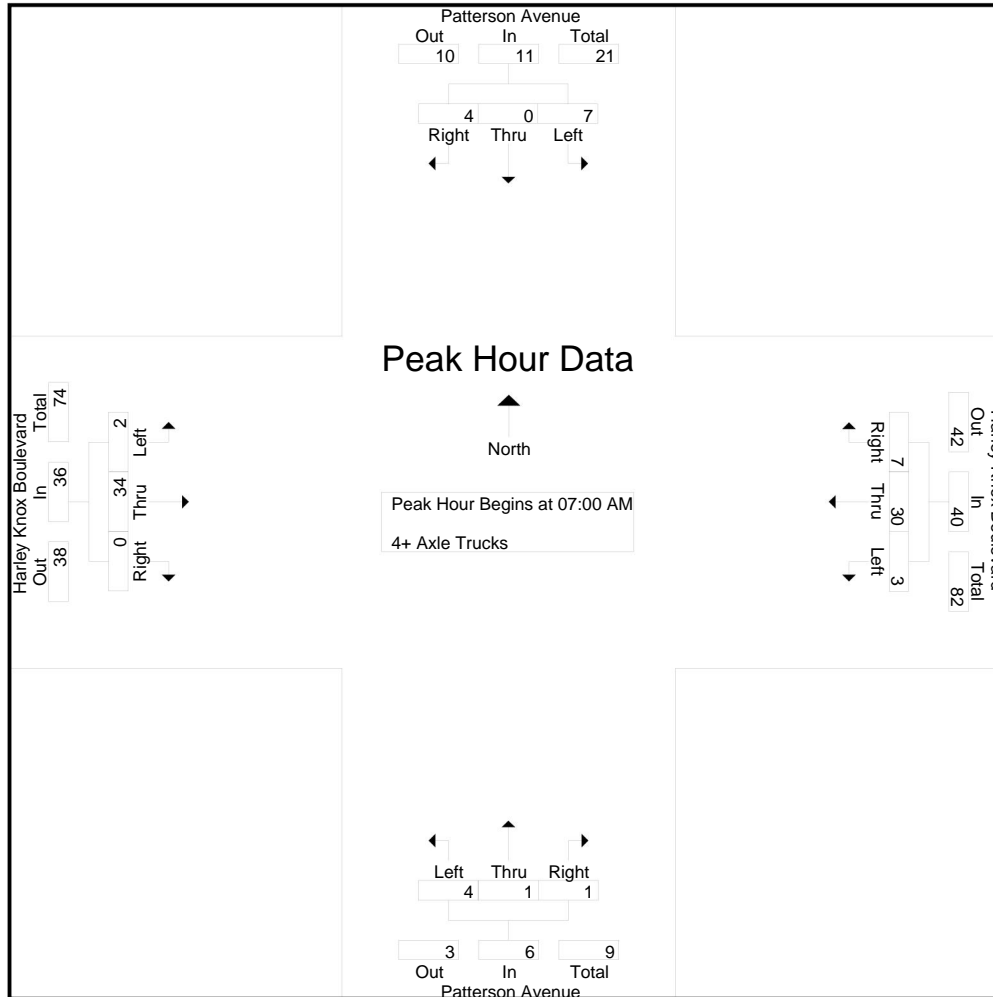
File Name : 04\_PER\_Patterson\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	Patterson Avenue Southbound					Harley Knox Boulevard Westbound					Patterson Avenue Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	3	0	0	0	3	0	6	3	0	9	1	0	0	0	1	0	10	0	0	10	0	23	23
07:15 AM	0	0	1	0	1	1	6	1	0	8	1	0	0	0	1	1	5	0	0	6	0	16	16
07:30 AM	1	0	1	0	2	1	11	1	0	13	2	1	0	0	3	1	13	0	0	14	0	32	32
07:45 AM	3	0	2	0	5	1	7	2	0	10	0	0	1	1	1	0	6	0	0	6	1	22	23
Total	7	0	4	0	11	3	30	7	0	40	4	1	1	1	6	2	34	0	0	36	1	93	94
08:00 AM	0	0	2	0	2	1	11	0	0	12	3	0	0	0	3	2	11	0	0	13	0	30	30
08:15 AM	0	0	0	0	0	1	5	2	0	8	2	0	3	1	5	0	13	0	0	13	1	26	27
08:30 AM	2	0	1	0	3	1	9	1	0	11	0	0	0	0	0	0	13	0	0	13	0	27	27
08:45 AM	1	0	2	0	3	1	11	7	0	19	0	0	1	1	1	2	16	1	1	19	2	42	44
Total	3	0	5	0	8	4	36	10	0	50	5	0	4	2	9	4	53	1	1	58	3	125	128
Grand Total	10	0	9	0	19	7	66	17	0	90	9	1	5	3	15	6	87	1	1	94	4	218	222
Apprch %	52.6	0	47.4			7.8	73.3	18.9			60	6.7	33.3			6.4	92.6	1.1					
Total %	4.6	0	4.1		8.7	3.2	30.3	7.8		41.3	4.1	0.5	2.3		6.9	2.8	39.9	0.5		43.1	1.8	98.2	

3.1-119

Start Time	Patterson Avenue Southbound				Harley Knox Boulevard Westbound				Patterson Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	3	0	0	3	0	6	3	9	1	0	0	1	0	10	0	10	23
07:15 AM	0	0	1	1	1	6	1	8	1	0	0	1	1	5	0	6	16
07:30 AM	1	0	1	2	1	11	1	13	2	1	0	3	1	13	0	14	32
07:45 AM	3	0	2	5	1	7	2	10	0	0	1	1	0	6	0	6	22
Total Volume	7	0	4	11	3	30	7	40	4	1	1	6	2	34	0	36	93
% App. Total	63.6	0	36.4		7.5	75	17.5		66.7	16.7	16.7		5.6	94.4	0		
PHF	.583	.000	.500	.550	.750	.682	.583	.769	.500	.250	.250	.500	.500	.654	.000	.643	.727





Counts Unlimited  
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City of Perris  
 N/S: Patterson Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 04\_PER\_Patterson\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Patterson Avenue Southbound				Harley Knox Boulevard Westbound				Patterson Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	3	0	0	3	0	6	3	9	1	0	0	1	0	10	0	10	
+15 mins.	0	0	1	1	1	6	1	8	1	0	0	1	1	5	0	6	
+30 mins.	1	0	1	2	1	11	1	13	2	1	0	3	1	13	0	14	
+45 mins.	3	0	2	5	1	7	2	10	0	0	1	1	0	6	0	6	
Total Volume	7	0	4	11	3	30	7	40	4	1	1	6	2	34	0	36	
% App. Total	63.6	0	36.4		7.5	75	17.5		66.7	16.7	16.7		5.6	94.4	0		
PHF	.583	.000	.500	.550	.750	.682	.583	.769	.500	.250	.250	.500	.500	.654	.000	.643	

3.1-121

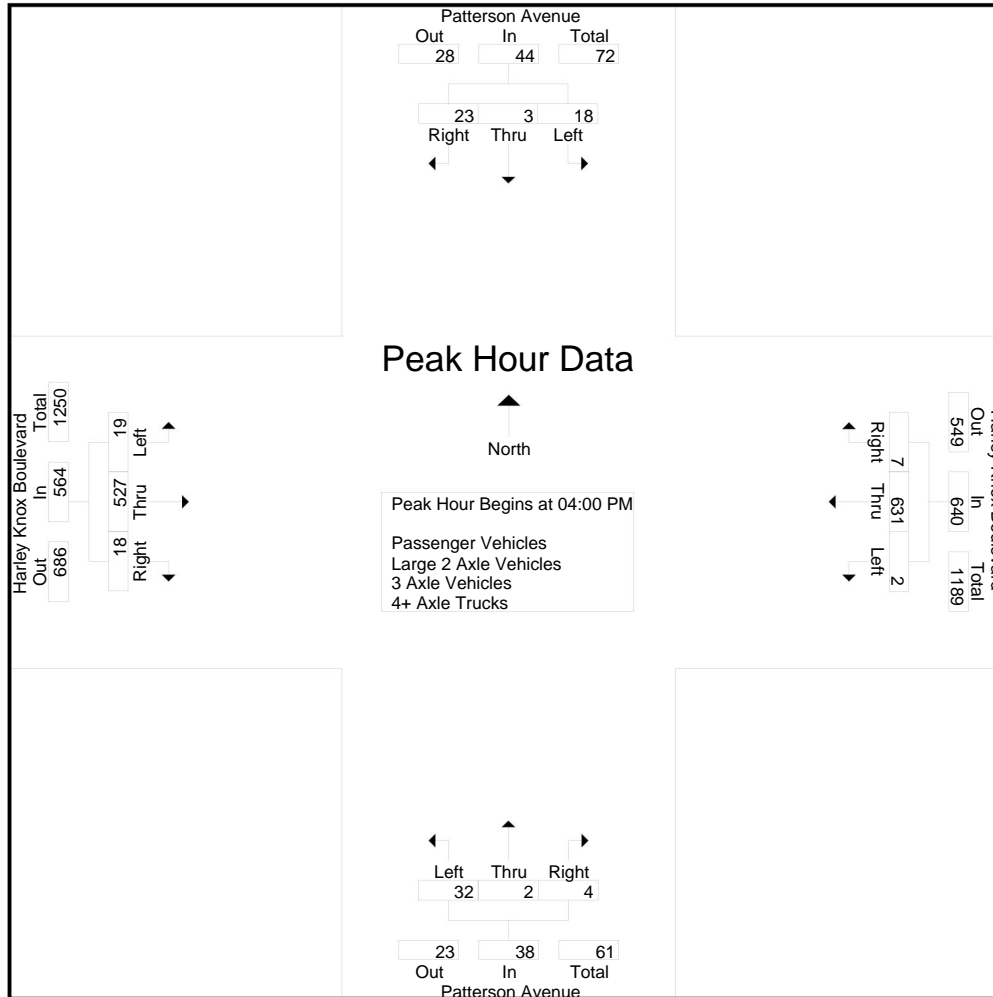
City of Perris  
 N/S: Patterson Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 04\_PER\_Patterson\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Patterson Avenue Southbound					Harley Knox Boulevard Westbound					Patterson Avenue Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	5	0	3	0	8	1	126	2	0	129	8	1	0	0	9	5	120	7	0	132	0	278	278
04:15 PM	2	1	4	1	7	0	118	3	0	121	10	0	2	1	12	6	144	6	1	156	3	296	299
04:30 PM	8	1	11	0	20	1	223	1	0	225	4	0	1	0	5	5	134	4	0	143	0	393	393
04:45 PM	3	1	5	0	9	0	164	1	0	165	10	1	1	0	12	3	129	1	0	133	0	319	319
<b>Total</b>	<b>18</b>	<b>3</b>	<b>23</b>	<b>1</b>	<b>44</b>	<b>2</b>	<b>631</b>	<b>7</b>	<b>0</b>	<b>640</b>	<b>32</b>	<b>2</b>	<b>4</b>	<b>1</b>	<b>38</b>	<b>19</b>	<b>527</b>	<b>18</b>	<b>1</b>	<b>564</b>	<b>3</b>	<b>1286</b>	<b>1289</b>
05:00 PM	6	0	8	3	14	1	128	0	0	129	5	0	1	1	6	1	104	7	1	112	5	261	266
05:15 PM	5	1	8	2	14	0	111	2	0	113	4	0	1	1	5	1	117	6	1	124	4	256	260
05:30 PM	1	0	3	0	4	4	140	2	0	146	4	1	0	0	5	1	107	7	0	115	0	270	270
05:45 PM	3	0	2	0	5	2	94	2	0	98	4	2	0	0	6	0	103	3	0	106	0	215	215
<b>Total</b>	<b>15</b>	<b>1</b>	<b>21</b>	<b>5</b>	<b>37</b>	<b>7</b>	<b>473</b>	<b>6</b>	<b>0</b>	<b>486</b>	<b>17</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>22</b>	<b>3</b>	<b>431</b>	<b>23</b>	<b>2</b>	<b>457</b>	<b>9</b>	<b>1002</b>	<b>1011</b>
<b>Grand Total</b>	<b>33</b>	<b>4</b>	<b>44</b>	<b>6</b>	<b>81</b>	<b>9</b>	<b>1104</b>	<b>13</b>	<b>0</b>	<b>1126</b>	<b>49</b>	<b>5</b>	<b>6</b>	<b>3</b>	<b>60</b>	<b>22</b>	<b>958</b>	<b>41</b>	<b>3</b>	<b>1021</b>	<b>12</b>	<b>2288</b>	<b>2300</b>
Apprch %	40.7	4.9	54.3			0.8	98	1.2			81.7	8.3	10			2.2	93.8	4					
Total %	1.4	0.2	1.9		3.5	0.4	48.3	0.6		49.2	2.1	0.2	0.3		2.6	1	41.9	1.8		44.6	0.5	99.5	
Passenger Vehicles	24	3	38		71	6	976	7		989	41	2	4		50	8	830	34		875	0	0	1985
% Passenger Vehicles	72.7	75	86.4	100	81.6	66.7	88.4	53.8	0	87.8	83.7	40	66.7	100	79.4	36.4	86.6	82.9	100	85.4	0	0	86.3
Large 2 Axle Vehicles	3	1	1		5	0	24	1		25	3	3	2		8	3	18	2		23	0	0	61
% Large 2 Axle Vehicles	9.1	25	2.3	0	5.7	0	2.2	7.7	0	2.2	6.1	60	33.3	0	12.7	13.6	1.9	4.9	0	2.2	0	0	2.7
3 Axle Vehicles	2	0	2		4	0	18	0		18	2	0	0		2	2	52	4		58	0	0	82
% 3 Axle Vehicles	6.1	0	4.5	0	4.6	0	1.6	0	0	1.6	4.1	0	0	0	3.2	9.1	5.4	9.8	0	5.7	0	0	3.6
4+ Axle Trucks	4	0	3		7	3	86	5		94	3	0	0		3	9	58	1		68	0	0	172
% 4+ Axle Trucks	12.1	0	6.8	0	8	33.3	7.8	38.5	0	8.3	6.1	0	0	0	4.8	40.9	6.1	2.4	0	6.6	0	0	7.5

Start Time	Patterson Avenue Southbound				Harley Knox Boulevard Westbound				Patterson Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	5	0	3	8	1	126	2	129	8	1	0	9	5	120	7	132	278
04:15 PM	2	1	4	7	0	118	3	121	10	0	2	12	6	144	6	156	296
04:30 PM	8	1	11	20	1	223	1	225	4	0	1	5	5	134	4	143	393
04:45 PM	3	1	5	9	0	164	1	165	10	1	1	12	3	129	1	133	319
<b>Total Volume</b>	<b>18</b>	<b>3</b>	<b>23</b>	<b>44</b>	<b>2</b>	<b>631</b>	<b>7</b>	<b>640</b>	<b>32</b>	<b>2</b>	<b>4</b>	<b>38</b>	<b>19</b>	<b>527</b>	<b>18</b>	<b>564</b>	<b>1286</b>
<b>% App. Total</b>	<b>40.9</b>	<b>6.8</b>	<b>52.3</b>		<b>0.3</b>	<b>98.6</b>	<b>1.1</b>		<b>84.2</b>	<b>5.3</b>	<b>10.5</b>		<b>3.4</b>	<b>93.4</b>	<b>3.2</b>		
PHF	.563	.750	.523	.550	.500	.707	.583	.711	.800	.500	.500	.792	.792	.915	.643	.904	.818



Counts Unlimited  
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City of Perris  
 N/S: Patterson Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 04\_PER\_Patterson\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Patterson Avenue Southbound				Harley Knox Boulevard Westbound				Patterson Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:00 PM				04:00 PM				04:00 PM				
+0 mins.	8	1	11	20	1	126	2	129	8	1	0	9	5	120	7	132	
+15 mins.	3	1	5	9	0	118	3	121	10	0	2	12	6	144	6	156	
+30 mins.	6	0	8	14	1	223	1	225	4	0	1	5	5	134	4	143	
+45 mins.	5	1	8	14	0	164	1	165	10	1	1	12	3	129	1	133	
Total Volume	22	3	32	57	2	631	7	640	32	2	4	38	19	527	18	564	
% App. Total	38.6	5.3	56.1		0.3	98.6	1.1		84.2	5.3	10.5		3.4	93.4	3.2		
PHF	.688	.750	.727	.713	.500	.707	.583	.711	.800	.500	.500	.792	.792	.915	.643	.904	

3.1-124

City of Perris  
 N/S: Patterson Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

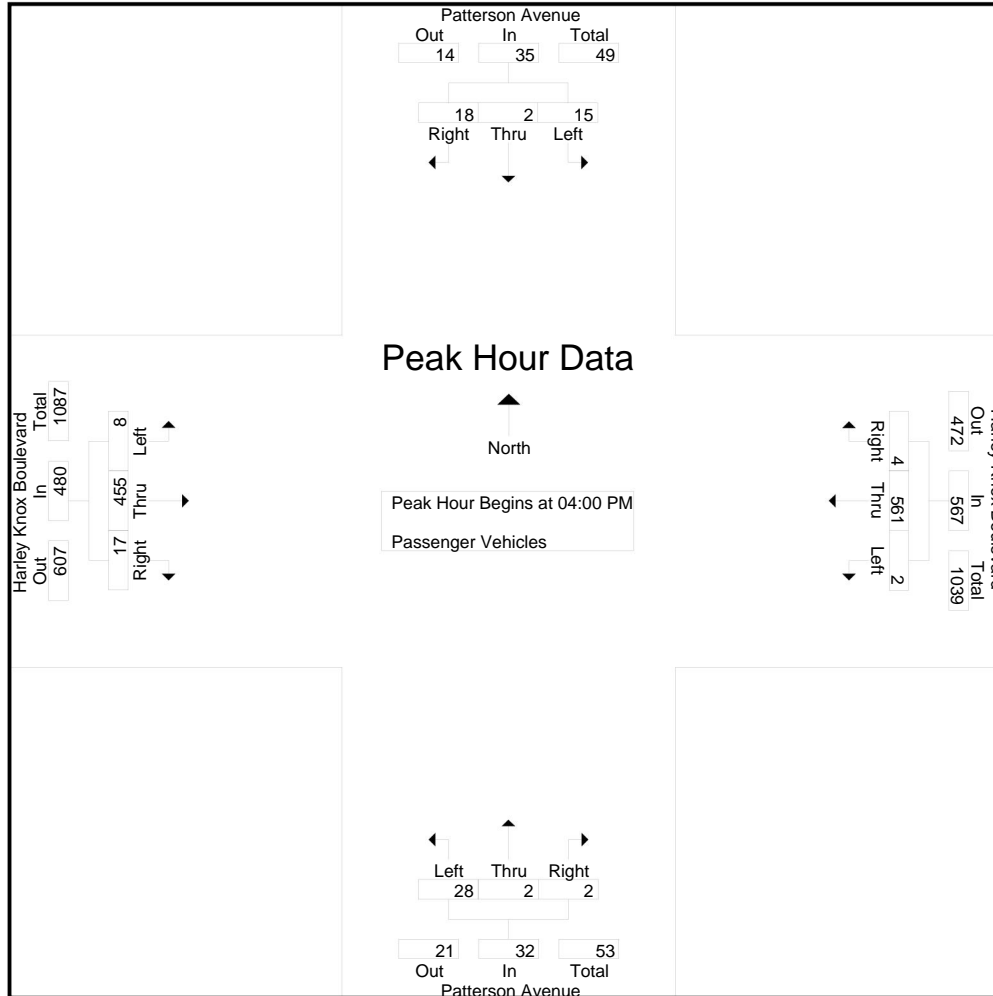
File Name : 04\_PER\_Patterson\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Patterson Avenue Southbound					Harley Knox Boulevard Westbound					Patterson Avenue Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	2	0	2	0	4	1	111	2	0	114	6	1	0	0	7	2	109	6	0	117	0	242	242
04:15 PM	2	0	3	1	5	0	97	2	0	99	9	0	2	1	11	3	116	6	1	125	3	240	243
04:30 PM	8	1	9	0	18	1	202	0	0	203	4	0	0	0	4	2	115	4	0	121	0	346	346
04:45 PM	3	1	4	0	8	0	151	0	0	151	9	1	0	0	10	1	115	1	0	117	0	286	286
Total	15	2	18	1	35	2	561	4	0	567	28	2	2	1	32	8	455	17	1	480	3	1114	1117
05:00 PM	5	0	8	3	13	1	115	0	0	116	4	0	1	1	5	0	88	6	1	94	5	228	233
05:15 PM	3	1	8	2	12	0	93	0	0	93	4	0	1	1	5	0	97	3	1	100	4	210	214
05:30 PM	1	0	2	0	3	1	128	1	0	130	3	0	0	0	3	0	97	7	0	104	0	240	240
05:45 PM	0	0	2	0	2	2	79	2	0	83	2	0	0	0	2	0	93	1	0	94	0	181	181
Total	9	1	20	5	30	4	415	3	0	422	13	0	2	2	15	0	375	17	2	392	9	859	868
Grand Total	24	3	38	6	65	6	976	7	0	989	41	2	4	3	47	8	830	34	3	872	12	1973	1985
Apprch %	36.9	4.6	58.5			0.6	98.7	0.7			87.2	4.3	8.5			0.9	95.2	3.9					
Total %	1.2	0.2	1.9		3.3	0.3	49.5	0.4		50.1	2.1	0.1	0.2		2.4	0.4	42.1	1.7		44.2	0.6	99.4	

3.1-125

Start Time	Patterson Avenue Southbound				Harley Knox Boulevard Westbound				Patterson Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	2	0	2	4	1	111	2	114	6	1	0	7	2	109	6	117	242
04:15 PM	2	0	3	5	0	97	2	99	9	0	2	11	3	116	6	125	240
04:30 PM	8	1	9	18	1	202	0	203	4	0	0	4	2	115	4	121	346
04:45 PM	3	1	4	8	0	151	0	151	9	1	0	10	1	115	1	117	286
Total Volume	15	2	18	35	2	561	4	567	28	2	2	32	8	455	17	480	1114
% App. Total	42.9	5.7	51.4		0.4	98.9	0.7		87.5	6.2	6.2		1.7	94.8	3.5		
PHF	.469	.500	.500	.486	.500	.694	.500	.698	.778	.500	.250	.727	.667	.981	.708	.960	.805



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Patterson Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 04\_PER\_Patterson\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Patterson Avenue Southbound				Harley Knox Boulevard Westbound				Patterson Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:00 PM				04:00 PM				04:00 PM				04:00 PM				
+0 mins.	2	0	2	4	1	111	2	114	6	1	0	7	2	109	6	117	
+15 mins.	2	0	3	5	0	97	2	99	9	0	2	11	3	116	6	125	
+30 mins.	8	1	9	18	1	202	0	203	4	0	0	4	2	115	4	121	
+45 mins.	3	1	4	8	0	151	0	151	9	1	0	10	1	115	1	117	
Total Volume	15	2	18	35	2	561	4	567	28	2	2	32	8	455	17	480	
% App. Total	42.9	5.7	51.4		0.4	98.9	0.7		87.5	6.2	6.2		1.7	94.8	3.5		
PHF	.469	.500	.500	.486	.500	.694	.500	.698	.778	.500	.250	.727	.667	.981	.708	.960	

3.1-127

City of Perris  
 N/S: Patterson Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 04\_PER\_Patterson\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

Start Time	Patterson Avenue Southbound					Harley Knox Boulevard Westbound					Patterson Avenue Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	3	0	1	0	4	0	4	0	0	4	1	0	0	0	1	1	1	1	0	3	0	12	12
04:15 PM	0	1	0	0	1	0	4	1	0	5	0	0	0	0	0	0	5	0	0	5	0	11	11
04:30 PM	0	0	0	0	0	0	5	0	0	5	0	0	1	0	1	0	0	0	0	0	0	6	6
04:45 PM	0	0	0	0	0	0	4	0	0	4	1	0	1	0	2	1	0	0	0	1	0	7	7
Total	3	1	1	0	5	0	17	1	0	18	2	0	2	0	4	2	6	1	0	9	0	36	36
05:00 PM	0	0	0	0	0	0	4	0	0	4	1	0	0	0	1	0	3	0	0	3	0	8	8
05:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	1	0	3	0	4	4
05:30 PM	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	1	4	0	0	5	0	7	7
05:45 PM	0	0	0	0	0	0	1	0	0	1	0	2	0	0	2	0	3	0	0	3	0	6	6
Total	0	0	0	0	0	0	7	0	0	7	1	3	0	0	4	1	12	1	0	14	0	25	25
Grand Total	3	1	1	0	5	0	24	1	0	25	3	3	2	0	8	3	18	2	0	23	0	61	61
Apprch %	60	20	20			0	96	4			37.5	37.5	25			13	78.3	8.7					
Total %	4.9	1.6	1.6		8.2	0	39.3	1.6		41	4.9	4.9	3.3		13.1	4.9	29.5	3.3		37.7	0	100	

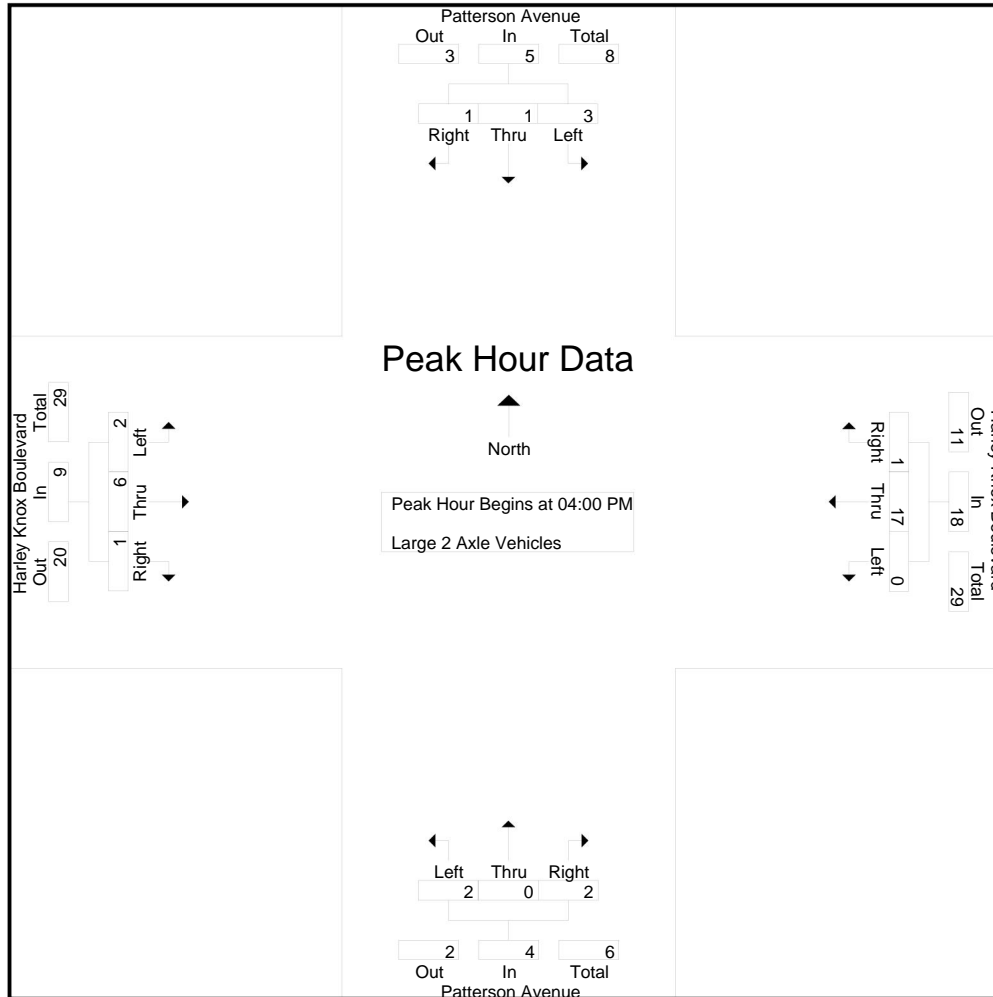
3.1-128

Start Time	Patterson Avenue Southbound				Harley Knox Boulevard Westbound				Patterson Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	3	0	1	4	0	4	0	4	1	0	0	1	1	1	1	3	12
04:15 PM	0	1	0	1	0	4	1	5	0	0	0	0	0	5	0	5	11
04:30 PM	0	0	0	0	0	5	0	5	0	0	1	1	0	0	0	0	6
04:45 PM	0	0	0	0	0	4	0	4	1	0	1	2	1	0	0	1	7
Total Volume	3	1	1	5	0	17	1	18	2	0	2	4	2	6	1	9	36
% App. Total	60	20	20		0	94.4	5.6		50	0	50		22.2	66.7	11.1		
PHF	.250	.250	.250	.313	.000	.850	.250	.900	.500	.000	.500	.500	.500	.300	.250	.450	.750



City of Perris  
 N/S: Patterson Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 04\_PER\_Patterson\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Patterson Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 04\_PER\_Patterson\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Patterson Avenue Southbound				Harley Knox Boulevard Westbound				Patterson Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:00 PM				04:00 PM				04:00 PM				04:00 PM				
+0 mins.	3	0	1	4	0	4	0	4	1	0	0	1	1	1	1	3	
+15 mins.	0	1	0	1	0	4	1	5	0	0	0	0	0	5	0	5	
+30 mins.	0	0	0	0	0	5	0	5	0	0	1	1	0	0	0	0	
+45 mins.	0	0	0	0	0	4	0	4	1	0	1	2	1	0	0	1	
Total Volume	3	1	1	5	0	17	1	18	2	0	2	4	2	6	1	9	
% App. Total	60	20	20		0	94.4	5.6		50	0	50		22.2	66.7	11.1		
PHF	.250	.250	.250	.313	.000	.850	.250	.900	.500	.000	.500	.500	.500	.300	.250	.450	

3.1-130

City of Perris  
 N/S: Patterson Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 04\_PER\_Patterson\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- 3 Axle Vehicles

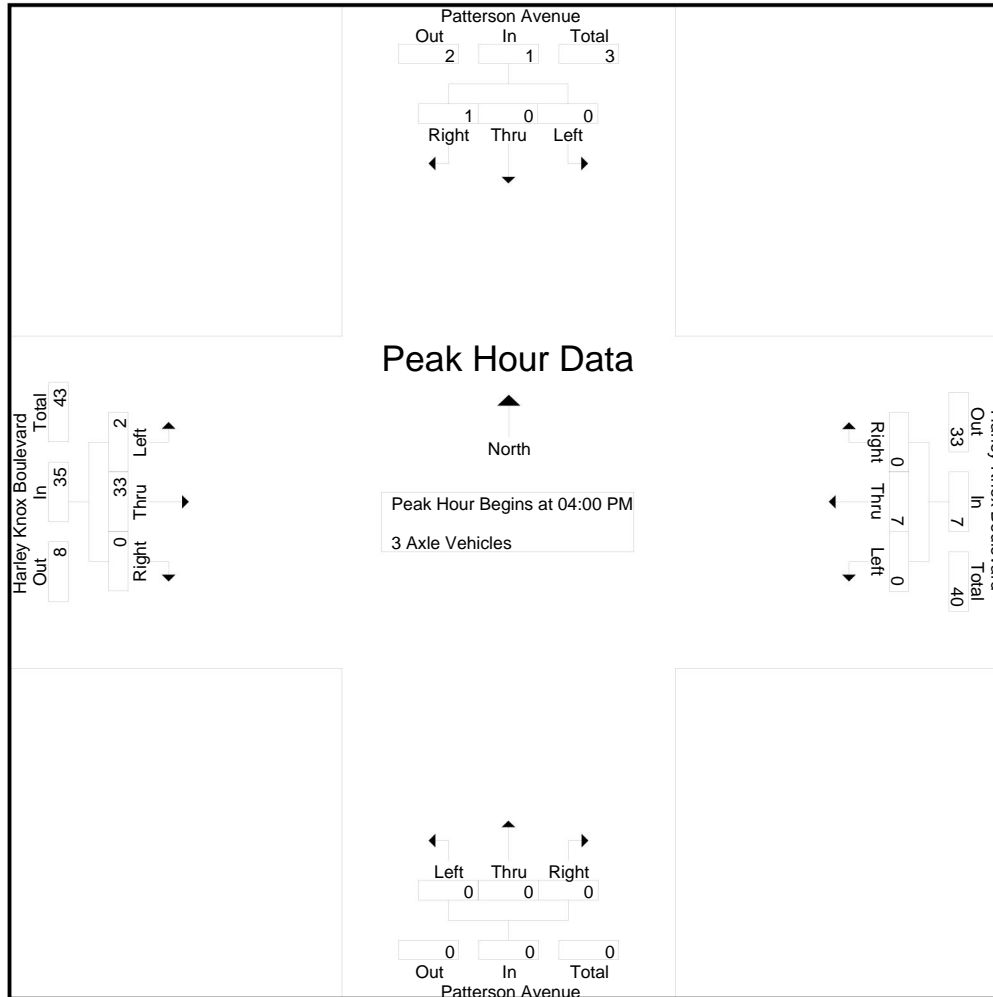
Start Time	Patterson Avenue Southbound					Harley Knox Boulevard Westbound					Patterson Avenue Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	3
04:15 PM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	2	10	0	0	12	0	16	16
04:30 PM	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	0	11	0	0	11	0	13	13
04:45 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	9	0	0	9	0	11	11
Total	0	0	1	0	1	0	7	0	0	7	0	0	0	0	0	2	33	0	0	35	0	43	43
05:00 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	5	1	0	6	0	8	8
05:15 PM	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	0	10	2	0	12	0	16	16
05:30 PM	0	0	1	0	1	0	2	0	0	2	1	0	0	0	1	0	1	0	0	1	0	5	5
05:45 PM	1	0	0	0	1	0	4	0	0	4	1	0	0	0	1	0	3	1	0	4	0	10	10
Total	2	0	1	0	3	0	11	0	0	11	2	0	0	0	2	0	19	4	0	23	0	39	39
Grand Total	2	0	2	0	4	0	18	0	0	18	2	0	0	0	2	2	52	4	0	58	0	82	82
Apprch %	50	0	50			0	100	0			100	0	0			3.4	89.7	6.9					
Total %	2.4	0	2.4		4.9	0	22	0		22	2.4	0	0		2.4	2.4	63.4	4.9		70.7	0	100	

3.1-131

Start Time	Patterson Avenue Southbound				Harley Knox Boulevard Westbound				Patterson Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	3
04:15 PM	0	0	0	0	0	4	0	4	0	0	0	0	2	10	0	12	16
04:30 PM	0	0	1	1	0	1	0	1	0	0	0	0	0	11	0	11	13
04:45 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	9	0	9	11
Total Volume	0	0	1	1	0	7	0	7	0	0	0	0	2	33	0	35	43
% App. Total	0	0	100		0	100	0		0	0	0		5.7	94.3	0		
PHF	.000	.000	.250	.250	.000	.438	.000	.438	.000	.000	.000	.000	.250	.750	.000	.729	.672

City of Perris  
N/S: Patterson Avenue  
E/W: Harley Knox Boulevard  
Weather: Clear

File Name : 04\_PER\_Patterson\_Harley Knox PM  
Site Code : 05118431  
Start Date : 5/24/2018  
Page No : 2



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Patterson Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 04\_PER\_Patterson\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Patterson Avenue Southbound				Harley Knox Boulevard Westbound				Patterson Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:00 PM				04:00 PM				04:00 PM				04:00 PM				
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	
+15 mins.	0	0	0	0	0	4	0	4	0	0	0	0	2	10	0	12	
+30 mins.	0	0	1	1	0	1	0	1	0	0	0	0	0	11	0	11	
+45 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	9	0	9	
Total Volume	0	0	1	1	0	7	0	7	0	0	0	0	2	33	0	35	
% App. Total	0	0	100		0	100	0		0	0	0		5.7	94.3	0		
PHF	.000	.000	.250	.250	.000	.438	.000	.438	.000	.000	.000	.000	.250	.750	.000	.729	

3.1-133

City of Perris  
 N/S: Patterson Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 04\_PER\_Patterson\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- 4+ Axle Trucks

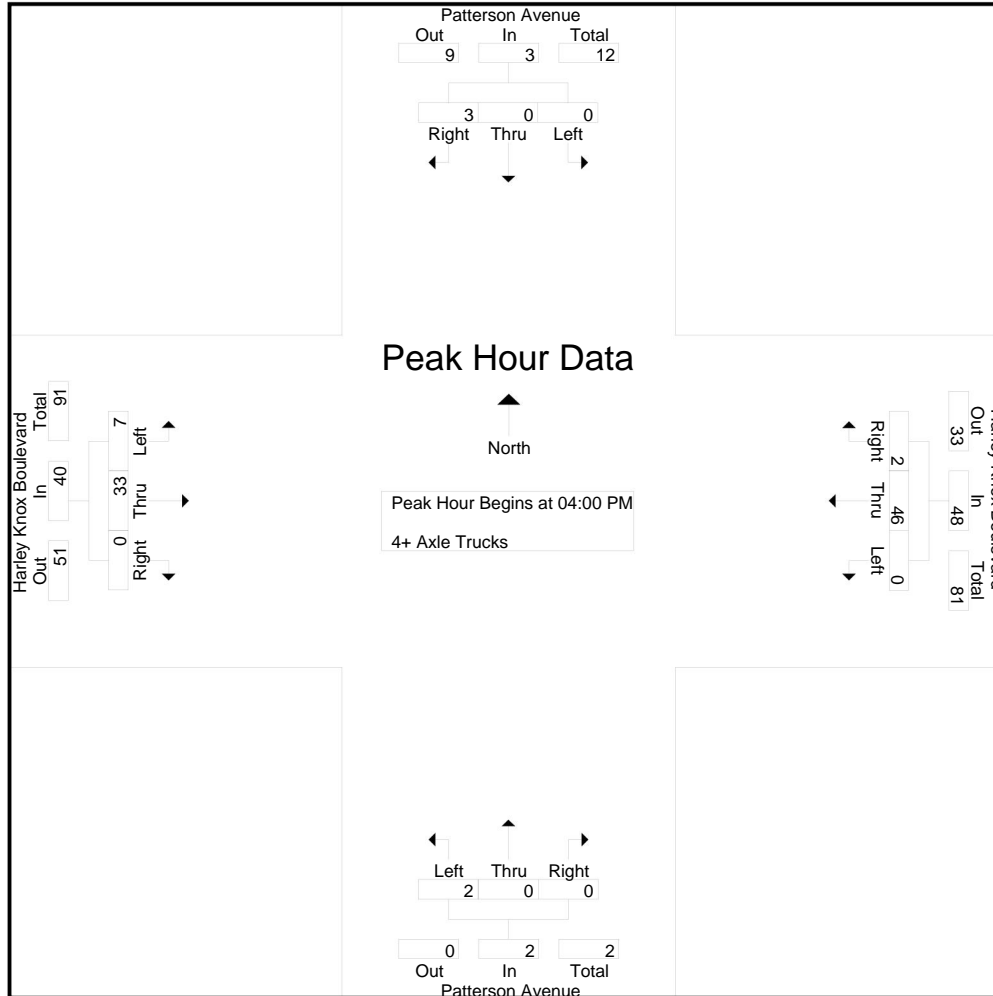
Start Time	Patterson Avenue Southbound					Harley Knox Boulevard Westbound					Patterson Avenue Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	0	0	0	0	0	0	11	0	0	11	1	0	0	0	1	2	7	0	0	9	0	21	21
04:15 PM	0	0	1	0	1	0	13	0	0	13	1	0	0	0	1	1	13	0	0	14	0	29	29
04:30 PM	0	0	1	0	1	0	15	1	0	16	0	0	0	0	0	3	8	0	0	11	0	28	28
04:45 PM	0	0	1	0	1	0	7	1	0	8	0	0	0	0	0	1	5	0	0	6	0	15	15
Total	0	0	3	0	3	0	46	2	0	48	2	0	0	0	2	7	33	0	0	40	0	93	93
05:00 PM	1	0	0	0	1	0	7	0	0	7	0	0	0	0	0	1	8	0	0	9	0	17	17
05:15 PM	1	0	0	0	1	0	14	2	0	16	0	0	0	0	0	1	8	0	0	9	0	26	26
05:30 PM	0	0	0	0	0	3	9	1	0	13	0	0	0	0	0	0	5	0	0	5	0	18	18
05:45 PM	2	0	0	0	2	0	10	0	0	10	1	0	0	0	1	0	4	1	0	5	0	18	18
Total	4	0	0	0	4	3	40	3	0	46	1	0	0	0	1	2	25	1	0	28	0	79	79
Grand Total	4	0	3	0	7	3	86	5	0	94	3	0	0	0	3	9	58	1	0	68	0	172	172
Apprch %	57.1	0	42.9			3.2	91.5	5.3			100	0	0			13.2	85.3	1.5					
Total %	2.3	0	1.7		4.1	1.7	50	2.9		54.7	1.7	0	0		1.7	5.2	33.7	0.6		39.5	0	100	

3.1-134

Start Time	Patterson Avenue Southbound				Harley Knox Boulevard Westbound				Patterson Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	11	0	11	1	0	0	1	2	7	0	9	21
04:15 PM	0	0	1	1	0	13	0	13	1	0	0	1	1	13	0	14	29
04:30 PM	0	0	1	1	0	15	1	16	0	0	0	0	3	8	0	11	28
04:45 PM	0	0	1	1	0	7	1	8	0	0	0	0	1	5	0	6	15
Total Volume	0	0	3	3	0	46	2	48	2	0	0	2	7	33	0	40	93
% App. Total	0	0	100		0	95.8	4.2		100	0	0		17.5	82.5	0		
PHF	.000	.000	.750	.750	.000	.767	.500	.750	.500	.000	.000	.500	.583	.635	.000	.714	.802

City of Perris  
 N/S: Patterson Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 04\_PER\_Patterson\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



3.1-135

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Patterson Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 04\_PER\_Patterson\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Patterson Avenue Southbound				Harley Knox Boulevard Westbound				Patterson Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:00 PM				04:00 PM				04:00 PM				04:00 PM				
+0 mins.	0	0	0	0	0	11	0	11	1	0	0	1	2	7	0	9	
+15 mins.	0	0	1	1	0	13	0	13	1	0	0	1	1	13	0	14	
+30 mins.	0	0	1	1	0	15	1	16	0	0	0	0	3	8	0	11	
+45 mins.	0	0	1	1	0	7	1	8	0	0	0	0	1	5	0	6	
Total Volume	0	0	3	3	0	46	2	48	2	0	0	2	7	33	0	40	
% App. Total	0	0	100		0	95.8	4.2		100	0	0		17.5	82.5	0		
PHF	.000	.000	.750	.750	.000	.767	.500	.750	.500	.000	.000	.500	.583	.635	.000	.714	



Location: Perris  
 N/S: Patterson Avenue  
 E/W: Harley Knox Boulevard



Date: 5/24/2018  
 Day: Thursday

**PEDESTRIANS**

	North Leg Patterson Avenue	East Leg Harley Knox Boulevard	South Leg Patterson Avenue	West Leg Harley Knox Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
<b>TOTAL VOLUMES:</b>	0	0	0	0	0

	North Leg Patterson Avenue	East Leg Harley Knox Boulevard	South Leg Patterson Avenue	West Leg Harley Knox Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
<b>TOTAL VOLUMES:</b>	0	0	0	0	0

Location: Perris  
 N/S: Patterson Avenue  
 E/W: Harley Knox Boulevard



Date: 5/24/2018  
 Day: Thursday

BICYCLES

	Southbound Patterson Avenue			Westbound Harley Knox Boulevard			Northbound Patterson Avenue			Eastbound Harley Knox Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound Patterson Avenue			Westbound Harley Knox Boulevard			Northbound Patterson Avenue			Eastbound Harley Knox Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	2	0	0	0	0	0	0	0	2

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Meyer Drive/John F Kennedy Drive  
 Weather: Clear

File Name : 07\_MRV\_Heacock\_John F Kennedy AM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
 Page No : 1

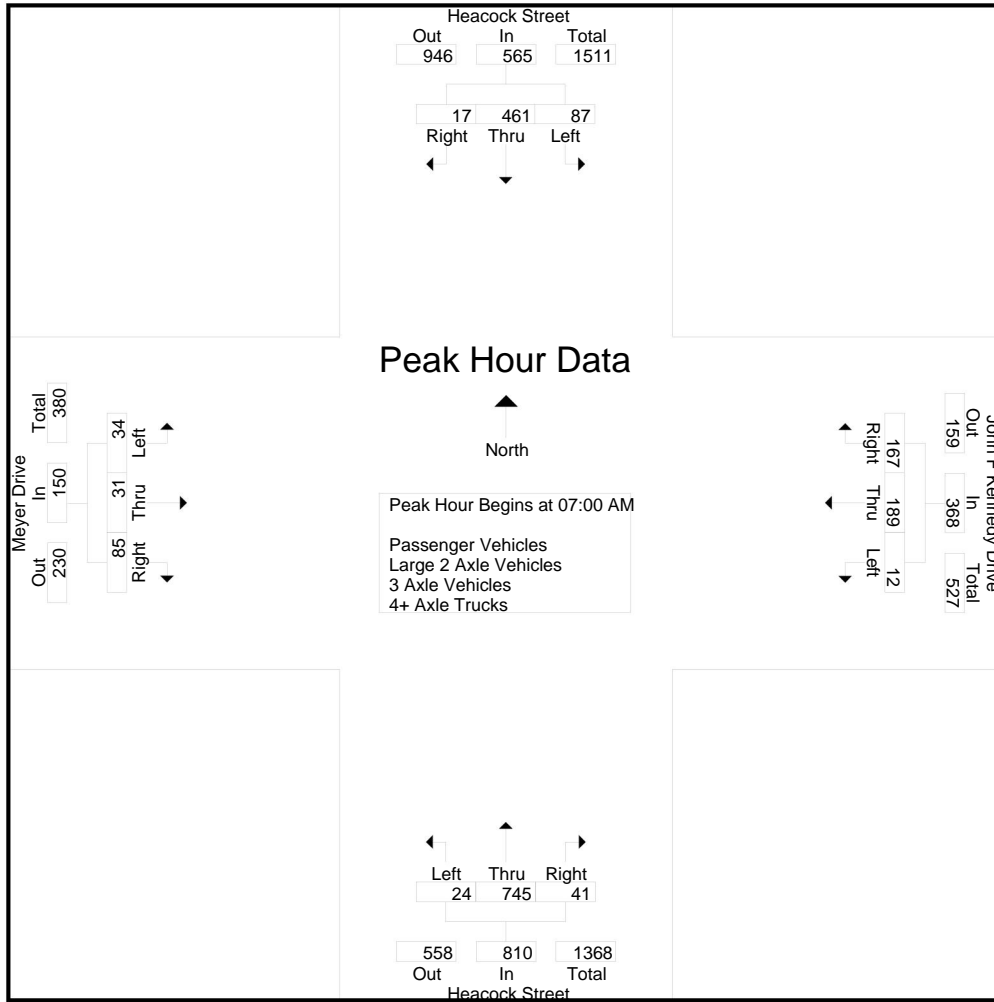
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Heacock Street Southbound				John F Kennedy Drive Westbound				Heacock Street Northbound				Meyer Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	17	116	5	138	6	39	44	89	21	174	5	200	2	17	12	31	458
07:15 AM	25	139	5	169	4	44	33	81	2	179	7	188	4	1	16	21	459
07:30 AM	24	116	3	143	1	52	46	99	1	186	16	203	14	10	25	49	494
07:45 AM	21	90	4	115	1	54	44	99	0	206	13	219	14	3	32	49	482
<b>Total</b>	<b>87</b>	<b>461</b>	<b>17</b>	<b>565</b>	<b>12</b>	<b>189</b>	<b>167</b>	<b>368</b>	<b>24</b>	<b>745</b>	<b>41</b>	<b>810</b>	<b>34</b>	<b>31</b>	<b>85</b>	<b>150</b>	<b>1893</b>
08:00 AM	18	109	5	132	1	27	43	71	0	192	8	200	10	0	11	21	424
08:15 AM	12	58	5	75	1	29	42	72	0	142	16	158	6	1	4	11	316
08:30 AM	13	65	4	82	0	11	34	45	0	131	9	140	7	0	6	13	280
08:45 AM	16	64	8	88	2	19	26	47	0	108	5	113	13	0	10	23	271
<b>Total</b>	<b>59</b>	<b>296</b>	<b>22</b>	<b>377</b>	<b>4</b>	<b>86</b>	<b>145</b>	<b>235</b>	<b>0</b>	<b>573</b>	<b>38</b>	<b>611</b>	<b>36</b>	<b>1</b>	<b>31</b>	<b>68</b>	<b>1291</b>
<b>Grand Total</b>	<b>146</b>	<b>757</b>	<b>39</b>	<b>942</b>	<b>16</b>	<b>275</b>	<b>312</b>	<b>603</b>	<b>24</b>	<b>1318</b>	<b>79</b>	<b>1421</b>	<b>70</b>	<b>32</b>	<b>116</b>	<b>218</b>	<b>3184</b>
Apprch %	15.5	80.4	4.1		2.7	45.6	51.7		1.7	92.8	5.6		32.1	14.7	53.2		
Total %	4.6	23.8	1.2	29.6	0.5	8.6	9.8	18.9	0.8	41.4	2.5	44.6	2.2	1	3.6	6.8	
Passenger Vehicles	143	640	33	816	14	264	307	585	22	1221	73	1316	59	29	111	199	2916
% Passenger Vehicles	97.9	84.5	84.6	86.6	87.5	96	98.4	97	91.7	92.6	92.4	92.6	84.3	90.6	95.7	91.3	91.6
Large 2 Axle Vehicles	3	29	3	35	0	8	4	12	2	23	5	30	5	3	4	12	89
% Large 2 Axle Vehicles	2.1	3.8	7.7	3.7	0	2.9	1.3	2	8.3	1.7	6.3	2.1	7.1	9.4	3.4	5.5	2.8
3 Axle Vehicles	0	30	3	33	1	3	0	4	0	22	1	23	5	0	1	6	66
% 3 Axle Vehicles	0	4	7.7	3.5	6.2	1.1	0	0.7	0	1.7	1.3	1.6	7.1	0	0.9	2.8	2.1
4+ Axle Trucks	0	58	0	58	1	0	1	2	0	52	0	52	1	0	0	1	113
% 4+ Axle Trucks	0	7.7	0	6.2	6.2	0	0.3	0.3	0	3.9	0	3.7	1.4	0	0	0.5	3.5

Start Time	Heacock Street Southbound				John F Kennedy Drive Westbound				Heacock Street Northbound				Meyer Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	17	116	5	138	6	39	44	89	21	174	5	200	2	17	12	31	458
07:15 AM	25	139	5	169	4	44	33	81	2	179	7	188	4	1	16	21	459
07:30 AM	24	116	3	143	1	52	46	99	1	186	16	203	14	10	25	49	494
07:45 AM	21	90	4	115	1	54	44	99	0	206	13	219	14	3	32	49	482
Total Volume	87	461	17	565	12	189	167	368	24	745	41	810	34	31	85	150	1893
% App. Total	15.4	81.6	3		3.3	51.4	45.4		3	92	5.1		22.7	20.7	56.7		
PHF	.870	.829	.850	.836	.500	.875	.908	.929	.286	.904	.641	.925	.607	.456	.664	.765	.958

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Meyer Drive/John F Kennedy Drive  
 Weather: Clear

File Name : 07\_MRV\_Heacock\_John F Kennedy AM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
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Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	17	116	5	138	6	39	44	89	21	174	5	200	2	17	12	31
+15 mins.	25	139	5	169	4	44	33	81	2	179	7	188	4	1	16	21
+30 mins.	24	116	3	143	1	52	46	99	1	186	16	203	14	10	25	49
+45 mins.	21	90	4	115	1	54	44	99	0	206	13	219	14	3	32	49
Total Volume	87	461	17	565	12	189	167	368	24	745	41	810	34	31	85	150
% App. Total	15.4	81.6	3		3.3	51.4	45.4		3	92	5.1		22.7	20.7	56.7	
PHF	.870	.829	.850	.836	.500	.875	.908	.929	.286	.904	.641	.925	.607	.456	.664	.765

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Meyer Drive/John F Kennedy Drive  
 Weather: Clear

File Name : 07\_MRV\_Heacock\_John F Kennedy AM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
 Page No : 1

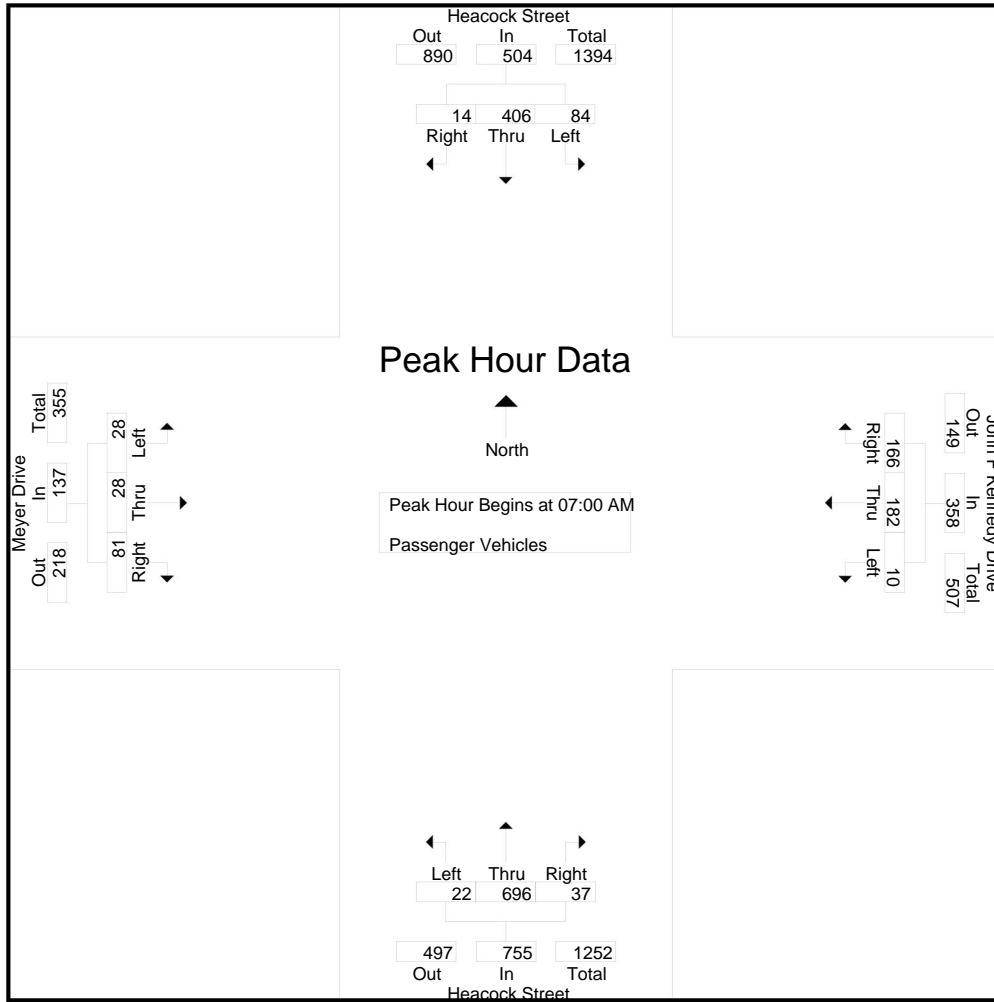
Groups Printed- Passenger Vehicles

Start Time	Heacock Street Southbound				John F Kennedy Drive Westbound				Heacock Street Northbound				Meyer Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	16	105	3	124	5	36	43	84	21	160	2	183	2	15	9	26	417
07:15 AM	23	117	4	144	4	41	33	78	1	168	6	175	4	1	16	21	418
07:30 AM	24	103	3	130	1	52	46	99	0	175	16	191	10	9	24	43	463
07:45 AM	21	81	4	106	0	53	44	97	0	193	13	206	12	3	32	47	456
<b>Total</b>	<b>84</b>	<b>406</b>	<b>14</b>	<b>504</b>	<b>10</b>	<b>182</b>	<b>166</b>	<b>358</b>	<b>22</b>	<b>696</b>	<b>37</b>	<b>755</b>	<b>28</b>	<b>28</b>	<b>81</b>	<b>137</b>	<b>1754</b>
08:00 AM	18	85	5	108	1	26	41	68	0	180	8	188	10	0	11	21	385
08:15 AM	12	48	4	64	1	28	40	69	0	130	14	144	4	1	4	9	286
08:30 AM	13	48	3	64	0	11	34	45	0	116	9	125	7	0	6	13	247
08:45 AM	16	53	7	76	2	17	26	45	0	99	5	104	10	0	9	19	244
<b>Total</b>	<b>59</b>	<b>234</b>	<b>19</b>	<b>312</b>	<b>4</b>	<b>82</b>	<b>141</b>	<b>227</b>	<b>0</b>	<b>525</b>	<b>36</b>	<b>561</b>	<b>31</b>	<b>1</b>	<b>30</b>	<b>62</b>	<b>1162</b>
<b>Grand Total</b>	<b>143</b>	<b>640</b>	<b>33</b>	<b>816</b>	<b>14</b>	<b>264</b>	<b>307</b>	<b>585</b>	<b>22</b>	<b>1221</b>	<b>73</b>	<b>1316</b>	<b>59</b>	<b>29</b>	<b>111</b>	<b>199</b>	<b>2916</b>
Apprch %	17.5	78.4	4		2.4	45.1	52.5		1.7	92.8	5.5		29.6	14.6	55.8		
Total %	4.9	21.9	1.1	28	0.5	9.1	10.5	20.1	0.8	41.9	2.5	45.1	2	1	3.8	6.8	

Start Time	Heacock Street Southbound				John F Kennedy Drive Westbound				Heacock Street Northbound				Meyer Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	16	105	3	124	5	36	43	84	21	160	2	183	2	15	9	26	417
07:15 AM	23	117	4	144	4	41	33	78	1	168	6	175	4	1	16	21	418
07:30 AM	24	103	3	130	1	52	46	99	0	175	16	191	10	9	24	43	463
07:45 AM	21	81	4	106	0	53	44	97	0	193	13	206	12	3	32	47	456
<b>Total Volume</b>	<b>84</b>	<b>406</b>	<b>14</b>	<b>504</b>	<b>10</b>	<b>182</b>	<b>166</b>	<b>358</b>	<b>22</b>	<b>696</b>	<b>37</b>	<b>755</b>	<b>28</b>	<b>28</b>	<b>81</b>	<b>137</b>	<b>1754</b>
% App. Total	16.7	80.6	2.8		2.8	50.8	46.4		2.9	92.2	4.9		20.4	20.4	59.1		
PHF	.875	.868	.875	.875	.500	.858	.902	.904	.262	.902	.578	.916	.583	.467	.633	.729	.947

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Meyer Drive/John F Kennedy Drive  
 Weather: Clear

File Name : 07\_MR\_V\_Heacock\_John F Kennedy AM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	16	105	3	124	5	36	43	84	21	160	2	183	2	15	9	26
+15 mins.	23	117	4	144	4	41	33	78	1	168	6	175	4	1	16	21
+30 mins.	24	103	3	130	1	52	46	99	0	175	16	191	10	9	24	43
+45 mins.	21	81	4	106	0	53	44	97	0	193	13	206	12	3	32	47
Total Volume	84	406	14	504	10	182	166	358	22	696	37	755	28	28	81	137
% App. Total	16.7	80.6	2.8		2.8	50.8	46.4		2.9	92.2	4.9		20.4	20.4	59.1	
PHF	.875	.868	.875	.875	.500	.858	.902	.904	.262	.902	.578	.916	.583	.467	.633	.729

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Meyer Drive/John F Kennedy Drive  
 Weather: Clear

File Name : 07\_MRV\_Heacock\_John F Kennedy AM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
 Page No : 1

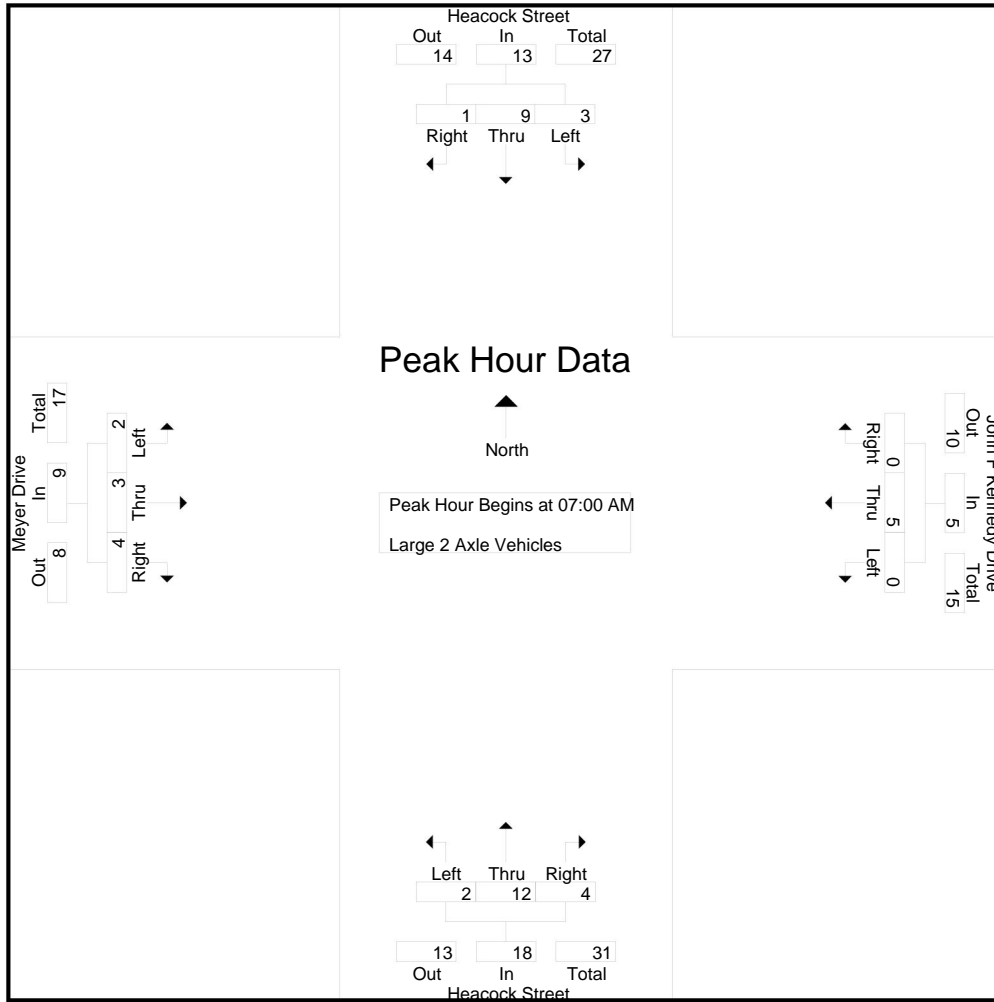
Groups Printed- Large 2 Axle Vehicles

Start Time	Heacock Street Southbound				John F Kennedy Drive Westbound				Heacock Street Northbound				Meyer Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	1	2	0	3	0	3	0	3	0	5	3	8	0	2	3	5	19
07:15 AM	2	3	1	6	0	1	0	1	1	3	1	5	0	0	0	0	12
07:30 AM	0	2	0	2	0	0	0	0	1	3	0	4	2	1	1	4	10
07:45 AM	0	2	0	2	0	1	0	1	0	1	0	1	0	0	0	0	4
Total	3	9	1	13	0	5	0	5	2	12	4	18	2	3	4	9	45
08:00 AM	0	8	0	8	0	1	2	3	0	4	0	4	0	0	0	0	15
08:15 AM	0	1	1	2	0	1	2	3	0	3	1	4	1	0	0	1	10
08:30 AM	0	8	1	9	0	0	0	0	0	1	0	1	0	0	0	0	10
08:45 AM	0	3	0	3	0	1	0	1	0	3	0	3	2	0	0	2	9
Total	0	20	2	22	0	3	4	7	0	11	1	12	3	0	0	3	44
Grand Total	3	29	3	35	0	8	4	12	2	23	5	30	5	3	4	12	89
Apprch %	8.6	82.9	8.6		0	66.7	33.3		6.7	76.7	16.7		41.7	25	33.3		
Total %	3.4	32.6	3.4	39.3	0	9	4.5	13.5	2.2	25.8	5.6	33.7	5.6	3.4	4.5	13.5	

Start Time	Heacock Street Southbound				John F Kennedy Drive Westbound				Heacock Street Northbound				Meyer Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	1	2	0	3	0	3	0	3	0	5	3	8	0	2	3	5	19
07:15 AM	2	3	1	6	0	1	0	1	1	3	1	5	0	0	0	0	12
07:30 AM	0	2	0	2	0	0	0	0	1	3	0	4	2	1	1	4	10
07:45 AM	0	2	0	2	0	1	0	1	0	1	0	1	0	0	0	0	4
Total Volume	3	9	1	13	0	5	0	5	2	12	4	18	2	3	4	9	45
% App. Total	23.1	69.2	7.7		0	100	0		11.1	66.7	22.2		22.2	33.3	44.4		
PHF	.375	.750	.250	.542	.000	.417	.000	.417	.500	.600	.333	.563	.250	.375	.333	.450	.592

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Meyer Drive/John F Kennedy Drive  
 Weather: Clear

File Name : 07\_MR\_V\_Heacock\_John F Kennedy AM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	1	2	0	3	0	3	0	3	0	5	3	8	0	2	3	5
+15 mins.	2	3	1	6	0	1	0	1	1	3	1	5	0	0	0	0
+30 mins.	0	2	0	2	0	0	0	0	1	3	0	4	2	1	1	4
+45 mins.	0	2	0	2	0	1	0	1	0	1	0	1	0	0	0	0
Total Volume	3	9	1	13	0	5	0	5	2	12	4	18	2	3	4	9
% App. Total	23.1	69.2	7.7		0	100	0		11.1	66.7	22.2		22.2	33.3	44.4	
PHF	.375	.750	.250	.542	.000	.417	.000	.417	.500	.600	.333	.563	.250	.375	.333	.450



City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Meyer Drive/John F Kennedy Drive  
 Weather: Clear

File Name : 07\_MR\_V\_Heacock\_John F Kennedy AM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
 Page No : 1

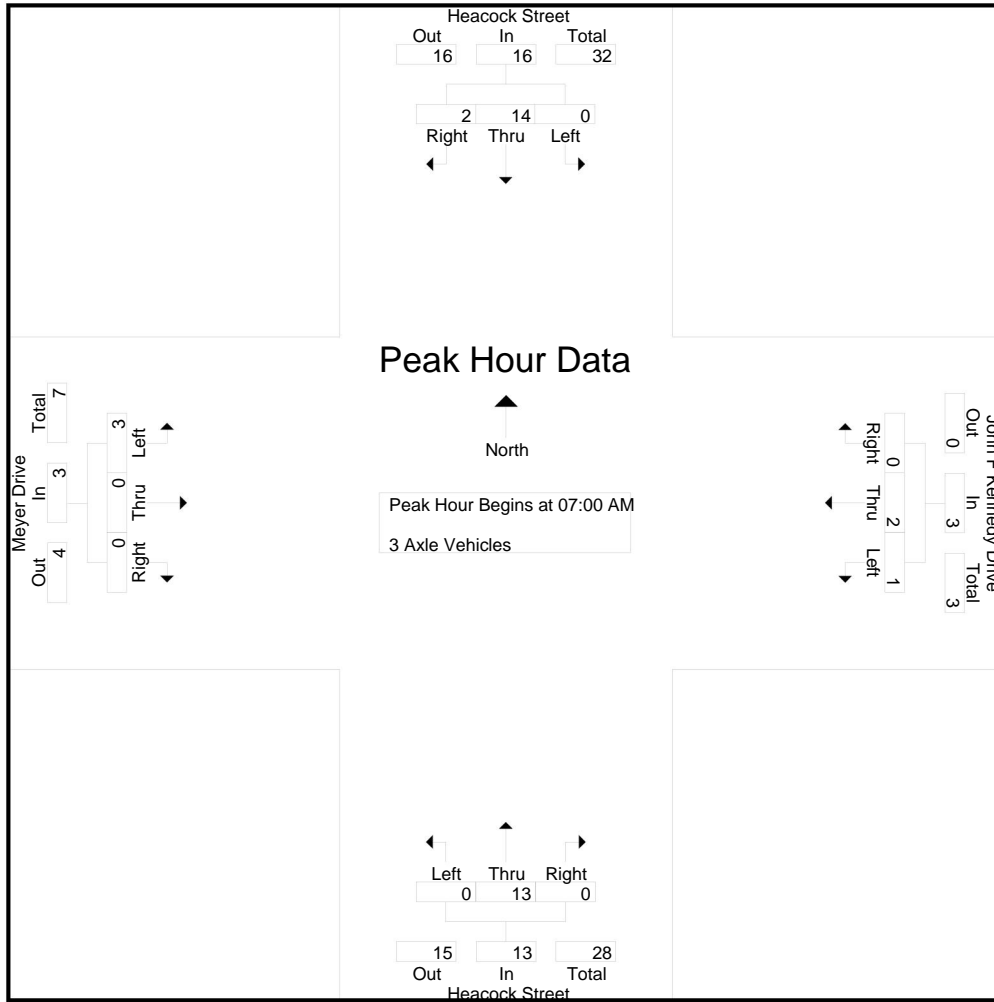
Groups Printed- 3 Axle Vehicles

Start Time	Heacock Street Southbound				John F Kennedy Drive Westbound				Heacock Street Northbound				Meyer Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	4	2	6	0	0	0	0	0	3	0	3	0	0	0	0	9
07:15 AM	0	7	0	7	0	2	0	2	0	2	0	2	0	0	0	0	11
07:30 AM	0	2	0	2	0	0	0	0	0	3	0	3	2	0	0	2	7
07:45 AM	0	1	0	1	1	0	0	1	0	5	0	5	1	0	0	1	8
<b>Total</b>	<b>0</b>	<b>14</b>	<b>2</b>	<b>16</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>13</b>	<b>0</b>	<b>13</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>35</b>
08:00 AM	0	4	0	4	0	0	0	0	0	2	0	2	0	0	0	0	6
08:15 AM	0	4	0	4	0	0	0	0	0	1	1	2	1	0	0	1	7
08:30 AM	0	2	0	2	0	0	0	0	0	4	0	4	0	0	0	0	6
08:45 AM	0	6	1	7	0	1	0	1	0	2	0	2	1	0	1	2	12
<b>Total</b>	<b>0</b>	<b>16</b>	<b>1</b>	<b>17</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>9</b>	<b>1</b>	<b>10</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>3</b>	<b>31</b>
<b>Grand Total</b>	<b>0</b>	<b>30</b>	<b>3</b>	<b>33</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>22</b>	<b>1</b>	<b>23</b>	<b>5</b>	<b>0</b>	<b>1</b>	<b>6</b>	<b>66</b>
Apprch %	0	90.9	9.1		25	75	0		0	95.7	4.3		83.3	0	16.7		
Total %	0	45.5	4.5	50	1.5	4.5	0	6.1	0	33.3	1.5	34.8	7.6	0	1.5	9.1	

Start Time	Heacock Street Southbound				John F Kennedy Drive Westbound				Heacock Street Northbound				Meyer Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	4	2	6	0	0	0	0	0	3	0	3	0	0	0	0	9
07:15 AM	0	7	0	7	0	2	0	2	0	2	0	2	0	0	0	0	11
07:30 AM	0	2	0	2	0	0	0	0	0	3	0	3	2	0	0	2	7
07:45 AM	0	1	0	1	1	0	0	1	0	5	0	5	1	0	0	1	8
<b>Total Volume</b>	<b>0</b>	<b>14</b>	<b>2</b>	<b>16</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>13</b>	<b>0</b>	<b>13</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>35</b>
% App. Total	0	87.5	12.5		33.3	66.7	0		0	100	0		100	0	0		
PHF	.000	.500	.250	.571	.250	.250	.000	.375	.000	.650	.000	.650	.375	.000	.000	.375	.795

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Meyer Drive/John F Kennedy Drive  
 Weather: Clear

File Name : 07\_MRV\_Heacock\_John F Kennedy AM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	4	2	6	0	0	0	0	0	3	0	3	0	0	0	0
+15 mins.	0	7	0	7	0	2	0	2	0	2	0	2	0	0	0	0
+30 mins.	0	2	0	2	0	0	0	0	0	3	0	3	2	0	0	2
+45 mins.	0	1	0	1	1	0	0	1	0	5	0	5	1	0	0	1
Total Volume	0	14	2	16	1	2	0	3	0	13	0	13	3	0	0	3
% App. Total	0	87.5	12.5	33.3	66.7	0	0	3	0	100	0	13	100	0	0	3
PHF	.000	.500	.250	.571	.250	.250	.000	.375	.000	.650	.000	.650	.375	.000	.000	.375

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Meyer Drive/John F Kennedy Drive  
 Weather: Clear

File Name : 07\_MRV\_Heacock\_John F Kennedy AM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
 Page No : 1

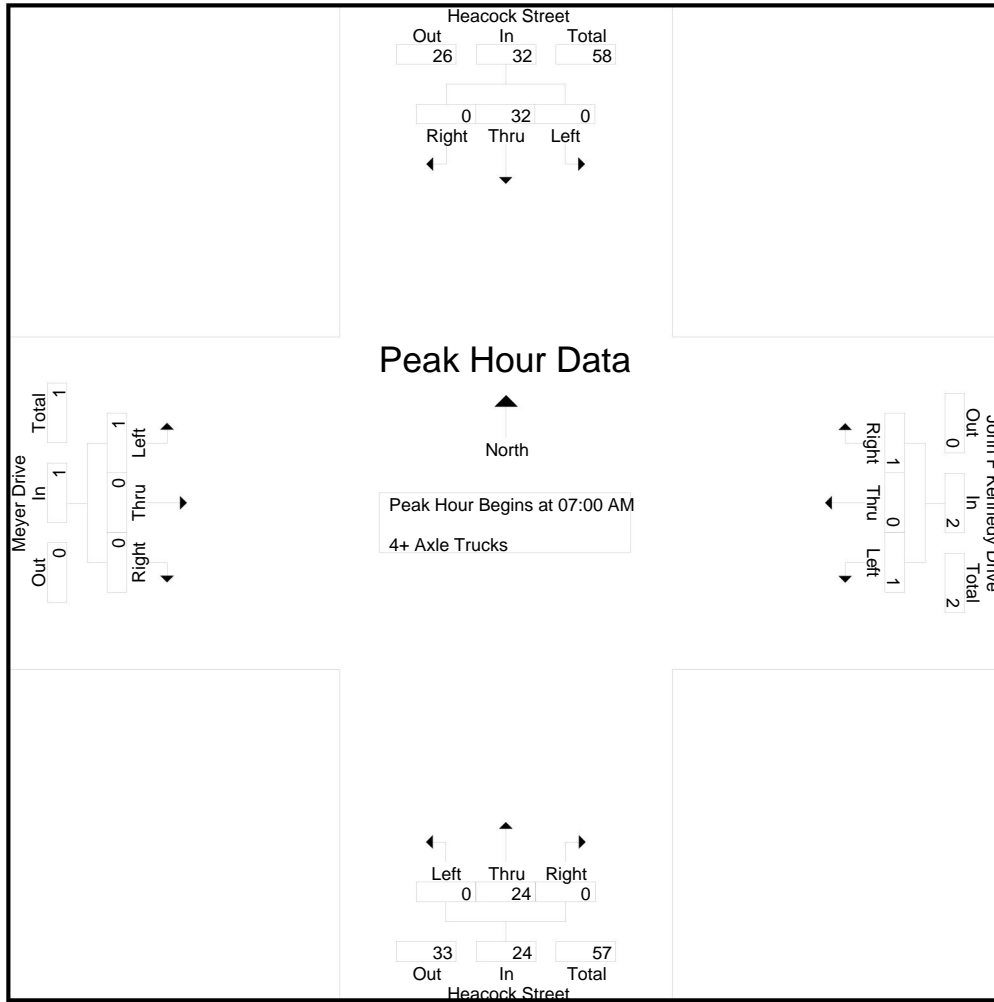
Groups Printed- 4+ Axle Trucks

Start Time	Heacock Street Southbound				John F Kennedy Drive Westbound				Heacock Street Northbound				Meyer Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	5	0	5	1	0	1	2	0	6	0	6	0	0	0	0	13
07:15 AM	0	12	0	12	0	0	0	0	0	6	0	6	0	0	0	0	18
07:30 AM	0	9	0	9	0	0	0	0	0	5	0	5	0	0	0	0	14
07:45 AM	0	6	0	6	0	0	0	0	0	7	0	7	1	0	0	1	14
Total	0	32	0	32	1	0	1	2	0	24	0	24	1	0	0	1	59
08:00 AM	0	12	0	12	0	0	0	0	0	6	0	6	0	0	0	0	18
08:15 AM	0	5	0	5	0	0	0	0	0	8	0	8	0	0	0	0	13
08:30 AM	0	7	0	7	0	0	0	0	0	10	0	10	0	0	0	0	17
08:45 AM	0	2	0	2	0	0	0	0	0	4	0	4	0	0	0	0	6
Total	0	26	0	26	0	0	0	0	0	28	0	28	0	0	0	0	54
Grand Total	0	58	0	58	1	0	1	2	0	52	0	52	1	0	0	1	113
Apprch %	0	100	0		50	0	50		0	100	0		100	0	0		
Total %	0	51.3	0	51.3	0.9	0	0.9	1.8	0	46	0	46	0.9	0	0	0.9	

Start Time	Heacock Street Southbound				John F Kennedy Drive Westbound				Heacock Street Northbound				Meyer Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	5	0	5	1	0	1	2	0	6	0	6	0	0	0	0	13
07:15 AM	0	12	0	12	0	0	0	0	0	6	0	6	0	0	0	0	18
07:30 AM	0	9	0	9	0	0	0	0	0	5	0	5	0	0	0	0	14
07:45 AM	0	6	0	6	0	0	0	0	0	7	0	7	1	0	0	1	14
Total Volume	0	32	0	32	1	0	1	2	0	24	0	24	1	0	0	1	59
% App. Total	0	100	0		50	0	50		0	100	0		100	0	0		
PHF	.000	.667	.000	.667	.250	.000	.250	.250	.000	.857	.000	.857	.250	.000	.000	.250	.819

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Meyer Drive/John F Kennedy Drive  
 Weather: Clear

File Name : 07\_MR\_V\_Heacock\_John F Kennedy AM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	5	0	5	1	0	1	2	0	6	0	6	0	0	0	0
+15 mins.	0	12	0	12	0	0	0	0	0	6	0	6	0	0	0	0
+30 mins.	0	9	0	9	0	0	0	0	0	5	0	5	0	0	0	0
+45 mins.	0	6	0	6	0	0	0	0	0	7	0	7	1	0	0	1
Total Volume	0	32	0	32	1	0	1	2	0	24	0	24	1	0	0	1
% App. Total	0	100	0	50	50	0	50	0	0	100	0	100	100	0	0	0
PHF	.000	.667	.000	.667	.250	.000	.250	.250	.000	.857	.000	.857	.250	.000	.000	.250

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Meyer Drive/John F Kennedy Drive  
 Weather: Clear

File Name : 07\_MRV\_Heacock\_John F Kennedy PM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
 Page No : 1

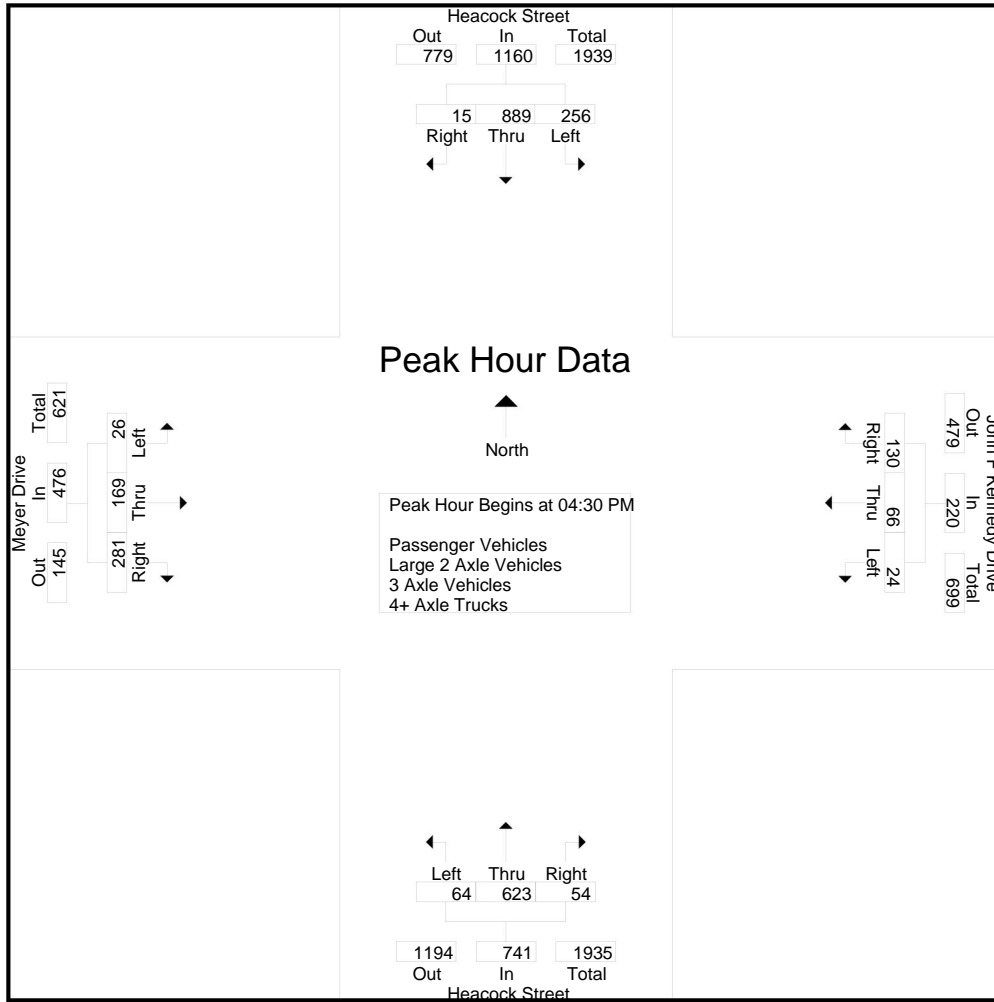
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Heacock Street Southbound				John F Kennedy Drive Westbound				Heacock Street Northbound				Meyer Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	50	204	6	260	6	11	31	48	12	157	10	179	5	45	71	121	608
04:15 PM	51	215	3	269	6	9	27	42	10	132	13	155	4	50	66	120	586
04:30 PM	71	231	3	305	9	24	40	73	14	199	14	227	8	50	80	138	743
04:45 PM	55	222	6	283	8	14	29	51	15	183	18	216	6	31	64	101	651
<b>Total</b>	<b>227</b>	<b>872</b>	<b>18</b>	<b>1117</b>	<b>29</b>	<b>58</b>	<b>127</b>	<b>214</b>	<b>51</b>	<b>671</b>	<b>55</b>	<b>777</b>	<b>23</b>	<b>176</b>	<b>281</b>	<b>480</b>	<b>2588</b>
05:00 PM	65	219	0	284	3	10	35	48	15	125	12	152	5	45	64	114	598
05:15 PM	65	217	6	288	4	18	26	48	20	116	10	146	7	43	73	123	605
05:30 PM	62	233	4	299	7	9	37	53	9	147	10	166	7	48	63	118	636
05:45 PM	61	214	4	279	5	20	41	66	15	91	9	115	10	41	64	115	575
<b>Total</b>	<b>253</b>	<b>883</b>	<b>14</b>	<b>1150</b>	<b>19</b>	<b>57</b>	<b>139</b>	<b>215</b>	<b>59</b>	<b>479</b>	<b>41</b>	<b>579</b>	<b>29</b>	<b>177</b>	<b>264</b>	<b>470</b>	<b>2414</b>
<b>Grand Total</b>	<b>480</b>	<b>1755</b>	<b>32</b>	<b>2267</b>	<b>48</b>	<b>115</b>	<b>266</b>	<b>429</b>	<b>110</b>	<b>1150</b>	<b>96</b>	<b>1356</b>	<b>52</b>	<b>353</b>	<b>545</b>	<b>950</b>	<b>5002</b>
Apprch %	21.2	77.4	1.4		11.2	26.8	62		8.1	84.8	7.1		5.5	37.2	57.4		
Total %	9.6	35.1	0.6	45.3	1	2.3	5.3	8.6	2.2	23	1.9	27.1	1	7.1	10.9		19
Passenger Vehicles	464	1648	32	2144	48	114	265	427	110	1068	96	1274	52	351	540	943	4788
% Passenger Vehicles	96.7	93.9	100	94.6	100	99.1	99.6	99.5	100	92.9	100	94	100	99.4	99.1	99.3	95.7
Large 2 Axle Vehicles	13	23	0	36	0	1	1	2	0	11	0	11	0	2	3	5	54
% Large 2 Axle Vehicles	2.7	1.3	0	1.6	0	0.9	0.4	0.5	0	1	0	0.8	0	0.6	0.6	0.5	1.1
3 Axle Vehicles	2	21	0	23	0	0	0	0	0	13	0	13	0	0	1	1	37
% 3 Axle Vehicles	0.4	1.2	0	1	0	0	0	0	0	1.1	0	1	0	0	0.2	0.1	0.7
4+ Axle Trucks	1	63	0	64	0	0	0	0	0	58	0	58	0	0	1	1	123
% 4+ Axle Trucks	0.2	3.6	0	2.8	0	0	0	0	0	5	0	4.3	0	0	0.2	0.1	2.5

Start Time	Heacock Street Southbound				John F Kennedy Drive Westbound				Heacock Street Northbound				Meyer Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	71	231	3	305	9	24	40	73	14	199	14	227	8	50	80	138	743
04:45 PM	55	222	6	283	8	14	29	51	15	183	18	216	6	31	64	101	651
05:00 PM	65	219	0	284	3	10	35	48	15	125	12	152	5	45	64	114	598
05:15 PM	65	217	6	288	4	18	26	48	20	116	10	146	7	43	73	123	605
Total Volume	256	889	15	1160	24	66	130	220	64	623	54	741	26	169	281	476	2597
% App. Total	22.1	76.6	1.3		10.9	30	59.1		8.6	84.1	7.3		5.5	35.5	59		
PHF	.901	.962	.625	.951	.667	.688	.813	.753	.800	.783	.750	.816	.813	.845	.878	.862	.874

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Meyer Drive/John F Kennedy Drive  
 Weather: Clear

File Name : 07\_MRV\_Heacock\_John F Kennedy PM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:00 PM				04:00 PM			
+0 mins.	<b>71</b>	<b>231</b>	3	<b>305</b>	<b>9</b>	<b>24</b>	<b>40</b>	<b>73</b>	12	157	10	179	5	45	71	121
+15 mins.	55	222	<b>6</b>	283	8	14	29	51	10	132	13	155	4	<b>50</b>	66	120
+30 mins.	65	219	0	284	3	10	35	48	14	<b>199</b>	14	<b>227</b>	<b>8</b>	50	<b>80</b>	<b>138</b>
+45 mins.	65	217	6	288	4	18	26	48	<b>15</b>	183	<b>18</b>	216	6	31	64	101
Total Volume	256	889	15	1160	24	66	130	220	51	671	55	777	23	176	281	480
% App. Total	22.1	76.6	1.3		10.9	30	59.1		6.6	86.4	7.1		4.8	36.7	58.5	
PHF	.901	.962	.625	.951	.667	.688	.813	.753	.850	.843	.764	.856	.719	.880	.878	.870

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Meyer Drive/John F Kennedy Drive  
 Weather: Clear

File Name : 07\_MRV\_Heacock\_John F Kennedy PM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
 Page No : 1

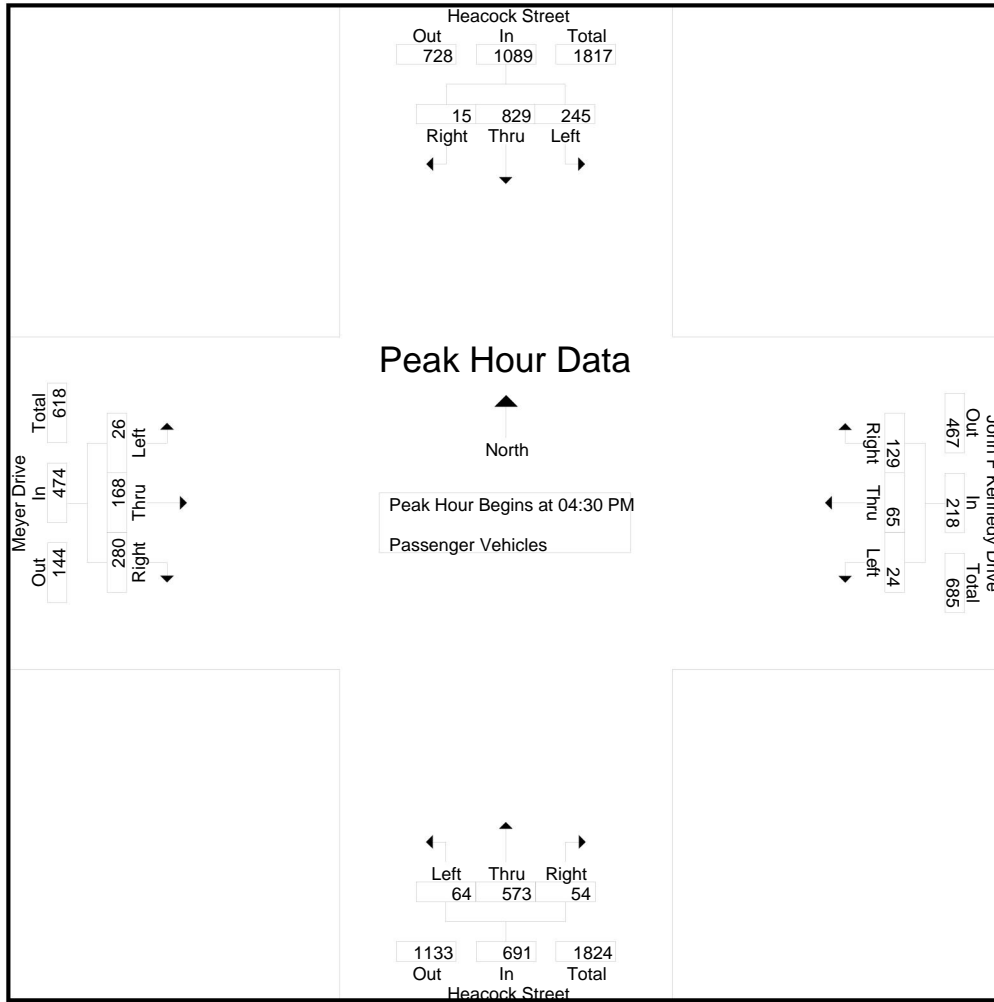
Groups Printed- Passenger Vehicles

Start Time	Heacock Street Southbound				John F Kennedy Drive Westbound				Heacock Street Northbound				Meyer Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	47	189	6	242	6	11	31	48	12	145	10	167	5	45	68	118	575
04:15 PM	50	202	3	255	6	9	27	42	10	123	13	146	4	50	66	120	563
04:30 PM	67	218	3	288	9	24	39	72	14	185	14	213	8	49	80	137	710
04:45 PM	54	208	6	268	8	14	29	51	15	171	18	204	6	31	64	101	624
Total	218	817	18	1053	29	58	126	213	51	624	55	730	23	175	278	476	2472
05:00 PM	61	204	0	265	3	9	35	47	15	114	12	141	5	45	63	113	566
05:15 PM	63	199	6	268	4	18	26	48	20	103	10	133	7	43	73	123	572
05:30 PM	62	224	4	290	7	9	37	53	9	141	10	160	7	48	62	117	620
05:45 PM	60	204	4	268	5	20	41	66	15	86	9	110	10	40	64	114	558
Total	246	831	14	1091	19	56	139	214	59	444	41	544	29	176	262	467	2316
Grand Total	464	1648	32	2144	48	114	265	427	110	1068	96	1274	52	351	540	943	4788
Apprch %	21.6	76.9	1.5		11.2	26.7	62.1		8.6	83.8	7.5		5.5	37.2	57.3		
Total %	9.7	34.4	0.7	44.8	1	2.4	5.5	8.9	2.3	22.3	2	26.6	1.1	7.3	11.3	19.7	

Start Time	Heacock Street Southbound				John F Kennedy Drive Westbound				Heacock Street Northbound				Meyer Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	67	218	3	288	9	24	39	72	14	185	14	213	8	49	80	137	710
04:45 PM	54	208	6	268	8	14	29	51	15	171	18	204	6	31	64	101	624
05:00 PM	61	204	0	265	3	9	35	47	15	114	12	141	5	45	63	113	566
05:15 PM	63	199	6	268	4	18	26	48	20	103	10	133	7	43	73	123	572
Total Volume	245	829	15	1089	24	65	129	218	64	573	54	691	26	168	280	474	2472
% App. Total	22.5	76.1	1.4		11	29.8	59.2		9.3	82.9	7.8		5.5	35.4	59.1		
PHF	.914	.951	.625	.945	.667	.677	.827	.757	.800	.774	.750	.811	.813	.857	.875	.865	.870

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Meyer Drive/John F Kennedy Drive  
 Weather: Clear

File Name : 07\_MRV\_Heacock\_John F Kennedy PM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
 Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	<b>67</b>	<b>218</b>	3	<b>288</b>	<b>9</b>	<b>24</b>	<b>39</b>	<b>72</b>	14	<b>185</b>	14	<b>213</b>	<b>8</b>	<b>49</b>	<b>80</b>	<b>137</b>
+15 mins.	54	208	<b>6</b>	268	8	14	29	51	15	171	<b>18</b>	204	6	31	64	101
+30 mins.	61	204	0	265	3	9	35	47	15	114	12	141	5	45	63	113
+45 mins.	63	199	6	268	4	18	26	48	<b>20</b>	103	10	133	7	43	73	123
Total Volume	245	829	15	1089	24	65	129	218	64	573	54	691	26	168	280	474
% App. Total	22.5	76.1	1.4		11	29.8	59.2		9.3	82.9	7.8		5.5	35.4	59.1	
PHF	.914	.951	.625	.945	.667	.677	.827	.757	.800	.774	.750	.811	.813	.857	.875	.865



City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Meyer Drive/John F Kennedy Drive  
 Weather: Clear

File Name : 07\_MRV\_Heacock\_John F Kennedy PM  
 Site Code : 06719334  
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 Page No : 1

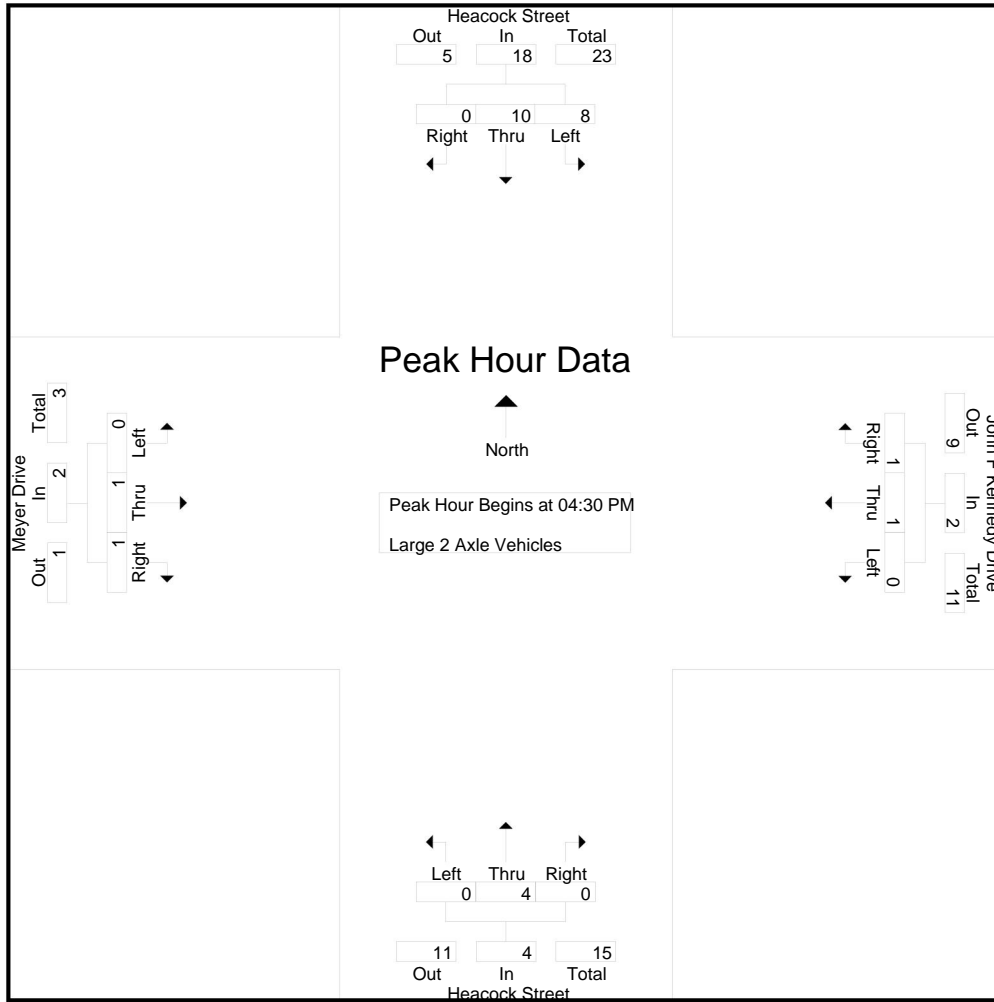
Groups Printed- Large 2 Axle Vehicles

Start Time	Heacock Street Southbound				John F Kennedy Drive Westbound				Heacock Street Northbound				Meyer Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	3	3	0	6	0	0	0	0	0	1	0	1	0	0	2	2	9
04:15 PM	1	7	0	8	0	0	0	0	0	2	0	2	0	0	0	0	10
04:30 PM	3	3	0	6	0	0	1	1	0	1	0	1	0	1	0	1	9
04:45 PM	1	4	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
Total	8	17	0	25	0	0	1	1	0	4	0	4	0	1	2	3	33
05:00 PM	2	1	0	3	0	1	0	1	0	1	0	1	0	0	1	1	6
05:15 PM	2	2	0	4	0	0	0	0	0	2	0	2	0	0	0	0	6
05:30 PM	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	4
05:45 PM	1	3	0	4	0	0	0	0	0	0	0	0	0	1	0	1	5
Total	5	6	0	11	0	1	0	1	0	7	0	7	0	1	1	2	21
Grand Total	13	23	0	36	0	1	1	2	0	11	0	11	0	2	3	5	54
Apprch %	36.1	63.9	0		0	50	50		0	100	0		0	40	60		
Total %	24.1	42.6	0	66.7	0	1.9	1.9	3.7	0	20.4	0	20.4	0	3.7	5.6	9.3	

Start Time	Heacock Street Southbound				John F Kennedy Drive Westbound				Heacock Street Northbound				Meyer Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	3	3	0	6	0	0	1	1	0	1	0	1	0	1	0	1	9
04:45 PM	1	4	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
05:00 PM	2	1	0	3	0	1	0	1	0	1	0	1	0	0	1	1	6
05:15 PM	2	2	0	4	0	0	0	0	0	2	0	2	0	0	0	0	6
Total Volume	8	10	0	18	0	1	1	2	0	4	0	4	0	1	1	2	26
% App. Total	44.4	55.6	0		0	50	50		0	100	0		0	50	50		
PHF	.667	.625	.000	.750	.000	.250	.250	.500	.000	.500	.000	.500	.000	.250	.250	.500	.722

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Meyer Drive/John F Kennedy Drive  
 Weather: Clear

File Name : 07\_MRV\_Heacock\_John F Kennedy PM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
 Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	3	3	0	6	0	0	1	1	0	1	0	1	0	1	0	1
+15 mins.	1	4	0	5	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	2	1	0	3	0	1	0	1	0	1	0	1	0	0	1	1
+45 mins.	2	2	0	4	0	0	0	0	0	2	0	2	0	0	0	0
Total Volume	8	10	0	18	0	1	1	2	0	4	0	4	0	1	1	2
% App. Total	44.4	55.6	0		0	50	50		0	100	0		0	50	50	
PHF	.667	.625	.000	.750	.000	.250	.250	.500	.000	.500	.000	.500	.000	.250	.250	.500

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Meyer Drive/John F Kennedy Drive  
 Weather: Clear

File Name : 07\_MRV\_Heacock\_John F Kennedy PM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
 Page No : 1

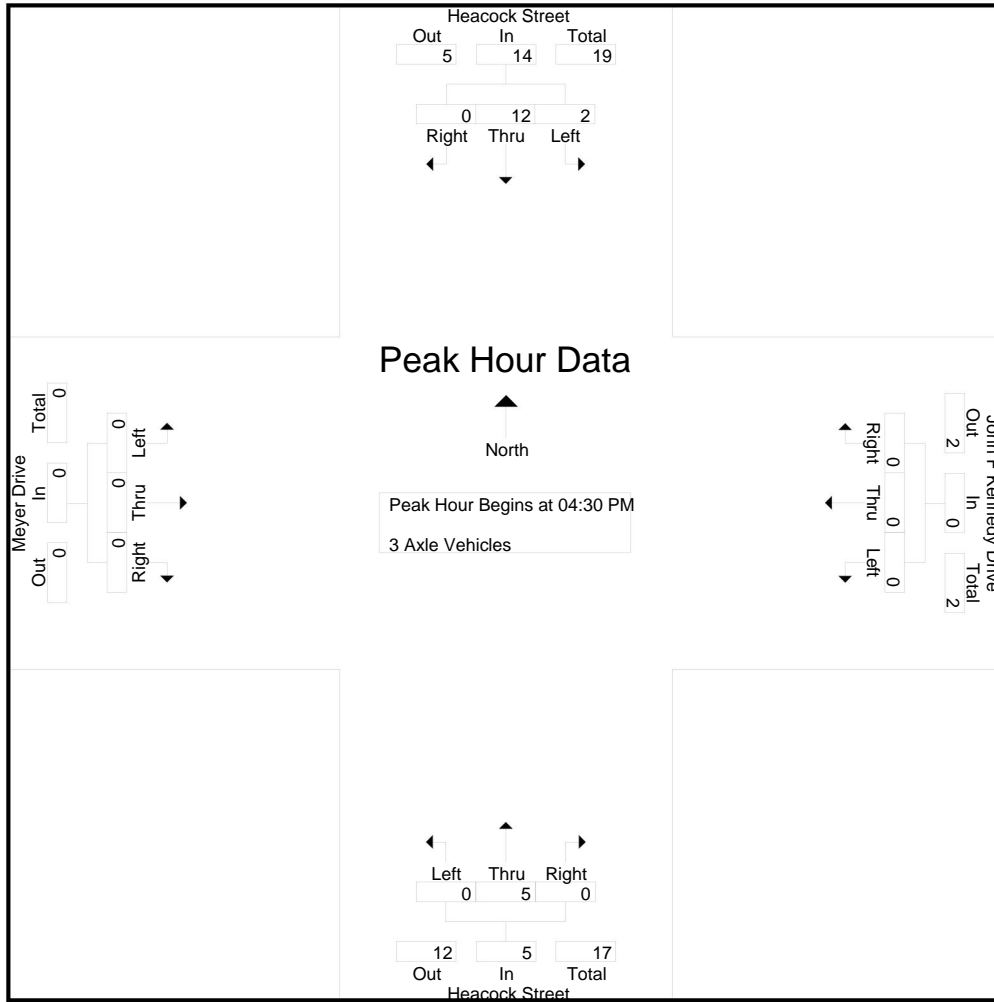
Groups Printed- 3 Axle Vehicles

Start Time	Heacock Street Southbound				John F Kennedy Drive Westbound				Heacock Street Northbound				Meyer Drive Eastbound				Int. Total	
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total		
04:00 PM	0	4	0	4	0	0	0	0	0	3	0	3	0	0	0	1	1	8
04:15 PM	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	3
04:30 PM	1	2	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
04:45 PM	0	3	0	3	0	0	0	0	0	2	0	2	0	0	0	0	0	5
Total	1	9	0	10	0	0	0	0	0	8	0	8	0	0	1	1	1	19
05:00 PM	1	3	0	4	0	0	0	0	0	1	0	1	0	0	0	0	0	5
05:15 PM	0	4	0	4	0	0	0	0	0	2	0	2	0	0	0	0	0	6
05:30 PM	0	3	0	3	0	0	0	0	0	1	0	1	0	0	0	0	0	4
05:45 PM	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	0	3
Total	1	12	0	13	0	0	0	0	0	5	0	5	0	0	0	0	0	18
Grand Total	2	21	0	23	0	0	0	0	0	13	0	13	0	0	1	1	1	37
Apprch %	8.7	91.3	0		0	0	0		0	100	0		0	0	100			
Total %	5.4	56.8	0	62.2	0	0	0	0	0	35.1	0	35.1	0	0	2.7	2.7		

Start Time	Heacock Street Southbound				John F Kennedy Drive Westbound				Heacock Street Northbound				Meyer Drive Eastbound				Int. Total	
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total		
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 04:30 PM																		
04:30 PM	1	2	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
04:45 PM	0	3	0	3	0	0	0	0	0	2	0	2	0	0	0	0	0	5
05:00 PM	1	3	0	4	0	0	0	0	0	1	0	1	0	0	0	0	0	5
05:15 PM	0	4	0	4	0	0	0	0	0	2	0	2	0	0	0	0	0	6
Total Volume	2	12	0	14	0	0	0	0	0	5	0	5	0	0	0	0	0	19
% App. Total	14.3	85.7	0		0	0	0		0	100	0		0	0	0			
PHF	.500	.750	.000	.875	.000	.000	.000	.000	.000	.625	.000	.625	.000	.000	.000	.000	.000	.792

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Meyer Drive/John F Kennedy Drive  
 Weather: Clear

File Name : 07\_MRV\_Heacock\_John F Kennedy PM  
 Site Code : 06719334  
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Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	1	2	0	3	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	3	0	3	0	0	0	0	0	2	0	2	0	0	0	0
+30 mins.	1	3	0	4	0	0	0	0	0	1	0	1	0	0	0	0
+45 mins.	0	4	0	4	0	0	0	0	0	2	0	2	0	0	0	0
Total Volume	2	12	0	14	0	0	0	0	0	5	0	5	0	0	0	0
% App. Total	14.3	85.7	0		0	0	0		0	100	0		0	0	0	
PHF	.500	.750	.000	.875	.000	.000	.000	.000	.000	.625	.000	.625	.000	.000	.000	.000

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Meyer Drive/John F Kennedy Drive  
 Weather: Clear

File Name : 07\_MRV\_Heacock\_John F Kennedy PM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
 Page No : 1

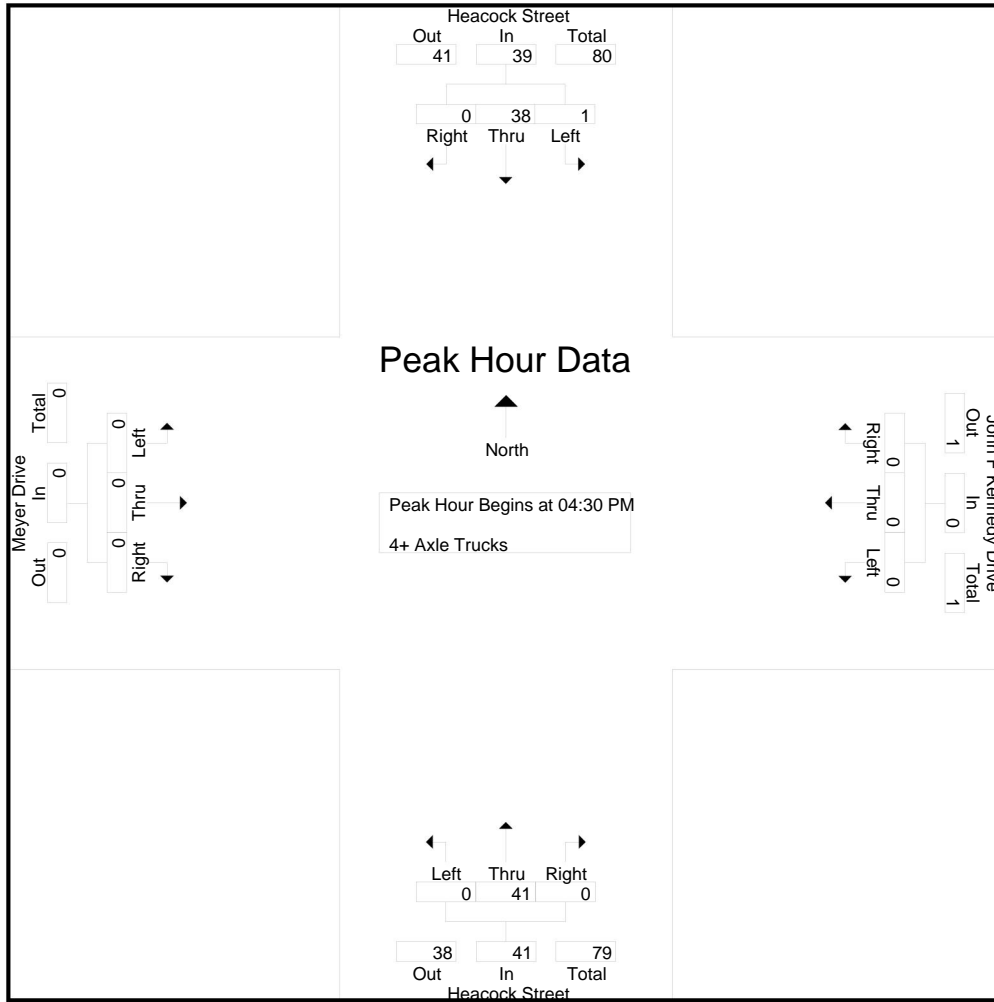
Groups Printed- 4+ Axle Trucks

Start Time	Heacock Street Southbound				John F Kennedy Drive Westbound				Heacock Street Northbound				Meyer Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	8	0	8	0	0	0	0	0	8	0	8	0	0	0	0	16
04:15 PM	0	6	0	6	0	0	0	0	0	4	0	4	0	0	0	0	10
04:30 PM	0	8	0	8	0	0	0	0	0	13	0	13	0	0	0	0	21
04:45 PM	0	7	0	7	0	0	0	0	0	10	0	10	0	0	0	0	17
Total	0	29	0	29	0	0	0	0	0	35	0	35	0	0	0	0	64
05:00 PM	1	11	0	12	0	0	0	0	0	9	0	9	0	0	0	0	21
05:15 PM	0	12	0	12	0	0	0	0	0	9	0	9	0	0	0	0	21
05:30 PM	0	6	0	6	0	0	0	0	0	1	0	1	0	0	1	1	8
05:45 PM	0	5	0	5	0	0	0	0	0	4	0	4	0	0	0	0	9
Total	1	34	0	35	0	0	0	0	0	23	0	23	0	0	1	1	59
Grand Total	1	63	0	64	0	0	0	0	0	58	0	58	0	0	1	1	123
Apprch %	1.6	98.4	0		0	0	0		0	100	0		0	0	100		
Total %	0.8	51.2	0	52	0	0	0	0	0	47.2	0	47.2	0	0	0.8	0.8	

Start Time	Heacock Street Southbound				John F Kennedy Drive Westbound				Heacock Street Northbound				Meyer Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	8	0	8	0	0	0	0	0	13	0	13	0	0	0	0	21
04:45 PM	0	7	0	7	0	0	0	0	0	10	0	10	0	0	0	0	17
05:00 PM	1	11	0	12	0	0	0	0	0	9	0	9	0	0	0	0	21
05:15 PM	0	12	0	12	0	0	0	0	0	9	0	9	0	0	0	0	21
Total Volume	1	38	0	39	0	0	0	0	0	41	0	41	0	0	0	0	80
% App. Total	2.6	97.4	0		0	0	0		0	100	0		0	0	0		
PHF	.250	.792	.000	.813	.000	.000	.000	.000	.000	.788	.000	.788	.000	.000	.000	.000	.952

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Meyer Drive/John F Kennedy Drive  
 Weather: Clear

File Name : 07\_MRV\_Heacock\_John F Kennedy PM  
 Site Code : 06719334  
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Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	8	0	8	0	0	0	0	0	<b>13</b>	0	<b>13</b>	0	0	0	0
+15 mins.	0	7	0	7	0	0	0	0	0	10	0	10	0	0	0	0
+30 mins.	<b>1</b>	11	0	<b>12</b>	0	0	0	0	0	9	0	9	0	0	0	0
+45 mins.	0	<b>12</b>	0	12	0	0	0	0	0	9	0	9	0	0	0	0
Total Volume	1	38	0	39	0	0	0	0	0	41	0	41	0	0	0	0
% App. Total	2.6	97.4	0		0	0	0		0	100	0		0	0	0	
PHF	.250	.792	.000	.813	.000	.000	.000	.000	.000	.788	.000	.788	.000	.000	.000	.000

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Gentian Avenue  
 Weather: Clear

File Name : 08\_MRV\_Heacock\_Gentian AM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
 Page No : 1

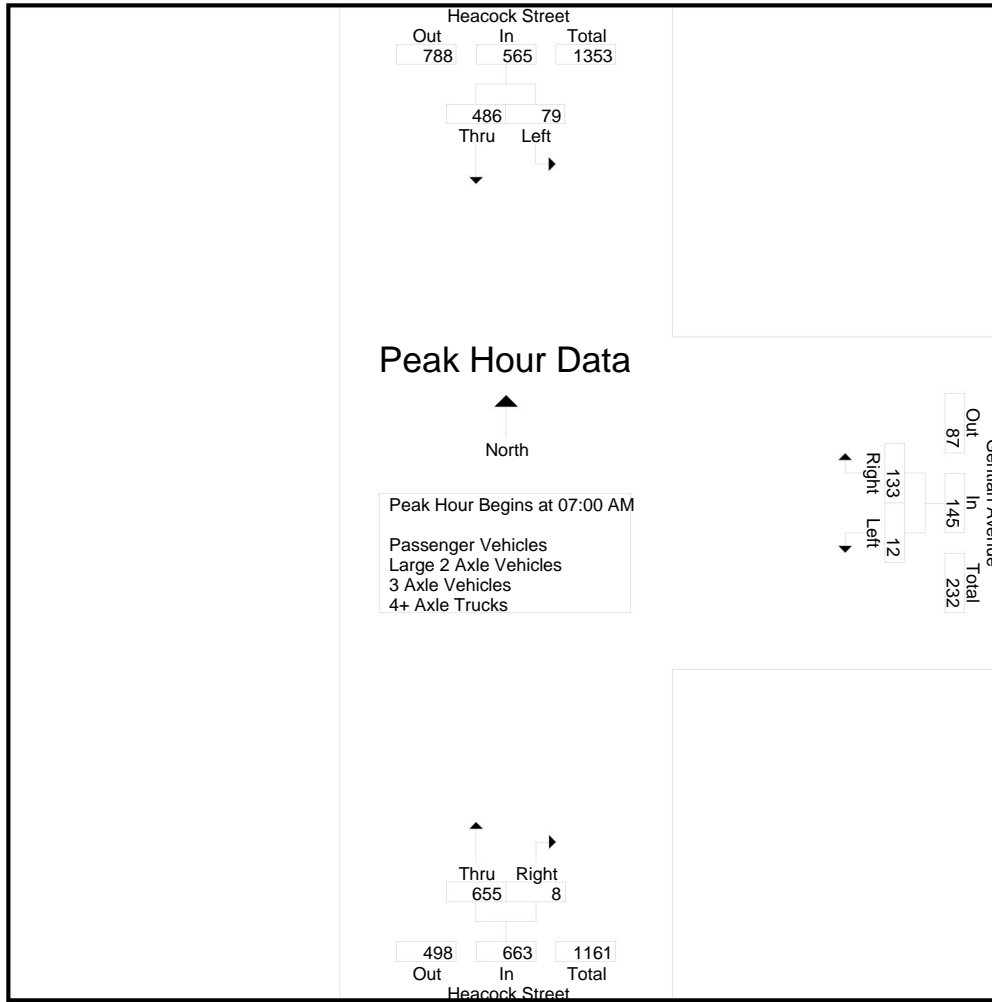
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Heacock Street Southbound			Gentian Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	10	112	122	3	31	34	153	0	153	309
07:15 AM	2	149	151	3	28	31	155	0	155	337
07:30 AM	36	131	167	2	29	31	192	4	196	394
07:45 AM	31	94	125	4	45	49	155	4	159	333
Total	79	486	565	12	133	145	655	8	663	1373
08:00 AM	21	91	112	4	22	26	142	2	144	282
08:15 AM	10	65	75	3	16	19	115	1	116	210
08:30 AM	11	65	76	4	20	24	106	3	109	209
08:45 AM	7	62	69	4	12	16	83	4	87	172
Total	49	283	332	15	70	85	446	10	456	873
Grand Total	128	769	897	27	203	230	1101	18	1119	2246
Apprch %	14.3	85.7		11.7	88.3		98.4	1.6		
Total %	5.7	34.2	39.9	1.2	9	10.2	49	0.8	49.8	
Passenger Vehicles	123	655	778	27	201	228	999	18	1017	2023
% Passenger Vehicles	96.1	85.2	86.7	100	99	99.1	90.7	100	90.9	90.1
Large 2 Axle Vehicles	3	25	28	0	1	1	27	0	27	56
% Large 2 Axle Vehicles	2.3	3.3	3.1	0	0.5	0.4	2.5	0	2.4	2.5
3 Axle Vehicles	2	27	29	0	1	1	22	0	22	52
% 3 Axle Vehicles	1.6	3.5	3.2	0	0.5	0.4	2	0	2	2.3
4+ Axle Trucks	0	62	62	0	0	0	53	0	53	115
% 4+ Axle Trucks	0	8.1	6.9	0	0	0	4.8	0	4.7	5.1

Start Time	Heacock Street Southbound			Gentian Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	10	112	122	3	31	34	153	0	153	309
07:15 AM	2	149	151	3	28	31	155	0	155	337
07:30 AM	36	131	167	2	29	31	192	4	196	394
07:45 AM	31	94	125	4	45	49	155	4	159	333
Total Volume	79	486	565	12	133	145	655	8	663	1373
% App. Total	14	86		8.3	91.7		98.8	1.2		
PHF	.549	.815	.846	.750	.739	.740	.853	.500	.846	.871

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Gentian Avenue  
 Weather: Clear

File Name : 08\_MRV\_Heacock\_Gentian AM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
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Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	10	112	122	3	31	34	153	0	153
+15 mins.	2	<b>149</b>	151	3	28	31	155	0	155
+30 mins.	<b>36</b>	131	<b>167</b>	2	29	31	<b>192</b>	<b>4</b>	<b>196</b>
+45 mins.	31	94	125	<b>4</b>	<b>45</b>	<b>49</b>	155	4	159
Total Volume	79	486	565	12	133	145	655	8	663
% App. Total	14	86		8.3	91.7		98.8	1.2	
PHF	.549	.815	.846	.750	.739	.740	.853	.500	.846



City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Gentian Avenue  
 Weather: Clear

File Name : 08\_MRV\_Heacock\_Gentian AM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
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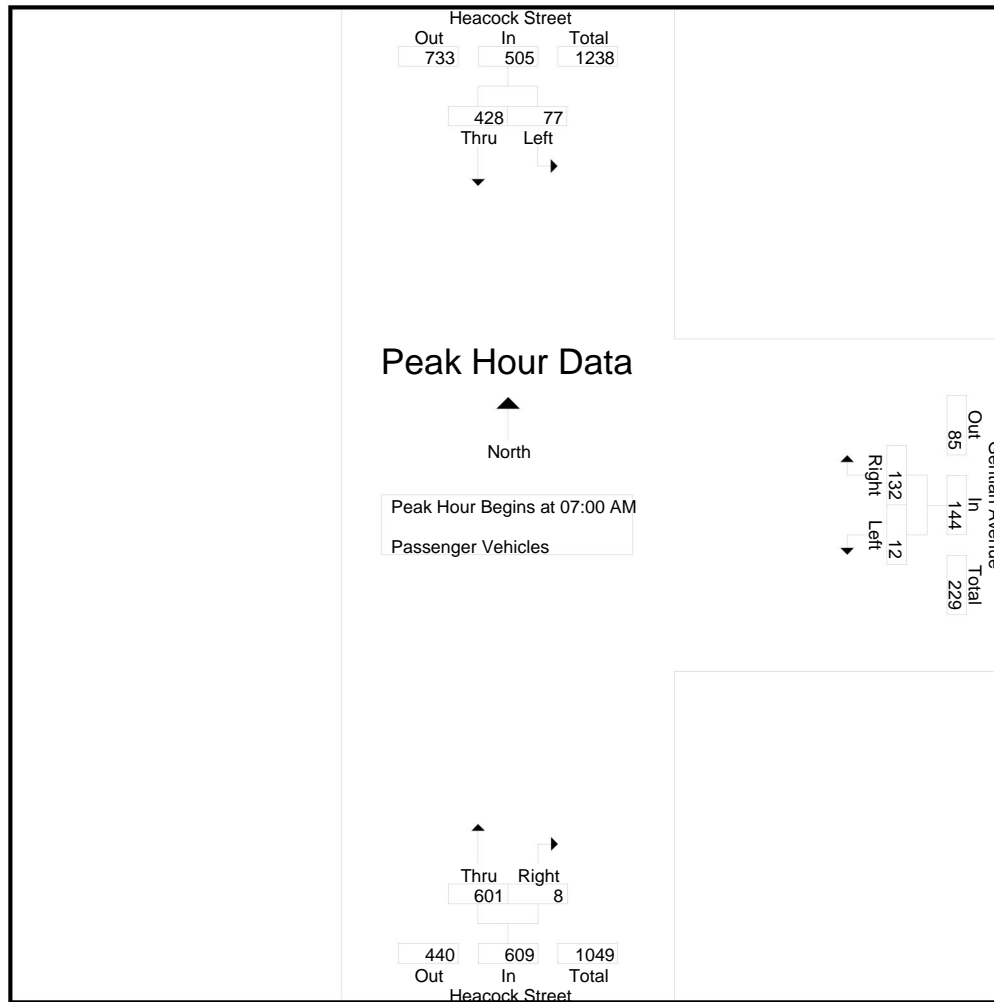
Groups Printed- Passenger Vehicles

Start Time	Heacock Street Southbound			Gentian Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	9	99	108	3	31	34	136	0	136	278
07:15 AM	2	127	129	3	28	31	144	0	144	304
07:30 AM	35	117	152	2	29	31	179	4	183	366
07:45 AM	31	85	116	4	44	48	142	4	146	310
Total	77	428	505	12	132	144	601	8	609	1258
08:00 AM	21	72	93	4	22	26	130	2	132	251
08:15 AM	8	56	64	3	16	19	102	1	103	186
08:30 AM	10	52	62	4	20	24	90	3	93	179
08:45 AM	7	47	54	4	11	15	76	4	80	149
Total	46	227	273	15	69	84	398	10	408	765
Grand Total	123	655	778	27	201	228	999	18	1017	2023
Apprch %	15.8	84.2		11.8	88.2		98.2	1.8		
Total %	6.1	32.4	38.5	1.3	9.9	11.3	49.4	0.9	50.3	

Start Time	Heacock Street Southbound			Gentian Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	9	99	108	3	31	34	136	0	136	278
07:15 AM	2	127	129	3	28	31	144	0	144	304
07:30 AM	<b>35</b>	117	<b>152</b>	2	29	31	<b>179</b>	<b>4</b>	<b>183</b>	<b>366</b>
07:45 AM	31	85	116	<b>4</b>	<b>44</b>	<b>48</b>	142	4	146	310
Total Volume	77	428	505	12	132	144	601	8	609	1258
% App. Total	15.2	84.8		8.3	91.7		98.7	1.3		
PHF	.550	.843	.831	.750	.750	.750	.839	.500	.832	.859

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Gentian Avenue  
 Weather: Clear

File Name : 08\_MRV\_Heacock\_Gentian AM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	9	99	108	3	31	34	136	0	136
+15 mins.	2	<b>127</b>	129	3	28	31	144	0	144
+30 mins.	<b>35</b>	117	<b>152</b>	2	29	31	<b>179</b>	<b>4</b>	<b>183</b>
+45 mins.	31	85	116	<b>4</b>	<b>44</b>	<b>48</b>	142	4	146
Total Volume	77	428	505	12	132	144	601	8	609
% App. Total	15.2	84.8		8.3	91.7		98.7	1.3	
PHF	.550	.843	.831	.750	.750	.750	.839	.500	.832

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Gentian Avenue  
 Weather: Clear

File Name : 08\_MRV\_Heacock\_Gentian AM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
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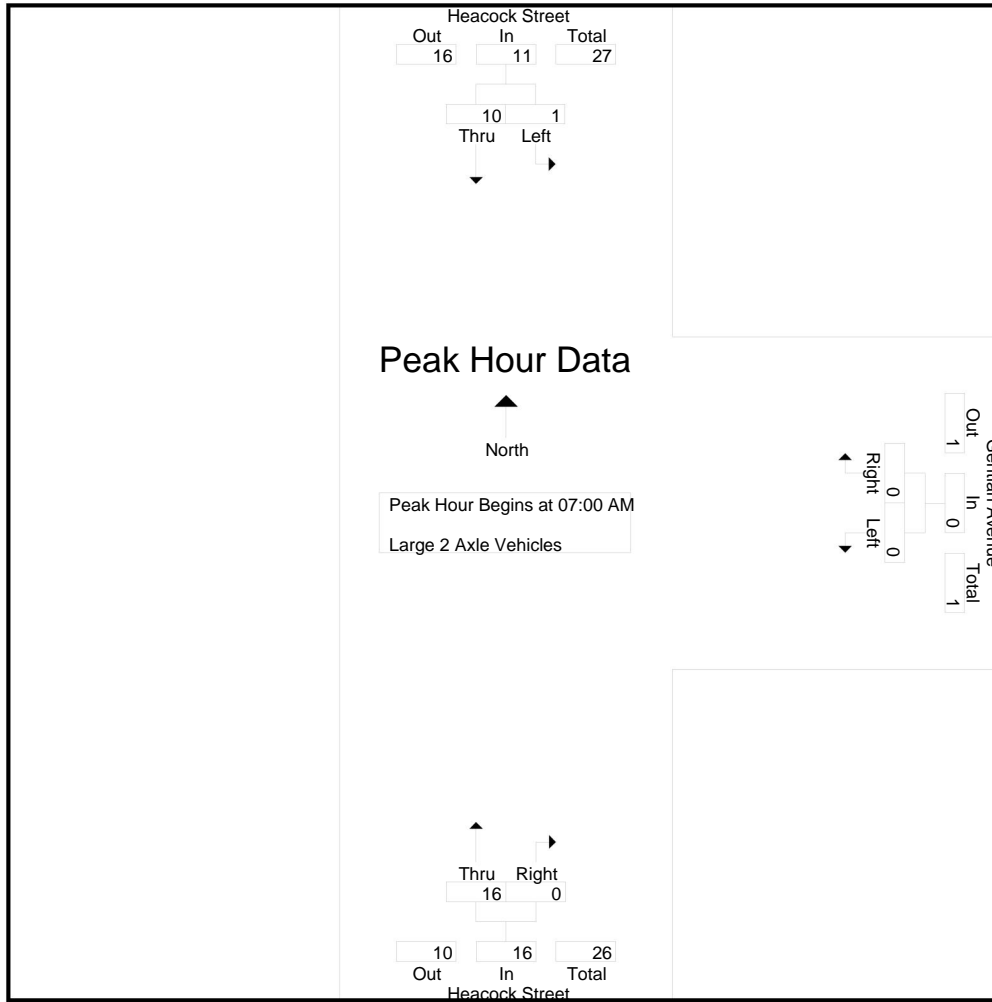
Groups Printed- Large 2 Axle Vehicles

Start Time	Heacock Street Southbound			Gentian Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	3	3	0	0	0	7	0	7	10
07:15 AM	0	4	4	0	0	0	3	0	3	7
07:30 AM	1	1	2	0	0	0	5	0	5	7
07:45 AM	0	2	2	0	0	0	1	0	1	3
Total	1	10	11	0	0	0	16	0	16	27
08:00 AM	0	3	3	0	0	0	4	0	4	7
08:15 AM	2	2	4	0	0	0	3	0	3	7
08:30 AM	0	4	4	0	0	0	2	0	2	6
08:45 AM	0	6	6	0	1	1	2	0	2	9
Total	2	15	17	0	1	1	11	0	11	29
Grand Total	3	25	28	0	1	1	27	0	27	56
Apprch %	10.7	89.3		0	100		100	0		
Total %	5.4	44.6	50	0	1.8	1.8	48.2	0	48.2	

Start Time	Heacock Street Southbound			Gentian Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	3	3	0	0	0	7	0	7	10
07:15 AM	0	4	4	0	0	0	3	0	3	7
07:30 AM	1	1	2	0	0	0	5	0	5	7
07:45 AM	0	2	2	0	0	0	1	0	1	3
Total Volume	1	10	11	0	0	0	16	0	16	27
% App. Total	9.1	90.9		0	0		100	0		
PHF	.250	.625	.688	.000	.000	.000	.571	.000	.571	.675

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Gentian Avenue  
 Weather: Clear

File Name : 08\_MRV\_Heacock\_Gentian AM  
 Site Code : 06719334  
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Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	3	3	0	0	0	7	0	7
+15 mins.	0	4	4	0	0	0	3	0	3
+30 mins.	1	1	2	0	0	0	5	0	5
+45 mins.	0	2	2	0	0	0	1	0	1
Total Volume	1	10	11	0	0	0	16	0	16
% App. Total	9.1	90.9		0	0	0	100	0	
PHF	.250	.625	.688	.000	.000	.000	.571	.000	.571

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Gentian Avenue  
 Weather: Clear

File Name : 08\_MRV\_Heacock\_Gentian AM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
 Page No : 1

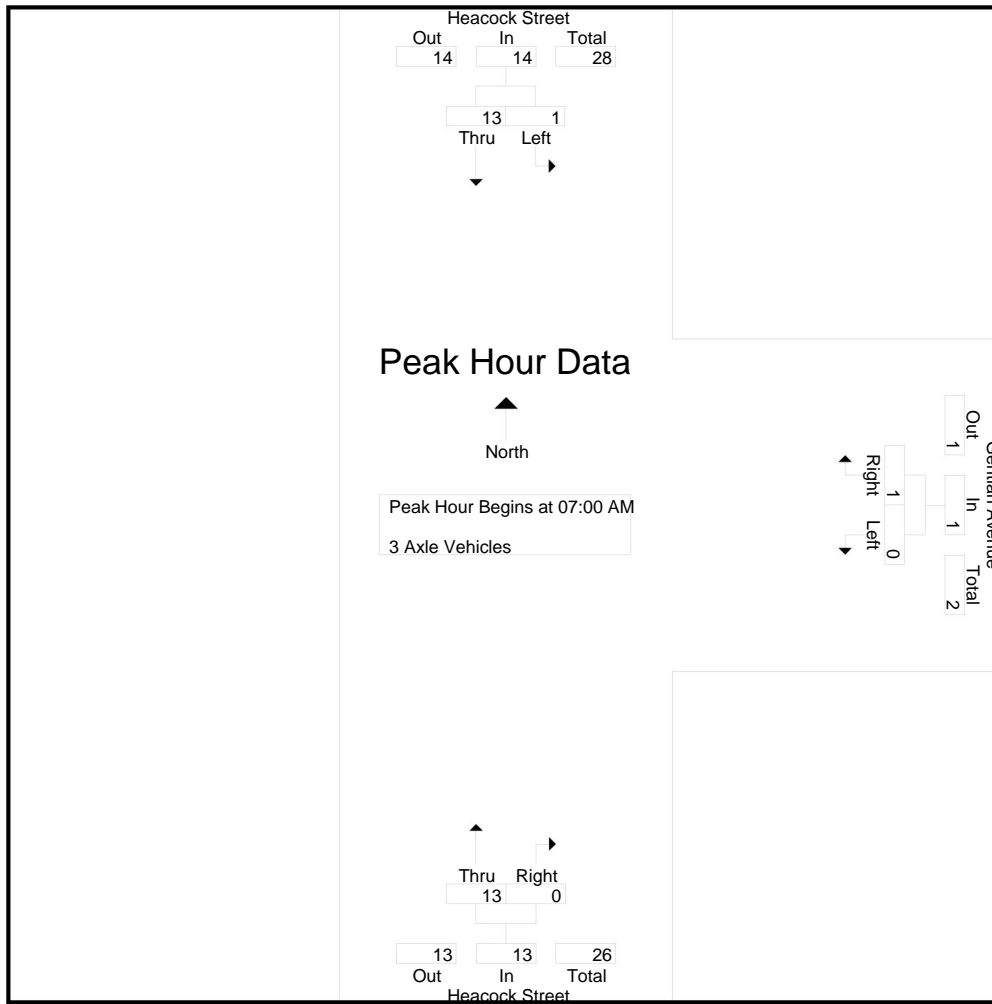
Groups Printed- 3 Axle Vehicles

Start Time	Heacock Street Southbound			Gentian Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	1	3	4	0	0	0	3	0	3	7
07:15 AM	0	7	7	0	0	0	2	0	2	9
07:30 AM	0	2	2	0	0	0	3	0	3	5
07:45 AM	0	1	1	0	1	1	5	0	5	7
Total	1	13	14	0	1	1	13	0	13	28
08:00 AM	0	4	4	0	0	0	2	0	2	6
08:15 AM	0	3	3	0	0	0	2	0	2	5
08:30 AM	1	3	4	0	0	0	3	0	3	7
08:45 AM	0	4	4	0	0	0	2	0	2	6
Total	1	14	15	0	0	0	9	0	9	24
Grand Total	2	27	29	0	1	1	22	0	22	52
Apprch %	6.9	93.1		0	100		100	0		
Total %	3.8	51.9	55.8	0	1.9	1.9	42.3	0	42.3	

Start Time	Heacock Street Southbound			Gentian Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	1	3	4	0	0	0	3	0	3	7
07:15 AM	0	7	7	0	0	0	2	0	2	9
07:30 AM	0	2	2	0	0	0	3	0	3	5
07:45 AM	0	1	1	0	1	1	5	0	5	7
Total Volume	1	13	14	0	1	1	13	0	13	28
% App. Total	7.1	92.9		0	100		100	0		
PHF	.250	.464	.500	.000	.250	.250	.650	.000	.650	.778

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Gentian Avenue  
 Weather: Clear

File Name : 08\_MRV\_Heacock\_Gentian AM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	1	3	4	0	0	0	3	0	3
+15 mins.	0	7	7	0	0	0	2	0	2
+30 mins.	0	2	2	0	0	0	3	0	3
+45 mins.	0	1	1	0	1	1	5	0	5
Total Volume	1	13	14	0	1	1	13	0	13
% App. Total	7.1	92.9		0	100		100	0	
PHF	.250	.464	.500	.000	.250	.250	.650	.000	.650

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Gentian Avenue  
 Weather: Clear

File Name : 08\_MRV\_Heacock\_Gentian AM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
 Page No : 1

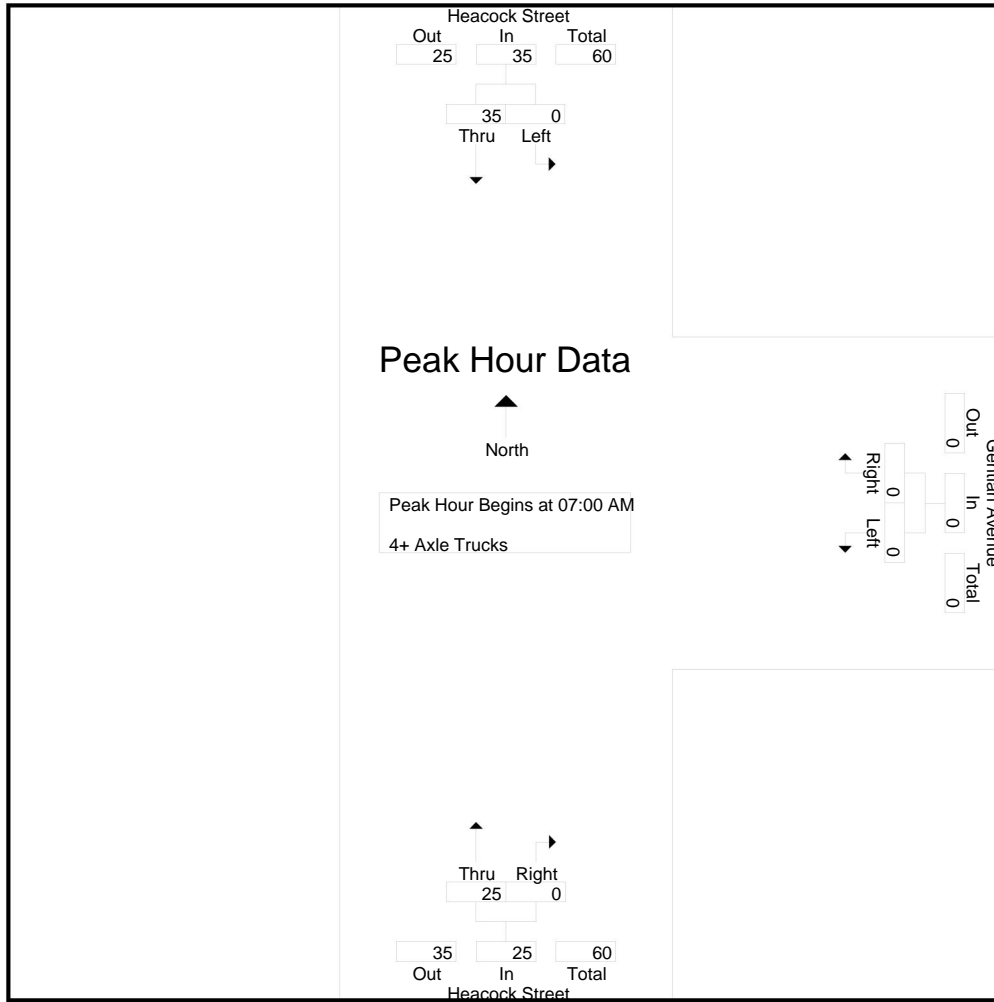
Groups Printed- 4+ Axle Trucks

Start Time	Heacock Street Southbound			Gentian Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	7	7	0	0	0	7	0	7	14
07:15 AM	0	11	11	0	0	0	6	0	6	17
07:30 AM	0	11	11	0	0	0	5	0	5	16
07:45 AM	0	6	6	0	0	0	7	0	7	13
Total	0	35	35	0	0	0	25	0	25	60
08:00 AM	0	12	12	0	0	0	6	0	6	18
08:15 AM	0	4	4	0	0	0	8	0	8	12
08:30 AM	0	6	6	0	0	0	11	0	11	17
08:45 AM	0	5	5	0	0	0	3	0	3	8
Total	0	27	27	0	0	0	28	0	28	55
Grand Total	0	62	62	0	0	0	53	0	53	115
Apprch %	0	100		0	0		100	0		
Total %	0	53.9	53.9	0	0	0	46.1	0	46.1	

Start Time	Heacock Street Southbound			Gentian Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	7	7	0	0	0	7	0	7	14
07:15 AM	0	11	11	0	0	0	6	0	6	17
07:30 AM	0	11	11	0	0	0	5	0	5	16
07:45 AM	0	6	6	0	0	0	7	0	7	13
Total Volume	0	35	35	0	0	0	25	0	25	60
% App. Total	0	100		0	0		100	0		
PHF	.000	.795	.795	.000	.000	.000	.893	.000	.893	.882

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Gentian Avenue  
 Weather: Clear

File Name : 08\_MRV\_Heacock\_Gentian AM  
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Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	7	7	0	0	0	7	0	7
+15 mins.	0	11	11	0	0	0	6	0	6
+30 mins.	0	11	11	0	0	0	5	0	5
+45 mins.	0	6	6	0	0	0	7	0	7
Total Volume	0	35	35	0	0	0	25	0	25
% App. Total	0	100		0	0		100	0	
PHF	.000	.795	.795	.000	.000	.000	.893	.000	.893



City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Gentian Avenue  
 Weather: Clear

File Name : 08\_MRV\_Heacock\_Gentian PM  
 Site Code : 06719334  
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 Page No : 1

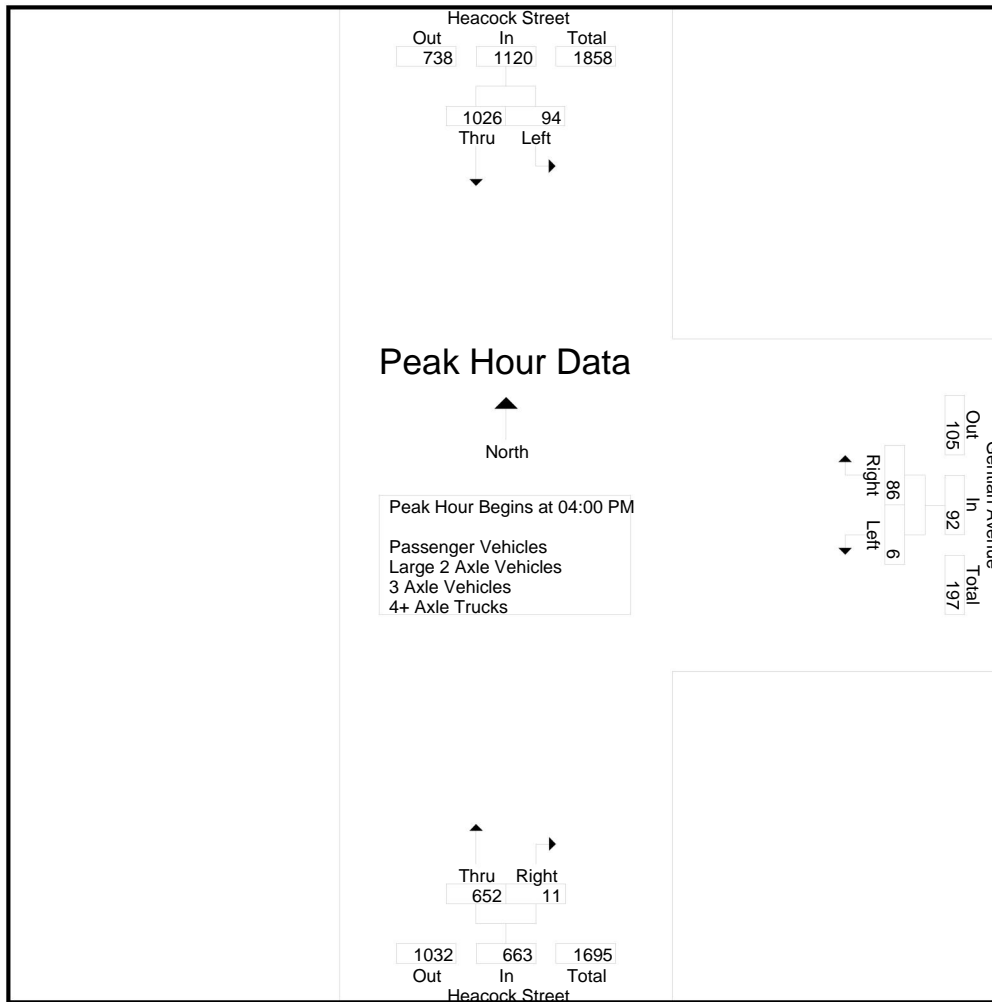
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Heacock Street Southbound			Gentian Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	27	245	272	0	26	26	163	2	165	463
04:15 PM	19	250	269	3	20	23	111	1	112	404
04:30 PM	29	263	292	2	21	23	214	2	216	531
04:45 PM	19	268	287	1	19	20	164	6	170	477
Total	94	1026	1120	6	86	92	652	11	663	1875
05:00 PM	29	233	262	0	13	13	119	2	121	396
05:15 PM	35	252	287	2	14	16	124	2	126	429
05:30 PM	37	263	300	1	16	17	120	3	123	440
05:45 PM	22	236	258	1	22	23	81	2	83	364
Total	123	984	1107	4	65	69	444	9	453	1629
Grand Total	217	2010	2227	10	151	161	1096	20	1116	3504
Apprch %	9.7	90.3		6.2	93.8		98.2	1.8		
Total %	6.2	57.4	63.6	0.3	4.3	4.6	31.3	0.6	31.8	
Passenger Vehicles	211	1909	2120	10	150	160	1019	20	1039	3319
% Passenger Vehicles	97.2	95	95.2	100	99.3	99.4	93	100	93.1	94.7
Large 2 Axle Vehicles	6	14	20	0	1	1	11	0	11	32
% Large 2 Axle Vehicles	2.8	0.7	0.9	0	0.7	0.6	1	0	1	0.9
3 Axle Vehicles	0	21	21	0	0	0	13	0	13	34
% 3 Axle Vehicles	0	1	0.9	0	0	0	1.2	0	1.2	1
4+ Axle Trucks	0	66	66	0	0	0	53	0	53	119
% 4+ Axle Trucks	0	3.3	3	0	0	0	4.8	0	4.7	3.4

Start Time	Heacock Street Southbound			Gentian Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	27	245	272	0	26	26	163	2	165	463
04:15 PM	19	250	269	3	20	23	111	1	112	404
04:30 PM	29	263	292	2	21	23	214	2	216	531
04:45 PM	19	268	287	1	19	20	164	6	170	477
Total Volume	94	1026	1120	6	86	92	652	11	663	1875
% App. Total	8.4	91.6		6.5	93.5		98.3	1.7		
PHF	.810	.957	.959	.500	.827	.885	.762	.458	.767	.883

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Gentian Avenue  
 Weather: Clear

File Name : 08\_MRV\_Heacock\_Gentian PM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:45 PM			04:00 PM			04:00 PM		
+0 mins.	19	<b>268</b>	287	0	<b>26</b>	<b>26</b>	163	2	165
+15 mins.	29	233	262	3	20	23	111	1	112
+30 mins.	35	252	287	2	21	23	<b>214</b>	2	<b>216</b>
+45 mins.	<b>37</b>	263	<b>300</b>	1	19	20	164	<b>6</b>	170
Total Volume	120	1016	1136	6	86	92	652	11	663
% App. Total	10.6	89.4		6.5	93.5		98.3	1.7	
PHF	.811	.948	.947	.500	.827	.885	.762	.458	.767

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Gentian Avenue  
 Weather: Clear

File Name : 08\_MRV\_Heacock\_Gentian PM  
 Site Code : 06719334  
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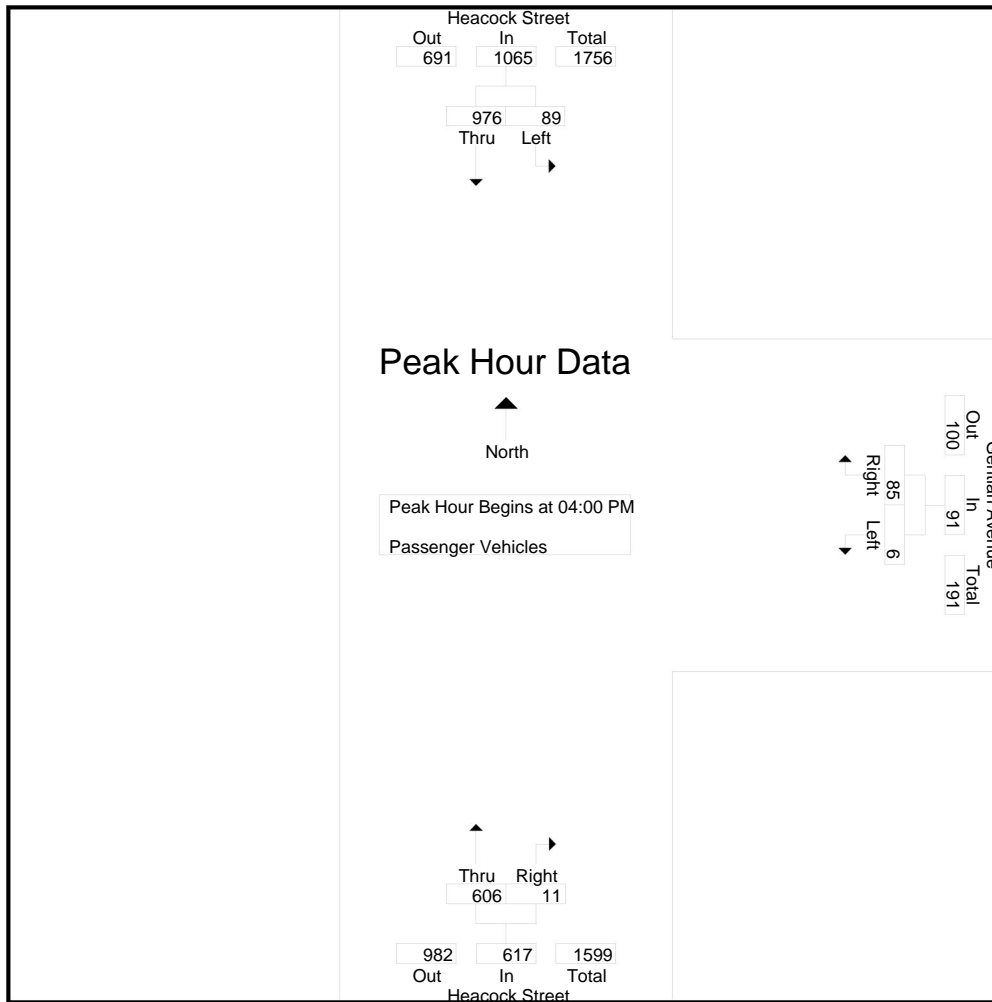
Groups Printed- Passenger Vehicles

Start Time	Heacock Street Southbound			Gentian Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	25	227	252	0	25	25	152	2	154	431
04:15 PM	17	241	258	3	20	23	102	1	103	384
04:30 PM	29	252	281	2	21	23	201	2	203	507
04:45 PM	18	256	274	1	19	20	151	6	157	451
Total	89	976	1065	6	85	91	606	11	617	1773
05:00 PM	29	221	250	0	13	13	111	2	113	376
05:15 PM	34	235	269	2	14	16	112	2	114	399
05:30 PM	37	250	287	1	16	17	114	3	117	421
05:45 PM	22	227	249	1	22	23	76	2	78	350
Total	122	933	1055	4	65	69	413	9	422	1546
Grand Total	211	1909	2120	10	150	160	1019	20	1039	3319
Apprch %	10	90		6.2	93.8		98.1	1.9		
Total %	6.4	57.5	63.9	0.3	4.5	4.8	30.7	0.6	31.3	

Start Time	Heacock Street Southbound			Gentian Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	25	227	252	0	<b>25</b>	<b>25</b>	152	2	154	431
04:15 PM	17	241	258	<b>3</b>	20	23	102	1	103	384
04:30 PM	<b>29</b>	252	<b>281</b>	2	21	23	<b>201</b>	2	<b>203</b>	<b>507</b>
04:45 PM	18	<b>256</b>	274	1	19	20	151	<b>6</b>	157	451
Total Volume	89	976	1065	6	85	91	606	11	617	1773
% App. Total	8.4	91.6		6.6	93.4		98.2	1.8		
PHF	.767	.953	.948	.500	.850	.910	.754	.458	.760	.874

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Gentian Avenue  
 Weather: Clear

File Name : 08\_MRV\_Heacock\_Gentian PM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
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Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:00 PM			04:00 PM			04:00 PM		
+0 mins.	25	227	252	0	<b>25</b>	<b>25</b>	152	2	154
+15 mins.	17	241	258	<b>3</b>	20	<b>23</b>	102	1	103
+30 mins.	<b>29</b>	252	<b>281</b>	2	21	23	<b>201</b>	2	<b>203</b>
+45 mins.	18	<b>256</b>	274	1	19	20	151	<b>6</b>	157
Total Volume	89	976	1065	6	85	91	606	11	617
% App. Total	8.4	91.6		6.6	93.4		98.2	1.8	
PHF	.767	.953	.948	.500	.850	.910	.754	.458	.760

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Gentian Avenue  
 Weather: Clear

File Name : 08\_MRV\_Heacock\_Gentian PM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
 Page No : 1

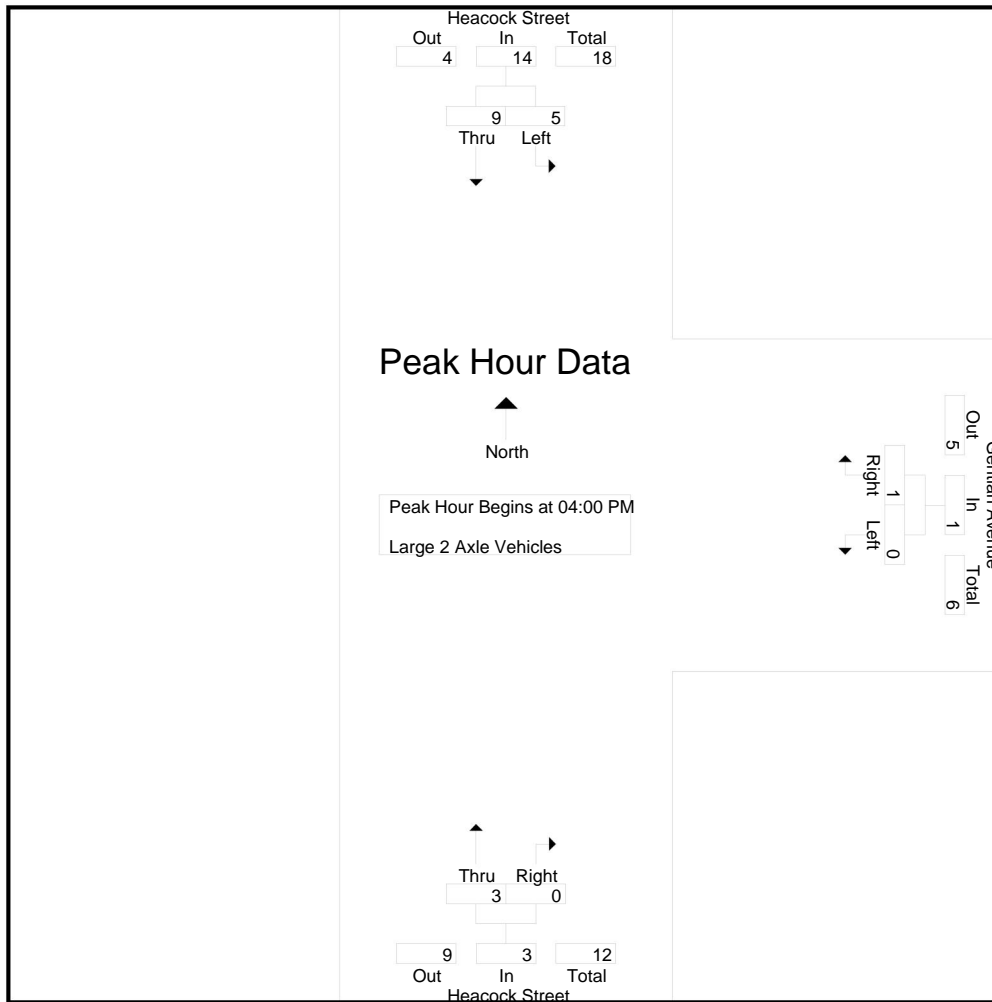
Groups Printed- Large 2 Axle Vehicles

Start Time	Heacock Street Southbound			Gentian Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	2	3	5	0	1	1	1	0	1	7
04:15 PM	2	2	4	0	0	0	1	0	1	5
04:30 PM	0	2	2	0	0	0	1	0	1	3
04:45 PM	1	2	3	0	0	0	0	0	0	3
Total	5	9	14	0	1	1	3	0	3	18
05:00 PM	0	1	1	0	0	0	1	0	1	2
05:15 PM	1	2	3	0	0	0	3	0	3	6
05:30 PM	0	0	0	0	0	0	4	0	4	4
05:45 PM	0	2	2	0	0	0	0	0	0	2
Total	1	5	6	0	0	0	8	0	8	14
Grand Total	6	14	20	0	1	1	11	0	11	32
Apprch %	30	70		0	100		100	0		
Total %	18.8	43.8	62.5	0	3.1	3.1	34.4	0	34.4	

Start Time	Heacock Street Southbound			Gentian Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	2	3	5	0	1	1	1	0	1	7
04:15 PM	2	2	4	0	0	0	1	0	1	5
04:30 PM	0	2	2	0	0	0	1	0	1	3
04:45 PM	1	2	3	0	0	0	0	0	0	3
Total Volume	5	9	14	0	1	1	3	0	3	18
% App. Total	35.7	64.3		0	100		100	0		
PHF	.625	.750	.700	.000	.250	.250	.750	.000	.750	.643

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Gentian Avenue  
 Weather: Clear

File Name : 08\_MRV\_Heacock\_Gentian PM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
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Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:00 PM			04:00 PM			04:00 PM		
+0 mins.	2	3	5	0	1	1	1	0	1
+15 mins.	2	2	4	0	0	0	1	0	1
+30 mins.	0	2	2	0	0	0	1	0	1
+45 mins.	1	2	3	0	0	0	0	0	0
Total Volume	5	9	14	0	1	1	3	0	3
% App. Total	35.7	64.3		0	100		100	0	
PHF	.625	.750	.700	.000	.250	.250	.750	.000	.750

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Gentian Avenue  
 Weather: Clear

File Name : 08\_MRV\_Heacock\_Gentian PM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
 Page No : 1

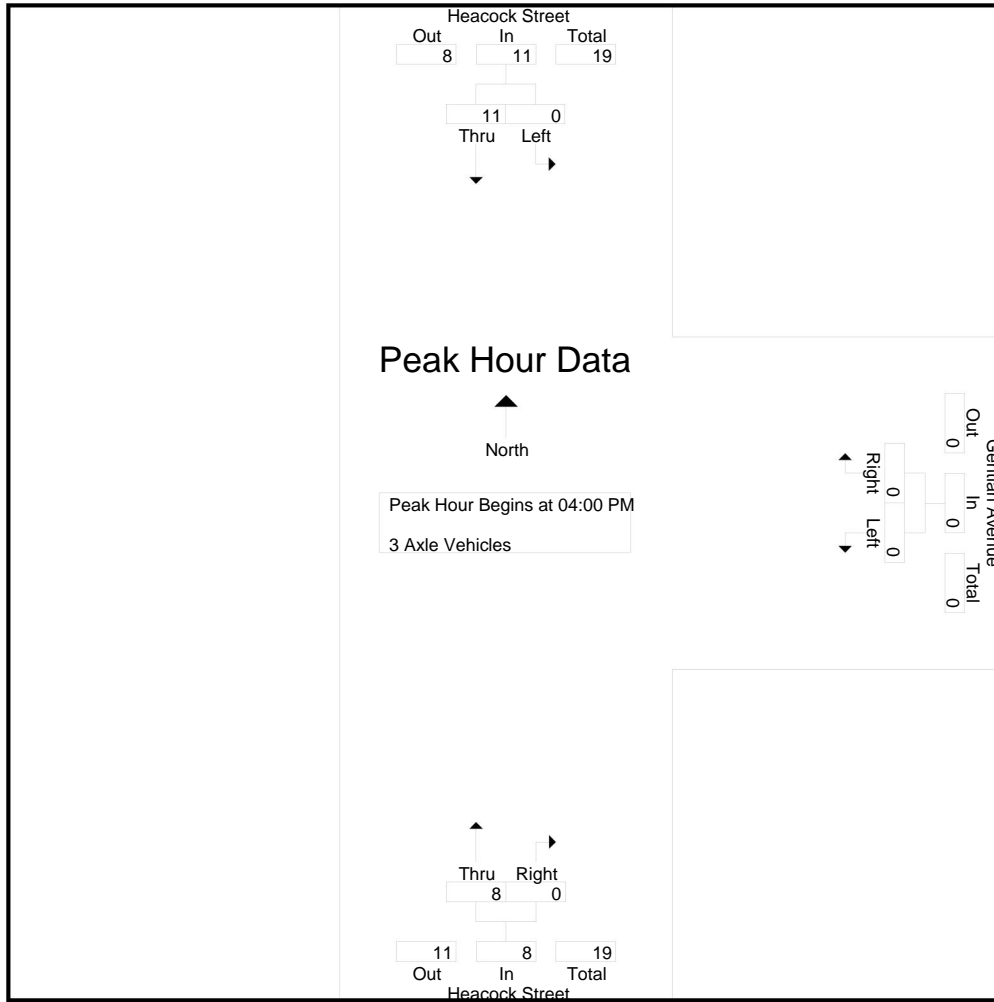
Groups Printed- 3 Axle Vehicles

Start Time	Heacock Street Southbound			Gentian Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	4	4	0	0	0	3	0	3	7
04:15 PM	0	1	1	0	0	0	3	0	3	4
04:30 PM	0	2	2	0	0	0	0	0	0	2
04:45 PM	0	4	4	0	0	0	2	0	2	6
Total	0	11	11	0	0	0	8	0	8	19
05:00 PM	0	2	2	0	0	0	1	0	1	3
05:15 PM	0	1	1	0	0	0	2	0	2	3
05:30 PM	0	4	4	0	0	0	1	0	1	5
05:45 PM	0	3	3	0	0	0	1	0	1	4
Total	0	10	10	0	0	0	5	0	5	15
Grand Total	0	21	21	0	0	0	13	0	13	34
Apprch %	0	100		0	0		100	0		
Total %	0	61.8	61.8	0	0	0	38.2	0	38.2	

Start Time	Heacock Street Southbound			Gentian Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	0	4	4	0	0	0	3	0	3	7
04:15 PM	0	1	1	0	0	0	3	0	3	4
04:30 PM	0	2	2	0	0	0	0	0	0	2
04:45 PM	0	4	4	0	0	0	2	0	2	6
Total Volume	0	11	11	0	0	0	8	0	8	19
% App. Total	0	100		0	0		100	0		
PHF	.000	.688	.688	.000	.000	.000	.667	.000	.667	.679

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Gentian Avenue  
 Weather: Clear

File Name : 08\_MRV\_Heacock\_Gentian PM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
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Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:00 PM			04:00 PM			04:00 PM		
+0 mins.	0	<b>4</b>	<b>4</b>	0	0	0	<b>3</b>	0	<b>3</b>
+15 mins.	0	1	1	0	0	0	3	0	3
+30 mins.	0	2	2	0	0	0	0	0	0
+45 mins.	0	4	4	0	0	0	2	0	2
Total Volume	0	11	11	0	0	0	8	0	8
% App. Total	0	100		0	0		100	0	
PHF	.000	.688	.688	.000	.000	.000	.667	.000	.667



City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Gentian Avenue  
 Weather: Clear

File Name : 08\_MRV\_Heacock\_Gentian PM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
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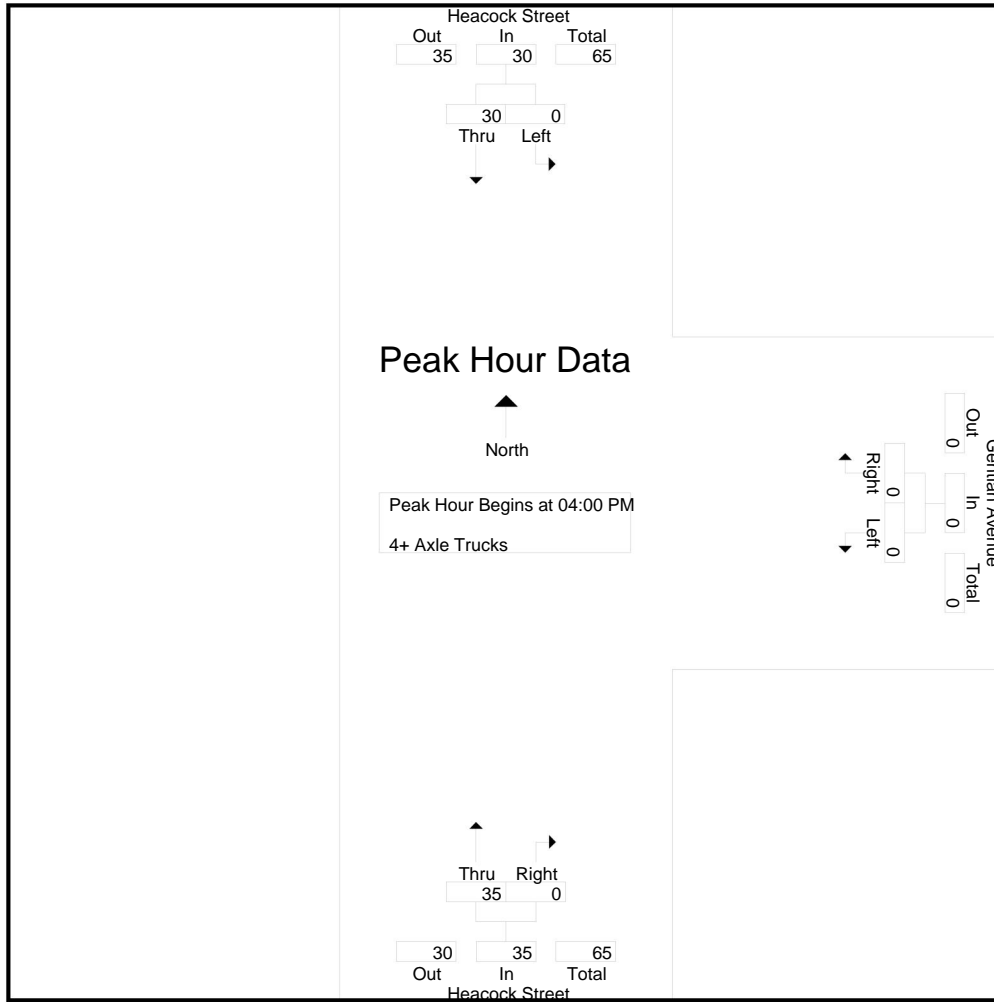
Groups Printed- 4+ Axle Trucks

Start Time	Heacock Street Southbound			Gentian Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	11	11	0	0	0	7	0	7	18
04:15 PM	0	6	6	0	0	0	5	0	5	11
04:30 PM	0	7	7	0	0	0	12	0	12	19
04:45 PM	0	6	6	0	0	0	11	0	11	17
Total	0	30	30	0	0	0	35	0	35	65
05:00 PM	0	9	9	0	0	0	6	0	6	15
05:15 PM	0	14	14	0	0	0	7	0	7	21
05:30 PM	0	9	9	0	0	0	1	0	1	10
05:45 PM	0	4	4	0	0	0	4	0	4	8
Total	0	36	36	0	0	0	18	0	18	54
Grand Total	0	66	66	0	0	0	53	0	53	119
Apprch %	0	100		0	0		100	0		
Total %	0	55.5	55.5	0	0	0	44.5	0	44.5	

Start Time	Heacock Street Southbound			Gentian Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	0	11	11	0	0	0	7	0	7	18
04:15 PM	0	6	6	0	0	0	5	0	5	11
04:30 PM	0	7	7	0	0	0	12	0	12	19
04:45 PM	0	6	6	0	0	0	11	0	11	17
Total Volume	0	30	30	0	0	0	35	0	35	65
% App. Total	0	100		0	0		100	0		
PHF	.000	.682	.682	.000	.000	.000	.729	.000	.729	.855

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Gentian Avenue  
 Weather: Clear

File Name : 08\_MRV\_Heacock\_Gentian PM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
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Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:00 PM			04:00 PM			04:00 PM		
+0 mins.	0	11	11	0	0	0	7	0	7
+15 mins.	0	6	6	0	0	0	5	0	5
+30 mins.	0	7	7	0	0	0	12	0	12
+45 mins.	0	6	6	0	0	0	11	0	11
Total Volume	0	30	30	0	0	0	35	0	35
% App. Total	0	100		0	0		100	0	
PHF	.000	.682	.682	.000	.000	.000	.729	.000	.729

City of Perris  
 N/S: Webster Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 05\_PER\_Webster\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

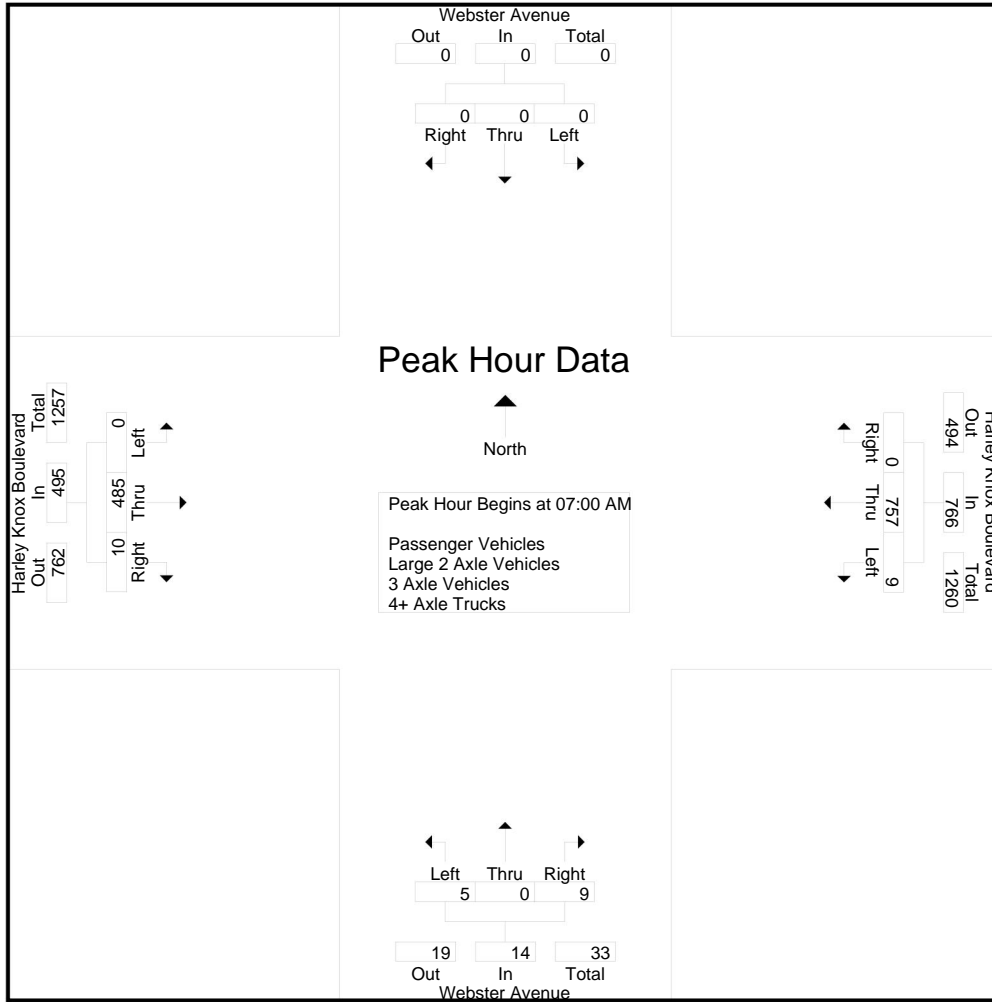
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Webster Avenue Southbound				Harley Knox Boulevard Westbound				Webster Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	226	0	226	0	0	2	2	0	122	1	123	351
07:15 AM	0	0	0	0	7	199	0	206	2	0	5	7	0	114	1	115	328
07:30 AM	0	0	0	0	1	175	0	176	2	0	1	3	0	131	2	133	312
07:45 AM	0	0	0	0	1	157	0	158	1	0	1	2	0	118	6	124	284
Total	0	0	0	0	9	757	0	766	5	0	9	14	0	485	10	495	1275
08:00 AM	0	0	0	0	1	124	0	125	2	0	1	3	0	103	4	107	235
08:15 AM	0	0	0	0	2	111	0	113	1	0	0	1	0	93	0	93	207
08:30 AM	0	0	0	0	0	87	0	87	1	0	1	2	0	84	5	89	178
08:45 AM	0	0	0	0	1	88	0	89	1	0	2	3	0	93	1	94	186
Total	0	0	0	0	4	410	0	414	5	0	4	9	0	373	10	383	806
Grand Total	0	0	0	0	13	1167	0	1180	10	0	13	23	0	858	20	878	2081
Apprch %	0	0	0		1.1	98.9	0		43.5	0	56.5		0	97.7	2.3		
Total %	0	0	0	0	0.6	56.1	0	56.7	0.5	0	0.6	1.1	0	41.2	1	42.2	
Passenger Vehicles	0	0	0	0	13	1007	0	1020	6	0	10	16	0	682	14	696	1732
% Passenger Vehicles	0	0	0	0	100	86.3	0	86.4	60	0	76.9	69.6	0	79.5	70	79.3	83.2
Large 2 Axle Vehicles	0	0	0	0	0	34	0	34	1	0	1	2	0	47	0	47	83
% Large 2 Axle Vehicles	0	0	0	0	0	2.9	0	2.9	10	0	7.7	8.7	0	5.5	0	5.4	4
3 Axle Vehicles	0	0	0	0	0	38	0	38	1	0	1	2	0	34	0	34	74
% 3 Axle Vehicles	0	0	0	0	0	3.3	0	3.2	10	0	7.7	8.7	0	4	0	3.9	3.6
4+ Axle Trucks	0	0	0	0	0	88	0	88	2	0	1	3	0	95	6	101	192
% 4+ Axle Trucks	0	0	0	0	0	7.5	0	7.5	20	0	7.7	13	0	11.1	30	11.5	9.2

Start Time	Webster Avenue Southbound				Harley Knox Boulevard Westbound				Webster Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	226	0	226	0	0	2	2	0	122	1	123	351
07:15 AM	0	0	0	0	7	199	0	206	2	0	5	7	0	114	1	115	328
07:30 AM	0	0	0	0	1	175	0	176	2	0	1	3	0	131	2	133	312
07:45 AM	0	0	0	0	1	157	0	158	1	0	1	2	0	118	6	124	284
Total Volume	0	0	0	0	9	757	0	766	5	0	9	14	0	485	10	495	1275
% App. Total	0	0	0		1.2	98.8	0		35.7	0	64.3		0	98	2		
PHF	.000	.000	.000	.000	.321	.837	.000	.847	.625	.000	.450	.500	.000	.926	.417	.930	.908

City of Perris  
 N/S: Webster Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 05\_PER\_Webster\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:15 AM				07:00 AM			
+0 mins.	0	0	0	0	0	<b>226</b>	0	<b>226</b>	2	0	5	7	0	122	1	123
+15 mins.	0	0	0	0	7	199	0	206	2	0	1	3	0	114	1	115
+30 mins.	0	0	0	0	1	175	0	176	1	0	1	2	0	<b>131</b>	2	<b>133</b>
+45 mins.	0	0	0	0	1	157	0	158	2	0	1	3	0	118	6	124
Total Volume	0	0	0	0	9	757	0	766	7	0	8	15	0	485	10	495
% App. Total	0	0	0	0	1.2	98.8	0		46.7	0	53.3		0	98	2	
PHF	.000	.000	.000	.000	.321	.837	.000	.847	.875	.000	.400	.536	.000	.926	.417	.930

City of Perris  
 N/S: Webster Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 05\_PER\_Webster\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

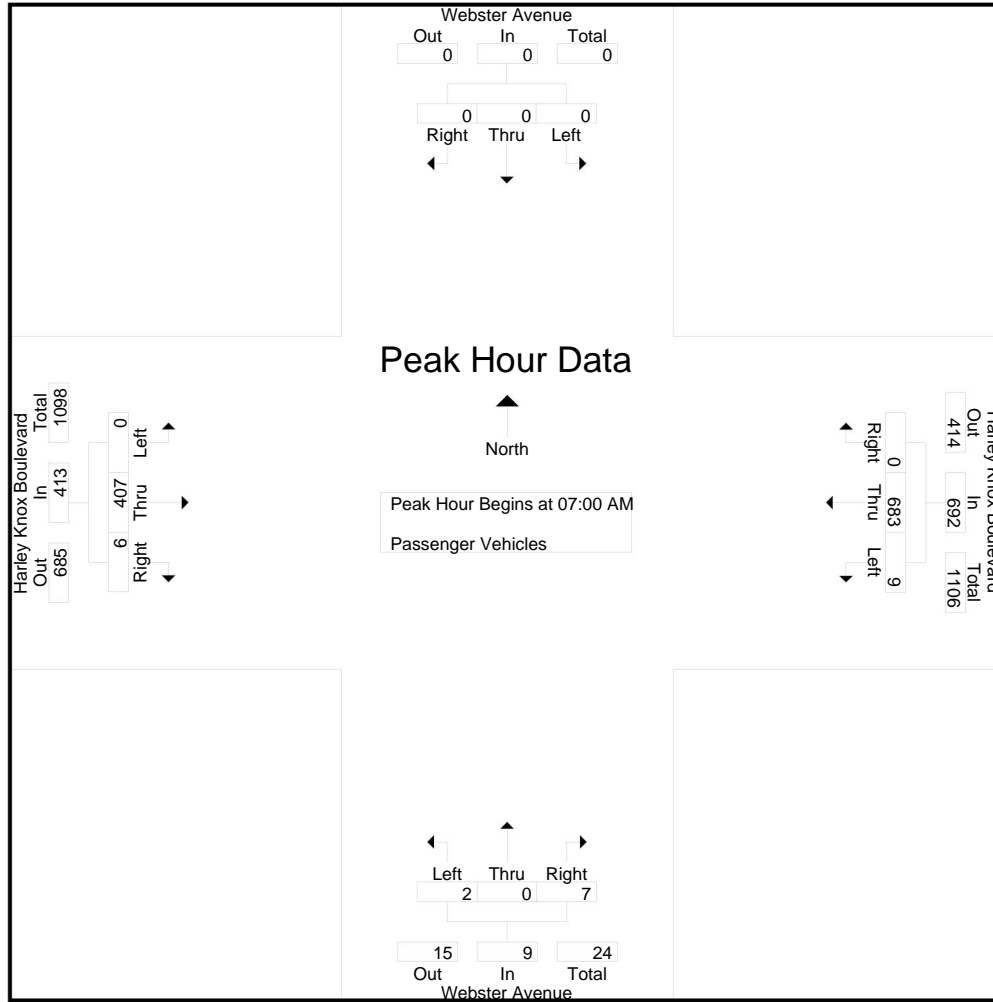
Groups Printed- Passenger Vehicles

Start Time	Webster Avenue Southbound				Harley Knox Boulevard Westbound				Webster Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	205	0	205	0	0	1	1	0	95	1	96	302
07:15 AM	0	0	0	0	7	184	0	191	1	0	4	5	0	103	0	103	299
07:30 AM	0	0	0	0	1	154	0	155	1	0	1	2	0	112	1	113	270
07:45 AM	0	0	0	0	1	140	0	141	0	0	1	1	0	97	4	101	243
Total	0	0	0	0	9	683	0	692	2	0	7	9	0	407	6	413	1114
08:00 AM	0	0	0	0	1	102	0	103	1	0	1	2	0	78	4	82	187
08:15 AM	0	0	0	0	2	91	0	93	1	0	0	1	0	68	0	68	162
08:30 AM	0	0	0	0	0	69	0	69	1	0	1	2	0	63	3	66	137
08:45 AM	0	0	0	0	1	62	0	63	1	0	1	2	0	66	1	67	132
Total	0	0	0	0	4	324	0	328	4	0	3	7	0	275	8	283	618
Grand Total	0	0	0	0	13	1007	0	1020	6	0	10	16	0	682	14	696	1732
Apprch %	0	0	0		1.3	98.7	0		37.5	0	62.5		0	98	2		
Total %	0	0	0		0.8	58.1	0	58.9	0.3	0	0.6	0.9	0	39.4	0.8	40.2	

Start Time	Webster Avenue Southbound				Harley Knox Boulevard Westbound				Webster Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	<b>205</b>	0	<b>205</b>	0	0	1	1	0	95	1	96	<b>302</b>
07:15 AM	0	0	0	0	<b>7</b>	184	0	191	<b>1</b>	0	<b>4</b>	<b>5</b>	0	103	0	103	299
07:30 AM	0	0	0	0	1	154	0	155	1	0	1	2	0	<b>112</b>	1	<b>113</b>	270
07:45 AM	0	0	0	0	1	140	0	141	0	0	1	1	0	97	<b>4</b>	101	243
Total Volume	0	0	0	0	9	683	0	692	2	0	7	9	0	407	6	413	1114
% App. Total	0	0	0		1.3	98.7	0		22.2	0	77.8		0	98.5	1.5		
PHF	.000	.000	.000	.000	.321	.833	.000	.844	.500	.000	.438	.450	.000	.908	.375	.914	.922

City of Perris  
 N/S: Webster Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 05\_PER\_Webster\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
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Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	<b>205</b>	0	<b>205</b>	0	0	1	1	0	95	1	96
+15 mins.	0	0	0	0	7	184	0	191	1	0	4	5	0	103	0	103
+30 mins.	0	0	0	0	1	154	0	155	1	0	1	2	0	<b>112</b>	1	<b>113</b>
+45 mins.	0	0	0	0	1	140	0	141	0	0	1	1	0	97	4	101
Total Volume	0	0	0	0	9	683	0	692	2	0	7	9	0	407	6	413
% App. Total	0	0	0	0	1.3	98.7	0		22.2	0	77.8		0	98.5	1.5	
PHF	.000	.000	.000	.000	.321	.833	.000	.844	.500	.000	.438	.450	.000	.908	.375	.914

City of Perris  
 N/S: Webster Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 05\_PER\_Webster\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

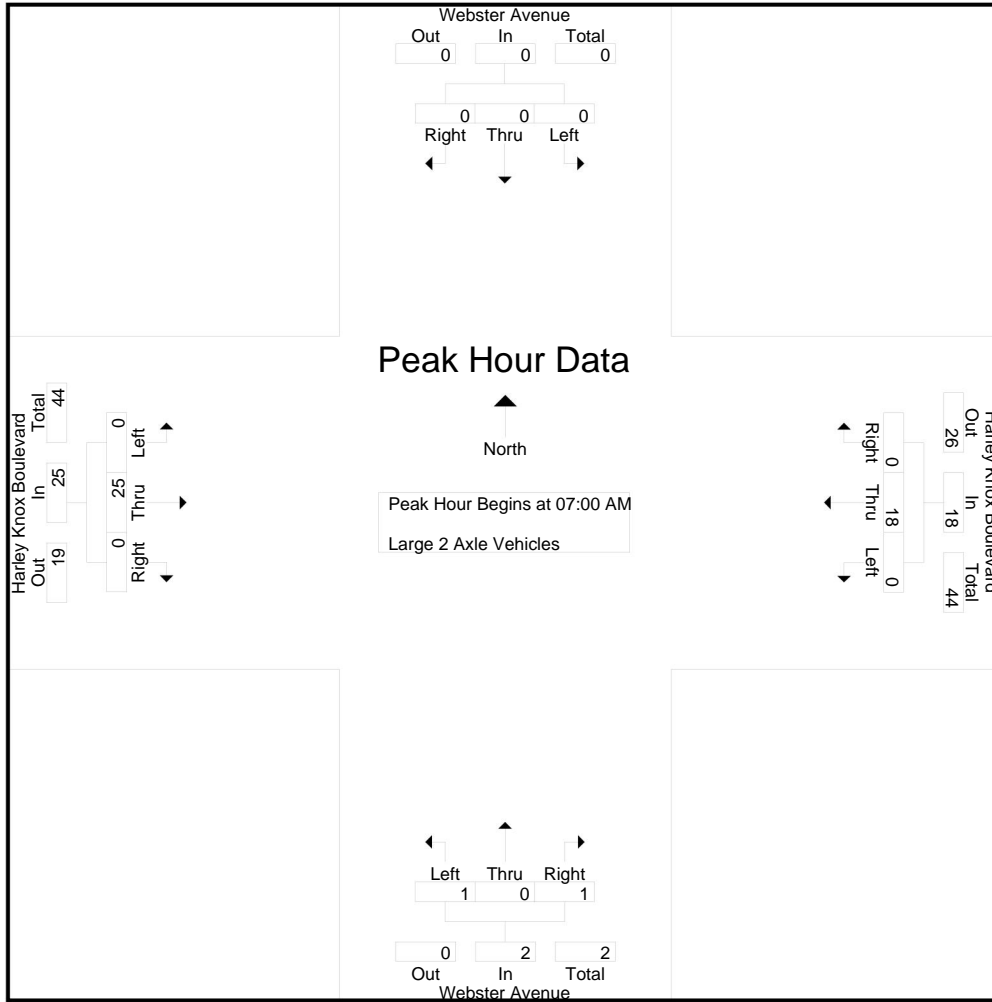
Groups Printed- Large 2 Axle Vehicles

Start Time	Webster Avenue Southbound				Harley Knox Boulevard Westbound				Webster Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	7	0	7	0	0	1	1	0	10	0	10	18
07:15 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	7	0	7	9
07:30 AM	0	0	0	0	0	5	0	5	0	0	0	0	0	3	0	3	8
07:45 AM	0	0	0	0	0	4	0	4	1	0	0	1	0	5	0	5	10
Total	0	0	0	0	0	18	0	18	1	0	1	2	0	25	0	25	45
08:00 AM	0	0	0	0	0	4	0	4	0	0	0	0	0	7	0	7	11
08:15 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	6	0	6	9
08:30 AM	0	0	0	0	0	5	0	5	0	0	0	0	0	5	0	5	10
08:45 AM	0	0	0	0	0	4	0	4	0	0	0	0	0	4	0	4	8
Total	0	0	0	0	0	16	0	16	0	0	0	0	0	22	0	22	38
Grand Total	0	0	0	0	0	34	0	34	1	0	1	2	0	47	0	47	83
Apprch %	0	0	0		0	100	0		50	0	50		0	100	0		
Total %	0	0	0		0	41	0	41	1.2	0	1.2	2.4	0	56.6	0	56.6	

Start Time	Webster Avenue Southbound				Harley Knox Boulevard Westbound				Webster Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	7	0	7	0	0	1	1	0	10	0	10	18
07:15 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	7	0	7	9
07:30 AM	0	0	0	0	0	5	0	5	0	0	0	0	0	3	0	3	8
07:45 AM	0	0	0	0	0	4	0	4	1	0	0	1	0	5	0	5	10
Total Volume	0	0	0	0	0	18	0	18	1	0	1	2	0	25	0	25	45
% App. Total	0	0	0		0	100	0		50	0	50		0	100	0		
PHF	.000	.000	.000	.000	.000	.643	.000	.643	.250	.000	.250	.500	.000	.625	.000	.625	.625

City of Perris  
 N/S: Webster Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 05\_PER\_Webster\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	<b>7</b>	0	<b>7</b>	0	0	<b>1</b>	<b>1</b>	0	<b>10</b>	0	<b>10</b>
+15 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	7	0	7
+30 mins.	0	0	0	0	0	5	0	5	0	0	0	0	0	3	0	3
+45 mins.	0	0	0	0	0	4	0	4	<b>1</b>	0	0	1	0	5	0	5
Total Volume	0	0	0	0	0	18	0	18	1	0	1	2	0	25	0	25
% App. Total	0	0	0	0	0	100	0	100	50	0	50	100	0	100	0	100
PHF	.000	.000	.000	.000	.000	.643	.000	.643	.250	.000	.250	.500	.000	.625	.000	.625



City of Perris  
 N/S: Webster Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 05\_PER\_Webster\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

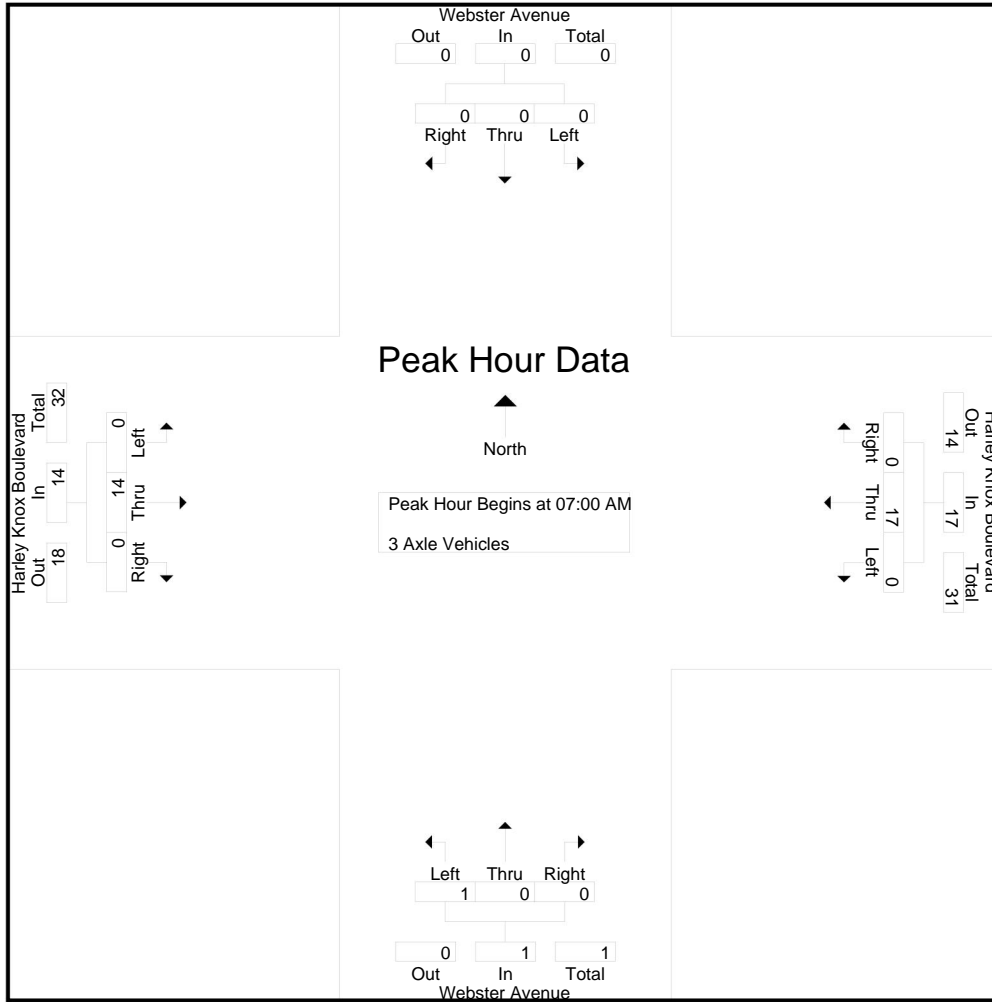
Groups Printed- 3 Axle Vehicles

Start Time	Webster Avenue Southbound				Harley Knox Boulevard Westbound				Webster Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	5	0	5	0	0	0	0	0	3	0	3	8
07:15 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	3
07:30 AM	0	0	0	0	0	5	0	5	1	0	0	1	0	5	0	5	11
07:45 AM	0	0	0	0	0	4	0	4	0	0	0	0	0	6	0	6	10
Total	0	0	0	0	0	17	0	17	1	0	0	1	0	14	0	14	32
08:00 AM	0	0	0	0	0	7	0	7	0	0	0	0	0	6	0	6	13
08:15 AM	0	0	0	0	0	8	0	8	0	0	0	0	0	3	0	3	11
08:30 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	4	0	4	7
08:45 AM	0	0	0	0	0	3	0	3	0	0	1	1	0	7	0	7	11
Total	0	0	0	0	0	21	0	21	0	0	1	1	0	20	0	20	42
Grand Total	0	0	0	0	0	38	0	38	1	0	1	2	0	34	0	34	74
Apprch %	0	0	0		0	100	0		50	0	50		0	100	0		
Total %	0	0	0		0	51.4	0	51.4	1.4	0	1.4	2.7	0	45.9	0	45.9	

Start Time	Webster Avenue Southbound				Harley Knox Boulevard Westbound				Webster Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	5	0	5	0	0	0	0	0	3	0	3	8
07:15 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	3
07:30 AM	0	0	0	0	0	5	0	5	1	0	0	1	0	5	0	5	11
07:45 AM	0	0	0	0	0	4	0	4	0	0	0	0	0	6	0	6	10
Total Volume	0	0	0	0	0	17	0	17	1	0	0	1	0	14	0	14	32
% App. Total	0	0	0		0	100	0		100	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.850	.000	.850	.250	.000	.000	.250	.000	.583	.000	.583	.727

City of Perris  
 N/S: Webster Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 05\_PER\_Webster\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	5	0	5	0	0	0	0	0	3	0	3
+15 mins.	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	5	0	5	1	0	0	1	0	5	0	5
+45 mins.	0	0	0	0	0	4	0	4	0	0	0	0	0	6	0	6
Total Volume	0	0	0	0	0	17	0	17	1	0	0	1	0	14	0	14
% App. Total	0	0	0	0	0	100	0	100	100	0	0	100	0	100	0	100
PHF	.000	.000	.000	.000	.000	.850	.000	.850	.250	.000	.000	.250	.000	.583	.000	.583

City of Perris  
 N/S: Webster Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 05\_PER\_Webster\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

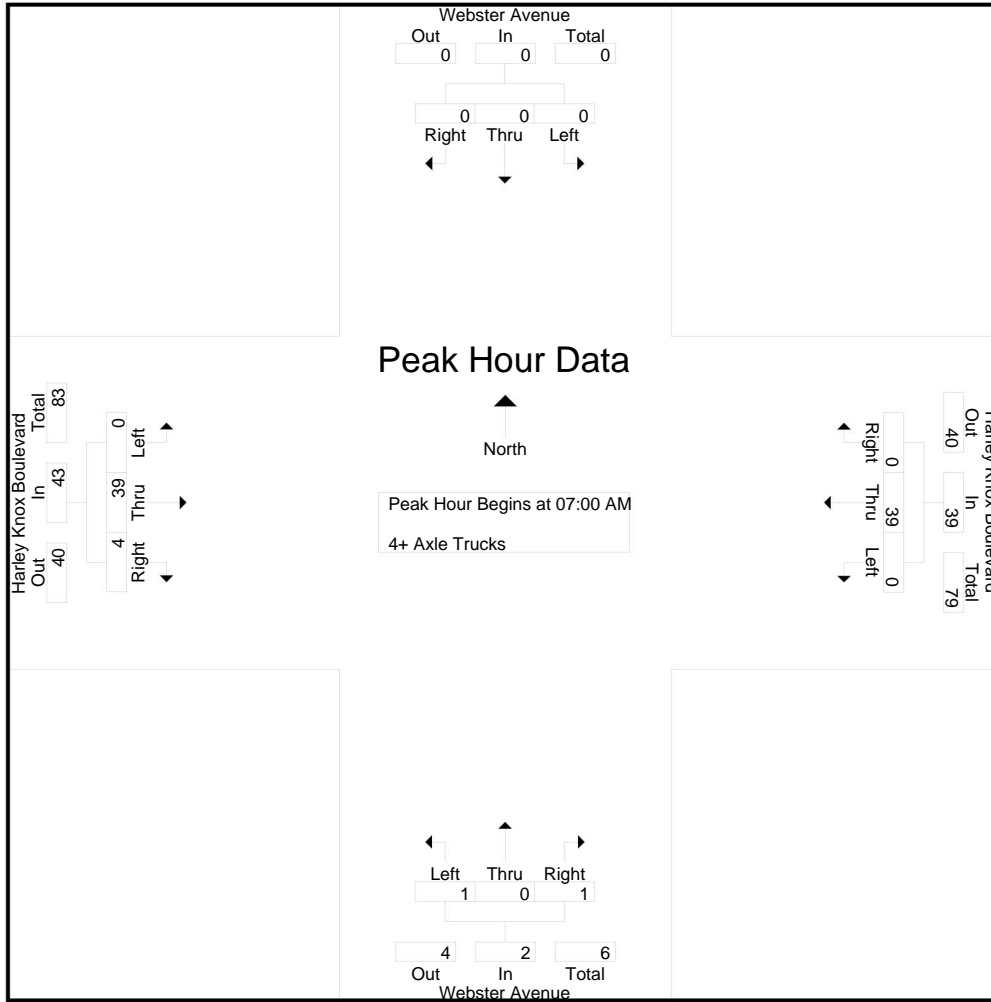
Groups Printed- 4+ Axle Trucks

Start Time	Webster Avenue Southbound				Harley Knox Boulevard Westbound				Webster Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	9	0	9	0	0	0	0	0	14	0	14	23
07:15 AM	0	0	0	0	0	10	0	10	1	0	1	2	0	4	1	5	17
07:30 AM	0	0	0	0	0	11	0	11	0	0	0	0	0	11	1	12	23
07:45 AM	0	0	0	0	0	9	0	9	0	0	0	0	0	10	2	12	21
Total	0	0	0	0	0	39	0	39	1	0	1	2	0	39	4	43	84
08:00 AM	0	0	0	0	0	11	0	11	1	0	0	1	0	12	0	12	24
08:15 AM	0	0	0	0	0	9	0	9	0	0	0	0	0	16	0	16	25
08:30 AM	0	0	0	0	0	10	0	10	0	0	0	0	0	12	2	14	24
08:45 AM	0	0	0	0	0	19	0	19	0	0	0	0	0	16	0	16	35
Total	0	0	0	0	0	49	0	49	1	0	0	1	0	56	2	58	108
Grand Total	0	0	0	0	0	88	0	88	2	0	1	3	0	95	6	101	192
Apprch %	0	0	0		0	100	0		66.7	0	33.3		0	94.1	5.9		
Total %	0	0	0		0	45.8	0	45.8	1	0	0.5	1.6	0	49.5	3.1	52.6	

Start Time	Webster Avenue Southbound				Harley Knox Boulevard Westbound				Webster Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	9	0	9	0	0	0	0	0	14	0	14	23
07:15 AM	0	0	0	0	0	10	0	10	1	0	1	2	0	4	1	5	17
07:30 AM	0	0	0	0	0	11	0	11	0	0	0	0	0	11	1	12	23
07:45 AM	0	0	0	0	0	9	0	9	0	0	0	0	0	10	2	12	21
Total Volume	0	0	0	0	0	39	0	39	1	0	1	2	0	39	4	43	84
% App. Total	0	0	0		0	100	0		50	0	50		0	90.7	9.3		
PHF	.000	.000	.000	.000	.000	.886	.000	.886	.250	.000	.250	.250	.000	.696	.500	.768	.913

City of Perris  
 N/S: Webster Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 05\_PER\_Webster\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	9	0	9	0	0	0	0	0	14	0	14
+15 mins.	0	0	0	0	0	10	0	10	1	0	1	2	0	4	1	5
+30 mins.	0	0	0	0	0	11	0	11	0	0	0	0	0	11	1	12
+45 mins.	0	0	0	0	0	9	0	9	0	0	0	0	0	10	2	12
Total Volume	0	0	0	0	0	39	0	39	1	0	1	2	0	39	4	43
% App. Total	0	0	0	0	0	100	0		50	0	50		0	90.7	9.3	
PHF	.000	.000	.000	.000	.000	.886	.000	.886	.250	.000	.250	.250	.000	.696	.500	.768

City of Perris  
 N/S: Webster Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 05\_PER\_Webster\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

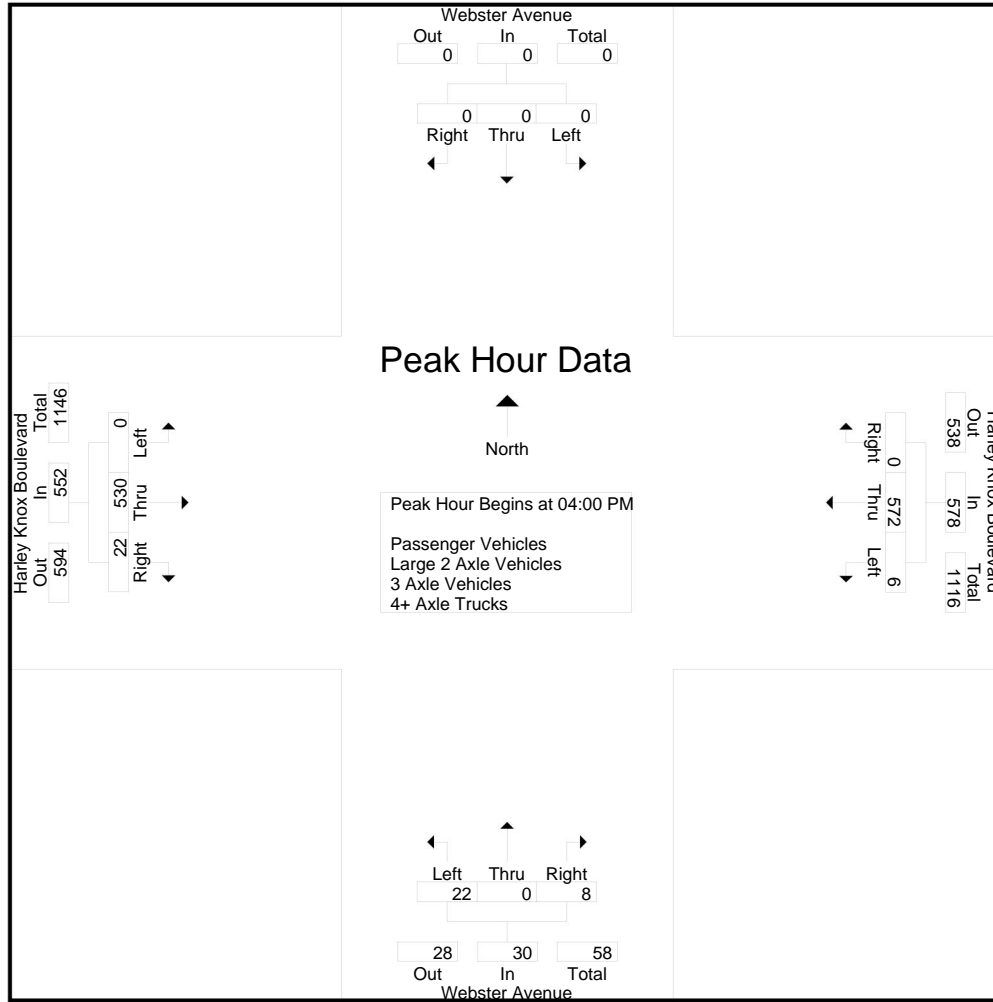
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Webster Avenue Southbound				Harley Knox Boulevard Westbound				Webster Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	0	0	0	3	117	0	120	3	0	2	5	0	128	6	134	259
04:15 PM	0	0	0	0	3	98	0	101	7	0	3	10	0	139	7	146	257
04:30 PM	0	0	0	0	0	223	0	223	7	0	2	9	0	141	1	142	374
04:45 PM	0	0	0	0	0	134	0	134	5	0	1	6	0	122	8	130	270
Total	0	0	0	0	6	572	0	578	22	0	8	30	0	530	22	552	1160
05:00 PM	0	0	0	0	1	120	0	121	4	0	2	6	0	117	3	120	247
05:15 PM	0	0	0	0	0	109	0	109	2	0	1	3	0	114	6	120	232
05:30 PM	0	0	0	0	0	142	0	142	5	0	1	6	0	105	6	111	259
05:45 PM	0	0	0	0	2	95	0	97	3	0	0	3	0	105	6	111	211
Total	0	0	0	0	3	466	0	469	14	0	4	18	0	441	21	462	949
Grand Total	0	0	0	0	9	1038	0	1047	36	0	12	48	0	971	43	1014	2109
Apprch %	0	0	0		0.9	99.1	0		75	0	25		0	95.8	4.2		
Total %	0	0	0	0	0.4	49.2	0	49.6	1.7	0	0.6	2.3	0	46	2	48.1	
Passenger Vehicles	0	0	0	0	8	908	0	916	29	0	11	40	0	844	36	880	1836
% Passenger Vehicles	0	0	0	0	88.9	87.5	0	87.5	80.6	0	91.7	83.3	0	86.9	83.7	86.8	87.1
Large 2 Axle Vehicles	0	0	0	0	0	26	0	26	1	0	0	1	0	19	1	20	47
% Large 2 Axle Vehicles	0	0	0	0	0	2.5	0	2.5	2.8	0	0	2.1	0	2	2.3	2	2.2
3 Axle Vehicles	0	0	0	0	1	17	0	18	0	0	1	1	0	53	2	55	74
% 3 Axle Vehicles	0	0	0	0	11.1	1.6	0	1.7	0	0	8.3	2.1	0	5.5	4.7	5.4	3.5
4+ Axle Trucks	0	0	0	0	0	87	0	87	6	0	0	6	0	55	4	59	152
% 4+ Axle Trucks	0	0	0	0	0	8.4	0	8.3	16.7	0	0	12.5	0	5.7	9.3	5.8	7.2

Start Time	Webster Avenue Southbound				Harley Knox Boulevard Westbound				Webster Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	3	117	0	120	3	0	2	5	0	128	6	134	259
04:15 PM	0	0	0	0	3	98	0	101	7	0	3	10	0	139	7	146	257
04:30 PM	0	0	0	0	0	223	0	223	7	0	2	9	0	141	1	142	374
04:45 PM	0	0	0	0	0	134	0	134	5	0	1	6	0	122	8	130	270
Total Volume	0	0	0	0	6	572	0	578	22	0	8	30	0	530	22	552	1160
% App. Total	0	0	0	0	1	99	0		73.3	0	26.7		0	96	4		
PHF	.000	.000	.000	.000	.500	.641	.000	.648	.786	.000	.667	.750	.000	.940	.688	.945	.775

City of Perris  
 N/S: Webster Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 05\_PER\_Webster\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:00 PM				04:30 PM				04:15 PM				04:00 PM			
+0 mins.	0	0	0	0	0	<b>223</b>	0	<b>223</b>	<b>7</b>	0	<b>3</b>	<b>10</b>	0	128	6	134
+15 mins.	0	0	0	0	0	134	0	134	7	0	2	9	0	139	7	<b>146</b>
+30 mins.	0	0	0	0	<b>1</b>	120	0	121	5	0	1	6	0	<b>141</b>	1	142
+45 mins.	0	0	0	0	0	109	0	109	4	0	2	6	0	122	<b>8</b>	130
Total Volume	0	0	0	0	1	586	0	587	23	0	8	31	0	530	22	552
% App. Total	0	0	0	0	0.2	99.8	0		74.2	0	25.8		0	96	4	
PHF	.000	.000	.000	.000	.250	.657	.000	.658	.821	.000	.667	.775	.000	.940	.688	.945

City of Perris  
 N/S: Webster Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 05\_PER\_Webster\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

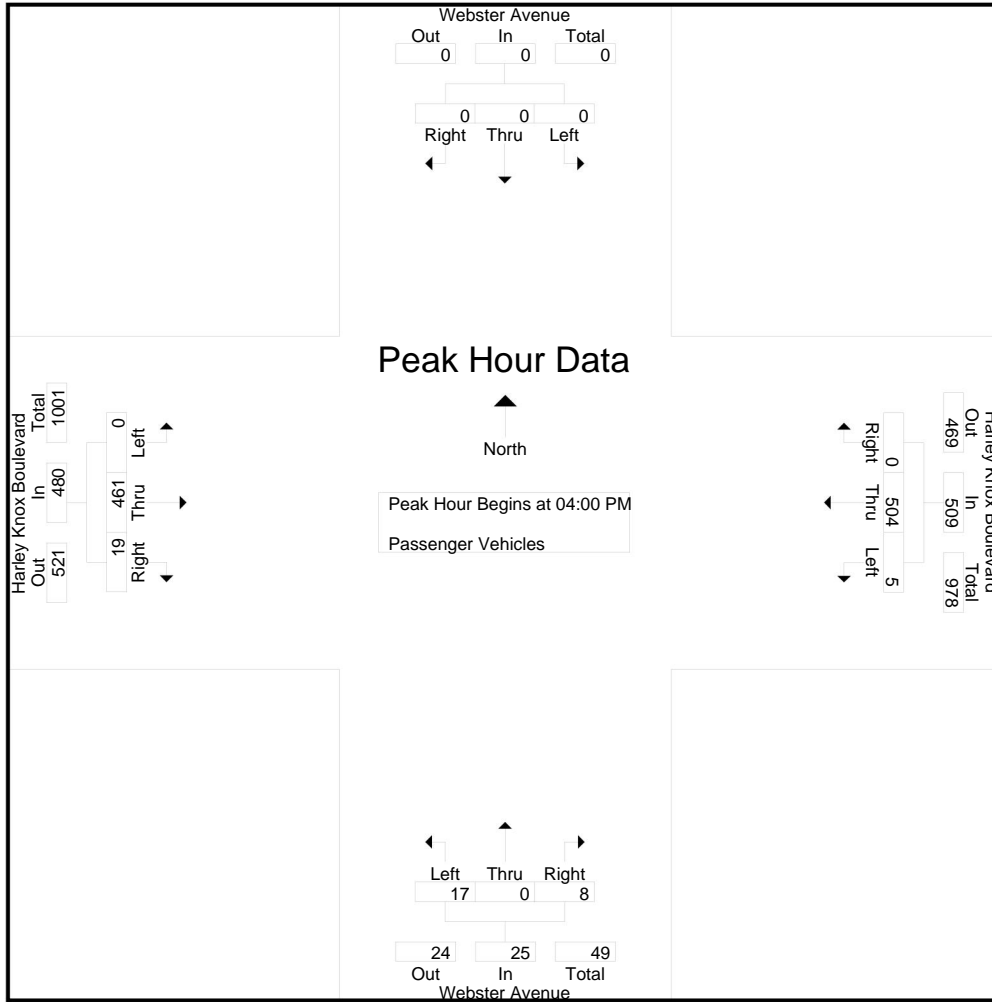
Groups Printed- Passenger Vehicles

Start Time	Webster Avenue Southbound				Harley Knox Boulevard Westbound				Webster Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	0	0	0	3	102	0	105	2	0	2	4	0	118	4	122	231
04:15 PM	0	0	0	0	2	78	0	80	5	0	3	8	0	116	6	122	210
04:30 PM	0	0	0	0	0	202	0	202	6	0	2	8	0	120	1	121	331
04:45 PM	0	0	0	0	0	122	0	122	4	0	1	5	0	107	8	115	242
Total	0	0	0	0	5	504	0	509	17	0	8	25	0	461	19	480	1014
05:00 PM	0	0	0	0	1	107	0	108	4	0	1	5	0	101	2	103	216
05:15 PM	0	0	0	0	0	90	0	90	2	0	1	3	0	93	4	97	190
05:30 PM	0	0	0	0	0	127	0	127	3	0	1	4	0	97	5	102	233
05:45 PM	0	0	0	0	2	80	0	82	3	0	0	3	0	92	6	98	183
Total	0	0	0	0	3	404	0	407	12	0	3	15	0	383	17	400	822
Grand Total	0	0	0	0	8	908	0	916	29	0	11	40	0	844	36	880	1836
Apprch %	0	0	0		0.9	99.1	0		72.5	0	27.5		0	95.9	4.1		
Total %	0	0	0		0.4	49.5	0	49.9	1.6	0	0.6	2.2	0	46	2	47.9	

Start Time	Webster Avenue Southbound				Harley Knox Boulevard Westbound				Webster Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	3	102	0	105	2	0	2	4	0	118	4	<b>122</b>	231
04:15 PM	0	0	0	0	2	78	0	80	5	0	<b>3</b>	<b>8</b>	0	116	6	122	210
04:30 PM	0	0	0	0	0	<b>202</b>	0	<b>202</b>	<b>6</b>	0	2	8	0	<b>120</b>	1	121	<b>331</b>
04:45 PM	0	0	0	0	0	122	0	122	4	0	1	5	0	107	<b>8</b>	115	242
Total Volume	0	0	0	0	5	504	0	509	17	0	8	25	0	461	19	480	1014
% App. Total	0	0	0		1	99	0		68	0	32		0	96	4		
PHF	.000	.000	.000	.000	.417	.624	.000	.630	.708	.000	.667	.781	.000	.960	.594	.984	.766

City of Perris  
 N/S: Webster Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 05\_PER\_Webster\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
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Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	0	0	0	0	<b>3</b>	102	0	105	2	0	2	4	0	118	4	<b>122</b>
+15 mins.	0	0	0	0	2	78	0	80	5	0	<b>3</b>	<b>8</b>	0	116	6	122
+30 mins.	0	0	0	0	0	<b>202</b>	0	<b>202</b>	<b>6</b>	0	2	8	0	<b>120</b>	1	121
+45 mins.	0	0	0	0	0	122	0	122	4	0	1	5	0	107	<b>8</b>	115
Total Volume	0	0	0	0	5	504	0	509	17	0	8	25	0	461	19	480
% App. Total	0	0	0	0	1	99	0		68	0	32		0	96	4	
PHF	.000	.000	.000	.000	.417	.624	.000	.630	.708	.000	.667	.781	.000	.960	.594	.984



City of Perris  
 N/S: Webster Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 05\_PER\_Webster\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

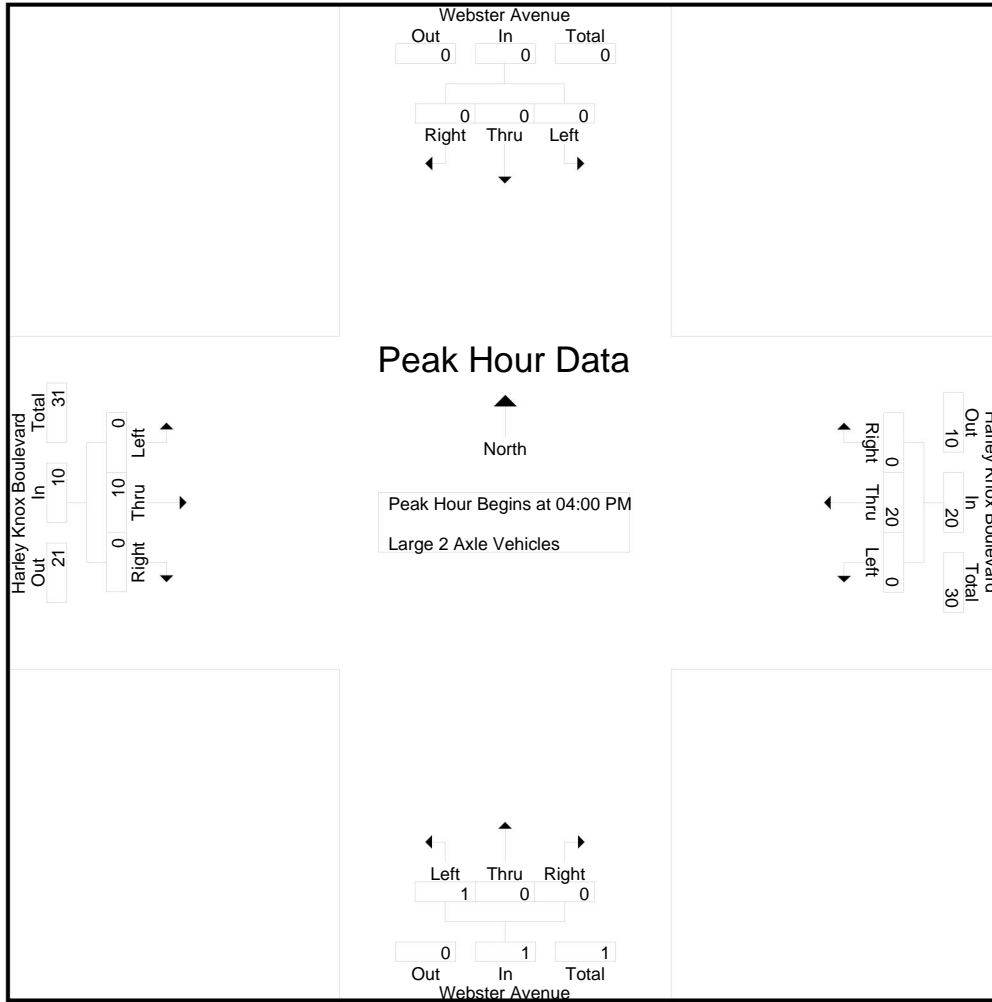
Groups Printed- Large 2 Axle Vehicles

Start Time	Webster Avenue Southbound				Harley Knox Boulevard Westbound				Webster Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	7	0	7	0	0	0	0	0	2	0	2	9
04:15 PM	0	0	0	0	0	5	0	5	1	0	0	1	0	6	0	6	12
04:30 PM	0	0	0	0	0	5	0	5	0	0	0	0	0	1	0	1	6
04:45 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	1	0	1	4
Total	0	0	0	0	0	20	0	20	1	0	0	1	0	10	0	10	31
05:00 PM	0	0	0	0	0	4	0	4	0	0	0	0	0	3	0	3	7
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	3	3
05:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
05:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	3	0	3	4
Total	0	0	0	0	0	6	0	6	0	0	0	0	0	9	1	10	16
Grand Total	0	0	0	0	0	26	0	26	1	0	0	1	0	19	1	20	47
Apprch %	0	0	0		0	100	0		100	0	0		0	95	5		
Total %	0	0	0		0	55.3	0	55.3	2.1	0	0	2.1	0	40.4	2.1	42.6	

Start Time	Webster Avenue Southbound				Harley Knox Boulevard Westbound				Webster Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	7	0	7	0	0	0	0	0	2	0	2	9
04:15 PM	0	0	0	0	0	5	0	5	1	0	0	1	0	6	0	6	12
04:30 PM	0	0	0	0	0	5	0	5	0	0	0	0	0	1	0	1	6
04:45 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	1	0	1	4
Total Volume	0	0	0	0	0	20	0	20	1	0	0	1	0	10	0	10	31
% App. Total	0	0	0		0	100	0		100	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.714	.000	.714	.250	.000	.000	.250	.000	.417	.000	.417	.646

City of Perris  
 N/S: Webster Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 05\_PER\_Webster\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	0	0	0	0	0	<b>7</b>	0	<b>7</b>	0	0	0	0	0	2	0	2
+15 mins.	0	0	0	0	0	5	0	5	<b>1</b>	0	0	0	<b>1</b>	<b>6</b>	0	<b>6</b>
+30 mins.	0	0	0	0	0	5	0	5	0	0	0	0	0	1	0	1
+45 mins.	0	0	0	0	0	3	0	3	0	0	0	0	0	1	0	1
Total Volume	0	0	0	0	0	20	0	20	1	0	0	1	0	10	0	10
% App. Total	0	0	0	0	0	100	0	100	100	0	0	0	0	100	0	100
PHF	.000	.000	.000	.000	.000	.714	.000	.714	.250	.000	.000	.250	.000	.417	.000	.417

City of Perris  
 N/S: Webster Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 05\_PER\_Webster\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

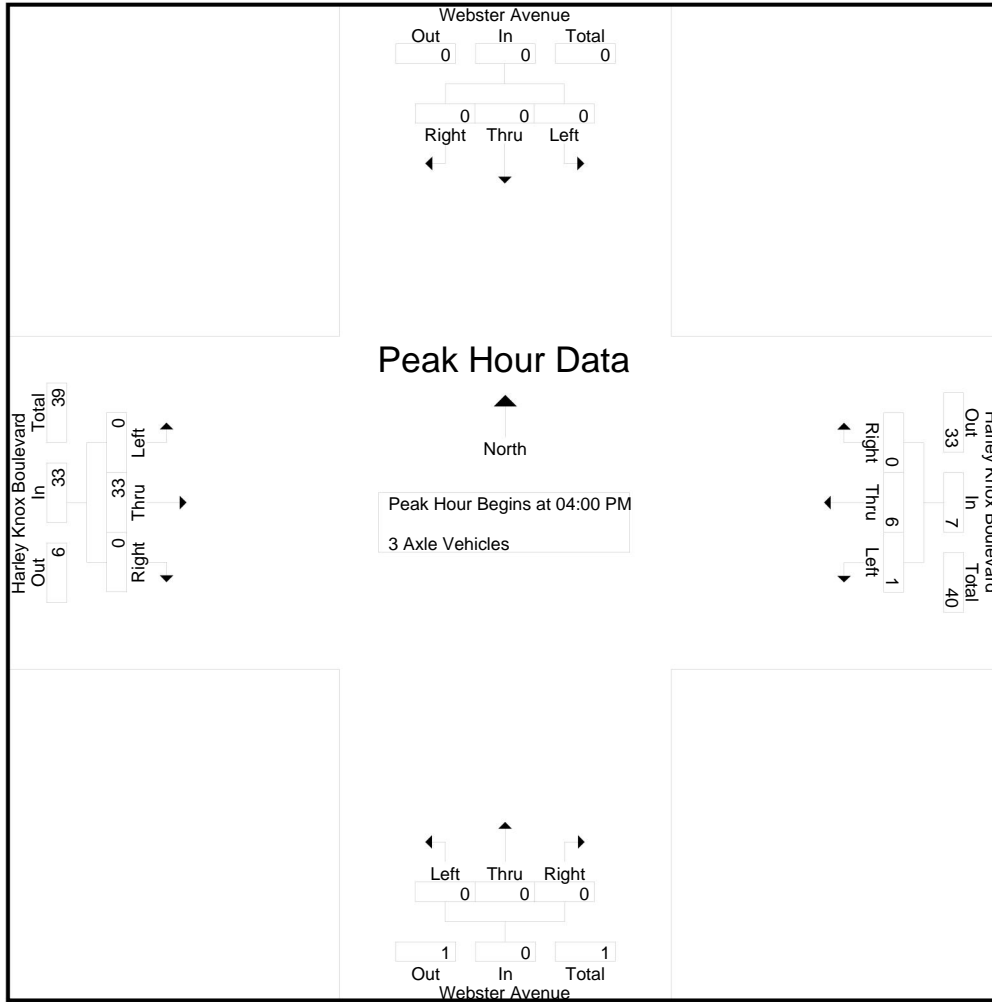
Groups Printed- 3 Axle Vehicles

Start Time	Webster Avenue Southbound				Harley Knox Boulevard Westbound				Webster Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	4
04:15 PM	0	0	0	0	1	3	0	4	0	0	0	0	0	8	0	8	12
04:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	11	0	11	12
04:45 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	10	0	10	12
Total	0	0	0	0	1	6	0	7	0	0	0	0	0	33	0	33	40
05:00 PM	0	0	0	0	0	2	0	2	0	0	1	1	0	5	0	5	8
05:15 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	9	1	10	13
05:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	1	3	5
05:45 PM	0	0	0	0	0	4	0	4	0	0	0	0	0	4	0	4	8
Total	0	0	0	0	0	11	0	11	0	0	1	1	0	20	2	22	34
Grand Total	0	0	0	0	1	17	0	18	0	0	1	1	0	53	2	55	74
Apprch %	0	0	0		5.6	94.4	0		0	0	100		0	96.4	3.6		
Total %	0	0	0	0	1.4	23	0	24.3	0	0	1.4	1.4	0	71.6	2.7	74.3	

Start Time	Webster Avenue Southbound				Harley Knox Boulevard Westbound				Webster Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	4
04:15 PM	0	0	0	0	1	3	0	4	0	0	0	0	0	8	0	8	12
04:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	11	0	11	12
04:45 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	10	0	10	12
Total Volume	0	0	0	0	1	6	0	7	0	0	0	0	0	33	0	33	40
% App. Total	0	0	0		14.3	85.7	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.250	.500	.000	.438	.000	.000	.000	.000	.000	.750	.000	.750	.833

City of Perris  
 N/S: Webster Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 05\_PER\_Webster\_Harley Knox PM  
 Site Code : 05118431  
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Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4
+15 mins.	0	0	0	0	1	3	0	4	0	0	0	0	0	8	0	8
+30 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	11	0	11
+45 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	10	0	10
Total Volume	0	0	0	0	1	6	0	7	0	0	0	0	0	33	0	33
% App. Total	0	0	0	0	14.3	85.7	0	0	0	0	0	0	0	100	0	0
PHF	.000	.000	.000	.000	.250	.500	.000	.438	.000	.000	.000	.000	.000	.750	.000	.750

City of Perris  
 N/S: Webster Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 05\_PER\_Webster\_Harley Knox PM  
 Site Code : 05118431  
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 Page No : 1

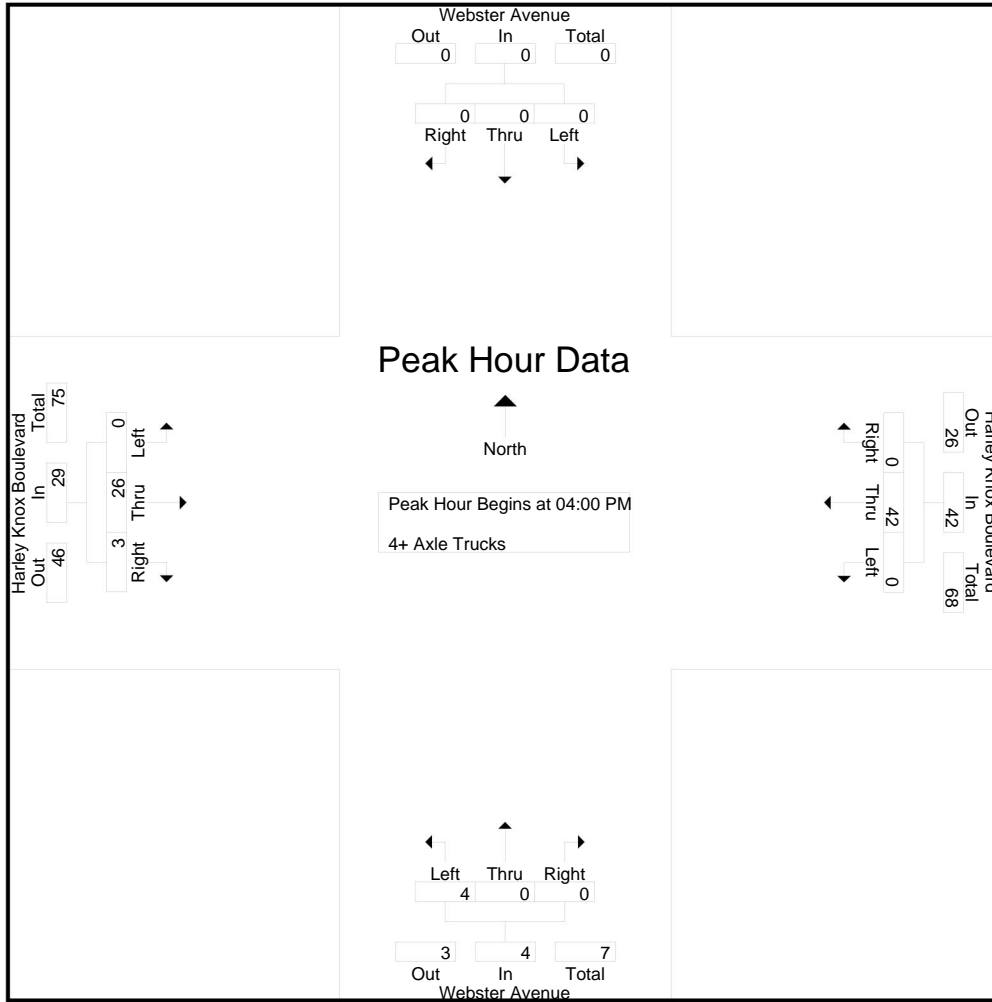
Groups Printed- 4+ Axle Trucks

Start Time	Webster Avenue Southbound				Harley Knox Boulevard Westbound				Webster Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	8	0	8	1	0	0	1	0	4	2	6	15
04:15 PM	0	0	0	0	0	12	0	12	1	0	0	1	0	9	1	10	23
04:30 PM	0	0	0	0	0	15	0	15	1	0	0	1	0	9	0	9	25
04:45 PM	0	0	0	0	0	7	0	7	1	0	0	1	0	4	0	4	12
Total	0	0	0	0	0	42	0	42	4	0	0	4	0	26	3	29	75
05:00 PM	0	0	0	0	0	7	0	7	0	0	0	0	0	8	1	9	16
05:15 PM	0	0	0	0	0	16	0	16	0	0	0	0	0	10	0	10	26
05:30 PM	0	0	0	0	0	12	0	12	2	0	0	2	0	5	0	5	19
05:45 PM	0	0	0	0	0	10	0	10	0	0	0	0	0	6	0	6	16
Total	0	0	0	0	0	45	0	45	2	0	0	2	0	29	1	30	77
Grand Total	0	0	0	0	0	87	0	87	6	0	0	6	0	55	4	59	152
Apprch %	0	0	0		0	100	0		100	0	0		0	93.2	6.8		
Total %	0	0	0		0	57.2	0	57.2	3.9	0	0	3.9	0	36.2	2.6	38.8	

Start Time	Webster Avenue Southbound				Harley Knox Boulevard Westbound				Webster Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	8	0	8	1	0	0	1	0	4	2	6	15
04:15 PM	0	0	0	0	0	12	0	12	1	0	0	1	0	9	1	10	23
04:30 PM	0	0	0	0	0	15	0	15	1	0	0	1	0	9	0	9	25
04:45 PM	0	0	0	0	0	7	0	7	1	0	0	1	0	4	0	4	12
Total Volume	0	0	0	0	0	42	0	42	4	0	0	4	0	26	3	29	75
% App. Total	0	0	0		0	100	0		100	0	0		0	89.7	10.3		
PHF	.000	.000	.000	.000	.000	.700	.000	.700	1.00	.000	.000	1.00	.000	.722	.375	.725	.750

City of Perris  
 N/S: Webster Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 05\_PER\_Webster\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	0	0	0	0	0	8	0	8	1	0	0	1	0	4	2	6
+15 mins.	0	0	0	0	0	12	0	12	1	0	0	1	0	9	1	10
+30 mins.	0	0	0	0	0	15	0	15	1	0	0	1	0	9	0	9
+45 mins.	0	0	0	0	0	7	0	7	1	0	0	1	0	4	0	4
Total Volume	0	0	0	0	0	42	0	42	4	0	0	4	0	26	3	29
% App. Total	0	0	0	0	0	100	0	100	100	0	0	100	0	89.7	10.3	100
PHF	.000	.000	.000	.000	.000	.700	.000	.700	1.000	.000	.000	1.000	.000	.722	.375	.725

Location: Perris  
 N/S: Patterson Avenue  
 E/W: Harley Knox Boulevard



Date: 5/24/2018  
 Day: Thursday

PEDESTRIANS

	North Leg Patterson Avenue	East Leg Harley Knox Boulevard	South Leg Patterson Avenue	West Leg Harley Knox Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg Patterson Avenue	East Leg Harley Knox Boulevard	South Leg Patterson Avenue	West Leg Harley Knox Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

Location: Perris  
 N/S: Patterson Avenue  
 E/W: Harley Knox Boulevard



Date: 5/24/2018  
 Day: Thursday

BICYCLES

	Southbound Patterson Avenue			Westbound Harley Knox Boulevard			Northbound Patterson Avenue			Eastbound Harley Knox Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound Patterson Avenue			Westbound Harley Knox Boulevard			Northbound Patterson Avenue			Eastbound Harley Knox Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	1	0	0	0	0	0	0	1



City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Iris Avenue  
 Weather: Clear

File Name : 09\_MRV\_Heacock\_Iris AM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
 Page No : 1

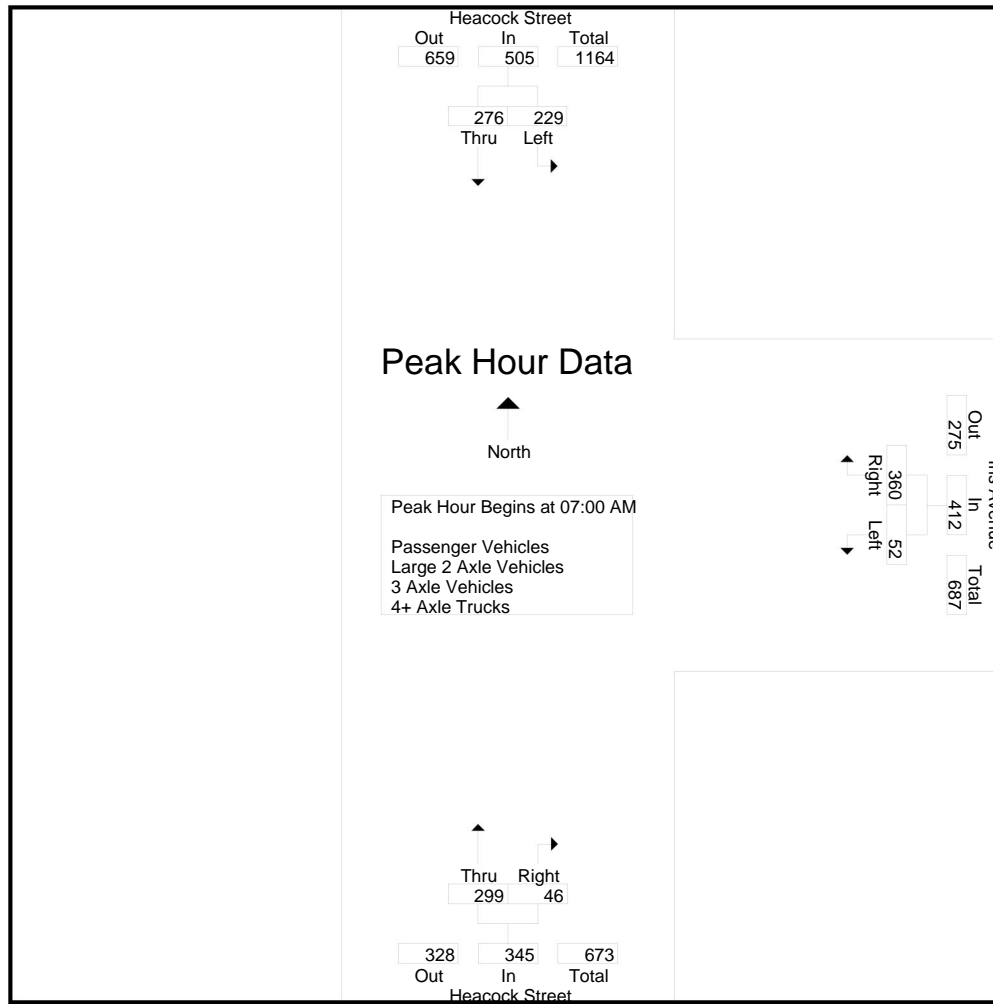
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Heacock Street Southbound			Iris Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	48	65	113	11	86	97	59	7	66	276
07:15 AM	59	80	139	15	91	106	66	10	76	321
07:30 AM	64	71	135	12	102	114	103	19	122	371
07:45 AM	58	60	118	14	81	95	71	10	81	294
Total	229	276	505	52	360	412	299	46	345	1262
08:00 AM	42	52	94	10	88	98	56	3	59	251
08:15 AM	46	20	66	7	66	73	51	3	54	193
08:30 AM	27	37	64	2	68	70	40	1	41	175
08:45 AM	34	36	70	2	47	49	40	3	43	162
Total	149	145	294	21	269	290	187	10	197	781
Grand Total	378	421	799	73	629	702	486	56	542	2043
Apprch %	47.3	52.7		10.4	89.6		89.7	10.3		
Total %	18.5	20.6	39.1	3.6	30.8	34.4	23.8	2.7	26.5	
Passenger Vehicles	365	324	689	65	621	686	400	54	454	1829
% Passenger Vehicles	96.6	77	86.2	89	98.7	97.7	82.3	96.4	83.8	89.5
Large 2 Axle Vehicles	8	15	23	7	7	14	12	1	13	50
% Large 2 Axle Vehicles	2.1	3.6	2.9	9.6	1.1	2	2.5	1.8	2.4	2.4
3 Axle Vehicles	1	25	26	1	0	1	23	1	24	51
% 3 Axle Vehicles	0.3	5.9	3.3	1.4	0	0.1	4.7	1.8	4.4	2.5
4+ Axle Trucks	4	57	61	0	1	1	51	0	51	113
% 4+ Axle Trucks	1.1	13.5	7.6	0	0.2	0.1	10.5	0	9.4	5.5

Start Time	Heacock Street Southbound			Iris Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	48	65	113	11	86	97	59	7	66	276
07:15 AM	59	<b>80</b>	<b>139</b>	<b>15</b>	91	106	66	10	76	321
07:30 AM	<b>64</b>	71	135	12	<b>102</b>	<b>114</b>	<b>103</b>	<b>19</b>	<b>122</b>	<b>371</b>
07:45 AM	58	60	118	14	81	95	71	10	81	294
Total Volume	229	276	505	52	360	412	299	46	345	1262
% App. Total	45.3	54.7		12.6	87.4		86.7	13.3		
PHF	.895	.863	.908	.867	.882	.904	.726	.605	.707	.850

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Iris Avenue  
 Weather: Clear

File Name : 09\_MRV\_Heacock\_Iris AM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:15 AM			07:00 AM		
+0 mins.	48	65	113	15	91	106	59	7	66
+15 mins.	59	<b>80</b>	<b>139</b>	12	<b>102</b>	<b>114</b>	66	10	76
+30 mins.	<b>64</b>	71	135	14	81	95	<b>103</b>	<b>19</b>	<b>122</b>
+45 mins.	58	60	118	10	88	98	71	10	81
Total Volume	229	276	505	51	362	413	299	46	345
% App. Total	45.3	54.7		12.3	87.7		86.7	13.3	
PHF	.895	.863	.908	.850	.887	.906	.726	.605	.707

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Iris Avenue  
 Weather: Clear

File Name : 09\_MRV\_Heacock\_Iris AM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
 Page No : 1

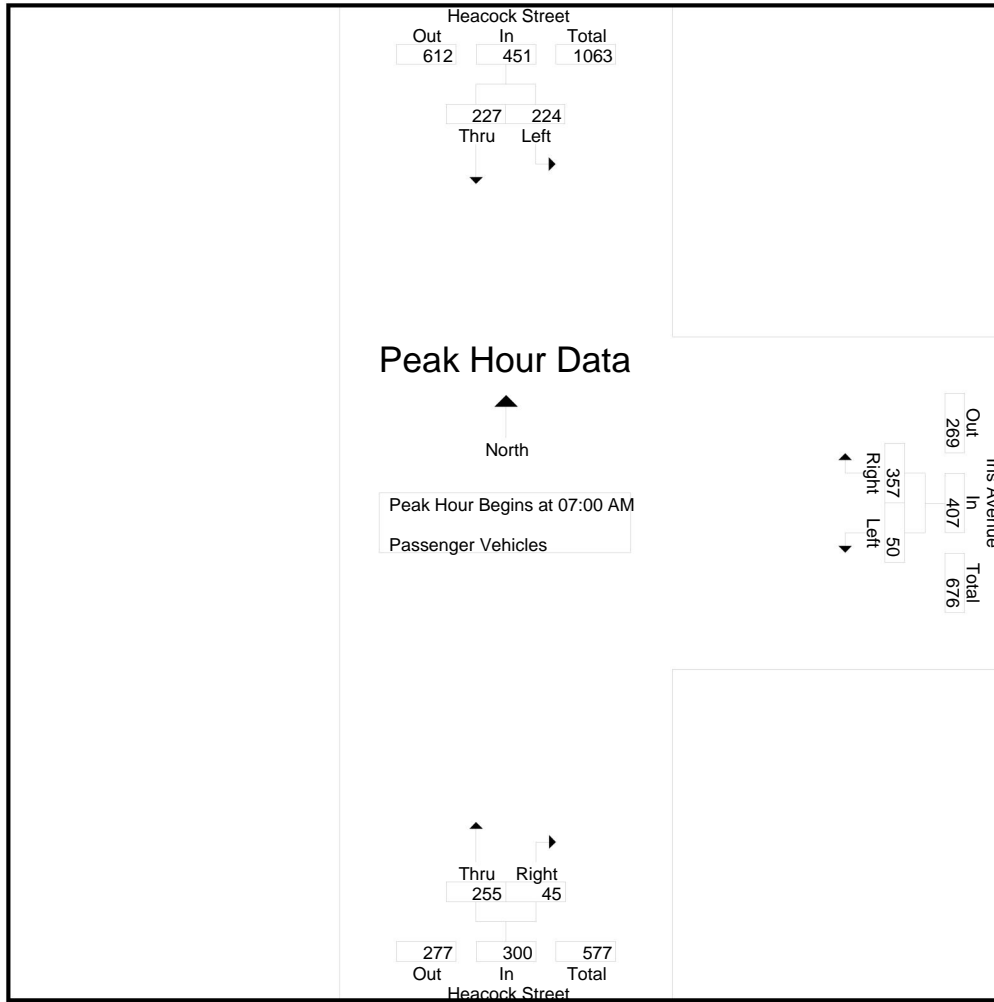
Groups Printed- Passenger Vehicles

Start Time	Heacock Street Southbound			Iris Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	47	53	100	10	84	94	48	7	55	249
07:15 AM	58	64	122	15	91	106	56	10	66	294
07:30 AM	63	57	120	11	101	112	92	18	110	342
07:45 AM	56	53	109	14	81	95	59	10	69	273
Total	224	227	451	50	357	407	255	45	300	1158
08:00 AM	40	35	75	9	87	96	47	3	50	221
08:15 AM	44	13	57	2	64	66	41	2	43	166
08:30 AM	25	26	51	2	66	68	25	1	26	145
08:45 AM	32	23	55	2	47	49	32	3	35	139
Total	141	97	238	15	264	279	145	9	154	671
Grand Total	365	324	689	65	621	686	400	54	454	1829
Apprch %	53	47		9.5	90.5		88.1	11.9		
Total %	20	17.7	37.7	3.6	34	37.5	21.9	3	24.8	

Start Time	Heacock Street Southbound			Iris Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	47	53	100	10	84	94	48	7	55	249
07:15 AM	58	<b>64</b>	<b>122</b>	15	91	106	56	10	66	294
07:30 AM	<b>63</b>	57	120	11	<b>101</b>	<b>112</b>	<b>92</b>	<b>18</b>	<b>110</b>	<b>342</b>
07:45 AM	56	53	109	14	81	95	59	10	69	273
Total Volume	224	227	451	50	357	407	255	45	300	1158
% App. Total	49.7	50.3		12.3	87.7		85	15		
PHF	.889	.887	.924	.833	.884	.908	.693	.625	.682	.846

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Iris Avenue  
 Weather: Clear

File Name : 09\_MRV\_Heacock\_Iris AM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	47	53	100	10	84	94	48	7	55
+15 mins.	58	<b>64</b>	<b>122</b>	<b>15</b>	91	106	56	10	66
+30 mins.	<b>63</b>	57	120	11	<b>101</b>	<b>112</b>	<b>92</b>	<b>18</b>	<b>110</b>
+45 mins.	56	53	109	14	81	95	59	10	69
Total Volume	224	227	451	50	357	407	255	45	300
% App. Total	49.7	50.3		12.3	87.7		85	15	
PHF	.889	.887	.924	.833	.884	.908	.693	.625	.682

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Iris Avenue  
 Weather: Clear

File Name : 09\_MRV\_Heacock\_Iris AM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
 Page No : 1

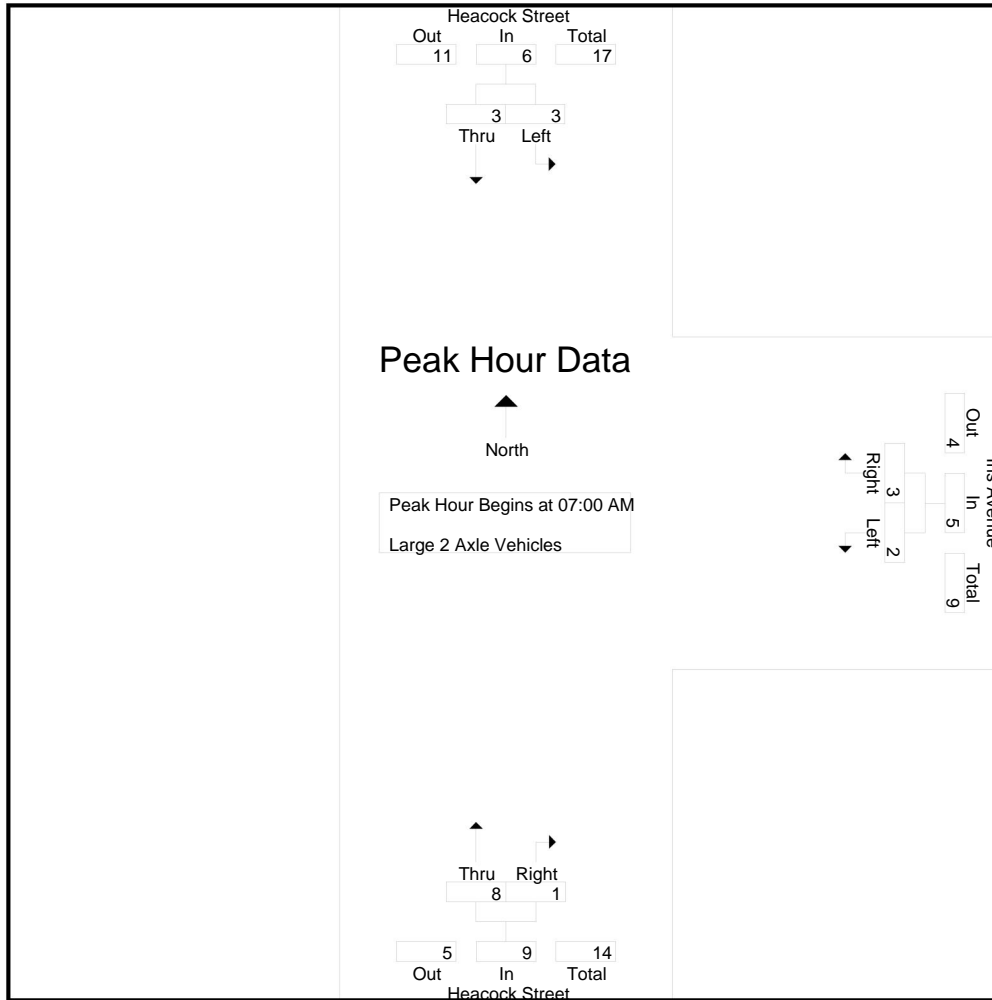
Groups Printed- Large 2 Axle Vehicles

Start Time	Heacock Street Southbound			Iris Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	1	2	3	1	2	3	2	0	2	8
07:15 AM	0	1	1	0	0	0	3	0	3	4
07:30 AM	1	0	1	1	1	2	2	1	3	6
07:45 AM	1	0	1	0	0	0	1	0	1	2
Total	3	3	6	2	3	5	8	1	9	20
08:00 AM	0	5	5	0	0	0	2	0	2	7
08:15 AM	2	0	2	5	2	7	0	0	0	9
08:30 AM	1	2	3	0	2	2	0	0	0	5
08:45 AM	2	5	7	0	0	0	2	0	2	9
Total	5	12	17	5	4	9	4	0	4	30
Grand Total	8	15	23	7	7	14	12	1	13	50
Apprch %	34.8	65.2		50	50		92.3	7.7		
Total %	16	30	46	14	14	28	24	2	26	

Start Time	Heacock Street Southbound			Iris Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	1	2	3	1	2	3	2	0	2	8
07:15 AM	0	1	1	0	0	0	3	0	3	4
07:30 AM	1	0	1	1	1	2	2	1	3	6
07:45 AM	1	0	1	0	0	0	1	0	1	2
Total Volume	3	3	6	2	3	5	8	1	9	20
% App. Total	50	50		40	60		88.9	11.1		
PHF	.750	.375	.500	.500	.375	.417	.667	.250	.750	.625

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Iris Avenue  
 Weather: Clear

File Name : 09\_MRV\_Heacock\_Iris AM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	1	2	3	1	2	3	2	0	2
+15 mins.	0	1	1	0	0	0	3	0	3
+30 mins.	1	0	1	1	1	2	2	1	3
+45 mins.	1	0	1	0	0	0	1	0	1
Total Volume	3	3	6	2	3	5	8	1	9
% App. Total	50	50		40	60		88.9	11.1	
PHF	.750	.375	.500	.500	.375	.417	.667	.250	.750

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Iris Avenue  
 Weather: Clear

File Name : 09\_MRV\_Heacock\_Iris AM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
 Page No : 1

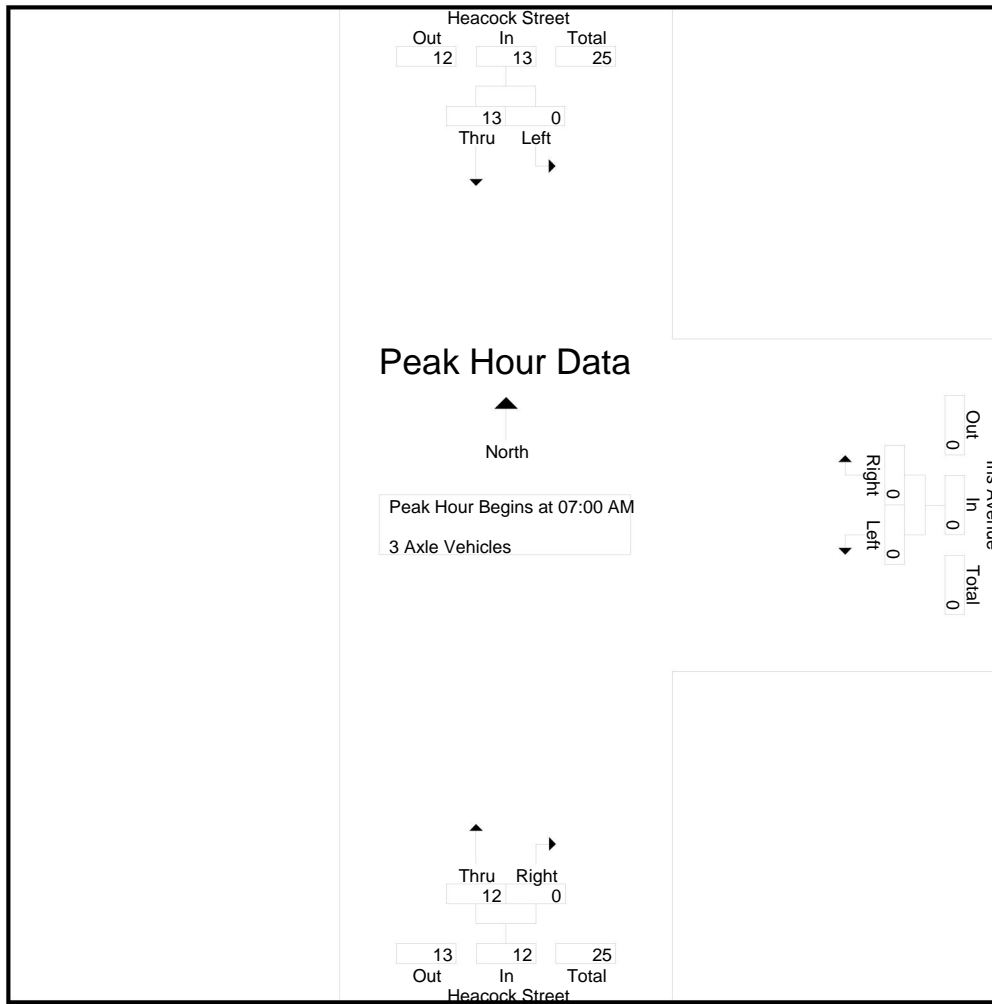
Groups Printed- 3 Axle Vehicles

Start Time	Heacock Street Southbound			Iris Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	3	3	0	0	0	3	0	3	6
07:15 AM	0	7	7	0	0	0	1	0	1	8
07:30 AM	0	1	1	0	0	0	4	0	4	5
07:45 AM	0	2	2	0	0	0	4	0	4	6
Total	0	13	13	0	0	0	12	0	12	25
08:00 AM	1	2	3	1	0	1	2	0	2	6
08:15 AM	0	3	3	0	0	0	2	1	3	6
08:30 AM	0	4	4	0	0	0	4	0	4	8
08:45 AM	0	3	3	0	0	0	3	0	3	6
Total	1	12	13	1	0	1	11	1	12	26
Grand Total	1	25	26	1	0	1	23	1	24	51
Apprch %	3.8	96.2		100	0		95.8	4.2		
Total %	2	49	51	2	0	2	45.1	2	47.1	

Start Time	Heacock Street Southbound			Iris Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	3	3	0	0	0	3	0	3	6
07:15 AM	0	7	7	0	0	0	1	0	1	8
07:30 AM	0	1	1	0	0	0	4	0	4	5
07:45 AM	0	2	2	0	0	0	4	0	4	6
Total Volume	0	13	13	0	0	0	12	0	12	25
% App. Total	0	100		0	0		100	0		
PHF	.000	.464	.464	.000	.000	.000	.750	.000	.750	.781

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Iris Avenue  
 Weather: Clear

File Name : 09\_MRV\_Heacock\_Iris AM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	3	3	0	0	0	3	0	3
+15 mins.	0	7	7	0	0	0	1	0	1
+30 mins.	0	1	1	0	0	0	4	0	4
+45 mins.	0	2	2	0	0	0	4	0	4
Total Volume	0	13	13	0	0	0	12	0	12
% App. Total	0	100		0	0		100	0	
PHF	.000	.464	.464	.000	.000	.000	.750	.000	.750



City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Iris Avenue  
 Weather: Clear

File Name : 09\_MRV\_Heacock\_Iris AM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
 Page No : 1

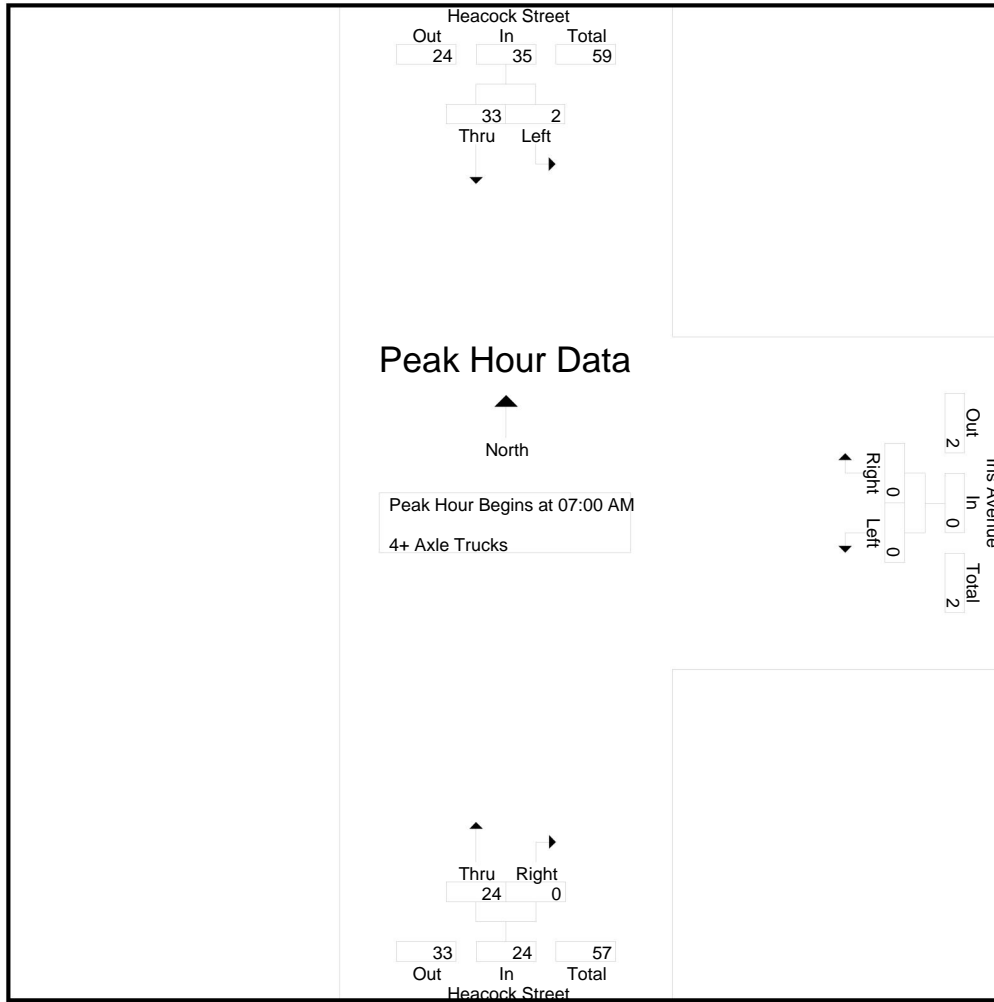
Groups Printed- 4+ Axle Trucks

Start Time	Heacock Street Southbound			Iris Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	7	7	0	0	0	6	0	6	13
07:15 AM	1	8	9	0	0	0	6	0	6	15
07:30 AM	0	13	13	0	0	0	5	0	5	18
07:45 AM	1	5	6	0	0	0	7	0	7	13
Total	2	33	35	0	0	0	24	0	24	59
08:00 AM	1	10	11	0	1	1	5	0	5	17
08:15 AM	0	4	4	0	0	0	8	0	8	12
08:30 AM	1	5	6	0	0	0	11	0	11	17
08:45 AM	0	5	5	0	0	0	3	0	3	8
Total	2	24	26	0	1	1	27	0	27	54
Grand Total	4	57	61	0	1	1	51	0	51	113
Apprch %	6.6	93.4		0	100		100	0		
Total %	3.5	50.4	54	0	0.9	0.9	45.1	0	45.1	

Start Time	Heacock Street Southbound			Iris Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	7	7	0	0	0	6	0	6	13
07:15 AM	1	8	9	0	0	0	6	0	6	15
07:30 AM	0	13	13	0	0	0	5	0	5	18
07:45 AM	1	5	6	0	0	0	7	0	7	13
Total Volume	2	33	35	0	0	0	24	0	24	59
% App. Total	5.7	94.3		0	0		100	0		
PHF	.500	.635	.673	.000	.000	.000	.857	.000	.857	.819

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Iris Avenue  
 Weather: Clear

File Name : 09\_MRV\_Heacock\_Iris AM  
 Site Code : 06719334  
 Start Date : 5/30/2019  
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Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	7	7	0	0	0	6	0	6
+15 mins.	1	8	9	0	0	0	6	0	6
+30 mins.	0	13	13	0	0	0	5	0	5
+45 mins.	1	5	6	0	0	0	7	0	7
Total Volume	2	33	35	0	0	0	24	0	24
% App. Total	5.7	94.3		0	0		100	0	
PHF	.500	.635	.673	.000	.000	.000	.857	.000	.857

City of Moreno Valley  
 N/S: Heacock Street  
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 Page No : 1

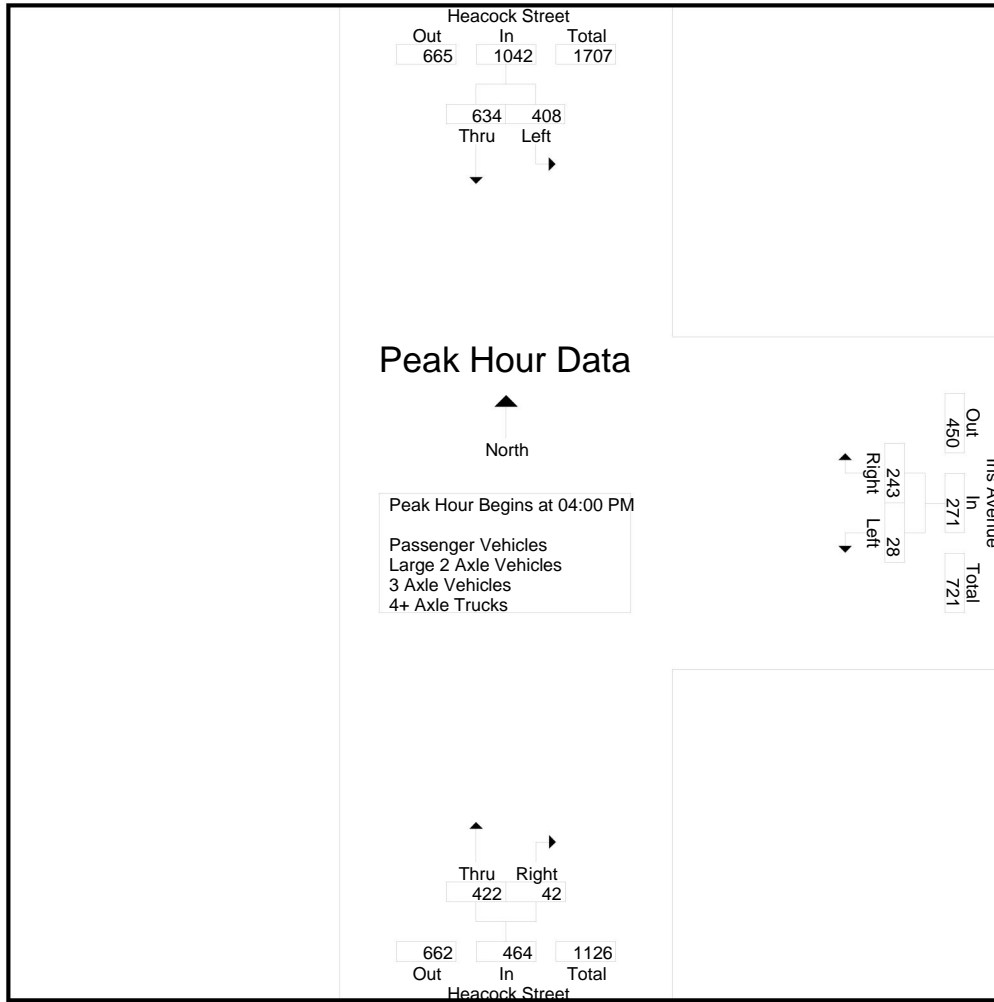
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Heacock Street Southbound			Iris Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	105	139	244	7	82	89	85	8	93	426
04:15 PM	115	150	265	2	52	54	59	4	63	382
04:30 PM	91	170	261	6	52	58	171	21	192	511
04:45 PM	97	175	272	13	57	70	107	9	116	458
Total	408	634	1042	28	243	271	422	42	464	1777
05:00 PM	104	138	242	2	45	47	74	5	79	368
05:15 PM	137	130	267	8	66	74	57	5	62	403
05:30 PM	116	139	255	10	49	59	75	8	83	397
05:45 PM	133	115	248	8	40	48	49	3	52	348
Total	490	522	1012	28	200	228	255	21	276	1516
Grand Total	898	1156	2054	56	443	499	677	63	740	3293
Apprch %	43.7	56.3		11.2	88.8		91.5	8.5		
Total %	27.3	35.1	62.4	1.7	13.5	15.2	20.6	1.9	22.5	
Passenger Vehicles	891	1055	1946	55	440	495	599	62	661	3102
% Passenger Vehicles	99.2	91.3	94.7	98.2	99.3	99.2	88.5	98.4	89.3	94.2
Large 2 Axle Vehicles	6	10	16	0	3	3	7	1	8	27
% Large 2 Axle Vehicles	0.7	0.9	0.8	0	0.7	0.6	1	1.6	1.1	0.8
3 Axle Vehicles	1	23	24	1	0	1	13	0	13	38
% 3 Axle Vehicles	0.1	2	1.2	1.8	0	0.2	1.9	0	1.8	1.2
4+ Axle Trucks	0	68	68	0	0	0	58	0	58	126
% 4+ Axle Trucks	0	5.9	3.3	0	0	0	8.6	0	7.8	3.8

Start Time	Heacock Street Southbound			Iris Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	105	139	244	7	<b>82</b>	<b>89</b>	85	8	93	426
04:15 PM	<b>115</b>	150	265	2	52	54	59	4	63	382
04:30 PM	91	170	261	6	52	58	<b>171</b>	<b>21</b>	<b>192</b>	<b>511</b>
04:45 PM	97	<b>175</b>	<b>272</b>	<b>13</b>	57	70	107	9	116	458
Total Volume	408	634	1042	28	243	271	422	42	464	1777
% App. Total	39.2	60.8		10.3	89.7		90.9	9.1		
PHF	.887	.906	.958	.538	.741	.761	.617	.500	.604	.869

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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:00 PM			04:00 PM			04:00 PM		
+0 mins.	105	139	244	7	<b>82</b>	<b>89</b>	85	8	93
+15 mins.	<b>115</b>	150	265	2	52	54	59	4	63
+30 mins.	91	170	261	6	52	58	<b>171</b>	<b>21</b>	<b>192</b>
+45 mins.	97	<b>175</b>	<b>272</b>	<b>13</b>	57	70	107	9	116
Total Volume	408	634	1042	28	243	271	422	42	464
% App. Total	39.2	60.8		10.3	89.7		90.9	9.1	
PHF	.887	.906	.958	.538	.741	.761	.617	.500	.604

City of Moreno Valley  
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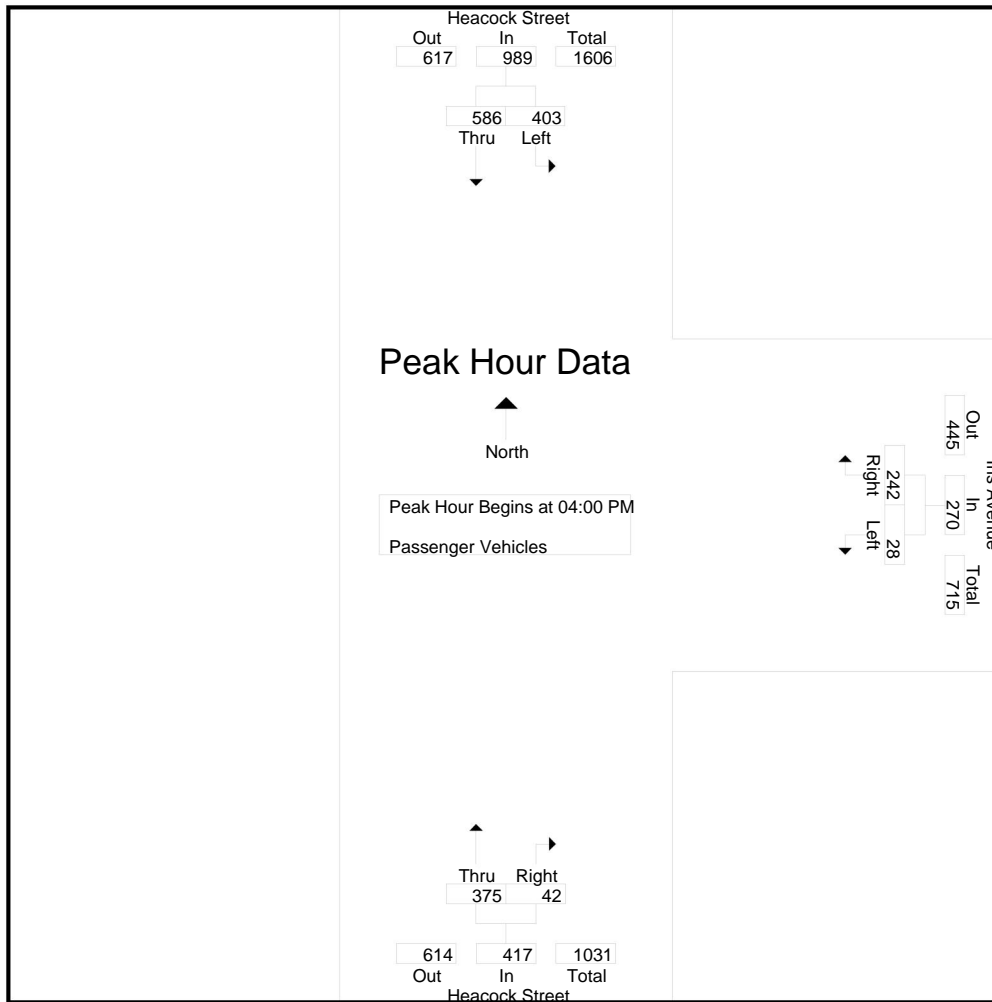
Groups Printed- Passenger Vehicles

Start Time	Heacock Street Southbound			Iris Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	103	122	225	7	81	88	73	8	81	394
04:15 PM	114	141	255	2	52	54	50	4	54	363
04:30 PM	89	164	253	6	52	58	157	21	178	489
04:45 PM	97	159	256	13	57	70	95	9	104	430
Total	403	586	989	28	242	270	375	42	417	1676
05:00 PM	103	127	230	2	45	47	63	4	67	344
05:15 PM	137	110	247	8	66	74	45	5	50	371
05:30 PM	116	128	244	10	47	57	72	8	80	381
05:45 PM	132	104	236	7	40	47	44	3	47	330
Total	488	469	957	27	198	225	224	20	244	1426
Grand Total	891	1055	1946	55	440	495	599	62	661	3102
Apprch %	45.8	54.2		11.1	88.9		90.6	9.4		
Total %	28.7	34	62.7	1.8	14.2	16	19.3	2	21.3	

Start Time	Heacock Street Southbound			Iris Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	103	122	225	7	<b>81</b>	<b>88</b>	73	8	81	394
04:15 PM	<b>114</b>	141	255	2	52	54	50	4	54	363
04:30 PM	89	<b>164</b>	253	6	52	58	<b>157</b>	<b>21</b>	<b>178</b>	<b>489</b>
04:45 PM	97	159	<b>256</b>	<b>13</b>	57	70	95	9	104	430
Total Volume	403	586	989	28	242	270	375	42	417	1676
% App. Total	40.7	59.3		10.4	89.6		89.9	10.1		
PHF	.884	.893	.966	.538	.747	.767	.597	.500	.586	.857

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Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:00 PM			04:00 PM			04:00 PM		
+0 mins.	103	122	225	7	<b>81</b>	<b>88</b>	73	8	81
+15 mins.	<b>114</b>	141	255	2	52	54	50	4	54
+30 mins.	89	<b>164</b>	253	6	52	58	<b>157</b>	<b>21</b>	<b>178</b>
+45 mins.	97	159	<b>256</b>	<b>13</b>	57	70	95	9	104
Total Volume	403	586	989	28	242	270	375	42	417
% App. Total	40.7	59.3		10.4	89.6		89.9	10.1	
PHF	.884	.893	.966	.538	.747	.767	.597	.500	.586

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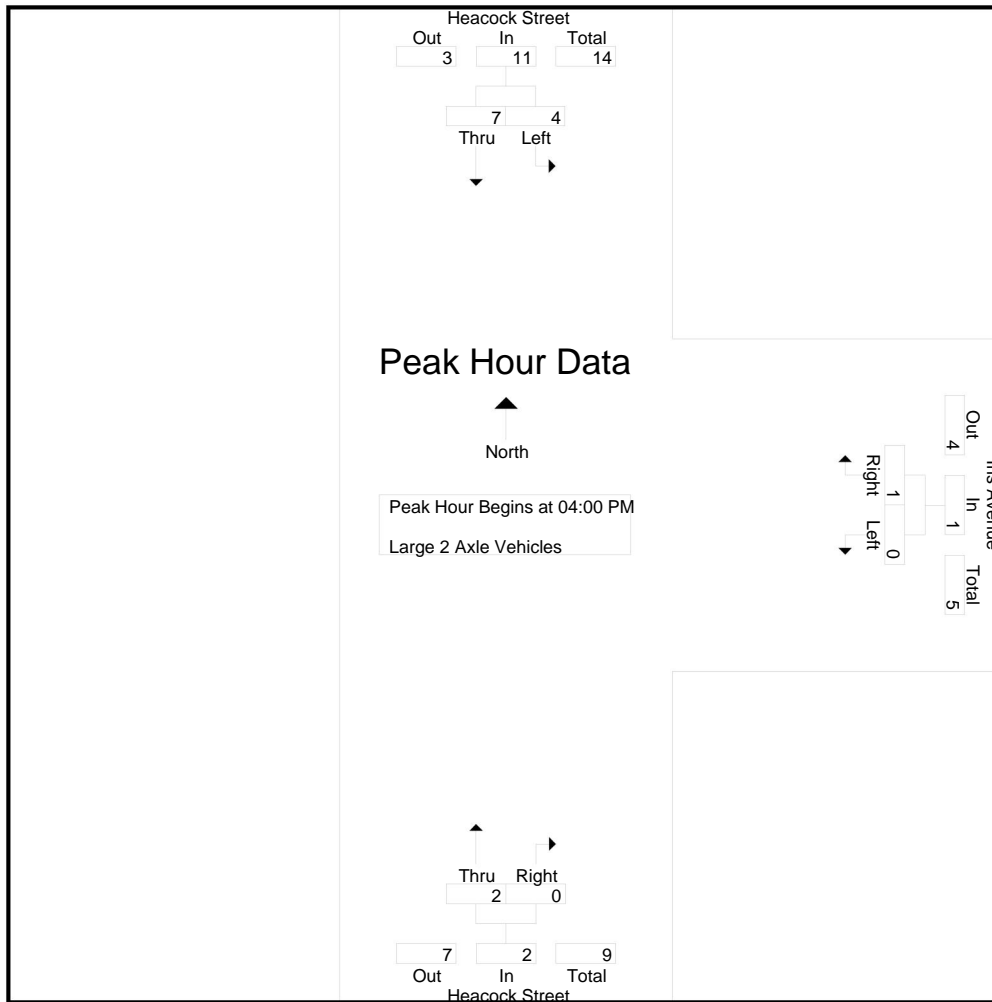
Groups Printed- Large 2 Axle Vehicles

Start Time	Heacock Street Southbound			Iris Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	1	2	3	0	1	1	1	0	1	5
04:15 PM	1	2	3	0	0	0	1	0	1	4
04:30 PM	2	0	2	0	0	0	0	0	0	2
04:45 PM	0	3	3	0	0	0	0	0	0	3
Total	4	7	11	0	1	1	2	0	2	14
05:00 PM	1	0	1	0	0	0	2	1	3	4
05:15 PM	0	1	1	0	0	0	2	0	2	3
05:30 PM	0	0	0	0	2	2	1	0	1	3
05:45 PM	1	2	3	0	0	0	0	0	0	3
Total	2	3	5	0	2	2	5	1	6	13
Grand Total	6	10	16	0	3	3	7	1	8	27
Apprch %	37.5	62.5		0	100		87.5	12.5		
Total %	22.2	37	59.3	0	11.1	11.1	25.9	3.7	29.6	

Start Time	Heacock Street Southbound			Iris Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	1	2	3	0	1	1	1	0	1	5
04:15 PM	1	2	3	0	0	0	1	0	1	4
04:30 PM	2	0	2	0	0	0	0	0	0	2
04:45 PM	0	3	3	0	0	0	0	0	0	3
Total Volume	4	7	11	0	1	1	2	0	2	14
% App. Total	36.4	63.6		0	100		100	0		
PHF	.500	.583	.917	.000	.250	.250	.500	.000	.500	.700

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Iris Avenue  
 Weather: Clear

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Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:00 PM			04:00 PM			04:00 PM		
+0 mins.	1	2	3	0	1	1	1	0	1
+15 mins.	1	2	3	0	0	0	1	0	1
+30 mins.	2	0	2	0	0	0	0	0	0
+45 mins.	0	3	3	0	0	0	0	0	0
Total Volume	4	7	11	0	1	1	2	0	2
% App. Total	36.4	63.6		0	100		100	0	
PHF	.500	.583	.917	.000	.250	.250	.500	.000	.500



City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Iris Avenue  
 Weather: Clear

File Name : 09\_MRV\_Heacock\_Iris PM  
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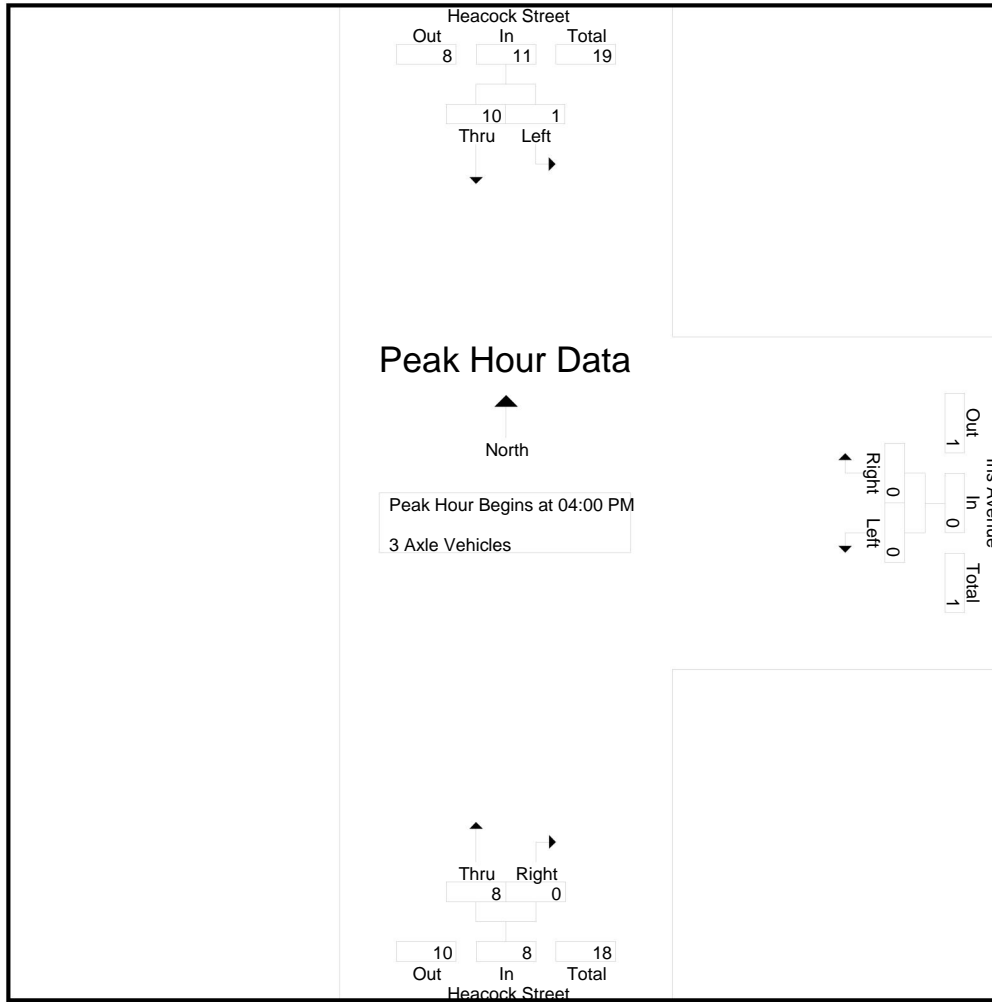
Groups Printed- 3 Axle Vehicles

Start Time	Heacock Street Southbound			Iris Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	1	4	5	0	0	0	3	0	3	8
04:15 PM	0	1	1	0	0	0	3	0	3	4
04:30 PM	0	2	2	0	0	0	0	0	0	2
04:45 PM	0	3	3	0	0	0	2	0	2	5
Total	1	10	11	0	0	0	8	0	8	19
05:00 PM	0	3	3	0	0	0	1	0	1	4
05:15 PM	0	4	4	0	0	0	2	0	2	6
05:30 PM	0	4	4	0	0	0	1	0	1	5
05:45 PM	0	2	2	1	0	1	1	0	1	4
Total	0	13	13	1	0	1	5	0	5	19
Grand Total	1	23	24	1	0	1	13	0	13	38
Apprch %	4.2	95.8		100	0		100	0		
Total %	2.6	60.5	63.2	2.6	0	2.6	34.2	0	34.2	

Start Time	Heacock Street Southbound			Iris Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	1	4	5	0	0	0	3	0	3	8
04:15 PM	0	1	1	0	0	0	3	0	3	4
04:30 PM	0	2	2	0	0	0	0	0	0	2
04:45 PM	0	3	3	0	0	0	2	0	2	5
Total Volume	1	10	11	0	0	0	8	0	8	19
% App. Total	9.1	90.9		0	0		100	0		
PHF	.250	.625	.550	.000	.000	.000	.667	.000	.667	.594

City of Moreno Valley  
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File Name : 09\_MRV\_Heacock\_Iris PM  
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Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:00 PM			04:00 PM			04:00 PM		
+0 mins.	1	4	5	0	0	0	3	0	3
+15 mins.	0	1	1	0	0	0	3	0	3
+30 mins.	0	2	2	0	0	0	0	0	0
+45 mins.	0	3	3	0	0	0	2	0	2
Total Volume	1	10	11	0	0	0	8	0	8
% App. Total	9.1	90.9		0	0		100	0	
PHF	.250	.625	.550	.000	.000	.000	.667	.000	.667

City of Moreno Valley  
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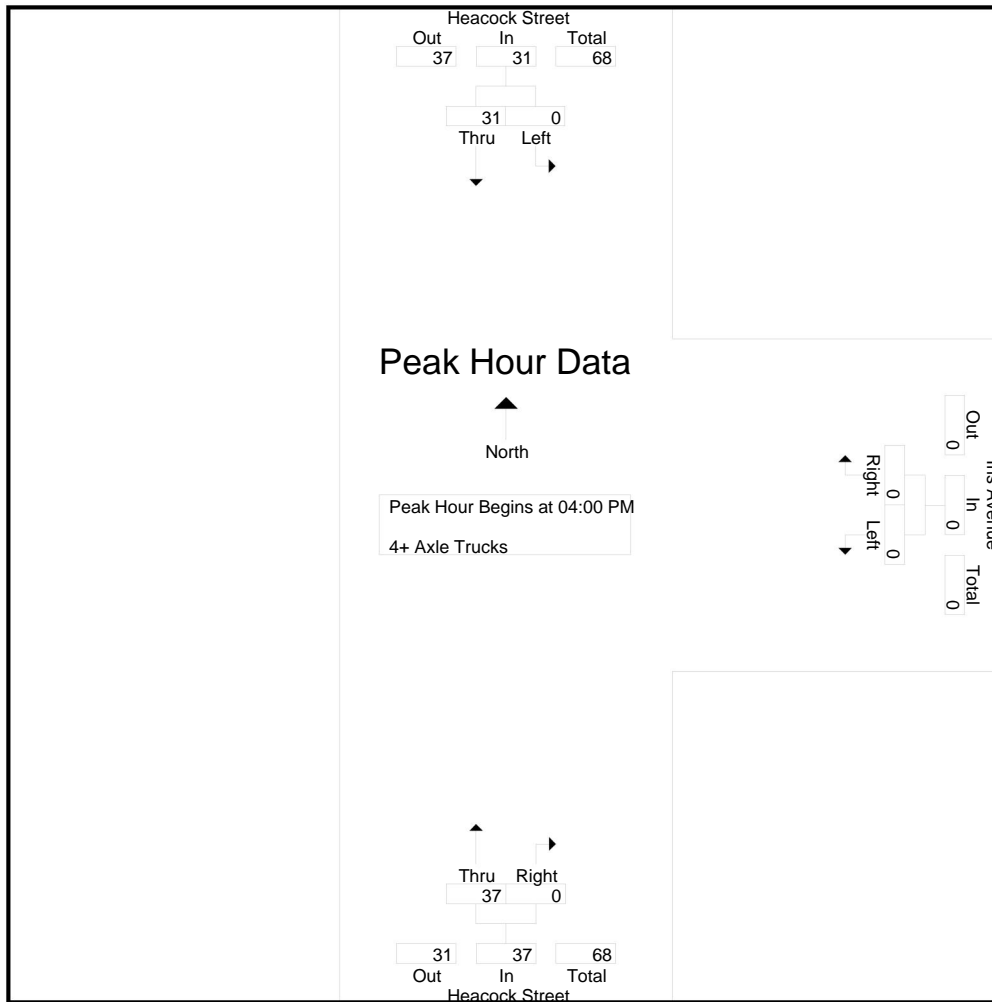
Groups Printed- 4+ Axle Trucks

Start Time	Heacock Street Southbound			Iris Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	11	11	0	0	0	8	0	8	19
04:15 PM	0	6	6	0	0	0	5	0	5	11
04:30 PM	0	4	4	0	0	0	14	0	14	18
04:45 PM	0	10	10	0	0	0	10	0	10	20
Total	0	31	31	0	0	0	37	0	37	68
05:00 PM	0	8	8	0	0	0	8	0	8	16
05:15 PM	0	15	15	0	0	0	8	0	8	23
05:30 PM	0	7	7	0	0	0	1	0	1	8
05:45 PM	0	7	7	0	0	0	4	0	4	11
Total	0	37	37	0	0	0	21	0	21	58
Grand Total	0	68	68	0	0	0	58	0	58	126
Apprch %	0	100		0	0		100	0		
Total %	0	54	54	0	0	0	46	0	46	

Start Time	Heacock Street Southbound			Iris Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	0	11	11	0	0	0	8	0	8	19
04:15 PM	0	6	6	0	0	0	5	0	5	11
04:30 PM	0	4	4	0	0	0	14	0	14	18
04:45 PM	0	10	10	0	0	0	10	0	10	20
Total Volume	0	31	31	0	0	0	37	0	37	68
% App. Total	0	100		0	0		100	0		
PHF	.000	.705	.705	.000	.000	.000	.661	.000	.661	.850

City of Moreno Valley  
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File Name : 09\_MRV\_Heacock\_Iris PM  
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Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:00 PM			04:00 PM			04:00 PM		
+0 mins.	0	11	11	0	0	0	8	0	8
+15 mins.	0	6	6	0	0	0	5	0	5
+30 mins.	0	4	4	0	0	0	14	0	14
+45 mins.	0	10	10	0	0	0	10	0	10
Total Volume	0	31	31	0	0	0	37	0	37
% App. Total	0	100		0	0		100	0	
PHF	.000	.705	.705	.000	.000	.000	.661	.000	.661

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cactus Avenue  
 Weather: Clear

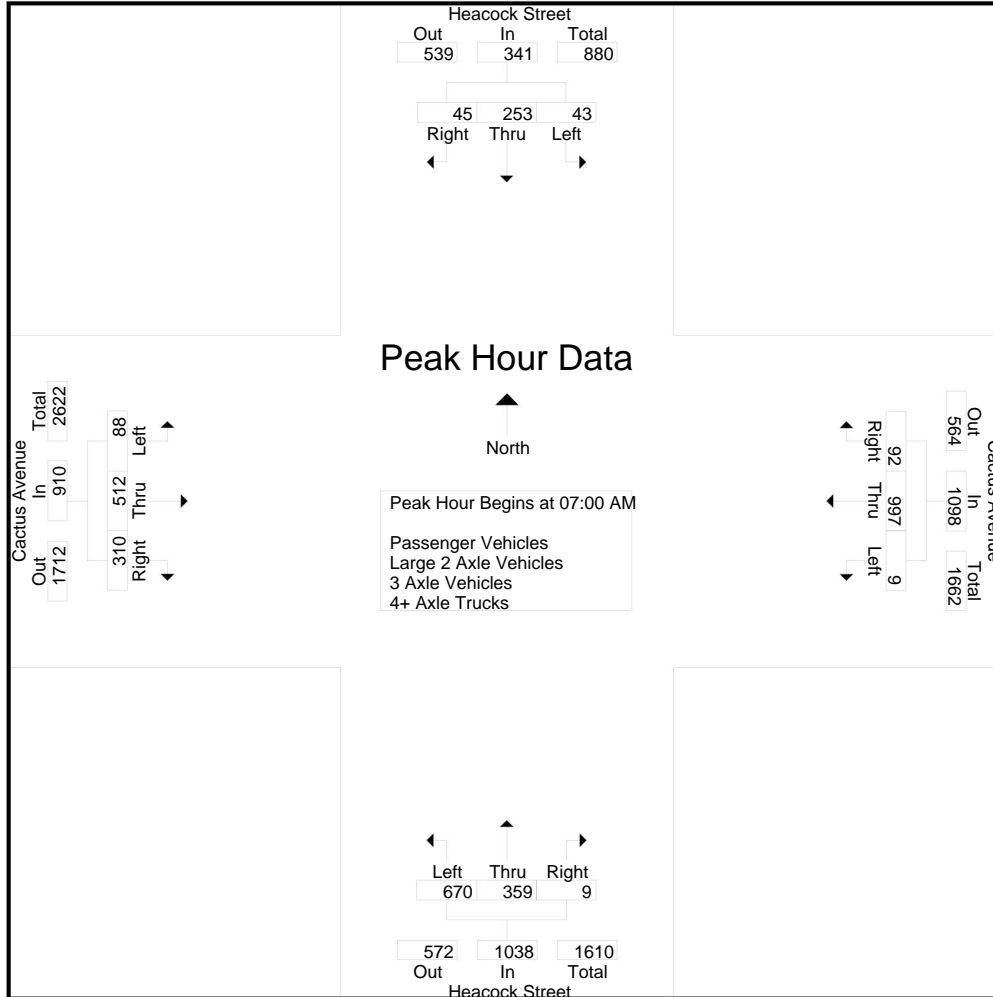
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 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Heacock Street Southbound					Cactus Avenue Westbound					Heacock Street Northbound					Cactus Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR			
07:00 AM	3	46	9	4	58	2	225	26	6	253	154	70	2	0	226	17	93	72	35	182	45	719	764
07:15 AM	8	72	9	2	89	3	284	20	0	307	169	87	2	2	258	18	139	77	11	234	15	888	903
07:30 AM	17	80	13	6	110	2	254	25	0	281	173	93	5	0	271	30	146	81	16	257	22	919	941
07:45 AM	15	55	14	3	84	2	234	21	2	257	174	109	0	0	283	23	134	80	9	237	14	861	875
<b>Total</b>	<b>43</b>	<b>253</b>	<b>45</b>	<b>15</b>	<b>341</b>	<b>9</b>	<b>997</b>	<b>92</b>	<b>8</b>	<b>1098</b>	<b>670</b>	<b>359</b>	<b>9</b>	<b>2</b>	<b>1038</b>	<b>88</b>	<b>512</b>	<b>310</b>	<b>71</b>	<b>910</b>	<b>96</b>	<b>3387</b>	<b>3483</b>
08:00 AM	14	43	7	2	64	3	197	23	5	223	124	91	1	0	216	28	123	61	13	212	20	715	735
08:15 AM	10	52	11	3	73	1	189	18	1	208	106	88	1	0	195	18	120	62	4	200	8	676	684
08:30 AM	20	44	8	2	72	2	143	17	1	162	113	83	1	0	197	13	112	66	2	191	5	622	627
08:45 AM	10	51	7	1	68	2	158	34	7	194	78	58	1	0	137	19	84	46	8	149	16	548	564
<b>Total</b>	<b>54</b>	<b>190</b>	<b>33</b>	<b>8</b>	<b>277</b>	<b>8</b>	<b>687</b>	<b>92</b>	<b>14</b>	<b>787</b>	<b>421</b>	<b>320</b>	<b>4</b>	<b>0</b>	<b>745</b>	<b>78</b>	<b>439</b>	<b>235</b>	<b>27</b>	<b>752</b>	<b>49</b>	<b>2561</b>	<b>2610</b>
<b>Grand Total</b>	<b>97</b>	<b>443</b>	<b>78</b>	<b>23</b>	<b>618</b>	<b>17</b>	<b>1684</b>	<b>184</b>	<b>22</b>	<b>1885</b>	<b>1091</b>	<b>679</b>	<b>13</b>	<b>2</b>	<b>1783</b>	<b>166</b>	<b>951</b>	<b>545</b>	<b>98</b>	<b>1662</b>	<b>145</b>	<b>5948</b>	<b>6093</b>
Apprch %	15.7	71.7	12.6			0.9	89.3	9.8			61.2	38.1	0.7			10	57.2	32.8					
Total %	1.6	7.4	1.3		10.4	0.3	28.3	3.1		31.7	18.3	11.4	0.2		30	2.8	16	9.2		27.9	2.4	97.6	
Passenger Vehicles	92	419	77		610	16	1646	176		1859	1043	659	12		1715	160	916	488		1650	0	0	5834
% Passenger Vehicles	94.8	94.6	98.7	95.7	95.2	94.1	97.7	95.7	95.5	97.5	95.6	97.1	92.3	50	96.1	96.4	96.3	89.5	87.8	93.8	0	0	95.7
Large 2 Axle Vehicles	4	9	0		13	1	27	6		35	27	13	0		40	4	26	22		55	0	0	143
% Large 2 Axle Vehicles	4.1	2	0	0	2	5.9	1.6	3.3	4.5	1.8	2.5	1.9	0	0	2.2	2.4	2.7	4	3.1	3.1	0	0	2.3
3 Axle Vehicles	0	2	0		2	0	5	0		5	2	1	0		3	0	4	5		11	0	0	21
% 3 Axle Vehicles	0	0.5	0	0	0.3	0	0.3	0	0	0.3	0.2	0.1	0	0	0.2	0	0.4	0.9	2	0.6	0	0	0.3
4+ Axle Trucks	1	13	1		16	0	6	2		8	19	6	1		27	2	5	30		44	0	0	95
% 4+ Axle Trucks	1	2.9	1.3	4.3	2.5	0	0.4	1.1	0	0.4	1.7	0.9	7.7	50	1.5	1.2	0.5	5.5	7.1	2.5	0	0	1.6

3.1-221

Start Time	Heacock Street Southbound				Cactus Avenue Westbound				Heacock Street Northbound				Cactus Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	3	46	9	58	2	225	26	253	154	70	2	226	17	93	72	182	719
07:15 AM	8	72	9	89	3	284	20	307	169	87	2	258	18	139	77	234	888
07:30 AM	17	80	13	110	2	254	25	281	173	93	5	271	30	146	81	257	919
07:45 AM	15	55	14	84	2	234	21	257	174	109	0	283	23	134	80	237	861
Total Volume	43	253	45	341	9	997	92	1098	670	359	9	1038	88	512	310	910	3387
% App. Total	12.6	74.2	13.2		0.8	90.8	8.4		64.5	34.6	0.9		9.7	56.3	34.1		
PHF	.632	.791	.804	.775	.750	.878	.885	.894	.963	.823	.450	.917	.733	.877	.957	.885	.921



City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cactus Avenue  
 Weather: Clear

File Name : MRVHECAAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Heacock Street Southbound				Cactus Avenue Westbound				Heacock Street Northbound				Cactus Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:15 AM				07:00 AM				07:00 AM				07:15 AM				
+0 mins.	8	72	9	89	2	225	<b>26</b>	253	154	70	2	226	18	139	77	234	
+15 mins.	<b>17</b>	<b>80</b>	13	<b>110</b>	<b>3</b>	<b>284</b>	20	<b>307</b>	169	87	2	258	<b>30</b>	<b>146</b>	<b>81</b>	<b>257</b>	
+30 mins.	15	55	<b>14</b>	84	2	254	25	281	173	93	<b>5</b>	271	23	134	80	237	
+45 mins.	14	43	7	64	2	234	21	257	<b>174</b>	<b>109</b>	0	<b>283</b>	28	123	61	212	
Total Volume	54	250	43	347	9	997	92	1098	670	359	9	1038	99	542	299	940	
% App. Total	15.6	72	12.4		0.8	90.8	8.4		64.5	34.6	0.9		10.5	57.7	31.8		
PHF	.794	.781	.768	.789	.750	.878	.885	.894	.963	.823	.450	.917	.825	.928	.923	.914	

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cactus Avenue  
 Weather: Clear

File Name : MRVHECAAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

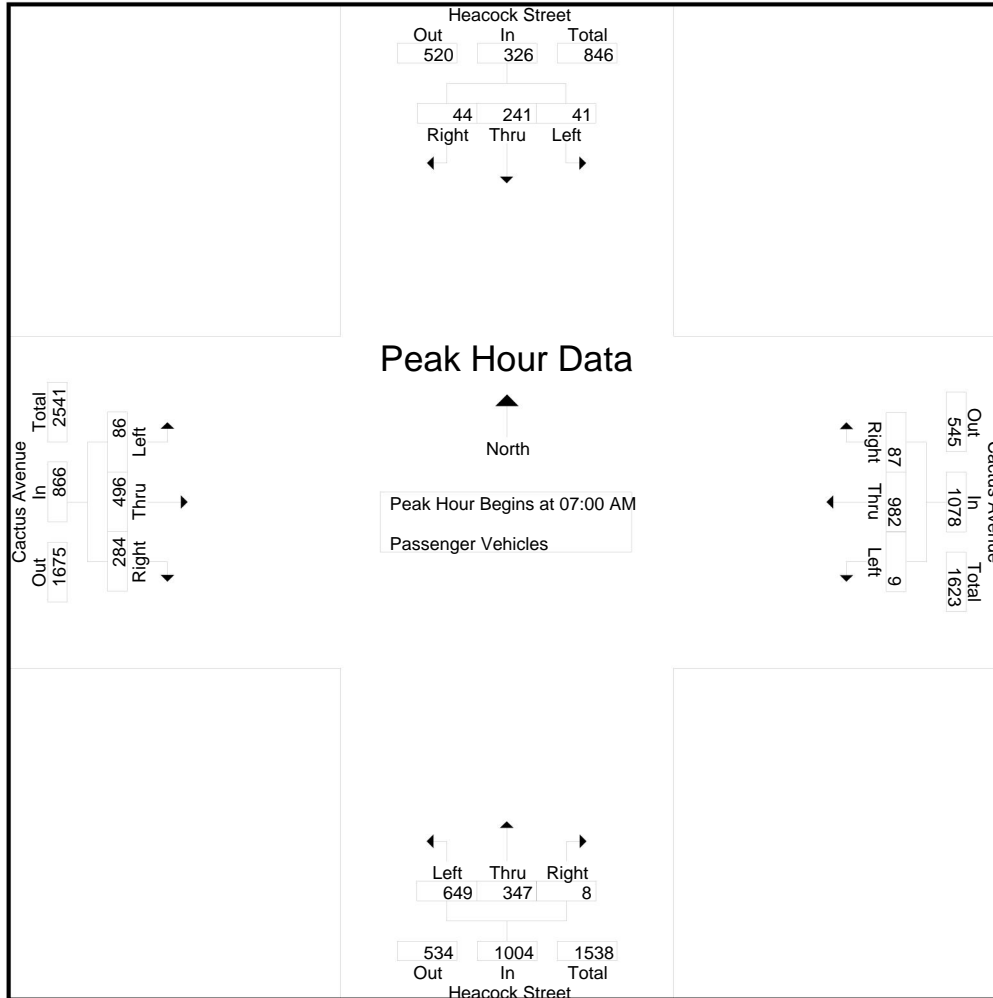
Groups Printed- Passenger Vehicles

Start Time	Heacock Street Southbound					Cactus Avenue Westbound					Heacock Street Northbound					Cactus Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	3	43	9	4	55	2	223	24	5	249	151	68	2	0	221	17	90	69	34	176	43	701	744
07:15 AM	6	69	9	2	84	3	279	19	0	301	164	85	1	1	250	16	136	72	10	224	13	859	872
07:30 AM	17	77	13	6	107	2	248	23	0	273	166	91	5	0	262	30	139	71	14	240	20	882	902
07:45 AM	15	52	13	2	80	2	232	21	2	255	168	103	0	0	271	23	131	72	5	226	9	832	841
Total	41	241	44	14	326	9	982	87	7	1078	649	347	8	1	1004	86	496	284	63	866	85	3274	3359
08:00 AM	14	42	7	2	63	2	191	23	5	216	112	90	1	0	203	25	116	51	10	192	17	674	691
08:15 AM	10	47	11	3	68	1	184	17	1	202	100	85	1	0	186	18	117	55	3	190	7	646	653
08:30 AM	17	41	8	2	66	2	137	17	1	156	108	80	1	0	189	13	105	58	2	176	5	587	592
08:45 AM	10	48	7	1	65	2	152	32	7	186	74	57	1	0	132	18	82	40	8	140	16	523	539
Total	51	178	33	8	262	7	664	89	14	760	394	312	4	0	710	74	420	204	23	698	45	2430	2475
Grand Total	92	419	77	22	588	16	1646	176	21	1838	1043	659	12	1	1714	160	916	488	86	1564	130	5704	5834
Apprch %	15.6	71.3	13.1			0.9	89.6	9.6			60.9	38.4	0.7			10.2	58.6	31.2					
Total %	1.6	7.3	1.3		10.3	0.3	28.9	3.1		32.2	18.3	11.6	0.2		30	2.8	16.1	8.6		27.4	2.2	97.8	

3.1-224

Start Time	Heacock Street Southbound				Cactus Avenue Westbound				Heacock Street Northbound				Cactus Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	3	43	9	55	2	223	<b>24</b>	249	151	68	2	221	17	90	69	176	701
07:15 AM	6	69	9	84	3	<b>279</b>	19	301	164	85	1	250	16	136	<b>72</b>	224	859
07:30 AM	<b>17</b>	<b>77</b>	<b>13</b>	<b>107</b>	2	248	23	273	166	91	<b>5</b>	262	<b>30</b>	<b>139</b>	71	<b>240</b>	<b>882</b>
07:45 AM	15	52	13	80	2	232	21	255	<b>168</b>	<b>103</b>	0	<b>271</b>	23	131	72	226	832
Total Volume	41	241	44	326	9	982	87	1078	649	347	8	1004	86	496	284	866	3274
% App. Total	12.6	73.9	13.5		0.8	91.1	8.1		64.6	34.6	0.8		9.9	57.3	32.8		
PHF	.603	.782	.846	.762	.750	.880	.906	.895	.966	.842	.400	.926	.717	.892	.986	.902	.928





City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cactus Avenue  
 Weather: Clear

File Name : MRVHECAAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Heacock Street Southbound				Cactus Avenue Westbound				Heacock Street Northbound				Cactus Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	3	43	9	55	2	223	<b>24</b>	249	151	68	2	221	17	90	69	176	
+15 mins.	6	69	9	84	<b>3</b>	<b>279</b>	19	<b>301</b>	164	85	1	250	16	136	<b>72</b>	224	
+30 mins.	<b>17</b>	<b>77</b>	<b>13</b>	<b>107</b>	2	248	23	273	166	91	<b>5</b>	<b>262</b>	<b>30</b>	<b>139</b>	71	<b>240</b>	
+45 mins.	15	52	13	80	2	232	21	255	<b>168</b>	<b>103</b>	0	<b>271</b>	23	131	72	226	
Total Volume	41	241	44	326	9	982	87	1078	649	347	8	1004	86	496	284	866	
% App. Total	12.6	73.9	13.5		0.8	91.1	8.1		64.6	34.6	0.8		9.9	57.3	32.8		
PHF	.603	.782	.846	.762	.750	.880	.906	.895	.966	.842	.400	.926	.717	.892	.986	.902	

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cactus Avenue  
 Weather: Clear

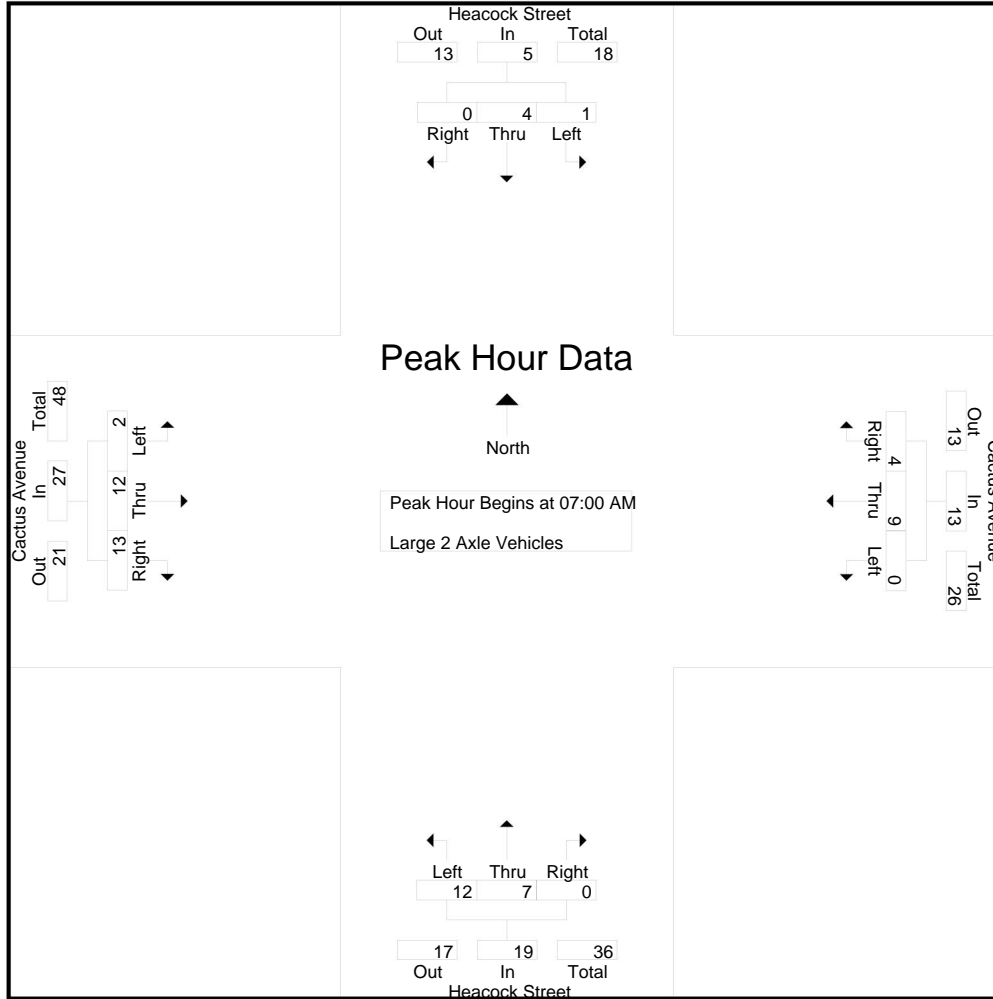
File Name : MRVHECAAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

Start Time	Heacock Street Southbound					Cactus Avenue Westbound					Heacock Street Northbound					Cactus Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	0	1	0	0	1	0	2	2	1	4	1	1	0	0	2	0	2	1	0	3	1	10	11
07:15 AM	1	1	0	0	2	0	5	1	0	6	4	2	0	0	6	2	2	4	1	8	1	22	23
07:30 AM	0	1	0	0	1	0	0	1	0	1	4	0	0	0	4	0	6	6	2	12	2	18	20
07:45 AM	0	1	0	0	1	0	2	0	0	2	3	4	0	0	7	0	2	2	0	4	0	14	14
Total	1	4	0	0	5	0	9	4	1	13	12	7	0	0	19	2	12	13	3	27	4	64	68
08:00 AM	0	1	0	0	1	1	6	0	0	7	6	1	0	0	7	2	4	3	0	9	0	24	24
08:15 AM	0	2	0	0	2	0	4	1	0	5	4	2	0	0	6	0	1	1	0	2	0	15	15
08:30 AM	3	1	0	0	4	0	4	0	0	4	2	2	0	0	4	0	7	2	0	9	0	21	21
08:45 AM	0	1	0	0	1	0	4	1	0	5	3	1	0	0	4	0	2	3	0	5	0	15	15
Total	3	5	0	0	8	1	18	2	0	21	15	6	0	0	21	2	14	9	0	25	0	75	75
Grand Total	4	9	0	0	13	1	27	6	1	34	27	13	0	0	40	4	26	22	3	52	4	139	143
Apprch %	30.8	69.2	0			2.9	79.4	17.6			67.5	32.5	0			7.7	50	42.3					
Total %	2.9	6.5	0		9.4	0.7	19.4	4.3		24.5	19.4	9.4	0		28.8	2.9	18.7	15.8		37.4	2.8	97.2	

3.1-227

Start Time	Heacock Street Southbound				Cactus Avenue Westbound				Heacock Street Northbound				Cactus Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	1	0	1	0	2	2	4	1	1	0	2	0	2	1	3	10
07:15 AM	1	1	0	2	0	5	1	6	4	2	0	6	2	2	4	8	22
07:30 AM	0	1	0	1	0	0	1	1	4	0	0	4	0	6	6	12	18
07:45 AM	0	1	0	1	0	2	0	2	3	4	0	7	0	2	2	4	14
Total Volume	1	4	0	5	0	9	4	13	12	7	0	19	2	12	13	27	64
% App. Total	20	80	0		0	69.2	30.8		63.2	36.8	0		7.4	44.4	48.1		
PHF	.250	1.00	.000	.625	.000	.450	.500	.542	.750	.438	.000	.679	.250	.500	.542	.563	.727



City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cactus Avenue  
 Weather: Clear

File Name : MRVHECAAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Heacock Street Southbound				Cactus Avenue Westbound				Heacock Street Northbound				Cactus Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	1	0	1	0	2	2	4	1	1	0	2	0	2	1	3	
+15 mins.	1	1	0	2	0	5	1	6	4	2	0	6	2	2	4	8	
+30 mins.	0	1	0	1	0	0	1	1	4	0	0	4	0	6	6	12	
+45 mins.	0	1	0	1	0	2	0	2	3	4	0	7	0	2	2	4	
Total Volume	1	4	0	5	0	9	4	13	12	7	0	19	2	12	13	27	
% App. Total	20	80	0		0	69.2	30.8		63.2	36.8	0		7.4	44.4	48.1		
PHF	.250	1.000	.000	.625	.000	.450	.500	.542	.750	.438	.000	.679	.250	.500	.542	.563	

3.1-229

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cactus Avenue  
 Weather: Clear

File Name : MRVHECAAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- 3 Axle Vehicles

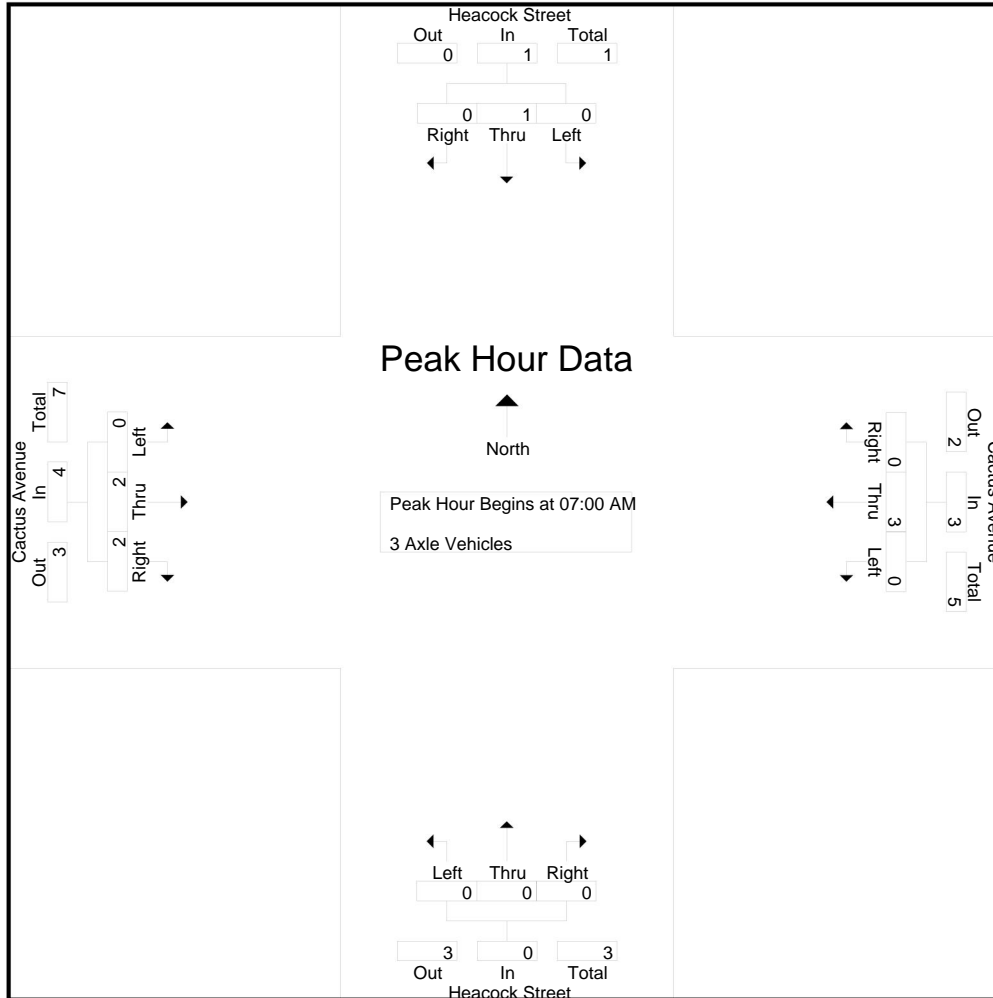
Start Time	Heacock Street Southbound					Cactus Avenue Westbound					Heacock Street Northbound					Cactus Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	2
07:15 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
07:30 AM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	1	1	0	2	0	5	5
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	1
Total	0	1	0	0	1	0	3	0	0	3	0	0	0	0	0	0	2	2	1	4	1	8	9
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	3	0	3	3
08:15 AM	0	1	0	0	1	0	1	0	0	1	1	0	0	0	1	0	0	1	1	1	1	4	5
08:30 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	2	2
08:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	1	0	2	2
Total	0	1	0	0	1	0	2	0	0	2	2	1	0	0	3	0	2	3	1	5	1	11	12
Grand Total	0	2	0	0	2	0	5	0	0	5	2	1	0	0	3	0	4	5	2	9	2	19	21
Apprch %	0	100	0			0	100	0			66.7	33.3	0			0	44.4	55.6					
Total %	0	10.5	0		10.5	0	26.3	0		26.3	10.5	5.3	0		15.8	0	21.1	26.3		47.4	9.5	90.5	

3.1-230

Start Time	Heacock Street Southbound				Cactus Avenue Westbound				Heacock Street Northbound				Cactus Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
07:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	1	1	2	5
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total Volume	0	1	0	1	0	3	0	3	0	0	0	0	0	2	2	4	8
% App. Total	0	100	0		0	100	0		0	0	0		0	50	50		
PHF	.000	.250	.000	.250	.000	.250	.000	.250	.000	.000	.000	.000	.000	.500	.500	.500	.400

City of Moreno Valley  
N/S: Heacock Street  
E/W: Cactus Avenue  
Weather: Clear

File Name : MRVHECAAM  
Site Code : 05115223  
Start Date : 4/28/2015  
Page No : 2



3.1-231

Counts Unlimited, Inc.  
 PO Box 1178  
 Corona, CA 92787  
 (951) 268-6268

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cactus Avenue  
 Weather: Clear

File Name : MRVHECAAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Heacock Street Southbound				Cactus Avenue Westbound				Heacock Street Northbound				Cactus Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	
+15 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	
+30 mins.	0	0	0	0	0	3	0	3	0	0	0	0	0	1	1	2	
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
Total Volume	0	1	0	1	0	3	0	3	0	0	0	0	0	2	2	4	
% App. Total	0	100	0		0	100	0		0	0	0		0	50	50		
PHF	.000	.250	.000	.250	.000	.250	.000	.250	.000	.000	.000	.000	.000	.500	.500	.500	

3.1-232



City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cactus Avenue  
 Weather: Clear

File Name : MRVHECAAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- 4+ Axle Trucks

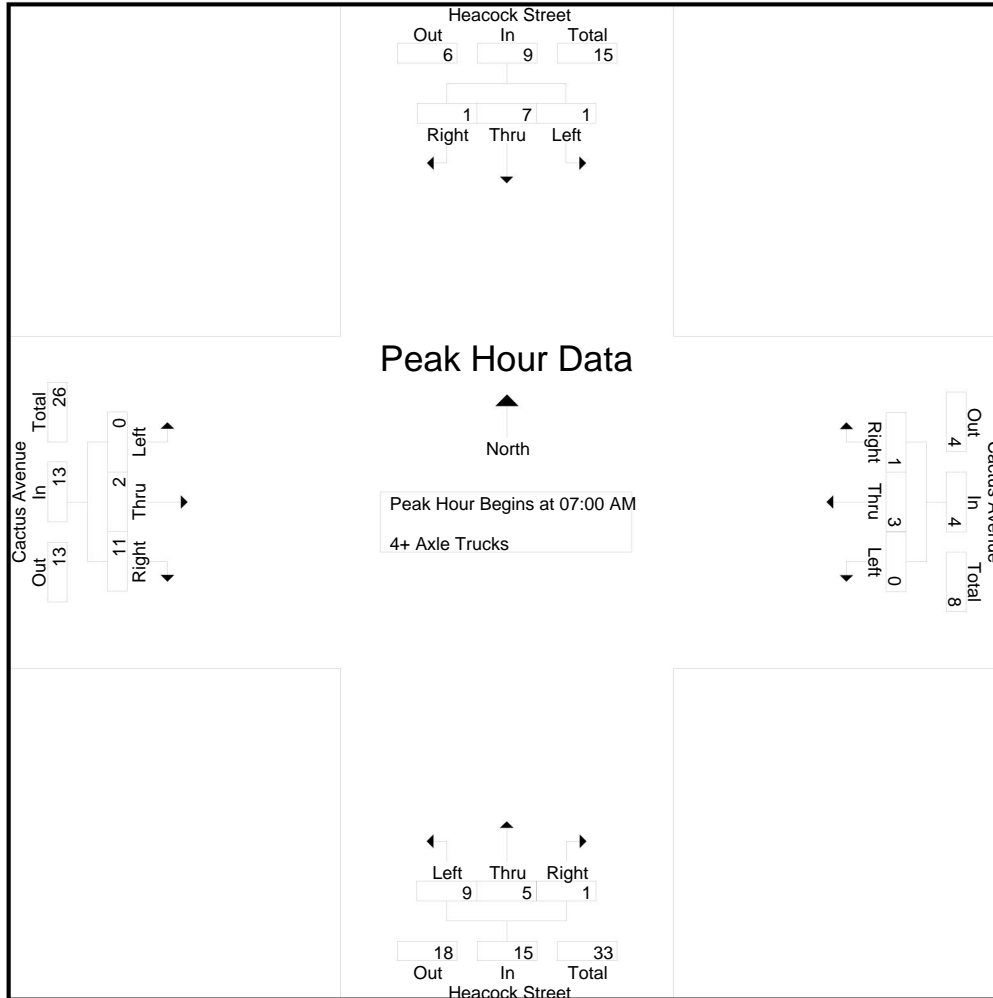
Start Time	Heacock Street Southbound					Cactus Avenue Westbound					Heacock Street Northbound					Cactus Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	0	2	0	0	2	0	0	0	0	0	2	1	0	0	3	0	1	1	0	2	0	7	7
07:15 AM	1	1	0	0	2	0	0	0	0	0	1	0	1	1	2	0	1	1	0	2	1	6	7
07:30 AM	0	2	0	0	2	0	3	1	0	4	3	2	0	0	5	0	0	3	0	3	0	14	14
07:45 AM	0	2	1	1	3	0	0	0	0	0	3	2	0	0	5	0	0	6	4	6	5	14	19
Total	1	7	1	1	9	0	3	1	0	4	9	5	1	1	15	0	2	11	4	13	6	41	47
08:00 AM	0	0	0	0	0	0	0	0	0	0	6	0	0	0	6	1	1	6	3	8	3	14	17
08:15 AM	0	2	0	0	2	0	0	0	0	0	1	1	0	0	2	0	2	5	0	7	0	11	11
08:30 AM	0	2	0	0	2	0	2	0	0	2	2	0	0	0	2	0	0	6	0	6	0	12	12
08:45 AM	0	2	0	0	2	0	1	1	0	2	1	0	0	0	1	1	0	2	0	3	0	8	8
Total	0	6	0	0	6	0	3	1	0	4	10	1	0	0	11	2	3	19	3	24	3	45	48
Grand Total	1	13	1	1	15	0	6	2	0	8	19	6	1	1	26	2	5	30	7	37	9	86	95
Apprch %	6.7	86.7	6.7			0	75	25			73.1	23.1	3.8			5.4	13.5	81.1					
Total %	1.2	15.1	1.2		17.4	0	7	2.3		9.3	22.1	7	1.2		30.2	2.3	5.8	34.9		43	9.5	90.5	

3.1-233

Start Time	Heacock Street Southbound				Cactus Avenue Westbound				Heacock Street Northbound				Cactus Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	2	0	2	0	0	0	0	2	1	0	3	0	1	1	2	7
07:15 AM	1	1	0	2	0	0	0	0	1	0	1	2	0	1	1	2	6
07:30 AM	0	2	0	2	0	3	1	4	3	2	0	5	0	0	3	3	14
07:45 AM	0	2	1	3	0	0	0	0	3	2	0	5	0	0	6	6	14
Total Volume	1	7	1	9	0	3	1	4	9	5	1	15	0	2	11	13	41
% App. Total	11.1	77.8	11.1		0	75	25		60	33.3	6.7		0	15.4	84.6		
PHF	.250	.875	.250	.750	.000	.250	.250	.250	.750	.625	.250	.750	.000	.500	.458	.542	.732

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cactus Avenue  
 Weather: Clear

File Name : MRVHECAAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 2



City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cactus Avenue  
 Weather: Clear

File Name : MRVHECAAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Heacock Street Southbound				Cactus Avenue Westbound				Heacock Street Northbound				Cactus Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	2	0	2	0	0	0	0	2	1	0	3	0	1	1	2	
+15 mins.	1	1	0	2	0	0	0	0	1	0	1	2	0	1	1	2	
+30 mins.	0	2	0	2	0	3	1	4	3	2	0	5	0	0	3	3	
+45 mins.	0	2	1	3	0	0	0	0	3	2	0	5	0	0	6	6	
Total Volume	1	7	1	9	0	3	1	4	9	5	1	15	0	2	11	13	
% App. Total	11.1	77.8	11.1		0	75	25		60	33.3	6.7		0	15.4	84.6		
PHF	.250	.875	.250	.750	.000	.250	.250	.250	.750	.625	.250	.750	.000	.500	.458	.542	

3.1-235

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cactus Avenue  
 Weather: Clear

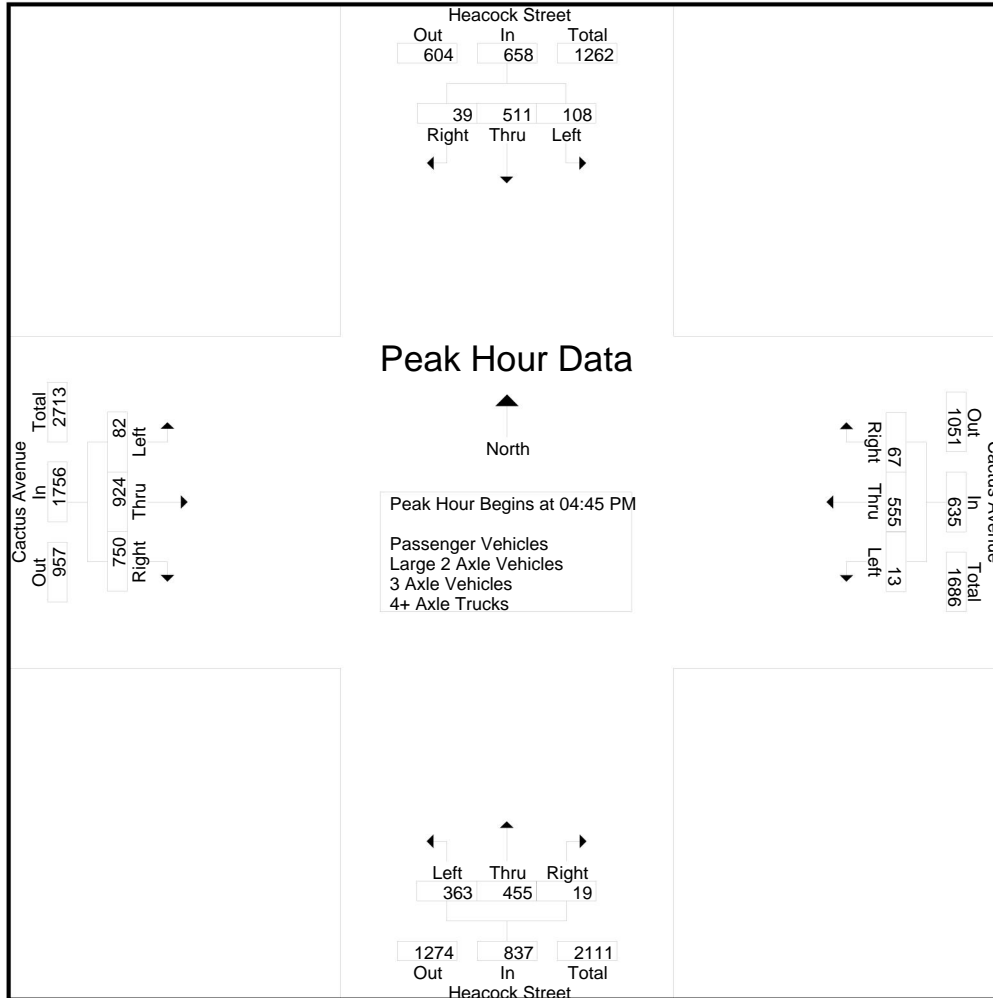
File Name : MRVHECAPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Heacock Street Southbound					Cactus Avenue Westbound					Heacock Street Northbound					Cactus Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR			
04:00 PM	29	102	15	1	146	0	141	14	1	155	95	74	4	0	173	26	207	151	5	384	7	858	865
04:15 PM	17	126	13	4	156	2	145	18	2	165	97	89	3	0	189	22	194	156	13	372	19	882	901
04:30 PM	16	127	11	3	154	6	159	24	0	189	87	130	1	0	218	19	202	168	6	389	9	950	959
04:45 PM	17	134	10	1	161	2	182	10	2	194	102	153	3	0	258	20	229	171	5	420	8	1033	1041
<b>Total</b>	<b>79</b>	<b>489</b>	<b>49</b>	<b>9</b>	<b>617</b>	<b>10</b>	<b>627</b>	<b>66</b>	<b>5</b>	<b>703</b>	<b>381</b>	<b>446</b>	<b>11</b>	<b>0</b>	<b>838</b>	<b>87</b>	<b>832</b>	<b>646</b>	<b>29</b>	<b>1565</b>	<b>43</b>	<b>3723</b>	<b>3766</b>
05:00 PM	34	110	7	4	151	2	132	15	0	149	101	89	7	3	197	22	220	184	1	426	8	923	931
05:15 PM	32	122	5	1	159	4	127	20	3	151	75	98	6	0	179	22	249	201	3	472	7	961	968
05:30 PM	25	145	17	1	187	5	114	22	1	141	85	115	3	1	203	18	226	194	5	438	8	969	977
05:45 PM	20	140	20	3	180	2	123	22	5	147	93	89	4	0	186	16	258	200	3	474	11	987	998
<b>Total</b>	<b>111</b>	<b>517</b>	<b>49</b>	<b>9</b>	<b>677</b>	<b>13</b>	<b>496</b>	<b>79</b>	<b>9</b>	<b>588</b>	<b>354</b>	<b>391</b>	<b>20</b>	<b>4</b>	<b>765</b>	<b>78</b>	<b>953</b>	<b>779</b>	<b>12</b>	<b>1810</b>	<b>34</b>	<b>3840</b>	<b>3874</b>
<b>Grand Total</b>	<b>190</b>	<b>1006</b>	<b>98</b>	<b>18</b>	<b>1294</b>	<b>23</b>	<b>1123</b>	<b>145</b>	<b>14</b>	<b>1291</b>	<b>735</b>	<b>837</b>	<b>31</b>	<b>4</b>	<b>1603</b>	<b>165</b>	<b>1785</b>	<b>1425</b>	<b>41</b>	<b>3375</b>	<b>77</b>	<b>7563</b>	<b>7640</b>
Apprch %	14.7	77.7	7.6			1.8	87	11.2			45.9	52.2	1.9			4.9	52.9	42.2					
Total %	2.5	13.3	1.3		17.1	0.3	14.8	1.9		17.1	9.7	11.1	0.4		21.2	2.2	23.6	18.8		44.6	1	99	
Passenger Vehicles	185	976	93		1271	22	1100	144		1280	704	819	30		1557	163	1757	1378		3339	0	0	7447
% Passenger Vehicles	97.4	97	94.9	94.4	96.9	95.7	98	99.3	100	98.1	95.8	97.8	96.8	100	96.9	98.8	98.4	96.7	100	97.7	0	0	97.5
Large 2 Axle Vehicles	5	15	1		22	1	20	1		22	13	14	1		28	2	23	16		41	0	0	113
% Large 2 Axle Vehicles	2.6	1.5	1	5.6	1.7	4.3	1.8	0.7	0	1.7	1.8	1.7	3.2	0	1.7	1.2	1.3	1.1	0	1.2	0	0	1.5
3 Axle Vehicles	0	13	2		15	0	1	0		1	2	2	0		4	0	3	5		8	0	0	28
% 3 Axle Vehicles	0	1.3	2	0	1.1	0	0.1	0	0	0.1	0.3	0.2	0	0	0.2	0	0.2	0.4	0	0.2	0	0	0.4
4+ Axle Trucks	0	2	2		4	0	2	0		2	16	2	0		18	0	2	26		28	0	0	52
% 4+ Axle Trucks	0	0.2	2	0	0.3	0	0.2	0	0	0.2	2.2	0.2	0	0	1.1	0	0.1	1.8	0	0.8	0	0	0.7

3.1-236

Start Time	Heacock Street Southbound				Cactus Avenue Westbound				Heacock Street Northbound				Cactus Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	17	134	10	161	2	182	10	194	102	153	3	258	20	229	171	420	1033
05:00 PM	34	110	7	151	2	132	15	149	101	89	7	197	22	220	184	426	923
05:15 PM	32	122	5	159	4	127	20	151	75	98	6	179	22	249	201	472	961
05:30 PM	25	145	17	187	5	114	22	141	85	115	3	203	18	226	194	438	969
Total Volume	108	511	39	658	13	555	67	635	363	455	19	837	82	924	750	1756	3886
% App. Total	16.4	77.7	5.9		2	87.4	10.6		43.4	54.4	2.3		4.7	52.6	42.7		
PHF	.794	.881	.574	.880	.650	.762	.761	.818	.890	.743	.679	.811	.932	.928	.933	.930	.940



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City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cactus Avenue  
 Weather: Clear

File Name : MRVHECAPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Heacock Street Southbound				Cactus Avenue Westbound				Heacock Street Northbound				Cactus Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	05:00 PM				04:00 PM				04:15 PM				05:00 PM				
+0 mins.	<b>34</b>	110	7	151	0	141	14	155	97	89	3	189	<b>22</b>	220	184	426	
+15 mins.	32	122	5	159	2	145	18	165	87	130	1	218	22	249	<b>201</b>	472	
+30 mins.	25	<b>145</b>	17	<b>187</b>	<b>6</b>	159	<b>24</b>	189	<b>102</b>	<b>153</b>	3	<b>258</b>	18	226	194	438	
+45 mins.	20	140	<b>20</b>	180	2	<b>182</b>	10	<b>194</b>	101	89	<b>7</b>	197	16	<b>258</b>	200	<b>474</b>	
Total Volume	111	517	49	677	10	627	66	703	387	461	14	862	78	953	779	1810	
% App. Total	16.4	76.4	7.2		1.4	89.2	9.4		44.9	53.5	1.6		4.3	52.7	43		
PHF	.816	.891	.613	.905	.417	.861	.688	.906	.949	.753	.500	.835	.886	.923	.969	.955	

3.1-238

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cactus Avenue  
 Weather: Clear

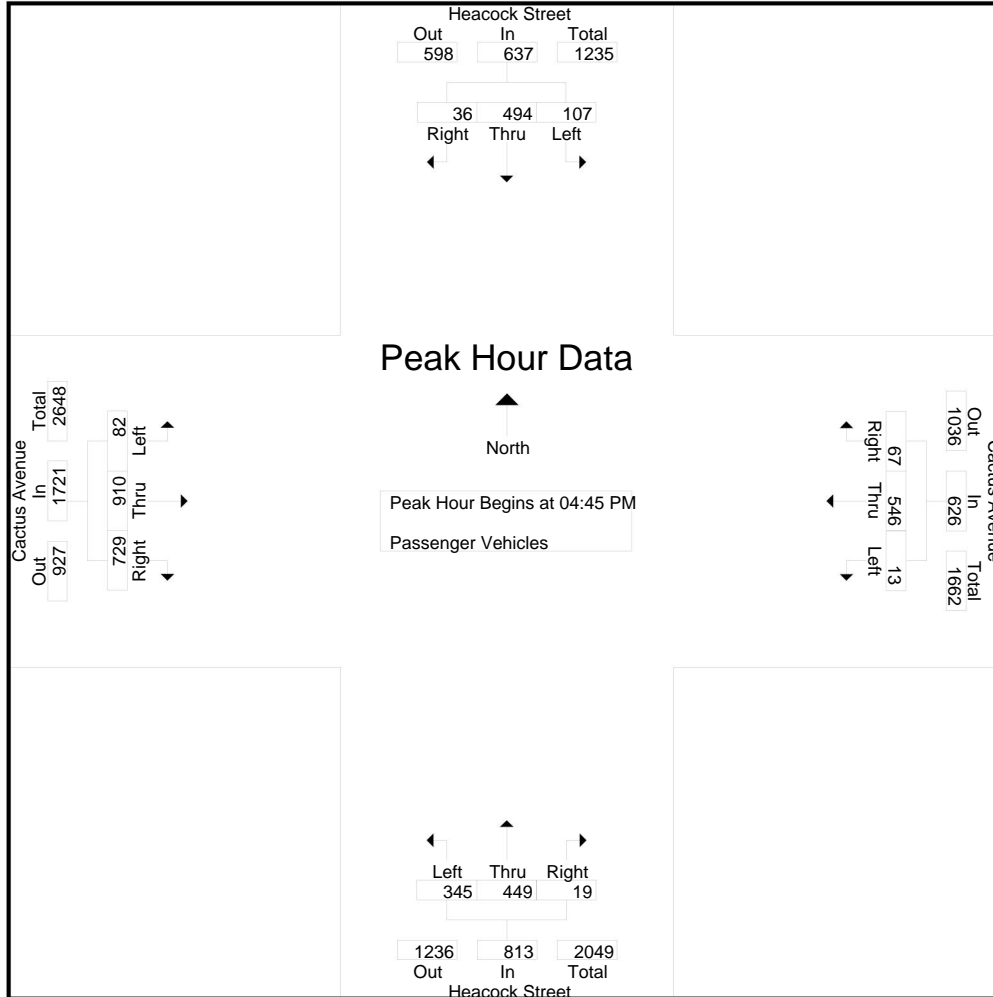
File Name : MRVHECAPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Heacock Street Southbound					Cactus Avenue Westbound					Heacock Street Northbound					Cactus Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	28	99	15	1	142	0	133	14	1	147	93	70	3	0	166	26	202	144	5	372	7	827	834
04:15 PM	15	123	13	4	151	1	142	17	2	160	93	89	3	0	185	21	190	151	13	362	19	858	877
04:30 PM	15	125	10	2	150	6	157	24	0	187	84	122	1	0	207	18	199	160	6	377	8	921	929
04:45 PM	17	130	8	1	155	2	180	10	2	192	100	150	3	0	253	20	224	163	5	407	8	1007	1015
Total	75	477	46	8	598	9	612	65	5	686	370	431	10	0	811	85	815	618	29	1518	42	3613	3655
05:00 PM	33	102	7	4	142	2	131	15	0	148	90	86	7	3	183	22	219	181	1	422	8	895	903
05:15 PM	32	118	4	1	154	4	126	20	3	150	72	98	6	0	176	22	244	195	3	461	7	941	948
05:30 PM	25	144	17	1	186	5	109	22	1	136	83	115	3	1	201	18	223	190	5	431	8	954	962
05:45 PM	20	135	19	3	174	2	122	22	5	146	89	89	4	0	182	16	256	194	3	466	11	968	979
Total	110	499	47	9	656	13	488	79	9	580	334	388	20	4	742	78	942	760	12	1780	34	3758	3792
Grand Total	185	976	93	17	1254	22	1100	144	14	1266	704	819	30	4	1553	163	1757	1378	41	3298	76	7371	7447
Apprch %	14.8	77.8	7.4			1.7	86.9	11.4			45.3	52.7	1.9			4.9	53.3	41.8					
Total %	2.5	13.2	1.3		17	0.3	14.9	2		17.2	9.6	11.1	0.4		21.1	2.2	23.8	18.7		44.7	1	99	

3.1-239

Start Time	Heacock Street Southbound				Cactus Avenue Westbound				Heacock Street Northbound				Cactus Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	17	130	8	155	2	<b>180</b>	10	<b>192</b>	<b>100</b>	<b>150</b>	3	<b>253</b>	20	224	163	407	<b>1007</b>
05:00 PM	33	102	7	142	2	131	15	148	90	86	7	183	22	219	181	422	895
05:15 PM	32	118	4	154	4	126	20	150	72	98	6	176	22	<b>244</b>	<b>195</b>	<b>461</b>	941
05:30 PM	25	144	17	186	5	109	22	136	83	115	3	201	18	223	190	431	954
Total Volume	107	494	36	637	13	546	67	626	345	449	19	813	82	910	729	1721	3797
% App. Total	16.8	77.6	5.7		2.1	87.2	10.7		42.4	55.2	2.3		4.8	52.9	42.4		
PHF	.811	.858	.529	.856	.650	.758	.761	.815	.863	.748	.679	.803	.932	.932	.935	.933	.943





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City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cactus Avenue  
 Weather: Clear

File Name : MRVHECAPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Heacock Street Southbound				Cactus Avenue Westbound				Heacock Street Northbound				Cactus Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:45 PM				04:45 PM				04:45 PM				04:45 PM				
+0 mins.	17	130	8	155	2	<b>180</b>	10	<b>192</b>	<b>100</b>	<b>150</b>	3	<b>253</b>	20	224	163	407	
+15 mins.	<b>33</b>	102	7	142	2	131	15	148	90	86	<b>7</b>	183	<b>22</b>	219	181	422	
+30 mins.	32	118	4	154	4	126	20	150	72	98	6	176	22	<b>244</b>	<b>195</b>	<b>461</b>	
+45 mins.	25	<b>144</b>	<b>17</b>	<b>186</b>	<b>5</b>	109	<b>22</b>	136	83	115	3	201	18	223	190	431	
Total Volume	107	494	36	637	13	546	67	626	345	449	19	813	82	910	729	1721	
% App. Total	16.8	77.6	5.7		2.1	87.2	10.7		42.4	55.2	2.3		4.8	52.9	42.4		
PHF	.811	.858	.529	.856	.650	.758	.761	.815	.863	.748	.679	.803	.932	.932	.935	.933	

3.1-241

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cactus Avenue  
 Weather: Clear

File Name : MRVHECAPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

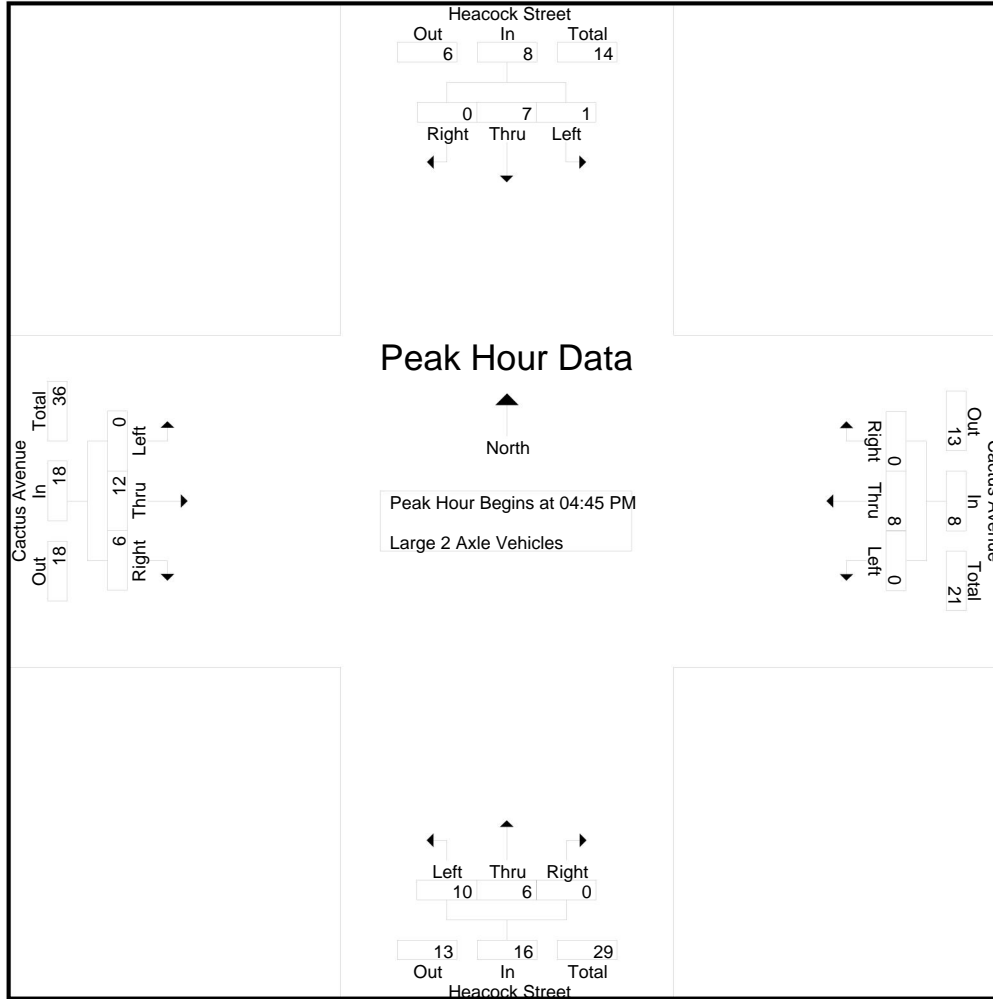
Start Time	Heacock Street Southbound					Cactus Avenue Westbound					Heacock Street Northbound					Cactus Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	1	3	0	0	4	0	7	0	0	7	1	2	1	0	4	0	5	3	0	8	0	23	23
04:15 PM	2	3	0	0	5	1	2	1	0	4	0	0	0	0	0	1	4	3	0	8	0	17	17
04:30 PM	1	2	1	1	4	0	2	0	0	2	1	6	0	0	7	1	0	2	0	3	1	16	17
04:45 PM	0	1	0	0	1	0	2	0	0	2	2	3	0	0	5	0	4	3	0	7	0	15	15
Total	4	9	1	1	14	1	13	1	0	15	4	11	1	0	16	2	13	11	0	26	1	71	72
05:00 PM	1	4	0	0	5	0	1	0	0	1	6	3	0	0	9	0	1	0	0	1	0	16	16
05:15 PM	0	1	0	0	1	0	1	0	0	1	2	0	0	0	2	0	5	3	0	8	0	12	12
05:30 PM	0	1	0	0	1	0	4	0	0	4	0	0	0	0	0	0	2	0	0	2	0	7	7
05:45 PM	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	2	2	0	4	0	6	6
Total	1	6	0	0	7	0	7	0	0	7	9	3	0	0	12	0	10	5	0	15	0	41	41
Grand Total	5	15	1	1	21	1	20	1	0	22	13	14	1	0	28	2	23	16	0	41	1	112	113
Apprch %	23.8	71.4	4.8			4.5	90.9	4.5			46.4	50	3.6			4.9	56.1	39					
Total %	4.5	13.4	0.9		18.8	0.9	17.9	0.9		19.6	11.6	12.5	0.9		25	1.8	20.5	14.3		36.6	0.9	99.1	

3.1-242

Start Time	Heacock Street Southbound				Cactus Avenue Westbound				Heacock Street Northbound				Cactus Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	1	0	1	0	2	0	2	2	3	0	5	0	4	3	7	15
05:00 PM	1	4	0	5	0	1	0	1	6	3	0	9	0	1	0	1	16
05:15 PM	0	1	0	1	0	1	0	1	2	0	0	2	0	5	3	8	12
05:30 PM	0	1	0	1	0	4	0	4	0	0	0	0	0	2	0	2	7
Total Volume	1	7	0	8	0	8	0	8	10	6	0	16	0	12	6	18	50
% App. Total	12.5	87.5	0		0	100	0		62.5	37.5	0		0	66.7	33.3		
PHF	.250	.438	.000	.400	.000	.500	.000	.500	.417	.500	.000	.444	.000	.600	.500	.563	.781

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cactus Avenue  
 Weather: Clear

File Name : MRVHECAPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 2



City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cactus Avenue  
 Weather: Clear

File Name : MRVHECAPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Heacock Street Southbound				Cactus Avenue Westbound				Heacock Street Northbound				Cactus Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:45 PM				04:45 PM				04:45 PM				04:45 PM				
+0 mins.	0	1	0	1	0	2	0	2	2	3	0	5	0	4	3	7	
+15 mins.	1	4	0	5	0	1	0	1	6	3	0	9	0	1	0	1	
+30 mins.	0	1	0	1	0	1	0	1	2	0	0	2	0	5	3	8	
+45 mins.	0	1	0	1	0	4	0	4	0	0	0	0	0	2	0	2	
Total Volume	1	7	0	8	0	8	0	8	10	6	0	16	0	12	6	18	
% App. Total	12.5	87.5	0		0	100	0		62.5	37.5	0		0	66.7	33.3		
PHF	.250	.438	.000	.400	.000	.500	.000	.500	.417	.500	.000	.444	.000	.600	.500	.563	

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cactus Avenue  
 Weather: Clear

File Name : MRVHECAPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- 3 Axle Vehicles

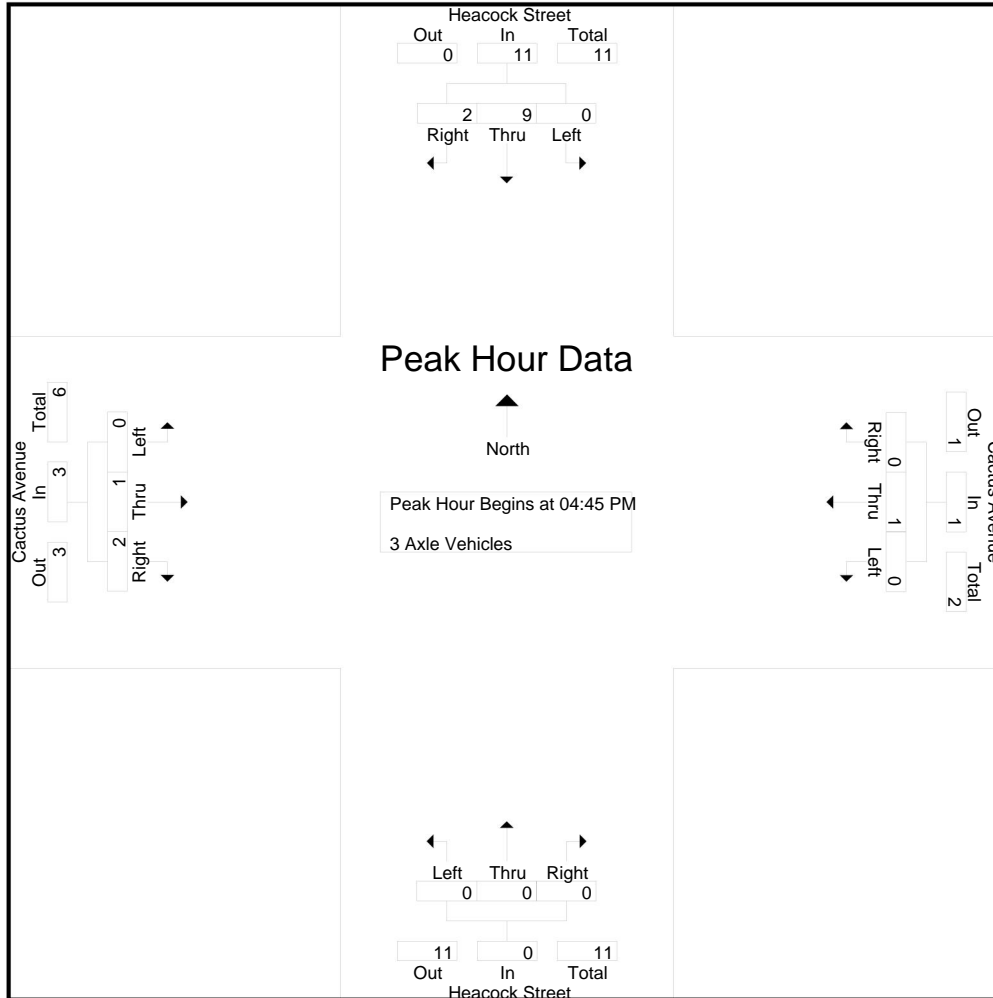
Start Time	Heacock Street Southbound					Cactus Avenue Westbound					Heacock Street Northbound					Cactus Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total	
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total				
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	2	2	0	4	0	0	6	6
04:45 PM	0	3	1	0	4	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	0	6	6
Total	0	3	1	0	4	0	0	0	0	0	1	2	0	0	3	0	3	4	0	7	0	0	14	14
05:00 PM	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3
05:15 PM	0	3	1	0	4	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	5	5
05:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1
05:45 PM	0	4	0	0	4	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	5	5
Total	0	10	1	0	11	0	1	0	0	1	1	0	0	0	1	0	0	1	0	1	0	0	14	14
Grand Total	0	13	2	0	15	0	1	0	0	1	2	2	0	0	4	0	3	5	0	8	0	0	28	28
Apprch %	0	86.7	13.3			0	100	0			50	50	0			0	37.5	62.5						
Total %	0	46.4	7.1		53.6	0	3.6	0		3.6	7.1	7.1	0		14.3	0	10.7	17.9		28.6	0	0	100	

3.1-245

Start Time	Heacock Street Southbound				Cactus Avenue Westbound				Heacock Street Northbound				Cactus Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	3	1	4	0	0	0	0	0	0	0	0	0	1	1	2	6
05:00 PM	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
05:15 PM	0	3	1	4	0	0	0	0	0	0	0	0	0	0	1	1	5
05:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total Volume	0	9	2	11	0	1	0	1	0	0	0	0	0	1	2	3	15
% App. Total	0	81.8	18.2		0	100	0		0	0	0		0	33.3	66.7		
PHF	.000	.750	.500	.688	.000	.250	.000	.250	.000	.000	.000	.000	.000	.250	.500	.375	.625

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cactus Avenue  
 Weather: Clear

File Name : MRVHECAPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 2



City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cactus Avenue  
 Weather: Clear

File Name : MRVHECAPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Heacock Street Southbound				Cactus Avenue Westbound				Heacock Street Northbound				Cactus Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:45 PM				04:45 PM				04:45 PM				04:45 PM				
+0 mins.	0	3	1	4	0	0	0	0	0	0	0	0	0	1	1	2	
+15 mins.	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	
+30 mins.	0	3	1	4	0	0	0	0	0	0	0	0	0	0	1	1	
+45 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	
Total Volume	0	9	2	11	0	1	0	1	0	0	0	0	0	1	2	3	
% App. Total	0	81.8	18.2		0	100	0		0	0	0		0	33.3	66.7		
PHF	.000	.750	.500	.688	.000	.250	.000	.250	.000	.000	.000	.000	.000	.250	.500	.375	

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cactus Avenue  
 Weather: Clear

File Name : MRVHECAPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	Heacock Street Southbound					Cactus Avenue Westbound					Heacock Street Northbound					Cactus Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	0	0	0	0	0	0	1	0	0	1	1	2	0	0	3	0	0	3	0	3	0	7	7
04:15 PM	0	0	0	0	0	0	1	0	0	1	3	0	0	0	3	0	0	2	0	2	0	6	6
04:30 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	1	4	0	5	0	7	7
04:45 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	0	5	5
Total	0	0	1	0	1	0	2	0	0	2	6	2	0	0	8	0	1	13	0	14	0	25	25
05:00 PM	0	1	0	0	1	0	0	0	0	0	5	0	0	0	5	0	0	3	0	3	0	9	9
05:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2	0	2	0	3	3
05:30 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	1	4	0	5	0	7	7
05:45 PM	0	1	1	0	2	0	0	0	0	0	2	0	0	0	2	0	0	4	0	4	0	8	8
Total	0	2	1	0	3	0	0	0	0	0	10	0	0	0	10	0	1	13	0	14	0	27	27
Grand Total	0	2	2	0	4	0	2	0	0	2	16	2	0	0	18	0	2	26	0	28	0	52	52
Apprch %	0	50	50			0	100	0			88.9	11.1	0			0	7.1	92.9					
Total %	0	3.8	3.8		7.7	0	3.8	0		3.8	30.8	3.8	0		34.6	0	3.8	50		53.8	0	100	

3.1-248

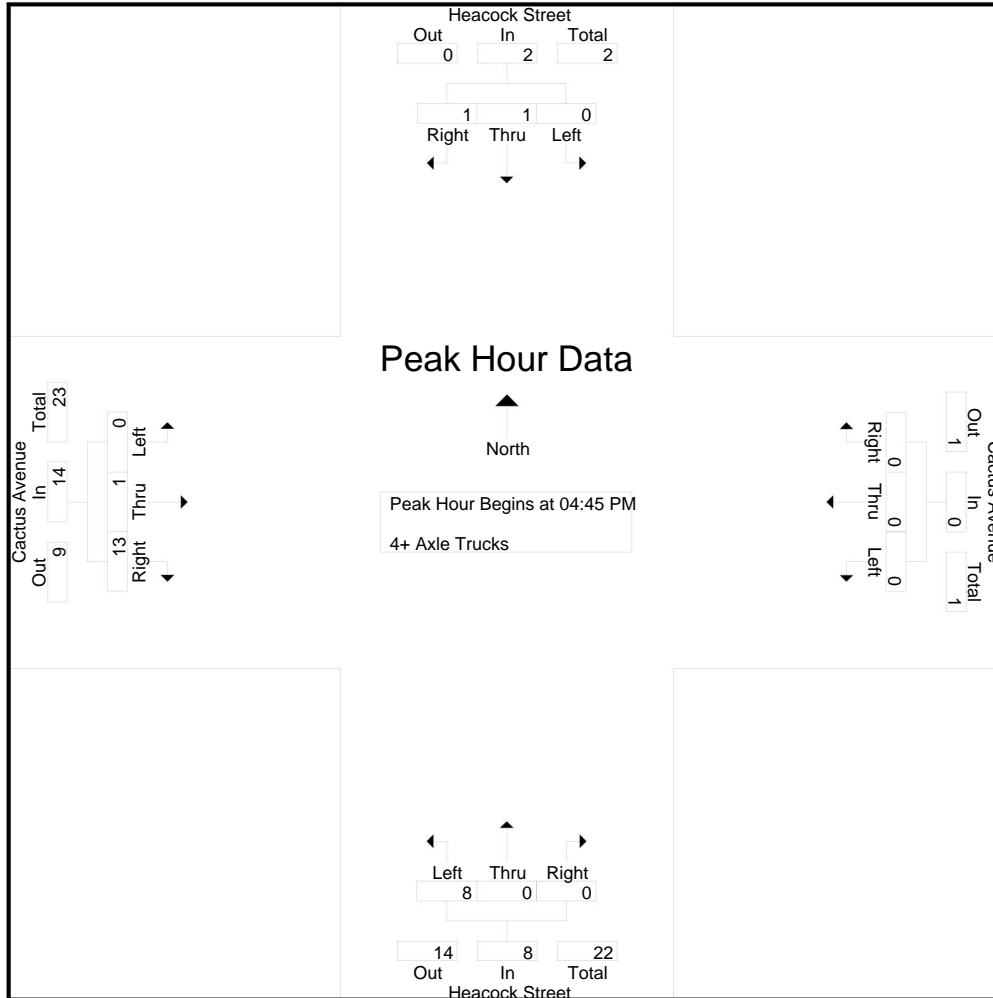
Start Time	Heacock Street Southbound				Cactus Avenue Westbound				Heacock Street Northbound				Cactus Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	4	4	5
05:00 PM	0	1	0	1	0	0	0	0	5	0	0	5	0	0	3	3	9
05:15 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	2	2	3
05:30 PM	0	0	0	0	0	0	0	0	2	0	0	2	0	1	4	5	7
Total Volume	0	1	1	2	0	0	0	0	8	0	0	8	0	1	13	14	24
% App. Total	0	50	50		0	0	0		100	0	0		0	7.1	92.9		
PHF	.000	.250	.250	.500	.000	.000	.000	.000	.400	.000	.000	.400	.000	.250	.813	.700	.667



City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cactus Avenue  
 Weather: Clear

File Name : MRVHECAPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 2

3.1-249



City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cactus Avenue  
 Weather: Clear

File Name : MRVHECAPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Heacock Street Southbound				Cactus Avenue Westbound				Heacock Street Northbound				Cactus Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:45 PM				04:45 PM				04:45 PM				04:45 PM				
+0 mins.	0	0	1	1	0	0	0	0	0	0	0	0	0	0	4	4	
+15 mins.	0	1	0	1	0	0	0	0	5	0	0	5	0	0	3	3	
+30 mins.	0	0	0	0	0	0	0	0	1	0	0	1	0	0	2	2	
+45 mins.	0	0	0	0	0	0	0	0	2	0	0	2	0	1	4	5	
Total Volume	0	1	1	2	0	0	0	0	8	0	0	8	0	1	13	14	
% App. Total	0	50	50		0	0	0		100	0	0		0	7.1	92.9		
PHF	.000	.250	.250	.500	.000	.000	.000	.000	.400	.000	.000	.400	.000	.250	.813	.700	

3.1-250

Location: Moreno Valley  
 N/S: Heacock Street  
 E/W: Cactus Avenue



Date: 4/28/2015  
 Weather: Clear

PEDESTRIANS

	North Leg Heacock Street	East Leg Cactus Avenue	South Leg Heacock Street	West Leg Cactus Avenue	TOTAL
7:00 AM	0	0	0	1	1
7:15 AM	0	1	3	0	4
7:30 AM	0	2	0	0	2
7:45 AM	0	2	0	1	3
8:00 AM	0	0	0	2	2
8:15 AM	1	1	0	0	2
8:30 AM	0	0	0	0	0
8:45 AM	0	1	0	0	1
TOTAL VOLUMES:	1	7	3	4	15

	North Leg Heacock Street	East Leg Cactus Avenue	South Leg Heacock Street	West Leg Cactus Avenue	TOTAL
4:00 PM	1	4	0	1	6
4:15 PM	0	1	0	0	1
4:30 PM	0	3	0	0	3
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	1	2	0	0	3
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	2	10	0	1	13

3-1-251

Location: Moreno Valley  
 N/S: Heacock Street  
 E/W: Cactus Avenue



Date: 4/28/2015  
 Weather: Clear

**BICYCLES**

	North Leg Heacock Street	East Leg Cactus Avenue	South Leg Heacock Street	West Leg Cactus Avenue	TOTAL
7:00 AM	0	1	0	0	1
7:15 AM	0	1	0	0	1
7:30 AM	0	0	0	0	0
7:45 AM	0	1	0	0	1
8:00 AM	0	1	0	0	1
8:15 AM	1	0	0	1	2
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	1	1
<b>TOTAL VOLUMES:</b>	1	4	0	2	7

	North Leg Heacock Street	East Leg Cactus Avenue	South Leg Heacock Street	West Leg Cactus Avenue	TOTAL
4:00 PM	1	0	0	0	1
4:15 PM	0	0	1	0	1
4:30 PM	0	0	0	1	1
4:45 PM	0	1	0	0	1
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	3	0	0	3
5:45 PM	0	0	0	0	0
<b>TOTAL VOLUMES:</b>	1	4	1	1	7

3-1-252

City of Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_Indian\_Harley Knox AM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 1

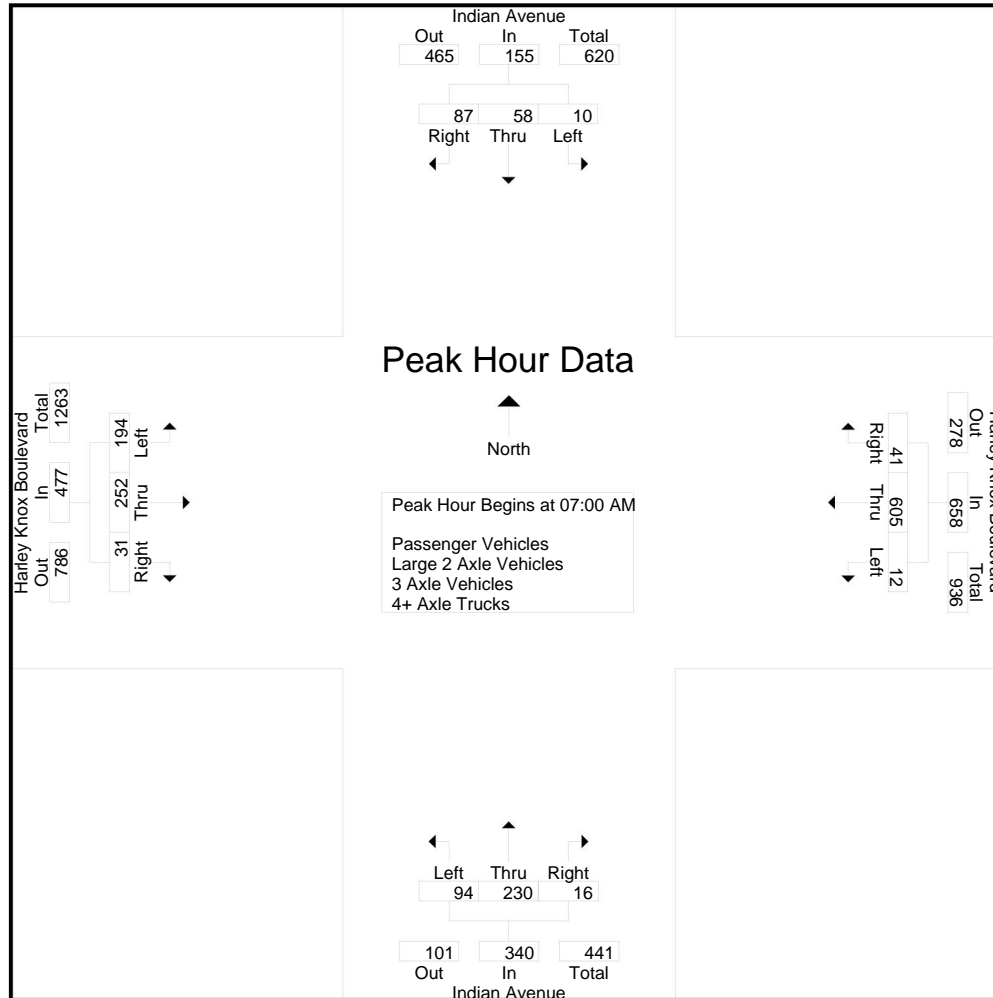
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Indian Avenue Southbound					Harley Knox Boulevard Westbound					Indian Avenue Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	1	11	25	6	37	2	191	9	2	202	29	64	2	0	95	52	56	4	4	112	12	446	458
07:15 AM	3	12	25	8	40	3	160	10	5	173	15	61	3	0	79	56	55	8	3	119	16	411	427
07:30 AM	2	16	21	6	39	2	126	8	1	136	31	57	7	6	95	47	77	11	4	135	17	405	422
07:45 AM	4	19	16	7	39	5	128	14	6	147	19	48	4	1	71	39	64	8	2	111	16	368	384
Total	10	58	87	27	155	12	605	41	14	658	94	230	16	7	340	194	252	31	13	477	61	1630	1691
08:00 AM	5	18	21	9	44	4	102	4	1	110	11	42	3	2	56	34	58	7	3	99	15	309	324
08:15 AM	1	10	23	10	34	0	66	2	0	68	17	15	2	2	34	33	45	14	3	92	15	228	243
08:30 AM	0	8	24	14	32	1	60	2	0	63	8	22	4	2	34	33	38	11	2	82	18	211	229
08:45 AM	1	18	31	11	50	3	46	1	1	50	4	27	1	0	32	50	39	8	3	97	15	229	244
Total	7	54	99	44	160	8	274	9	2	291	40	106	10	6	156	150	180	40	11	370	63	977	1040
Grand Total	17	112	186	71	315	20	879	50	16	949	134	336	26	13	496	344	432	71	24	847	124	2607	2731
Apprch %	5.4	35.6	59			2.1	92.6	5.3			27	67.7	5.2			40.6	51	8.4					
Total %	0.7	4.3	7.1		12.1	0.8	33.7	1.9		36.4	5.1	12.9	1		19	13.2	16.6	2.7		32.5	4.5	95.5	
Passenger Vehicles	13	90	89		226	15	827	48		905	110	305	19		445	237	384	41		678	0	0	2254
% Passenger Vehicles	76.5	80.4	47.8	47.9	58.5	75	94.1	96	93.8	93.8	82.1	90.8	73.1	84.6	87.4	68.9	88.9	57.7	66.7	77.8	0	0	82.5
Large 2 Axle Vehicles	1	4	21		33	0	18	2		21	5	10	1		16	25	24	6		56	0	0	126
% Large 2 Axle Vehicles	5.9	3.6	11.3	9.9	8.5	0	2	4	6.2	2.2	3.7	3	3.8	0	3.1	7.3	5.6	8.5	4.2	6.4	0	0	4.6
3 Axle Vehicles	2	8	25		44	3	4	0		7	11	2	5		20	27	5	3		37	0	0	108
% 3 Axle Vehicles	11.8	7.1	13.4	12.7	11.4	15	0.5	0	0	0.7	8.2	0.6	19.2	15.4	3.9	7.8	1.2	4.2	8.3	4.2	0	0	4
4+ Axle Trucks	1	10	51		83	2	30	0		32	8	19	1		28	55	19	21		100	0	0	243
% 4+ Axle Trucks	5.9	8.9	27.4	29.6	21.5	10	3.4	0	0	3.3	6	5.7	3.8	0	5.5	16	4.4	29.6	20.8	11.5	0	0	8.9

Start Time	Indian Avenue Southbound				Harley Knox Boulevard Westbound				Indian Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	1	11	25	37	2	191	9	202	29	64	2	95	52	56	4	112	446
07:15 AM	3	12	25	40	3	160	10	173	15	61	3	79	56	55	8	119	411
07:30 AM	2	16	21	39	2	126	8	136	31	57	7	95	47	77	11	135	405
07:45 AM	4	19	16	39	5	128	14	147	19	48	4	71	39	64	8	111	368
Total Volume	10	58	87	155	12	605	41	658	94	230	16	340	194	252	31	477	1630
% App. Total	6.5	37.4	56.1		1.8	91.9	6.2		27.6	67.6	4.7		40.7	52.8	6.5		
PHF	.625	.763	.870	.969	.600	.792	.732	.814	.758	.898	.571	.895	.866	.818	.705	.883	.914

City of Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_Indian\_Harley Knox AM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 2



City of Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_Indian\_Harley Knox AM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Indian Avenue Southbound				Harley Knox Boulevard Westbound				Indian Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:15 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	3	12	<b>25</b>	40	2	<b>191</b>	9	<b>202</b>	29	<b>64</b>	2	<b>95</b>	52	56	4	112	
+15 mins.	2	16	21	39	3	160	10	173	15	61	3	79	<b>56</b>	55	8	119	
+30 mins.	4	<b>19</b>	16	39	2	126	8	136	<b>31</b>	57	<b>7</b>	95	47	<b>77</b>	<b>11</b>	<b>135</b>	
+45 mins.	<b>5</b>	18	21	<b>44</b>	<b>5</b>	128	<b>14</b>	147	19	48	4	71	39	64	8	111	
Total Volume	14	65	83	162	12	605	41	658	94	230	16	340	194	252	31	477	
% App. Total	8.6	40.1	51.2		1.8	91.9	6.2		27.6	67.6	4.7		40.7	52.8	6.5		
PHF	.700	.855	.830	.920	.600	.792	.732	.814	.758	.898	.571	.895	.866	.818	.705	.883	

City of Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_Indian\_Harley Knox AM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 1

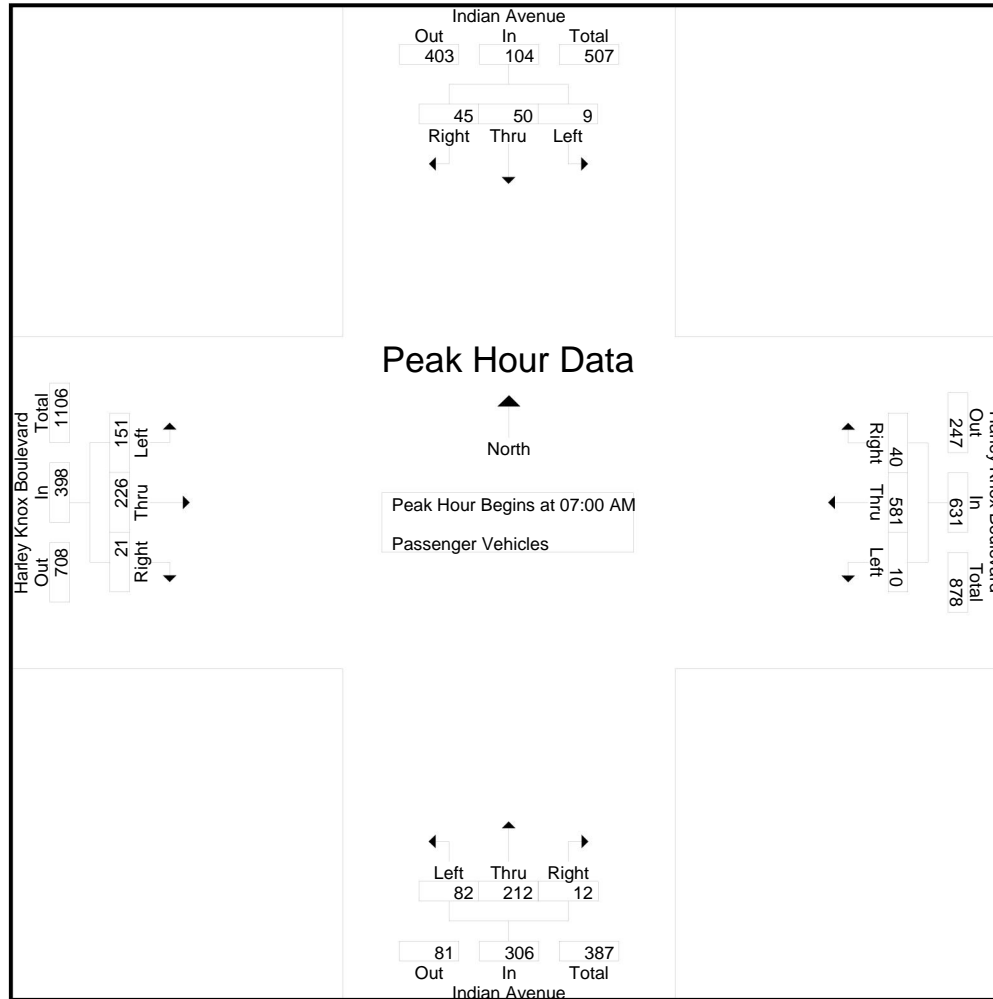
Groups Printed- Passenger Vehicles

Start Time	Indian Avenue Southbound					Harley Knox Boulevard Westbound					Indian Avenue Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	1	10	12	2	23	1	187	9	2	197	24	57	1	0	82	39	47	1	1	87	5	389	394
07:15 AM	3	8	13	3	24	2	157	9	4	168	13	56	2	0	71	46	52	7	3	105	10	368	378
07:30 AM	2	15	12	4	29	2	116	8	1	126	29	53	6	5	88	39	68	8	4	115	14	358	372
07:45 AM	3	17	8	4	28	5	121	14	6	140	16	46	3	1	65	27	59	5	2	91	13	324	337
Total	9	50	45	13	104	10	581	40	13	631	82	212	12	6	306	151	226	21	10	398	42	1439	1481
08:00 AM	3	14	8	4	25	4	92	4	1	100	10	38	2	2	50	17	52	5	1	74	8	249	257
08:15 AM	1	8	15	6	24	0	60	1	0	61	10	14	2	2	26	17	41	9	3	67	11	178	189
08:30 AM	0	5	11	7	16	0	54	2	0	56	6	19	3	1	28	20	33	5	1	58	9	158	167
08:45 AM	0	13	10	4	23	1	40	1	1	42	2	22	0	0	24	32	32	1	1	65	6	154	160
Total	4	40	44	21	88	5	246	8	2	259	28	93	7	5	128	86	158	20	6	264	34	739	773
Grand Total	13	90	89	34	192	15	827	48	15	890	110	305	19	11	434	237	384	41	16	662	76	2178	2254
Apprch %	6.8	46.9	46.4			1.7	92.9	5.4			25.3	70.3	4.4			35.8	58	6.2					
Total %	0.6	4.1	4.1		8.8	0.7	38	2.2		40.9	5.1	14	0.9		19.9	10.9	17.6	1.9		30.4	3.4	96.6	

3.1-256

Start Time	Indian Avenue Southbound				Harley Knox Boulevard Westbound				Indian Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	1	10	12	23	1	<b>187</b>	9	<b>197</b>	24	<b>57</b>	1	82	39	47	1	87	<b>389</b>
07:15 AM	3	8	13	24	2	157	9	168	13	56	2	71	46	52	7	105	368
07:30 AM	2	15	12	29	2	116	8	126	29	53	6	88	39	68	8	115	358
07:45 AM	3	17	8	28	5	121	14	140	16	46	3	65	27	59	5	91	324
Total Volume	9	50	45	104	10	581	40	631	82	212	12	306	151	226	21	398	1439
% App. Total	8.7	48.1	43.3		1.6	92.1	6.3		26.8	69.3	3.9		37.9	56.8	5.3		
PHF	.750	.735	.865	.897	.500	.777	.714	.801	.707	.930	.500	.869	.821	.831	.656	.865	.925





Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_Indian\_Harley Knox AM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Indian Avenue Southbound				Harley Knox Boulevard Westbound				Indian Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	1	10	12	23	1	<b>187</b>	9	<b>197</b>	24	<b>57</b>	1	82	39	47	1	87	
+15 mins.	<b>3</b>	8	<b>13</b>	24	2	157	9	168	13	56	2	71	<b>46</b>	52	7	105	
+30 mins.	2	15	12	<b>29</b>	2	116	8	126	<b>29</b>	53	<b>6</b>	<b>88</b>	39	<b>68</b>	<b>8</b>	<b>115</b>	
+45 mins.	3	<b>17</b>	8	28	<b>5</b>	121	<b>14</b>	140	16	46	3	65	27	59	5	91	
Total Volume	9	50	45	104	10	581	40	631	82	212	12	306	151	226	21	398	
% App. Total	8.7	48.1	43.3		1.6	92.1	6.3		26.8	69.3	3.9		37.9	56.8	5.3		
PHF	.750	.735	.865	.897	.500	.777	.714	.801	.707	.930	.500	.869	.821	.831	.656	.865	

3.1-258

City of Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_Indian\_Harley Knox AM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

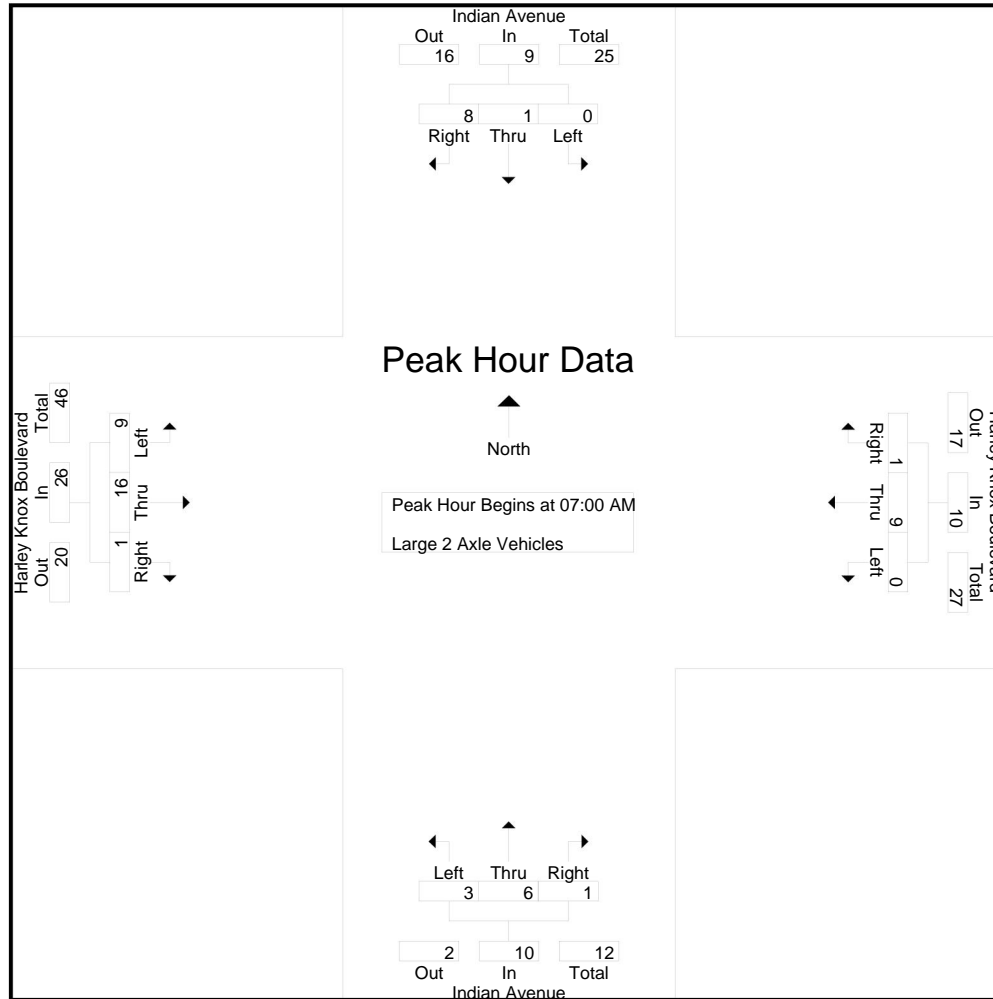
Start Time	Indian Avenue Southbound					Harley Knox Boulevard Westbound					Indian Avenue Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	0	0	4	3	4	0	3	0	0	3	2	3	0	0	5	4	6	0	0	10	3	22	25
07:15 AM	0	0	1	0	1	0	0	1	1	1	1	0	1	0	2	4	1	1	0	6	1	10	11
07:30 AM	0	0	3	0	3	0	3	0	0	3	0	2	0	0	2	0	5	0	0	5	0	13	13
07:45 AM	0	1	0	0	1	0	3	0	0	3	0	1	0	0	1	1	4	0	0	5	0	10	10
Total	0	1	8	3	9	0	9	1	1	10	3	6	1	0	10	9	16	1	0	26	4	55	59
08:00 AM	0	2	3	0	5	0	3	0	0	3	0	1	0	0	1	6	2	0	0	8	0	17	17
08:15 AM	0	0	0	0	0	0	2	1	0	3	1	0	0	0	1	3	3	2	0	8	0	12	12
08:30 AM	0	0	4	3	4	0	3	0	0	3	1	1	0	0	2	3	2	1	1	6	4	15	19
08:45 AM	1	1	6	1	8	0	1	0	0	1	0	2	0	0	2	4	1	2	0	7	1	18	19
Total	1	3	13	4	17	0	9	1	0	10	2	4	0	0	6	16	8	5	1	29	5	62	67
Grand Total	1	4	21	7	26	0	18	2	1	20	5	10	1	0	16	25	24	6	1	55	9	117	126
Apprch %	3.8	15.4	80.8			0	90	10			31.2	62.5	6.2			45.5	43.6	10.9					
Total %	0.9	3.4	17.9		22.2	0	15.4	1.7		17.1	4.3	8.5	0.9		13.7	21.4	20.5	5.1		47	7.1	92.9	

3.1-259

Start Time	Indian Avenue Southbound				Harley Knox Boulevard Westbound				Indian Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	4	4	0	3	0	3	2	3	0	5	4	6	0	10	22
07:15 AM	0	0	1	1	0	0	1	1	1	0	1	2	4	1	1	6	10
07:30 AM	0	0	3	3	0	3	0	3	0	2	0	2	0	5	0	5	13
07:45 AM	0	1	0	1	0	3	0	3	0	1	0	1	1	4	0	5	10
Total Volume	0	1	8	9	0	9	1	10	3	6	1	10	9	16	1	26	55
% App. Total	0	11.1	88.9		0	90	10		30	60	10		34.6	61.5	3.8		
PHF	.000	.250	.500	.563	.000	.750	.250	.833	.375	.500	.250	.500	.563	.667	.250	.650	.625

City of Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_Indian\_Harley Knox AM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 2



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_Indian\_Harley Knox AM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Indian Avenue Southbound				Harley Knox Boulevard Westbound				Indian Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	0	4	4	0	3	0	3	2	3	0	5	4	6	0	10	
+15 mins.	0	0	1	1	0	0	1	1	1	0	1	2	4	1	1	6	
+30 mins.	0	0	3	3	0	3	0	3	0	2	0	2	0	5	0	5	
+45 mins.	0	1	0	1	0	3	0	3	0	1	0	1	1	4	0	5	
Total Volume	0	1	8	9	0	9	1	10	3	6	1	10	9	16	1	26	
% App. Total	0	11.1	88.9		0	90	10		30	60	10		34.6	61.5	3.8		
PHF	.000	.250	.500	.563	.000	.750	.250	.833	.375	.500	.250	.500	.563	.667	.250	.650	

3.1-261

City of Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_Indian\_Harley Knox AM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- 3 Axle Vehicles

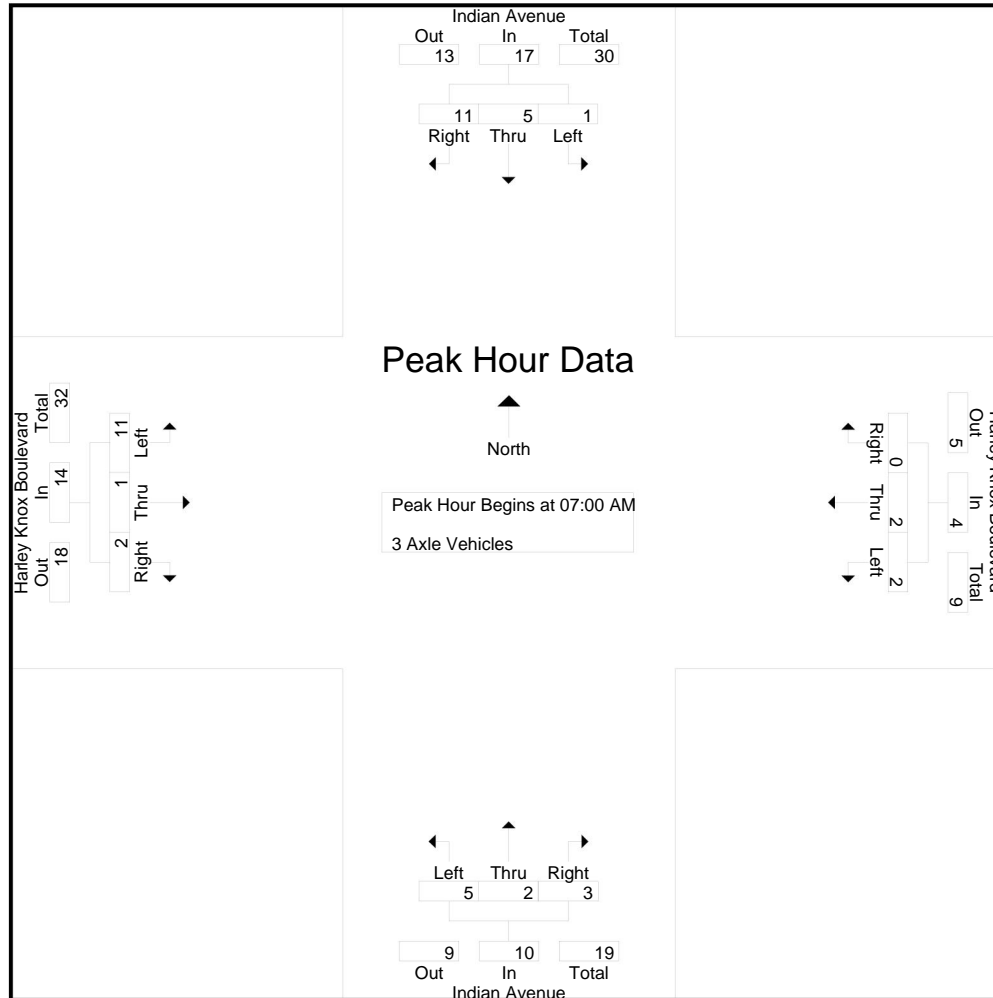
Start Time	Indian Avenue Southbound					Harley Knox Boulevard Westbound					Indian Avenue Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	0	1	3	0	4	1	0	0	0	1	1	2	1	0	4	2	0	1	1	3	1	12	13
07:15 AM	0	2	3	1	5	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	1	7	8
07:30 AM	0	1	3	0	4	0	1	0	0	1	1	0	1	1	2	3	1	1	0	5	1	12	13
07:45 AM	1	1	2	1	4	0	0	0	0	0	3	0	1	0	4	6	0	0	0	6	1	14	15
Total	1	5	11	2	17	2	2	0	0	4	5	2	3	1	10	11	1	2	1	14	4	45	49
08:00 AM	1	1	6	4	8	0	1	0	0	1	1	0	1	0	2	3	0	1	1	4	5	15	20
08:15 AM	0	1	4	1	5	0	0	0	0	0	4	0	0	0	4	4	0	0	0	4	1	13	14
08:30 AM	0	1	2	1	3	1	0	0	0	1	1	0	1	1	2	0	1	0	0	1	2	7	9
08:45 AM	0	0	2	1	2	0	1	0	0	1	0	0	0	0	0	9	3	0	0	12	1	15	16
Total	1	3	14	7	18	1	2	0	0	3	6	0	2	1	8	16	4	1	1	21	9	50	59
Grand Total	2	8	25	9	35	3	4	0	0	7	11	2	5	2	18	27	5	3	2	35	13	95	108
Apprch %	5.7	22.9	71.4			42.9	57.1	0			61.1	11.1	27.8			77.1	14.3	8.6					
Total %	2.1	8.4	26.3		36.8	3.2	4.2	0		7.4	11.6	2.1	5.3		18.9	28.4	5.3	3.2		36.8	12	88	

3.1-262

Start Time	Indian Avenue Southbound				Harley Knox Boulevard Westbound				Indian Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	1	3	4	1	0	0	1	1	2	1	4	2	0	1	3	12
07:15 AM	0	2	3	5	1	1	0	2	0	0	0	0	0	0	0	0	7
07:30 AM	0	1	3	4	0	1	0	1	1	0	1	2	3	1	1	5	12
07:45 AM	1	1	2	4	0	0	0	0	3	0	1	4	6	0	0	6	14
Total Volume	1	5	11	17	2	2	0	4	5	2	3	10	11	1	2	14	45
% App. Total	5.9	29.4	64.7		50	50	0		50	20	30		78.6	7.1	14.3		
PHF	.250	.625	.917	.850	.500	.500	.000	.500	.417	.250	.750	.625	.458	.250	.500	.583	.804

City of Perris  
N/S: Indian Avenue  
E/W: Harley Knox Boulevard  
Weather: Clear

File Name : 01\_PER\_Indian\_Harley Knox AM  
Site Code : 05118430  
Start Date : 5/24/2018  
Page No : 2



3.1-263

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_Indian\_Harley Knox AM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Indian Avenue Southbound				Harley Knox Boulevard Westbound				Indian Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	1	3	4	1	0	0	1	1	2	1	4	2	0	1	3	
+15 mins.	0	2	3	5	1	1	0	2	0	0	0	0	0	0	0	0	
+30 mins.	0	1	3	4	0	1	0	1	1	0	1	2	3	1	1	5	
+45 mins.	1	1	2	4	0	0	0	0	3	0	1	4	6	0	0	6	
Total Volume	1	5	11	17	2	2	0	4	5	2	3	10	11	1	2	14	
% App. Total	5.9	29.4	64.7		50	50	0		50	20	30		78.6	7.1	14.3		
PHF	.250	.625	.917	.850	.500	.500	.000	.500	.417	.250	.750	.625	.458	.250	.500	.583	

3.1-264



City of Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_Indian\_Harley Knox AM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- 4+ Axle Trucks

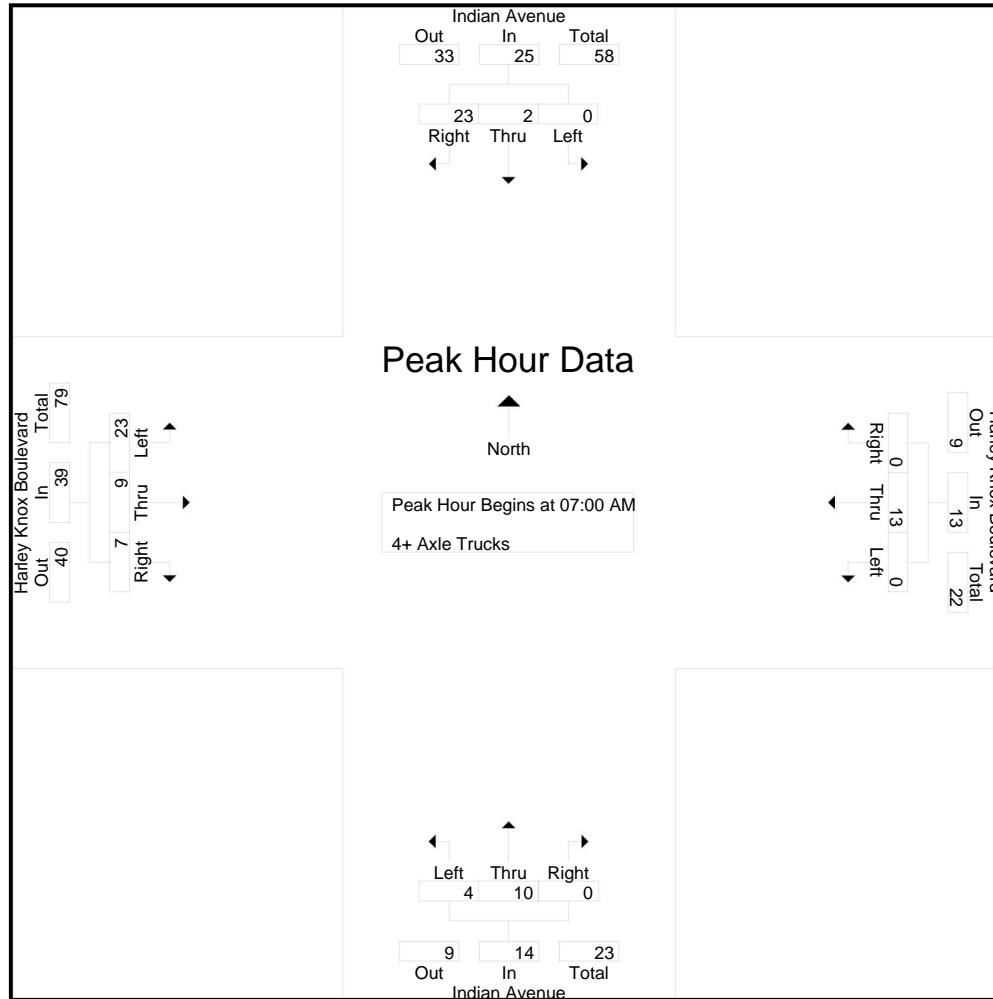
Start Time	Indian Avenue Southbound					Harley Knox Boulevard Westbound					Indian Avenue Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	0	0	6	1	6	0	1	0	0	1	2	2	0	0	4	7	3	2	2	12	3	23	26
07:15 AM	0	2	8	4	10	0	2	0	0	2	1	5	0	0	6	6	2	0	0	8	4	26	30
07:30 AM	0	0	3	2	3	0	6	0	0	6	1	2	0	0	3	5	3	2	0	10	2	22	24
07:45 AM	0	0	6	2	6	0	4	0	0	4	0	1	0	0	1	5	1	3	0	9	2	20	22
Total	0	2	23	9	25	0	13	0	0	13	4	10	0	0	14	23	9	7	2	39	11	91	102
08:00 AM	1	1	4	1	6	0	6	0	0	6	0	3	0	0	3	8	4	1	1	13	2	28	30
08:15 AM	0	1	4	3	5	0	4	0	0	4	2	1	0	0	3	9	1	3	0	13	3	25	28
08:30 AM	0	2	7	3	9	0	3	0	0	3	0	2	0	0	2	10	2	5	0	17	3	31	34
08:45 AM	0	4	13	5	17	2	4	0	0	6	2	3	1	0	6	5	3	5	2	13	7	42	49
Total	1	8	28	12	37	2	17	0	0	19	4	9	1	0	14	32	10	14	3	56	15	126	141
Grand Total	1	10	51	21	62	2	30	0	0	32	8	19	1	0	28	55	19	21	5	95	26	217	243
Apprch %	1.6	16.1	82.3			6.2	93.8	0			28.6	67.9	3.6			57.9	20	22.1					
Total %	0.5	4.6	23.5		28.6	0.9	13.8	0		14.7	3.7	8.8	0.5		12.9	25.3	8.8	9.7		43.8	10.7	89.3	

3.1-265

Start Time	Indian Avenue Southbound				Harley Knox Boulevard Westbound				Indian Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	6	6	0	1	0	1	2	2	0	4	7	3	2	12	23
07:15 AM	0	2	8	10	0	2	0	2	1	5	0	6	6	2	0	8	26
07:30 AM	0	0	3	3	0	6	0	6	1	2	0	3	5	3	2	10	22
07:45 AM	0	0	6	6	0	4	0	4	0	1	0	1	5	1	3	9	20
Total Volume	0	2	23	25	0	13	0	13	4	10	0	14	23	9	7	39	91
% App. Total	0	8	92		0	100	0		28.6	71.4	0		59	23.1	17.9		
PHF	.000	.250	.719	.625	.000	.542	.000	.542	.500	.500	.000	.583	.821	.750	.583	.813	.875

City of Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_Indian\_Harley Knox AM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 2



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_Indian\_Harley Knox AM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Indian Avenue Southbound				Harley Knox Boulevard Westbound				Indian Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	0	6	6	0	1	0	1	2	2	0	4	7	3	2	12	
+15 mins.	0	2	8	10	0	2	0	2	1	5	0	6	6	2	0	8	
+30 mins.	0	0	3	3	0	6	0	6	1	2	0	3	5	3	2	10	
+45 mins.	0	0	6	6	0	4	0	4	0	1	0	1	5	1	3	9	
Total Volume	0	2	23	25	0	13	0	13	4	10	0	14	23	9	7	39	
% App. Total	0	8	92		0	100	0		28.6	71.4	0		59	23.1	17.9		
PHF	.000	.250	.719	.625	.000	.542	.000	.542	.500	.500	.000	.583	.821	.750	.583	.813	

3.1-267

City of Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_Indian\_Harley Knox PM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 1

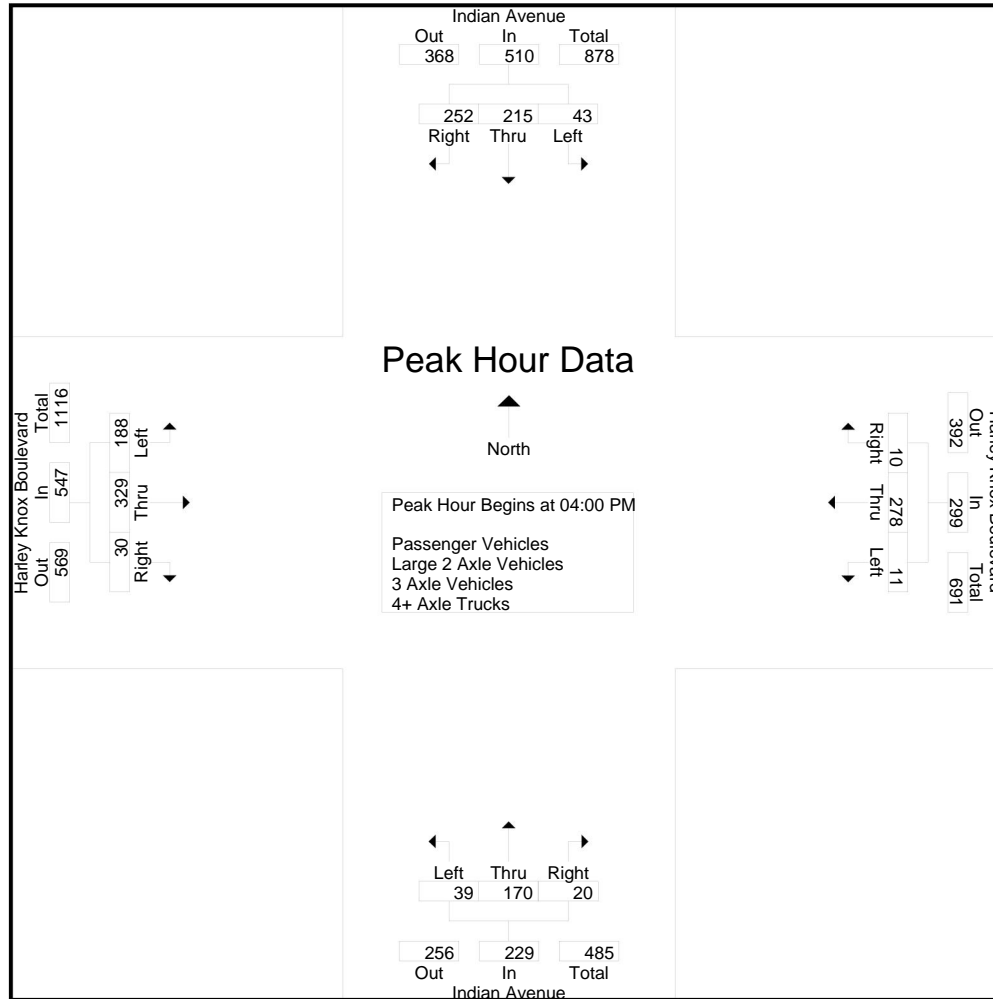
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Indian Avenue Southbound					Harley Knox Boulevard Westbound					Indian Avenue Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	6	43	44	18	93	0	75	6	1	81	5	42	4	1	51	43	87	8	3	138	23	363	386
04:15 PM	10	51	31	12	92	3	64	2	1	69	5	25	3	2	33	38	90	10	4	138	19	332	351
04:30 PM	14	61	122	42	197	4	72	2	0	78	14	54	8	6	76	60	79	7	1	146	49	497	546
04:45 PM	13	60	55	25	128	4	67	0	0	71	15	49	5	4	69	47	73	5	1	125	30	393	423
Total	43	215	252	97	510	11	278	10	2	299	39	170	20	13	229	188	329	30	9	547	121	1585	1706
05:00 PM	11	52	40	21	103	6	67	6	4	79	9	17	5	2	31	25	84	9	4	118	31	331	362
05:15 PM	12	70	35	11	117	3	84	3	2	90	2	19	0	0	21	26	81	7	2	114	15	342	357
05:30 PM	12	76	57	17	145	3	63	1	1	67	9	21	4	0	34	30	70	6	1	106	19	352	371
05:45 PM	16	51	34	15	101	1	51	3	1	55	4	23	3	2	30	30	69	3	1	102	19	288	307
Total	51	249	166	64	466	13	265	13	8	291	24	80	12	4	116	111	304	25	8	440	84	1313	1397
Grand Total	94	464	418	161	976	24	543	23	10	590	63	250	32	17	345	299	633	55	17	987	205	2898	3103
Apprch %	9.6	47.5	42.8			4.1	92	3.9			18.3	72.5	9.3			30.3	64.1	5.6					
Total %	3.2	16	14.4		33.7	0.8	18.7	0.8		20.4	2.2	8.6	1.1		11.9	10.3	21.8	1.9		34.1	6.6	93.4	
Passenger Vehicles	94	442	368		1046	20	483	20		531	43	207	29		294	223	598	34		865	0	0	2736
% Passenger Vehicles	100	95.3	88	88.2	92	83.3	89	87	80	88.5	68.3	82.8	90.6	88.2	81.2	74.6	94.5	61.8	58.8	86.2	0	0	88.2
Large 2 Axle Vehicles	0	5	8		16	1	13	0		14	5	5	0		10	9	8	4		25	0	0	65
% Large 2 Axle Vehicles	0	1.1	1.9	1.9	1.4	4.2	2.4	0	0	2.3	7.9	2	0	0	2.8	3	1.3	7.3	23.5	2.5	0	0	2.1
3 Axle Vehicles	0	2	8		11	1	8	2		12	4	17	2		25	44	8	6		60	0	0	108
% 3 Axle Vehicles	0	0.4	1.9	0.6	1	4.2	1.5	8.7	10	2	6.3	6.8	6.2	11.8	6.9	14.7	1.3	10.9	11.8	6	0	0	3.5
4+ Axle Trucks	0	15	34		64	2	39	1		43	11	21	1		33	23	19	11		54	0	0	194
% 4+ Axle Trucks	0	3.2	8.1	9.3	5.6	8.3	7.2	4.3	10	7.2	17.5	8.4	3.1	0	9.1	7.7	3	20	5.9	5.4	0	0	6.3

Start Time	Indian Avenue Southbound				Harley Knox Boulevard Westbound				Indian Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	6	43	44	93	0	75	6	81	5	42	4	51	43	87	8	138	363
04:15 PM	10	51	31	92	3	64	2	69	5	25	3	33	38	90	10	138	332
04:30 PM	14	61	122	197	4	72	2	78	14	54	8	76	60	79	7	146	497
04:45 PM	13	60	55	128	4	67	0	71	15	49	5	69	47	73	5	125	393
Total Volume	43	215	252	510	11	278	10	299	39	170	20	229	188	329	30	547	1585
% App. Total	8.4	42.2	49.4		3.7	93	3.3		17	74.2	8.7		34.4	60.1	5.5		
PHF	.768	.881	.516	.647	.688	.927	.417	.923	.650	.787	.625	.753	.783	.914	.750	.937	.797

City of Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_Indian\_Harley Knox PM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 2



City of Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_Indian\_Harley Knox PM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Indian Avenue Southbound				Harley Knox Boulevard Westbound				Indian Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:30 PM				04:00 PM				04:00 PM				
+0 mins.	14	61	122	197	4	72	2	78	5	42	4	51	43	87	8	138	
+15 mins.	13	60	55	128	4	67	0	71	5	25	3	33	38	90	10	138	
+30 mins.	11	52	40	103	6	67	6	79	14	54	8	76	60	79	7	146	
+45 mins.	12	70	35	117	3	84	3	90	15	49	5	69	47	73	5	125	
Total Volume	50	243	252	545	17	290	11	318	39	170	20	229	188	329	30	547	
% App. Total	9.2	44.6	46.2		5.3	91.2	3.5		17	74.2	8.7		34.4	60.1	5.5		
PHF	.893	.868	.516	.692	.708	.863	.458	.883	.650	.787	.625	.753	.783	.914	.750	.937	

City of Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_Indian\_Harley Knox PM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Passenger Vehicles

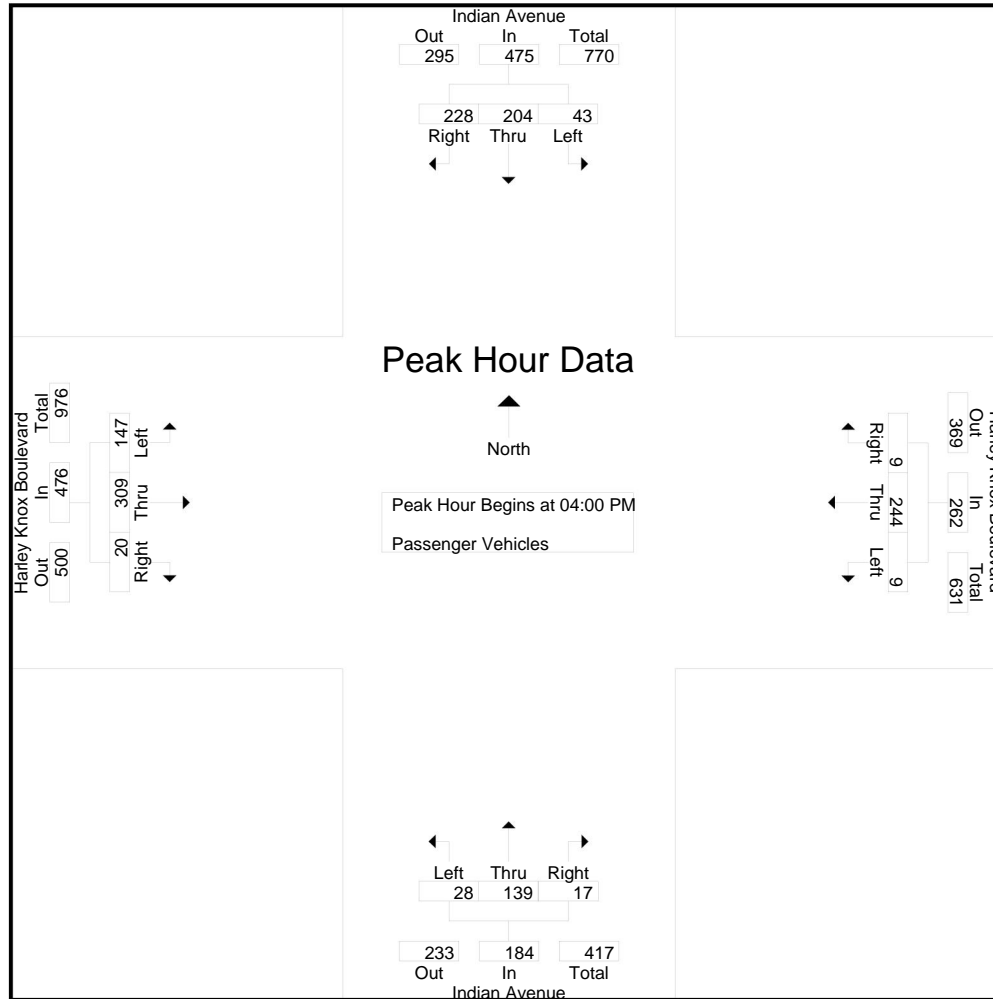
Start Time	Indian Avenue Southbound					Harley Knox Boulevard Westbound					Indian Avenue Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	6	42	36	13	84	0	68	6	1	74	5	34	4	1	43	39	83	6	1	128	16	329	345
04:15 PM	10	46	26	11	82	2	52	2	1	56	2	20	3	2	25	27	83	7	3	117	17	280	297
04:30 PM	14	59	114	40	187	3	61	1	0	65	12	48	7	5	67	44	73	4	0	121	45	440	485
04:45 PM	13	57	52	24	122	4	63	0	0	67	9	37	3	3	49	37	70	3	1	110	28	348	376
Total	43	204	228	88	475	9	244	9	2	262	28	139	17	11	184	147	309	20	5	476	106	1397	1503
05:00 PM	11	50	37	20	98	6	61	5	3	72	5	15	5	2	25	20	78	5	2	103	27	298	325
05:15 PM	12	66	26	8	104	2	73	2	1	77	2	17	0	0	19	14	76	3	1	93	10	293	303
05:30 PM	12	73	50	16	135	2	58	1	1	61	5	18	4	0	27	22	68	4	1	94	18	317	335
05:45 PM	16	49	27	10	92	1	47	3	1	51	3	18	3	2	24	20	67	2	1	89	14	256	270
Total	51	238	140	54	429	11	239	11	6	261	15	68	12	4	95	76	289	14	5	379	69	1164	1233
Grand Total	94	442	368	142	904	20	483	20	8	523	43	207	29	15	279	223	598	34	10	855	175	2561	2736
Apprch %	10.4	48.9	40.7			3.8	92.4	3.8			15.4	74.2	10.4			26.1	69.9	4					
Total %	3.7	17.3	14.4		35.3	0.8	18.9	0.8		20.4	1.7	8.1	1.1		10.9	8.7	23.4	1.3		33.4	6.4	93.6	

3.1-271

Start Time	Indian Avenue Southbound				Harley Knox Boulevard Westbound				Indian Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	6	42	36	84	0	<b>68</b>	<b>6</b>	<b>74</b>	5	34	4	43	39	<b>83</b>	6	<b>128</b>	329
04:15 PM	10	46	26	82	2	52	2	56	2	20	3	25	27	83	7	117	280
04:30 PM	<b>14</b>	<b>59</b>	<b>114</b>	<b>187</b>	3	61	1	65	<b>12</b>	<b>48</b>	<b>7</b>	<b>67</b>	<b>44</b>	73	4	121	<b>440</b>
04:45 PM	13	57	52	122	<b>4</b>	63	0	67	9	37	3	49	37	70	3	110	348
Total Volume	43	204	228	475	9	244	9	262	28	139	17	184	147	309	20	476	1397
% App. Total	9.1	42.9	48		3.4	93.1	3.4		15.2	75.5	9.2		30.9	64.9	4.2		
PHF	.768	.864	.500	.635	.563	.897	.375	.885	.583	.724	.607	.687	.835	.931	.714	.930	.794

City of Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_Indian\_Harley Knox PM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 2





City of Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_Indian\_Harley Knox PM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Indian Avenue Southbound				Harley Knox Boulevard Westbound				Indian Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:00 PM				04:00 PM				04:00 PM				04:00 PM				
+0 mins.	6	42	36	84	0	<b>68</b>	<b>6</b>	<b>74</b>	5	34	4	43	39	<b>83</b>	6	<b>128</b>	
+15 mins.	10	46	26	82	2	52	2	56	2	20	3	25	27	83	7	117	
+30 mins.	<b>14</b>	<b>59</b>	<b>114</b>	<b>187</b>	3	61	1	65	<b>12</b>	<b>48</b>	<b>7</b>	<b>67</b>	<b>44</b>	73	4	121	
+45 mins.	13	57	52	122	<b>4</b>	63	0	67	9	37	3	49	37	70	3	110	
Total Volume	43	204	228	475	9	244	9	262	28	139	17	184	147	309	20	476	
% App. Total	9.1	42.9	48		3.4	93.1	3.4		15.2	75.5	9.2		30.9	64.9	4.2		
PHF	.768	.864	.500	.635	.563	.897	.375	.885	.583	.724	.607	.687	.835	.931	.714	.930	

City of Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_Indian\_Harley Knox PM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

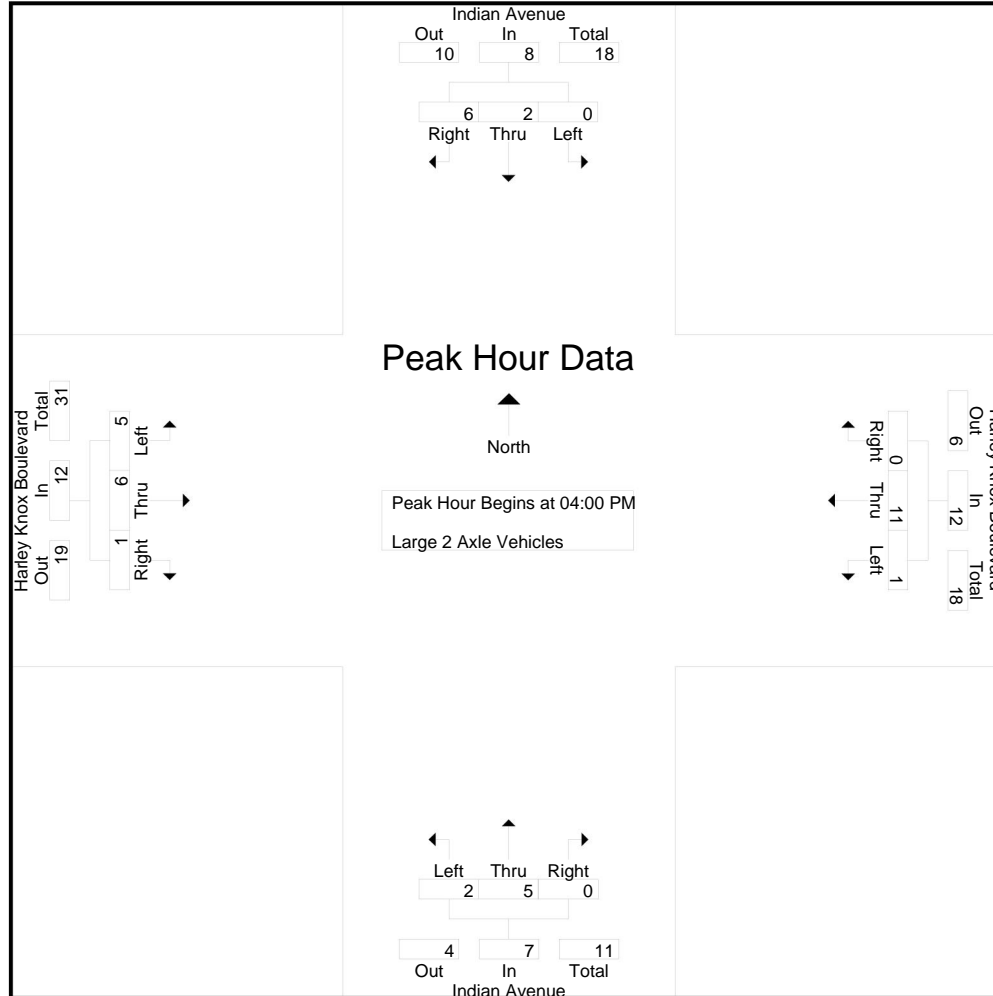
Start Time	Indian Avenue Southbound					Harley Knox Boulevard Westbound					Indian Avenue Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total								
04:00 PM	0	0	2	2	2	0	3	0	0	3	0	2	0	0	2	1	1	0	0	2	2	2	0	0	5	2	9	11
04:15 PM	0	1	1	0	2	1	4	0	0	5	0	2	0	0	2	2	3	0	0	5	0	14	14	0	14	14		
04:30 PM	0	1	3	0	4	0	3	0	0	3	0	0	0	0	0	1	1	1	1	3	1	10	11	1	10	11		
04:45 PM	0	0	0	0	0	0	1	0	0	1	2	1	0	0	3	1	1	0	0	2	0	6	6	0	6	6		
Total	0	2	6	2	8	1	11	0	0	12	2	5	0	0	7	5	6	1	1	12	3	39	42	3	39	42		
05:00 PM	0	0	0	0	0	0	2	0	0	2	1	0	0	0	1	0	0	2	2	2	2	5	7	2	5	7		
05:15 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	3	1	4	5	1	4	5		
05:30 PM	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	1	0	0	0	1	0	3	3	0	3	3		
05:45 PM	0	2	1	1	3	0	0	0	0	0	1	0	0	0	1	2	1	0	0	3	1	7	8	1	7	8		
Total	0	3	2	1	5	0	2	0	0	2	3	0	0	0	3	4	2	3	3	9	4	19	23	4	19	23		
Grand Total	0	5	8	3	13	1	13	0	0	14	5	5	0	0	10	9	8	4	4	21	7	58	65	7	58	65		
Apprch %	0	38.5	61.5			7.1	92.9	0			50	50	0			42.9	38.1	19										
Total %	0	8.6	13.8		22.4	1.7	22.4	0		24.1	8.6	8.6	0		17.2	15.5	13.8	6.9		36.2	10.8	89.2		10.8	89.2			

3.1-274

Start Time	Indian Avenue Southbound				Harley Knox Boulevard Westbound				Indian Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	2	2	0	3	0	3	0	2	0	2	1	1	0	2	9
04:15 PM	0	1	1	2	1	4	0	5	0	2	0	2	2	3	0	5	14
04:30 PM	0	1	3	4	0	3	0	3	0	0	0	0	1	1	1	3	10
04:45 PM	0	0	0	0	0	1	0	1	2	1	0	3	1	1	0	2	6
Total Volume	0	2	6	8	1	11	0	12	2	5	0	7	5	6	1	12	39
% App. Total	0	25	75		8.3	91.7	0		28.6	71.4	0		41.7	50	8.3		
PHF	.000	.500	.500	.500	.250	.688	.000	.600	.250	.625	.000	.583	.625	.500	.250	.600	.696

City of Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_Indian\_Harley Knox PM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 2



3.1-275

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_Indian\_Harley Knox PM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Indian Avenue Southbound				Harley Knox Boulevard Westbound				Indian Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:00 PM				04:00 PM				04:00 PM				04:00 PM				
+0 mins.	0	0	2	2	0	3	0	3	0	2	0	2	1	1	0	2	
+15 mins.	0	1	1	2	1	4	0	5	0	2	0	2	2	3	0	5	
+30 mins.	0	1	3	4	0	3	0	3	0	0	0	0	1	1	1	3	
+45 mins.	0	0	0	0	0	1	0	1	2	1	0	3	1	1	0	2	
Total Volume	0	2	6	8	1	11	0	12	2	5	0	7	5	6	1	12	
% App. Total	0	25	75		8.3	91.7	0		28.6	71.4	0		41.7	50	8.3		
PHF	.000	.500	.500	.500	.250	.688	.000	.600	.250	.625	.000	.583	.625	.500	.250	.600	

City of Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_Indian\_Harley Knox PM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- 3 Axle Vehicles

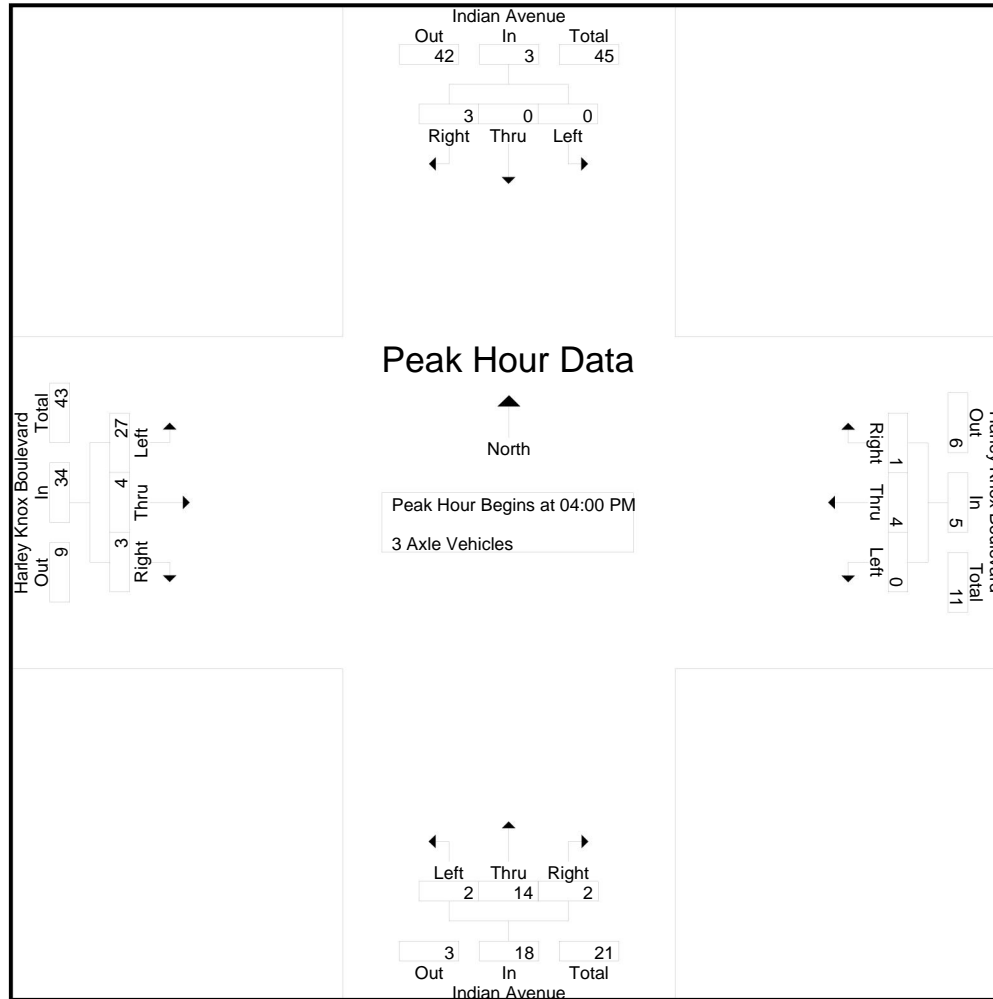
Start Time	Indian Avenue Southbound					Harley Knox Boulevard Westbound					Indian Avenue Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	2	0	1	1	3	1	6	7
04:15 PM	0	0	1	0	1	0	1	0	0	1	1	2	0	0	3	8	1	1	1	10	1	15	16
04:30 PM	0	0	0	0	0	0	2	1	0	3	1	3	1	1	5	9	2	0	0	11	1	19	20
04:45 PM	0	0	2	1	2	0	1	0	0	1	0	6	1	1	7	8	1	1	0	10	2	20	22
Total	0	0	3	1	3	0	4	1	0	5	2	14	2	2	18	27	4	3	2	34	5	60	65
05:00 PM	0	0	1	0	1	0	0	0	0	0	1	1	0	0	2	5	1	1	0	7	0	10	10
05:15 PM	0	0	1	0	1	1	2	1	1	4	0	1	0	0	1	6	1	1	0	8	1	14	15
05:30 PM	0	2	1	0	3	0	1	0	0	1	1	1	0	0	2	2	2	1	0	5	0	11	11
05:45 PM	0	0	2	0	2	0	1	0	0	1	0	0	0	0	0	4	0	0	0	4	0	7	7
Total	0	2	5	0	7	1	4	1	1	6	2	3	0	0	5	17	4	3	0	24	1	42	43
Grand Total	0	2	8	1	10	1	8	2	1	11	4	17	2	2	23	44	8	6	2	58	6	102	108
Apprch %	0	20	80			9.1	72.7	18.2			17.4	73.9	8.7			75.9	13.8	10.3					
Total %	0	2	7.8		9.8	1	7.8	2		10.8	3.9	16.7	2		22.5	43.1	7.8	5.9		56.9	5.6	94.4	

3.1-277

Start Time	Indian Avenue Southbound				Harley Knox Boulevard Westbound				Indian Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	0	0	0	0	3	0	3	2	0	1	3	6
04:15 PM	0	0	1	1	0	1	0	1	1	2	0	3	8	1	1	10	15
04:30 PM	0	0	0	0	0	2	1	3	1	3	1	5	9	2	0	11	19
04:45 PM	0	0	2	2	0	1	0	1	0	6	1	7	8	1	1	10	20
Total Volume	0	0	3	3	0	4	1	5	2	14	2	18	27	4	3	34	60
% App. Total	0	0	100		0	80	20		11.1	77.8	11.1		79.4	11.8	8.8		
PHF	.000	.000	.375	.375	.000	.500	.250	.417	.500	.583	.500	.643	.750	.500	.750	.773	.750

City of Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_Indian\_Harley Knox PM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 2



3.1-278

City of Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_Indian\_Harley Knox PM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Indian Avenue Southbound				Harley Knox Boulevard Westbound				Indian Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:00 PM				04:00 PM				04:00 PM				04:00 PM				
+0 mins.	0	0	0	0	0	0	0	0	0	3	0	3	2	0	1	3	
+15 mins.	0	0	1	1	0	1	0	1	1	2	0	3	8	1	1	10	
+30 mins.	0	0	0	0	0	2	1	3	1	3	1	5	9	2	0	11	
+45 mins.	0	0	2	2	0	1	0	1	0	6	1	7	8	1	1	10	
Total Volume	0	0	3	3	0	4	1	5	2	14	2	18	27	4	3	34	
% App. Total	0	0	100		0	80	20		11.1	77.8	11.1		79.4	11.8	8.8		
PHF	.000	.000	.375	.375	.000	.500	.250	.417	.500	.583	.500	.643	.750	.500	.750	.773	

City of Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_Indian\_Harley Knox PM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	Indian Avenue Southbound					Harley Knox Boulevard Westbound					Indian Avenue Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	0	1	6	3	7	0	4	0	0	4	0	3	0	0	3	1	3	1	1	5	4	19	23
04:15 PM	0	4	3	1	7	0	7	0	0	7	2	1	0	0	3	1	3	2	0	6	1	23	24
04:30 PM	0	1	5	2	6	1	6	0	0	7	1	3	0	0	4	6	3	2	0	11	2	28	30
04:45 PM	0	3	1	0	4	0	2	0	0	2	4	5	1	0	10	1	1	1	0	3	0	19	19
Total	0	9	15	6	24	1	19	0	0	20	7	12	1	0	20	9	10	6	1	25	7	89	96
05:00 PM	0	2	2	1	4	0	4	1	1	5	2	1	0	0	3	0	5	1	0	6	2	18	20
05:15 PM	0	4	7	3	11	0	9	0	0	9	0	1	0	0	1	5	3	2	0	10	3	31	34
05:30 PM	0	0	6	1	6	1	4	0	0	5	2	2	0	0	4	5	0	1	0	6	1	21	22
05:45 PM	0	0	4	4	4	0	3	0	0	3	0	5	0	0	5	4	1	1	0	6	4	18	22
Total	0	6	19	9	25	1	20	1	1	22	4	9	0	0	13	14	9	5	0	28	10	88	98
Grand Total	0	15	34	15	49	2	39	1	1	42	11	21	1	0	33	23	19	11	1	53	17	177	194
Apprch %	0	30.6	69.4			4.8	92.9	2.4			33.3	63.6	3			43.4	35.8	20.8					
Total %	0	8.5	19.2		27.7	1.1	22	0.6		23.7	6.2	11.9	0.6		18.6	13	10.7	6.2		29.9	8.8	91.2	

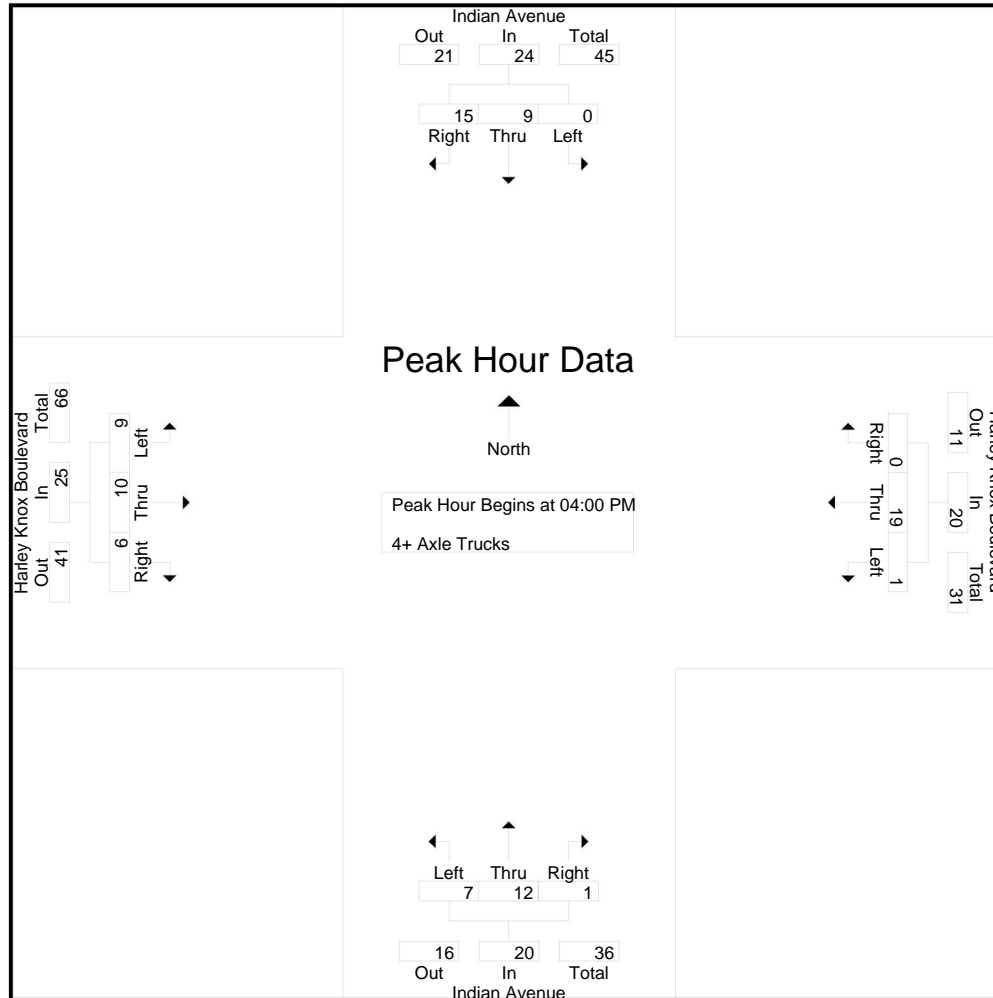
3.1-280

Start Time	Indian Avenue Southbound				Harley Knox Boulevard Westbound				Indian Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	1	6	7	0	4	0	4	0	3	0	3	1	3	1	5	19
04:15 PM	0	4	3	7	0	7	0	7	2	1	0	3	1	3	2	6	23
04:30 PM	0	1	5	6	1	6	0	7	1	3	0	4	6	3	2	11	28
04:45 PM	0	3	1	4	0	2	0	2	4	5	1	10	1	1	1	3	19
Total Volume	0	9	15	24	1	19	0	20	7	12	1	20	9	10	6	25	89
% App. Total	0	37.5	62.5		5	95	0		35	60	5		36	40	24		
PHF	.000	.563	.625	.857	.250	.679	.000	.714	.438	.600	.250	.500	.375	.833	.750	.568	.795



City of Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_Indian\_Harley Knox PM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 2



City of Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_Indian\_Harley Knox PM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Indian Avenue Southbound				Harley Knox Boulevard Westbound				Indian Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:00 PM				04:00 PM				04:00 PM				04:00 PM				
+0 mins.	0	1	6	7	0	4	0	4	0	3	0	3	1	3	1	5	
+15 mins.	0	4	3	7	0	7	0	7	2	1	0	3	1	3	2	6	
+30 mins.	0	1	5	6	1	6	0	7	1	3	0	4	6	3	2	11	
+45 mins.	0	3	1	4	0	2	0	2	4	5	1	10	1	1	1	3	
Total Volume	0	9	15	24	1	19	0	20	7	12	1	20	9	10	6	25	
% App. Total	0	37.5	62.5		5	95	0		35	60	5		36	40	24		
PHF	.000	.563	.625	.857	.250	.679	.000	.714	.438	.600	.250	.500	.375	.833	.750	.568	

Location: Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard



Date: 5/24/2018  
 Day: Thursday

PEDESTRIANS

	North Leg Indian Avenue	East Leg Harley Knox Boulevard	South Leg Indian Avenue	West Leg Harley Knox Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg Indian Avenue	East Leg Harley Knox Boulevard	South Leg Indian Avenue	West Leg Harley Knox Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

3.1-283

Location: Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard



Date: 5/24/2018  
 Day: Thursday

BICYCLES

	Southbound Indian Avenue			Westbound Harley Knox Boulevard			Northbound Indian Avenue			Eastbound Harley Knox Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	0	0	0	0	0	0	0	0	1

	Southbound Indian Avenue			Westbound Harley Knox Boulevard			Northbound Indian Avenue			Eastbound Harley Knox Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	1	0	0	0	0	1

3.1-284

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Meyer Drive / John F Kennedy Drive  
 Weather: Clear

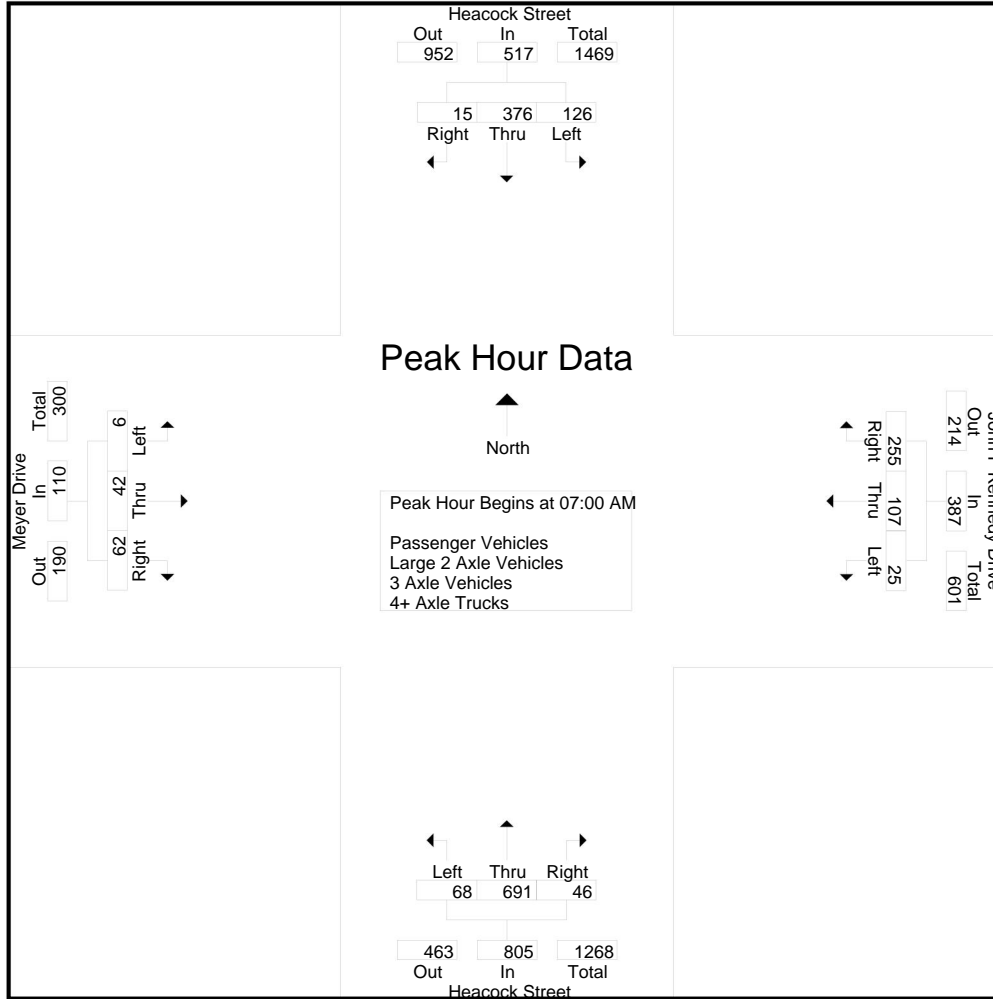
File Name : MRVHEMEAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Heacock Street Southbound					John F Kennedy Drive Westbound					Heacock Street Northbound					Meyer Drive Eastbound					Exclu. Total	Inclu. Total
	Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR		
07:00 AM	19	99	0	0	118	5	26	42	28	73	20	172	4	1	196	2	5	12	10	19	39	406
07:15 AM	30	106	8	3	144	6	31	72	47	109	7	154	11	1	172	1	8	18	12	27	63	452
07:30 AM	43	91	4	3	138	7	29	65	24	101	23	186	13	6	222	2	15	17	12	34	45	495
07:45 AM	34	80	3	0	117	7	21	76	49	104	18	179	18	6	215	1	14	15	7	30	62	466
Total	126	376	15	6	517	25	107	255	148	387	68	691	46	14	805	6	42	62	41	110	209	1819
08:00 AM	24	63	6	2	93	10	27	54	38	91	15	125	4	1	144	2	10	7	6	19	47	347
08:15 AM	30	48	6	1	84	2	21	55	26	78	11	123	15	7	149	3	8	8	6	19	40	330
08:30 AM	15	55	10	2	80	4	19	34	25	57	13	109	13	2	135	3	11	8	3	22	32	294
08:45 AM	25	51	8	2	84	2	23	34	22	59	16	81	9	1	106	2	4	10	6	16	31	265
Total	94	217	30	7	341	18	90	177	111	285	55	438	41	11	534	10	33	33	21	76	150	1236
Grand Total	220	593	45	13	858	43	197	432	259	672	123	1129	87	25	1339	16	75	95	62	186	359	3055
Apprch %	25.6	69.1	5.2			6.4	29.3	64.3			9.2	84.3	6.5			8.6	40.3	51.1				
Total %	7.2	19.4	1.5		28.1	1.4	6.4	14.1		22	4	37	2.8		43.8	0.5	2.5	3.1		6.1	10.5	89.5
Passenger Vehicles	212	537	43		805	42	194	426		921	120	1093	83		1321	11	73	93		239	0	0
% Passenger Vehicles	96.4	90.6	95.6	100	92.4	97.7	98.5	98.6	100	98.9	97.6	96.8	95.4	100	96.8	68.8	97.3	97.9	100	96.4	0	0
Large 2 Axle Vehicles	6	7	2		15	1	3	5		9	3	9	3		15	5	2	2		9	0	0
% Large 2 Axle Vehicles	2.7	1.2	4.4	0	1.7	2.3	1.5	1.2	0	1	2.4	0.8	3.4	0	1.1	31.2	2.7	2.1	0	3.6	0	0
3 Axle Vehicles	1	4	0		5	0	0	0		0	0	4	0		4	0	0	0		0	0	0
% 3 Axle Vehicles	0.5	0.7	0	0	0.6	0	0	0	0	0	0	0.4	0	0	0.3	0	0	0	0	0	0	0
4+ Axle Trucks	1	45	0		46	0	0	1		1	0	23	1		24	0	0	0		0	0	0
% 4+ Axle Trucks	0.5	7.6	0	0	5.3	0	0	0.2	0	0.1	0	2	1.1	0	1.8	0	0	0	0	0	0	0

3.1-285

Start Time	Heacock Street Southbound				John F Kennedy Drive Westbound				Heacock Street Northbound				Meyer Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	19	99	0	118	5	26	42	73	20	172	4	196	2	5	12	19	406
07:15 AM	30	106	8	144	6	31	72	109	7	154	11	172	1	8	18	27	452
07:30 AM	43	91	4	138	7	29	65	101	23	186	13	222	2	15	17	34	495
07:45 AM	34	80	3	117	7	21	76	104	18	179	18	215	1	14	15	30	466
Total Volume	126	376	15	517	25	107	255	387	68	691	46	805	6	42	62	110	1819
% App. Total	24.4	72.7	2.9		6.5	27.6	65.9		8.4	85.8	5.7		5.5	38.2	56.4		
PHF	.733	.887	.469	.898	.893	.863	.839	.888	.739	.929	.639	.907	.750	.700	.861	.809	.919



City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Meyer Drive / John F Kennedy Drive  
 Weather: Clear

File Name : MRVHEMEAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Heacock Street Southbound				John F Kennedy Drive Westbound				Heacock Street Northbound				Meyer Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:15 AM				07:00 AM				07:00 AM				
+0 mins.	19	99	0	118	6	31	72	109	20	172	4	196	2	5	12	19	
+15 mins.	30	106	8	144	7	29	65	101	7	154	11	172	1	8	18	27	
+30 mins.	43	91	4	138	7	21	76	104	23	186	13	222	2	15	17	34	
+45 mins.	34	80	3	117	10	27	54	91	18	179	18	215	1	14	15	30	
Total Volume	126	376	15	517	30	108	267	405	68	691	46	805	6	42	62	110	
% App. Total	24.4	72.7	2.9		7.4	26.7	65.9		8.4	85.8	5.7		5.5	38.2	56.4		
PHF	.733	.887	.469	.898	.750	.871	.878	.929	.739	.929	.639	.907	.750	.700	.861	.809	

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Meyer Drive / John F Kennedy Drive  
 Weather: Clear

File Name : MRVHEMEAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Heacock Street Southbound					John F Kennedy Drive Westbound					Heacock Street Northbound					Meyer Drive Eastbound					Exclu. Total	Inclu. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total		
07:00 AM	18	94	0	0	112	5	26	42	28	73	20	170	4	1	194	2	5	12	10	19	39	398
07:15 AM	29	103	7	3	139	6	31	72	47	109	7	151	10	1	168	1	7	18	12	26	63	442
07:30 AM	41	83	4	3	128	6	29	63	24	98	23	180	13	6	216	1	15	17	12	33	45	475
07:45 AM	33	71	3	0	107	7	20	74	49	101	18	174	18	6	210	1	14	15	7	30	62	448
Total	121	351	14	6	486	24	106	251	148	381	68	675	45	14	788	5	41	62	41	108	209	1763
08:00 AM	23	56	6	2	85	10	25	53	38	88	14	116	4	1	134	2	10	7	6	19	47	326
08:15 AM	30	40	5	1	75	2	21	55	26	78	10	119	14	7	143	2	8	8	6	18	40	314
08:30 AM	14	44	10	2	68	4	19	34	25	57	12	105	11	2	128	1	10	7	3	18	32	271
08:45 AM	24	46	8	2	78	2	23	33	22	58	16	78	9	1	103	1	4	9	6	14	31	253
Total	91	186	29	7	306	18	88	175	111	281	52	418	38	11	508	6	32	31	21	69	150	1164
Grand Total	212	537	43	13	792	42	194	426	259	662	120	1093	83	25	1296	11	73	93	62	177	359	2927
Apprch %	26.8	67.8	5.4			6.3	29.3	64.4			9.3	84.3	6.4			6.2	41.2	52.5				
Total %	7.2	18.3	1.5		27.1	1.4	6.6	14.6		22.6	4.1	37.3	2.8		44.3	0.4	2.5	3.2		6	10.9	89.1

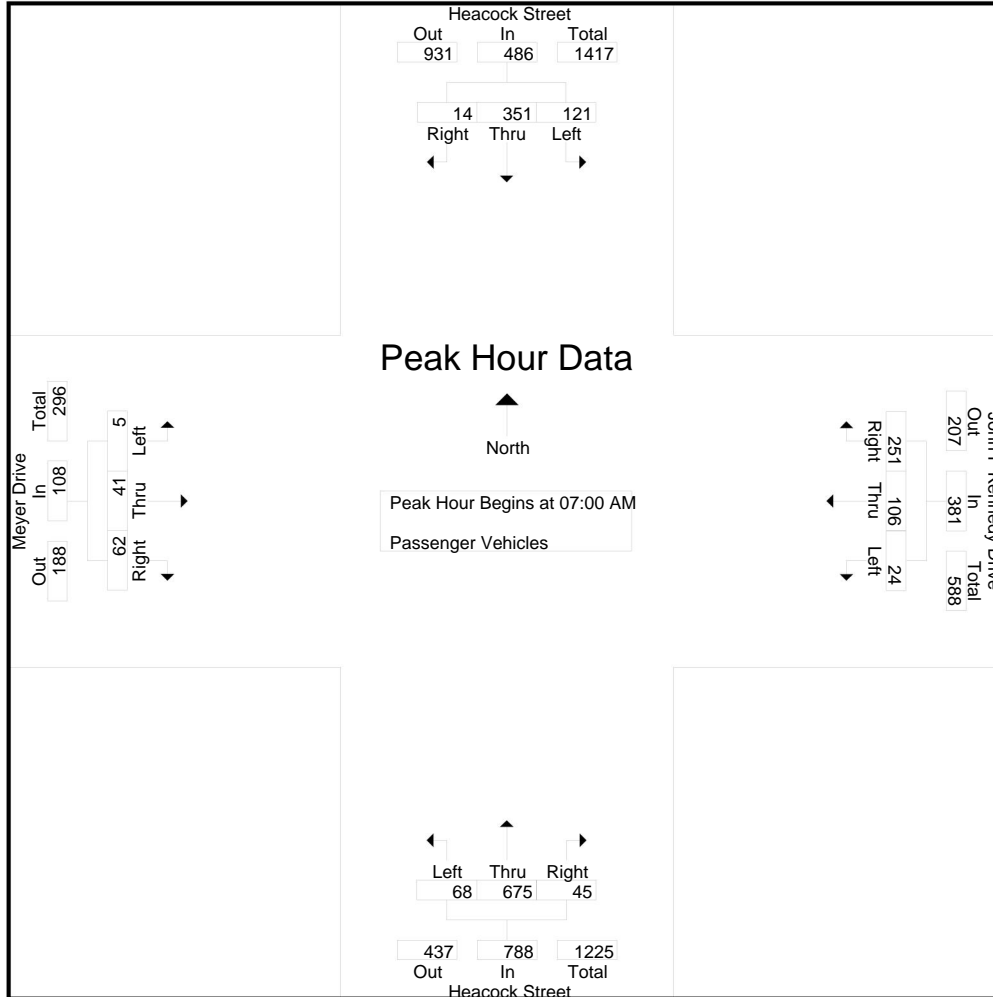
3.1-288

Start Time	Heacock Street Southbound				John F Kennedy Drive Westbound				Heacock Street Northbound				Meyer Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	18	94	0	112	5	26	42	73	20	170	4	194	2	5	12	19	398
07:15 AM	29	103	7	139	6	31	72	109	7	151	10	168	1	7	18	26	442
07:30 AM	41	83	4	128	6	29	63	98	23	180	13	216	1	15	17	33	475
07:45 AM	33	71	3	107	7	20	74	101	18	174	18	210	1	14	15	30	448
Total Volume	121	351	14	486	24	106	251	381	68	675	45	788	5	41	62	108	1763
% App. Total	24.9	72.2	2.9		6.3	27.8	65.9		8.6	85.7	5.7		4.6	38	57.4		
PHF	.738	.852	.500	.874	.857	.855	.848	.874	.739	.938	.625	.912	.625	.683	.861	.818	.928



City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Meyer Drive / John F Kennedy Drive  
 Weather: Clear

File Name : MRVHEMEAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 2



3.1-289

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Meyer Drive / John F Kennedy Drive  
 Weather: Clear

File Name : MRVHEMEAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Heacock Street Southbound				John F Kennedy Drive Westbound				Heacock Street Northbound				Meyer Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	18	94	0	112	5	26	42	73	20	170	4	194	2	5	12	19	
+15 mins.	29	<b>103</b>	<b>7</b>	<b>139</b>	6	<b>31</b>	72	<b>109</b>	7	151	10	168	1	7	<b>18</b>	26	
+30 mins.	<b>41</b>	83	4	128	6	29	63	98	<b>23</b>	<b>180</b>	13	<b>216</b>	1	<b>15</b>	17	<b>33</b>	
+45 mins.	33	71	3	107	<b>7</b>	20	<b>74</b>	101	18	174	<b>18</b>	210	1	14	15	30	
Total Volume	121	351	14	486	24	106	251	381	68	675	45	788	5	41	62	108	
% App. Total	24.9	72.2	2.9		6.3	27.8	65.9		8.6	85.7	5.7		4.6	38	57.4		
PHF	.738	.852	.500	.874	.857	.855	.848	.874	.739	.938	.625	.912	.625	.683	.861	.818	

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Meyer Drive / John F Kennedy Drive  
 Weather: Clear

File Name : MRVHEMEAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

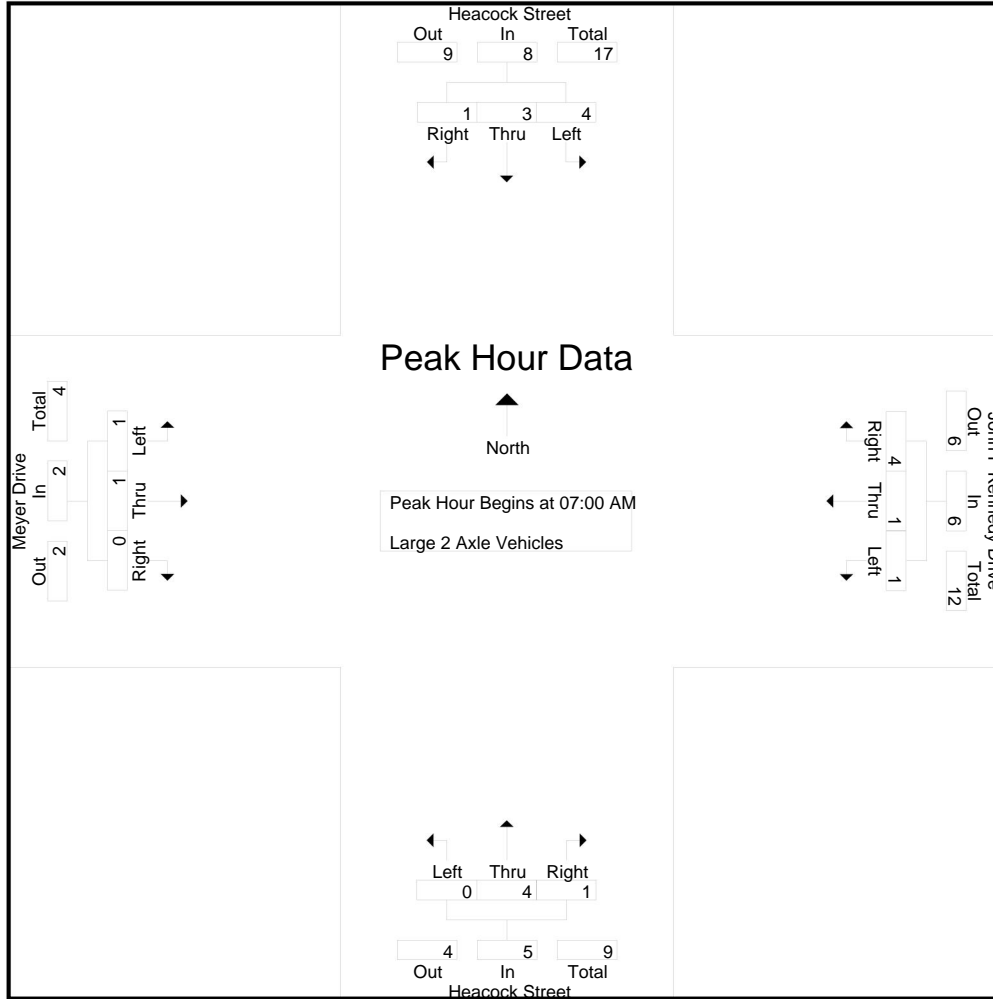
Start Time	Heacock Street Southbound					John F Kennedy Drive Westbound					Heacock Street Northbound					Meyer Drive Eastbound					Exclu. Total	Inclu. Total			
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total					
07:00 AM	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
07:15 AM	0	0	1	0	1	0	0	0	0	0	0	1	1	0	2	0	1	0	0	1	0	0	0	1	4
07:30 AM	2	2	0	0	4	1	0	2	0	3	0	3	0	0	3	1	0	0	0	1	0	0	0	1	11
07:45 AM	1	0	0	0	1	0	1	2	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Total	4	3	1	0	8	1	1	4	0	6	0	4	1	0	5	1	1	0	0	2	0	0	0	0	21
08:00 AM	1	1	0	0	2	0	2	0	0	2	1	4	0	0	5	0	0	0	0	0	0	0	0	0	9
08:15 AM	0	1	1	0	2	0	0	0	0	0	1	0	1	0	2	1	0	0	0	1	0	0	0	1	5
08:30 AM	1	1	0	0	2	0	0	0	0	0	1	0	1	0	2	2	1	1	0	4	0	0	0	0	8
08:45 AM	0	1	0	0	1	0	0	1	0	1	0	1	0	0	1	1	0	1	0	2	0	0	0	0	5
Total	2	4	1	0	7	0	2	1	0	3	3	5	2	0	10	4	1	2	0	7	0	0	0	0	27
Grand Total	6	7	2	0	15	1	3	5	0	9	3	9	3	0	15	5	2	2	0	9	0	0	0	0	48
Apprch %	40	46.7	13.3			11.1	33.3	55.6			20	60	20			55.6	22.2	22.2							
Total %	12.5	14.6	4.2		31.2	2.1	6.2	10.4		18.8	6.2	18.8	6.2		31.2	10.4	4.2	4.2		18.8	0	0	0	0	100

3.1-291

Start Time	Heacock Street Southbound				John F Kennedy Drive Westbound				Heacock Street Northbound				Meyer Drive Eastbound				Int. Total				
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total					
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
07:15 AM	0	0	1	1	0	0	0	0	0	1	1	2	0	1	0	1	0	0	0	1	4
07:30 AM	2	2	0	4	1	0	2	3	0	3	0	3	1	0	0	1	0	0	0	1	11
07:45 AM	1	0	0	1	0	1	2	3	0	0	0	0	0	0	0	0	0	0	0	0	4
Total Volume	4	3	1	8	1	1	4	6	0	4	1	5	1	1	0	2	0	0	0	0	21
% App. Total	50	37.5	12.5		16.7	16.7	66.7		0	80	20		50	50	0						
PHF	.500	.375	.250	.500	.250	.250	.500	.500	.000	.333	.250	.417	.250	.250	.000	.500					.477

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Meyer Drive / John F Kennedy Drive  
 Weather: Clear

File Name : MRVHEMEAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 2



3.1-292

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Meyer Drive / John F Kennedy Drive  
 Weather: Clear

File Name : MRVHEMEAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Heacock Street Southbound				John F Kennedy Drive Westbound				Heacock Street Northbound				Meyer Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	
+15 mins.	0	0	1	1	0	0	0	0	0	1	1	2	0	1	0	1	
+30 mins.	2	2	0	4	1	0	2	3	0	3	0	3	1	0	0	1	
+45 mins.	1	0	0	1	0	1	2	3	0	0	0	0	0	0	0	0	
Total Volume	4	3	1	8	1	1	4	6	0	4	1	5	1	1	0	2	
% App. Total	50	37.5	12.5		16.7	16.7	66.7		0	80	20		50	50	0		
PHF	.500	.375	.250	.500	.250	.250	.500	.500	.000	.333	.250	.417	.250	.250	.000	.500	

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Meyer Drive / John F Kennedy Drive  
 Weather: Clear

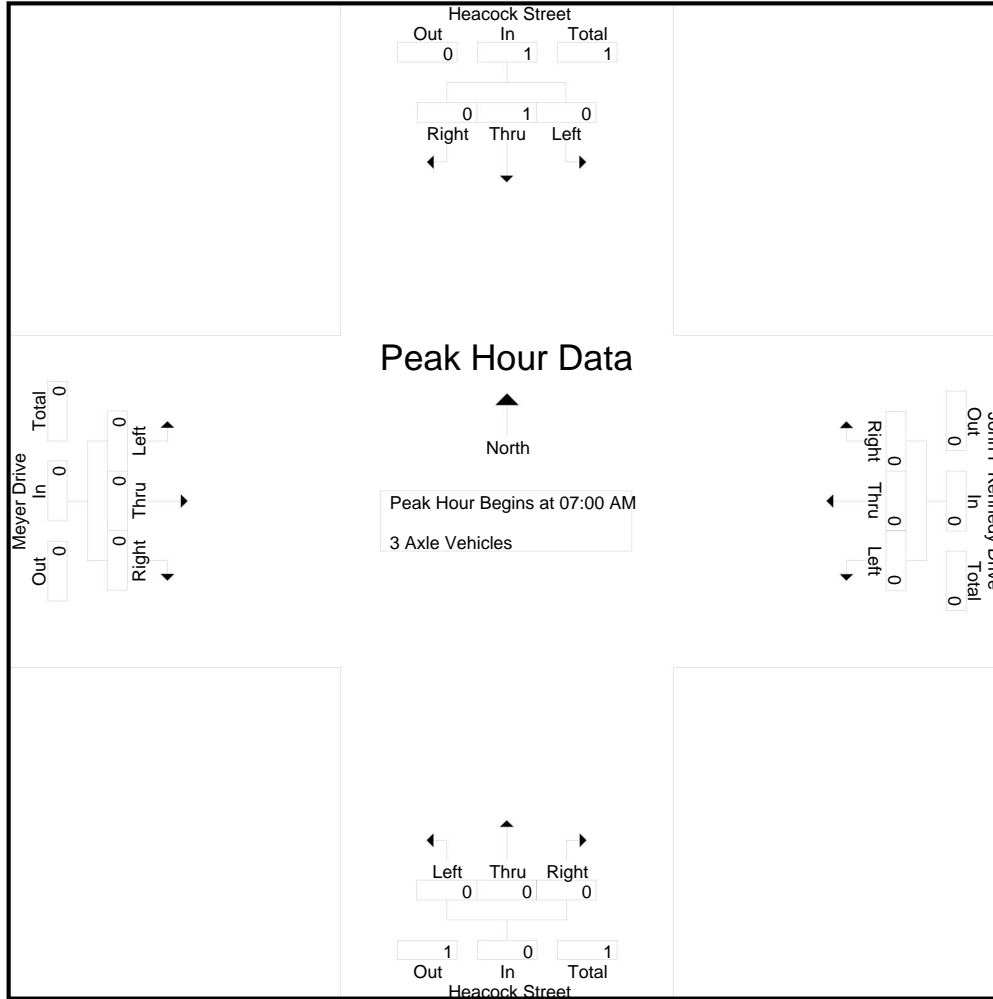
File Name : MRVHEMEAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- 3 Axle Vehicles

Start Time	Heacock Street Southbound					John F Kennedy Drive Westbound					Heacock Street Northbound					Meyer Drive Eastbound					Exclu. Total	Inclu. Total					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total							
07:00 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:00 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:15 AM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	4
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2
08:45 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	1	3	0	0	4	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	8
Grand Total	1	4	0	0	5	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	9
Apprch %	20	80	0			0	0	0			0	100	0			0	0	0			0	0	0			0	100
Total %	11.1	44.4	0		55.6	0	0	0		0	0	44.4	0		44.4	0	0	0		0	0	0	0		0	0	100

3.1-294

Start Time	Heacock Street Southbound				John F Kennedy Drive Westbound				Heacock Street Northbound				Meyer Drive Eastbound				Int. Total				
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total					
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% App. Total	0	100	0		0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250



City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Meyer Drive / John F Kennedy Drive  
 Weather: Clear

File Name : MRVHEMEAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Heacock Street Southbound				John F Kennedy Drive Westbound				Heacock Street Northbound				Meyer Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Volume	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	
% App. Total	0	100	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	



City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Meyer Drive / John F Kennedy Drive  
 Weather: Clear

File Name : MRVHEMEAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- 4+ Axle Trucks

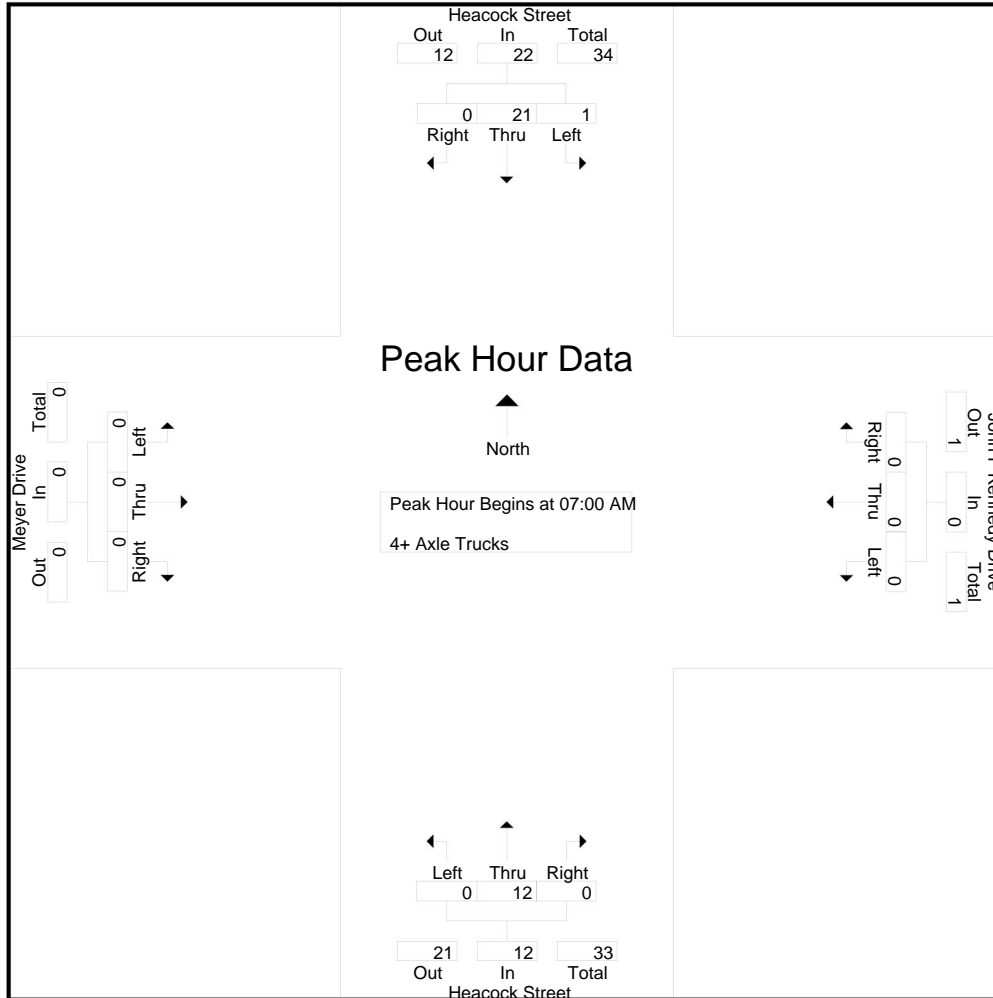
Start Time	Heacock Street Southbound					John F Kennedy Drive Westbound					Heacock Street Northbound					Meyer Drive Eastbound					Exclu. Total	Inclu. Total	
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	5
07:15 AM	1	3	0	0	4	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	6
07:30 AM	0	6	0	0	6	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	9
07:45 AM	0	9	0	0	9	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	0	14
<b>Total</b>	<b>1</b>	<b>21</b>	<b>0</b>	<b>0</b>	<b>22</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>34</b>
08:00 AM	0	5	0	0	5	0	0	1	0	1	0	5	0	0	5	0	0	0	0	0	0	0	11
08:15 AM	0	5	0	0	5	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	7
08:30 AM	0	10	0	0	10	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0	0	0	13
08:45 AM	0	4	0	0	4	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	6
<b>Total</b>	<b>0</b>	<b>24</b>	<b>0</b>	<b>0</b>	<b>24</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>11</b>	<b>1</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>37</b>
<b>Grand Total</b>	<b>1</b>	<b>45</b>	<b>0</b>	<b>0</b>	<b>46</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>23</b>	<b>1</b>	<b>0</b>	<b>24</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>71</b>
Apprch %	2.2	97.8	0			0	0	100			0	95.8	4.2			0	0	0					
Total %	1.4	63.4	0		64.8	0	0	1.4		1.4	0	32.4	1.4		33.8	0	0	0			0		100

3.1-297

Start Time	Heacock Street Southbound				John F Kennedy Drive Westbound				Heacock Street Northbound				Meyer Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	3	0	3	0	0	0	0	0	2	0	2	0	0	0	0	5
07:15 AM	1	3	0	4	0	0	0	0	0	2	0	2	0	0	0	0	6
07:30 AM	0	6	0	6	0	0	0	0	0	3	0	3	0	0	0	0	9
07:45 AM	0	9	0	9	0	0	0	0	0	5	0	5	0	0	0	0	14
<b>Total Volume</b>	<b>1</b>	<b>21</b>	<b>0</b>	<b>22</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>34</b>
% App. Total	4.5	95.5	0		0	0	0		0	100	0		0	0	0		
PHF	.250	.583	.000	.611	.000	.000	.000	.000	.000	.600	.000	.600	.000	.000	.000	.000	.607

City of Moreno Valley  
N/S: Heacock Street  
E/W: Meyer Drive / John F Kennedy Drive  
Weather: Clear

File Name : MRVHEMEAM  
Site Code : 05115223  
Start Date : 4/28/2015  
Page No : 2



City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Meyer Drive / John F Kennedy Drive  
 Weather: Clear

File Name : MRVHEMEAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Heacock Street Southbound				John F Kennedy Drive Westbound				Heacock Street Northbound				Meyer Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	3	0	3	0	0	0	0	0	2	0	2	0	0	0	0	
+15 mins.	1	3	0	4	0	0	0	0	0	2	0	2	0	0	0	0	
+30 mins.	0	6	0	6	0	0	0	0	0	3	0	3	0	0	0	0	
+45 mins.	0	9	0	9	0	0	0	0	0	5	0	5	0	0	0	0	
Total Volume	1	21	0	22	0	0	0	0	0	12	0	12	0	0	0	0	
% App. Total	4.5	95.5	0		0	0	0		0	100	0		0	0	0		
PHF	.250	.583	.000	.611	.000	.000	.000	.000	.000	.600	.000	.600	.000	.000	.000	.000	

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Meyer Drive / John F Kennedy Drive  
 Weather: Clear

File Name : MRVHEMEPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

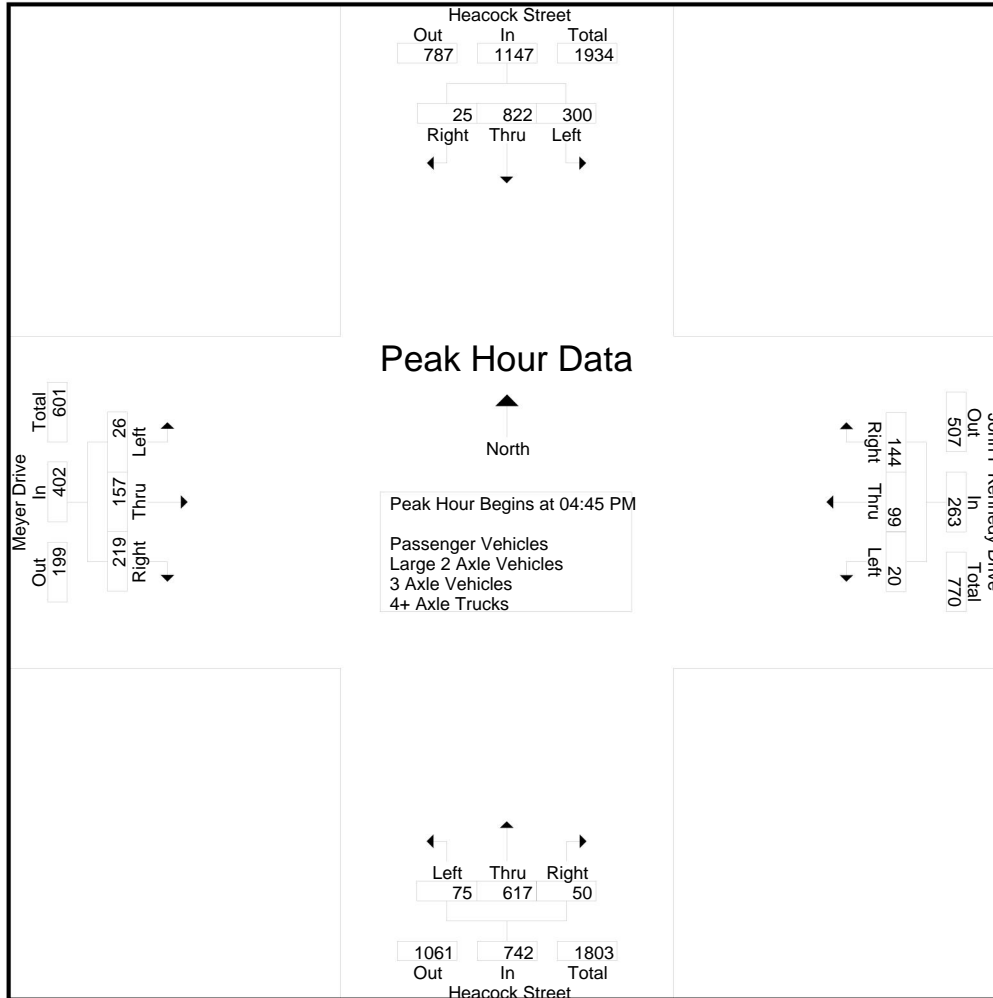
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Heacock Street Southbound					John F Kennedy Drive Westbound					Heacock Street Northbound					Meyer Drive Eastbound					Exclu. Total	Inclu. Total	
	Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR			App. Total
	04:00 PM	69	135	6	0	210	4	25	51	36	80	17	105	12	1	134	10	45	29	16	84	53	508
	04:15 PM	89	157	11	0	257	7	27	48	20	82	16	99	5	1	120	7	41	36	22	84	43	543
	04:30 PM	63	187	10	2	260	6	21	35	20	62	18	159	10	3	187	5	42	37	23	84	48	593
	04:45 PM	69	213	3	2	285	4	25	46	27	75	21	203	20	6	244	9	39	30	17	78	52	682
	<b>Total</b>	<b>290</b>	<b>692</b>	<b>30</b>	<b>4</b>	<b>1012</b>	<b>21</b>	<b>98</b>	<b>180</b>	<b>103</b>	<b>299</b>	<b>72</b>	<b>566</b>	<b>47</b>	<b>11</b>	<b>685</b>	<b>31</b>	<b>167</b>	<b>132</b>	<b>78</b>	<b>330</b>	<b>196</b>	<b>2326</b>
	05:00 PM	70	182	7	2	259	4	25	35	25	64	15	158	12	5	185	9	44	65	24	118	56	626
	05:15 PM	85	203	9	5	297	5	22	32	22	59	15	110	8	4	133	3	34	62	40	99	71	588
	05:30 PM	76	224	6	2	306	7	27	31	17	65	24	146	10	2	180	5	40	62	26	107	47	658
	05:45 PM	82	207	7	6	296	4	25	35	22	64	19	102	13	6	134	7	51	48	22	106	56	600
	<b>Total</b>	<b>313</b>	<b>816</b>	<b>29</b>	<b>15</b>	<b>1158</b>	<b>20</b>	<b>99</b>	<b>133</b>	<b>86</b>	<b>252</b>	<b>73</b>	<b>516</b>	<b>43</b>	<b>17</b>	<b>632</b>	<b>24</b>	<b>169</b>	<b>237</b>	<b>112</b>	<b>430</b>	<b>230</b>	<b>2472</b>
3.1-300	<b>Grand Total</b>	<b>603</b>	<b>1508</b>	<b>59</b>	<b>19</b>	<b>2170</b>	<b>41</b>	<b>197</b>	<b>313</b>	<b>189</b>	<b>551</b>	<b>145</b>	<b>1082</b>	<b>90</b>	<b>28</b>	<b>1317</b>	<b>55</b>	<b>336</b>	<b>369</b>	<b>190</b>	<b>760</b>	<b>426</b>	<b>4798</b>
	Apprch %	27.8	69.5	2.7			7.4	35.8	56.8			11	82.2	6.8			7.2	44.2	48.6				
	Total %	12.6	31.4	1.2		45.2	0.9	4.1	6.5		11.5	3	22.6	1.9		27.4	1.1	7	7.7		15.8	8.2	91.8
	Passenger Vehicles	597	1449	59		2124	41	195	311		736	145	1054	89		1316	55	332	365		941	0	0
	% Passenger Vehicles	99	96.1	100	100	97	100	99	99.4	100	99.5	100	97.4	98.9	100	97.8	100	98.8	98.9	99.5	99.1	0	0
	Large 2 Axle Vehicles	5	19	0		24	0	2	0		2	0	9	1		10	0	4	3		8	0	0
	% Large 2 Axle Vehicles	0.8	1.3	0	0	1.1	0	1	0	0	0.3	0	0.8	1.1	0	0.7	0	1.2	0.8	0.5	0.8	0	0
	3 Axle Vehicles	1	14	0		15	0	0	1		1	0	3	0		3	0	0	1		1	0	0
	% 3 Axle Vehicles	0.2	0.9	0	0	0.7	0	0	0.3	0	0.1	0	0.3	0	0	0.2	0	0	0.3	0	0.1	0	0
	4+ Axle Trucks	0	26	0		26	0	0	1		1	0	16	0		16	0	0	0		0	0	0
% 4+ Axle Trucks	0	1.7	0	0	1.2	0	0	0.3	0	0.1	0	1.5	0	0	1.2	0	0	0	0	0	0	0	

	Heacock Street Southbound				John F Kennedy Drive Westbound				Heacock Street Northbound				Meyer Drive Eastbound				Int. Total	
	Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right		App. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 04:45 PM																		
	04:45 PM	69	213	3	285	4	25	<b>46</b>	<b>75</b>	21	<b>203</b>	<b>20</b>	<b>244</b>	<b>9</b>	39	30	78	<b>682</b>
	05:00 PM	70	182	7	259	4	25	35	64	15	158	12	185	9	<b>44</b>	<b>65</b>	<b>118</b>	626
	05:15 PM	<b>85</b>	203	<b>9</b>	297	5	22	32	59	15	110	8	133	3	34	62	99	588
	05:30 PM	76	<b>224</b>	6	<b>306</b>	<b>7</b>	<b>27</b>	31	65	<b>24</b>	146	10	180	5	40	62	107	658
	<b>Total Volume</b>	<b>300</b>	<b>822</b>	<b>25</b>	<b>1147</b>	<b>20</b>	<b>99</b>	<b>144</b>	<b>263</b>	<b>75</b>	<b>617</b>	<b>50</b>	<b>742</b>	<b>26</b>	<b>157</b>	<b>219</b>	<b>402</b>	<b>2554</b>
	<b>% App. Total</b>	<b>26.2</b>	<b>71.7</b>	<b>2.2</b>		<b>7.6</b>	<b>37.6</b>	<b>54.8</b>		<b>10.1</b>	<b>83.2</b>	<b>6.7</b>		<b>6.5</b>	<b>39.1</b>	<b>54.5</b>		
	PHF	.882	.917	.694	.937	.714	.917	.783	.877	.781	.760	.625	.760	.722	.892	.842	.852	.936

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Meyer Drive / John F Kennedy Drive  
 Weather: Clear

File Name : MRVHEMEPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 2



3.1-301

Counts Unlimited, Inc.  
 PO Box 1178  
 Corona, CA 92787  
 (951) 268-6268

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Meyer Drive / John F Kennedy Drive  
 Weather: Clear

File Name : MRVHEMEPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Heacock Street Southbound				John F Kennedy Drive Westbound				Heacock Street Northbound				Meyer Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	05:00 PM				04:00 PM				04:30 PM				05:00 PM				
+0 mins.	70	182	7	259	4	25	51	80	18	159	10	187	9	44	65	118	
+15 mins.	85	203	9	297	7	27	48	82	21	203	20	244	3	34	62	99	
+30 mins.	76	224	6	306	6	21	35	62	15	158	12	185	5	40	62	107	
+45 mins.	82	207	7	296	4	25	46	75	15	110	8	133	7	51	48	106	
Total Volume	313	816	29	1158	21	98	180	299	69	630	50	749	24	169	237	430	
% App. Total	27	70.5	2.5		7	32.8	60.2		9.2	84.1	6.7		5.6	39.3	55.1		
PHF	.921	.911	.806	.946	.750	.907	.882	.912	.821	.776	.625	.767	.667	.828	.912	.911	

3.1-302

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Meyer Drive / John F Kennedy Drive  
 Weather: Clear

File Name : MRVHEMEPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- Passenger Vehicles

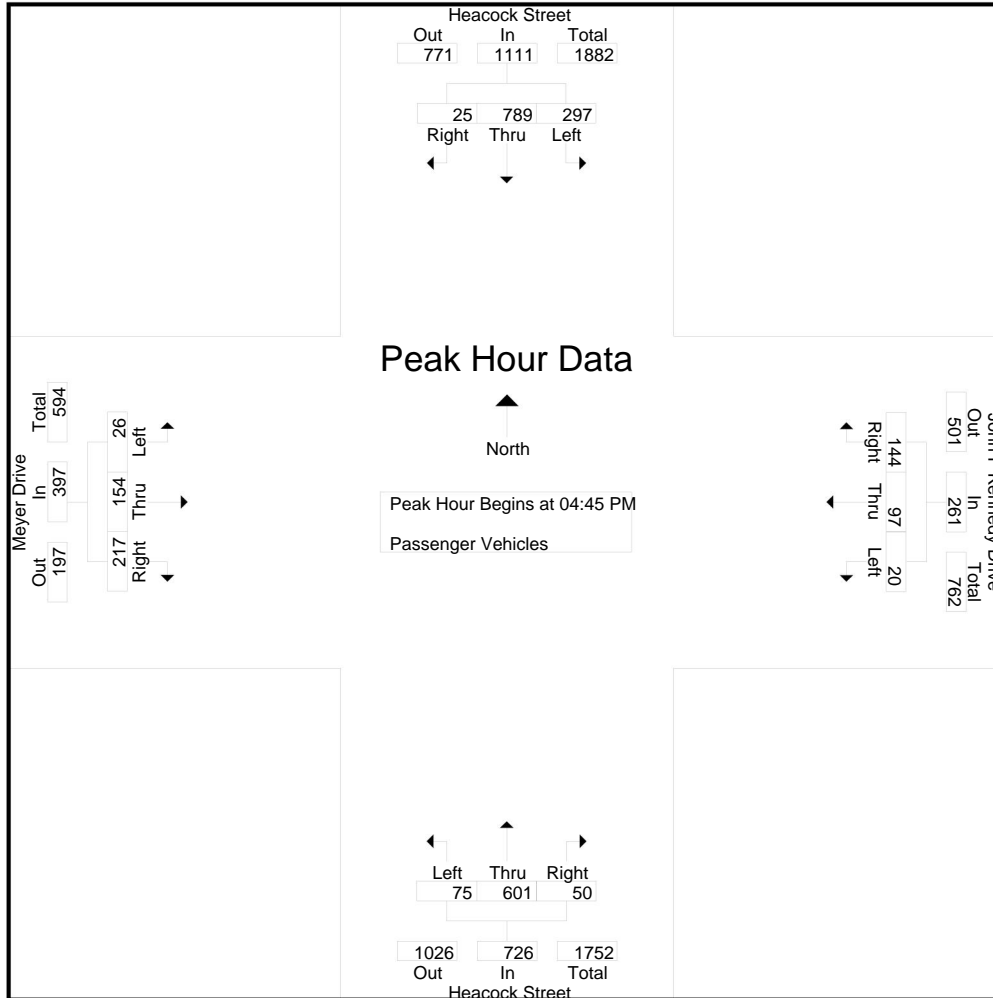
Start Time	Heacock Street Southbound					John F Kennedy Drive Westbound					Heacock Street Northbound					Meyer Drive Eastbound					Exclu. Total	Inclu. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total		
04:00 PM	68	129	6	0	203	4	25	50	36	79	17	100	12	1	129	10	44	28	15	82	52	493
04:15 PM	87	152	11	0	250	7	27	48	20	82	16	96	4	1	116	7	41	36	22	84	43	532
04:30 PM	63	177	10	2	250	6	21	34	20	61	18	157	10	3	185	5	42	37	23	84	48	580
04:45 PM	68	201	3	2	272	4	25	46	27	75	21	200	20	6	241	9	39	30	17	78	52	666
Total	286	659	30	4	975	21	98	178	103	297	72	553	46	11	671	31	166	131	77	328	195	2271
05:00 PM	69	175	7	2	251	4	23	35	25	62	15	149	12	5	176	9	43	65	24	117	56	606
05:15 PM	84	194	9	5	287	5	22	32	22	59	15	110	8	4	133	3	33	62	40	98	71	577
05:30 PM	76	219	6	2	301	7	27	31	17	65	24	142	10	2	176	5	39	60	26	104	47	646
05:45 PM	82	202	7	6	291	4	25	35	22	64	19	100	13	6	132	7	51	47	22	105	56	592
Total	311	790	29	15	1130	20	97	133	86	250	73	501	43	17	617	24	166	234	112	424	230	2421
Grand Total	597	1449	59	19	2105	41	195	311	189	547	145	1054	89	28	1288	55	332	365	189	752	425	4692
Apprch %	28.4	68.8	2.8			7.5	35.6	56.9			11.3	81.8	6.9			7.3	44.1	48.5				
Total %	12.7	30.9	1.3		44.9	0.9	4.2	6.6		11.7	3.1	22.5	1.9		27.5	1.2	7.1	7.8		16	8.3	91.7

3.1-303

Start Time	Heacock Street Southbound				John F Kennedy Drive Westbound				Heacock Street Northbound				Meyer Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	68	201	3	272	4	25	<b>46</b>	<b>75</b>	21	<b>200</b>	<b>20</b>	<b>241</b>	9	39	30	78	<b>666</b>
05:00 PM	69	175	7	251	4	23	35	62	15	149	12	176	9	<b>43</b>	<b>65</b>	<b>117</b>	606
05:15 PM	<b>84</b>	194	<b>9</b>	287	5	22	32	59	15	110	8	133	3	33	62	98	577
05:30 PM	76	<b>219</b>	6	<b>301</b>	<b>7</b>	<b>27</b>	31	65	<b>24</b>	142	10	176	5	39	60	104	646
Total Volume	297	789	25	1111	20	97	144	261	75	601	50	726	26	154	217	397	2495
% App. Total	26.7	71	2.3		7.7	37.2	55.2		10.3	82.8	6.9		6.5	38.8	54.7		
PHF	.884	.901	.694	.923	.714	.898	.783	.870	.781	.751	.625	.753	.722	.895	.835	.848	.937

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Meyer Drive / John F Kennedy Drive  
 Weather: Clear

File Name : MRVHEMEPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 2



3.1-304



Counts Unlimited, Inc.  
 PO Box 1178  
 Corona, CA 92787  
 (951) 268-6268

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Meyer Drive / John F Kennedy Drive  
 Weather: Clear

File Name : MRVHEMEPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Heacock Street Southbound				John F Kennedy Drive Westbound				Heacock Street Northbound				Meyer Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:45 PM				04:45 PM				04:45 PM				04:45 PM				
+0 mins.	68	201	3	272	4	25	<b>46</b>	<b>75</b>	21	<b>200</b>	<b>20</b>	<b>241</b>	<b>9</b>	39	30	78	
+15 mins.	69	175	7	251	4	23	35	62	15	149	12	176	9	<b>43</b>	<b>65</b>	<b>117</b>	
+30 mins.	<b>84</b>	194	<b>9</b>	287	5	22	32	59	15	110	8	133	3	33	62	98	
+45 mins.	76	<b>219</b>	6	<b>301</b>	<b>7</b>	<b>27</b>	31	65	<b>24</b>	142	10	176	5	39	60	104	
Total Volume	297	789	25	1111	20	97	144	261	75	601	50	726	26	154	217	397	
% App. Total	26.7	71	2.3		7.7	37.2	55.2		10.3	82.8	6.9		6.5	38.8	54.7		
PHF	.884	.901	.694	.923	.714	.898	.783	.870	.781	.751	.625	.753	.722	.895	.835	.848	

3.1-305

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Meyer Drive / John F Kennedy Drive  
 Weather: Clear

File Name : MRVHEMEPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

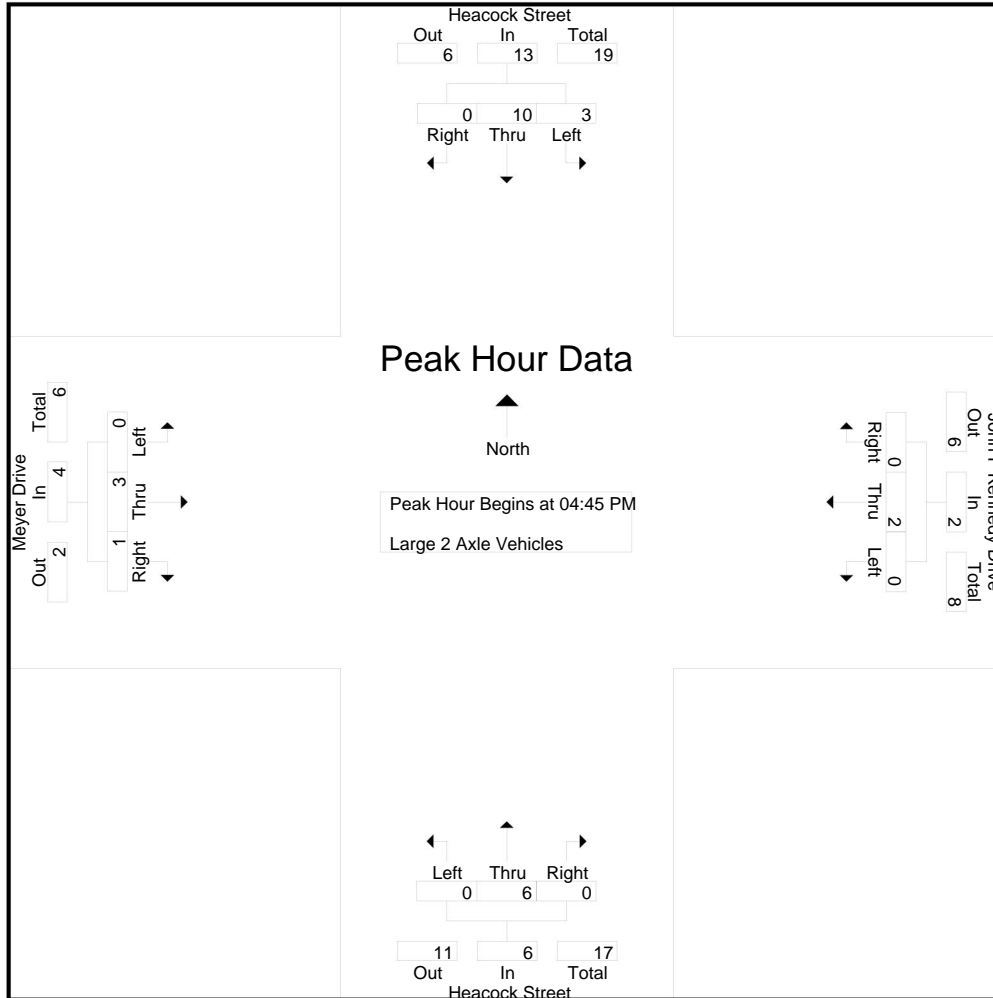
Start Time	Heacock Street Southbound					John F Kennedy Drive Westbound					Heacock Street Northbound					Meyer Drive Eastbound					Exclu. Total	Inclu. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total		
04:00 PM	1	2	0	0	3	0	0	0	0	0	0	1	0	0	1	0	1	1	1	2	1	6
04:15 PM	1	3	0	0	4	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	5
04:30 PM	0	4	0	0	4	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	5
04:45 PM	1	4	0	0	5	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	8
Total	3	13	0	0	16	0	0	0	0	0	0	5	1	0	6	0	1	1	1	2	1	24
05:00 PM	1	1	0	0	2	0	2	0	0	2	0	3	0	0	3	0	1	0	0	1	0	8
05:15 PM	1	4	0	0	5	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	6
05:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	3
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	0	2
Total	2	6	0	0	8	0	2	0	0	2	0	4	0	0	4	0	3	2	0	5	0	19
Grand Total	5	19	0	0	24	0	2	0	0	2	0	9	1	0	10	0	4	3	1	7	1	43
Apprch %	20.8	79.2	0			0	100	0			0	90	10			0	57.1	42.9				
Total %	11.6	44.2	0		55.8	0	4.7	0		4.7	0	20.9	2.3		23.3	0	9.3	7		16.3	2.3	97.7

3.1-306

Start Time	Heacock Street Southbound				John F Kennedy Drive Westbound				Heacock Street Northbound				Meyer Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	1	4	0	5	0	0	0	0	0	3	0	3	0	0	0	0	8
05:00 PM	1	1	0	2	0	2	0	2	0	3	0	3	0	1	0	1	8
05:15 PM	1	4	0	5	0	0	0	0	0	0	0	0	0	1	0	1	6
05:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	1	1	2	3
Total Volume	3	10	0	13	0	2	0	2	0	6	0	6	0	3	1	4	25
% App. Total	23.1	76.9	0		0	100	0		0	100	0		0	75	25		
PHF	.750	.625	.000	.650	.000	.250	.000	.250	.000	.500	.000	.500	.000	.750	.250	.500	.781

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Meyer Drive / John F Kennedy Drive  
 Weather: Clear

File Name : MRVHEMEPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 2



3.1-307

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Meyer Drive / John F Kennedy Drive  
 Weather: Clear

File Name : MRVHEMEPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Heacock Street Southbound				John F Kennedy Drive Westbound				Heacock Street Northbound				Meyer Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:45 PM				04:45 PM				04:45 PM				04:45 PM				
+0 mins.	1	4	0	5	0	0	0	0	0	3	0	3	0	0	0	0	
+15 mins.	1	1	0	2	0	2	0	2	0	3	0	3	0	1	0	1	
+30 mins.	1	4	0	5	0	0	0	0	0	0	0	0	0	1	0	1	
+45 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	1	1	2	
Total Volume	3	10	0	13	0	2	0	2	0	6	0	6	0	3	1	4	
% App. Total	23.1	76.9	0		0	100	0		0	100	0		0	75	25		
PHF	.750	.625	.000	.650	.000	.250	.000	.250	.000	.500	.000	.500	.000	.750	.250	.500	

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Meyer Drive / John F Kennedy Drive  
 Weather: Clear

File Name : MRVHEMEPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- 3 Axle Vehicles

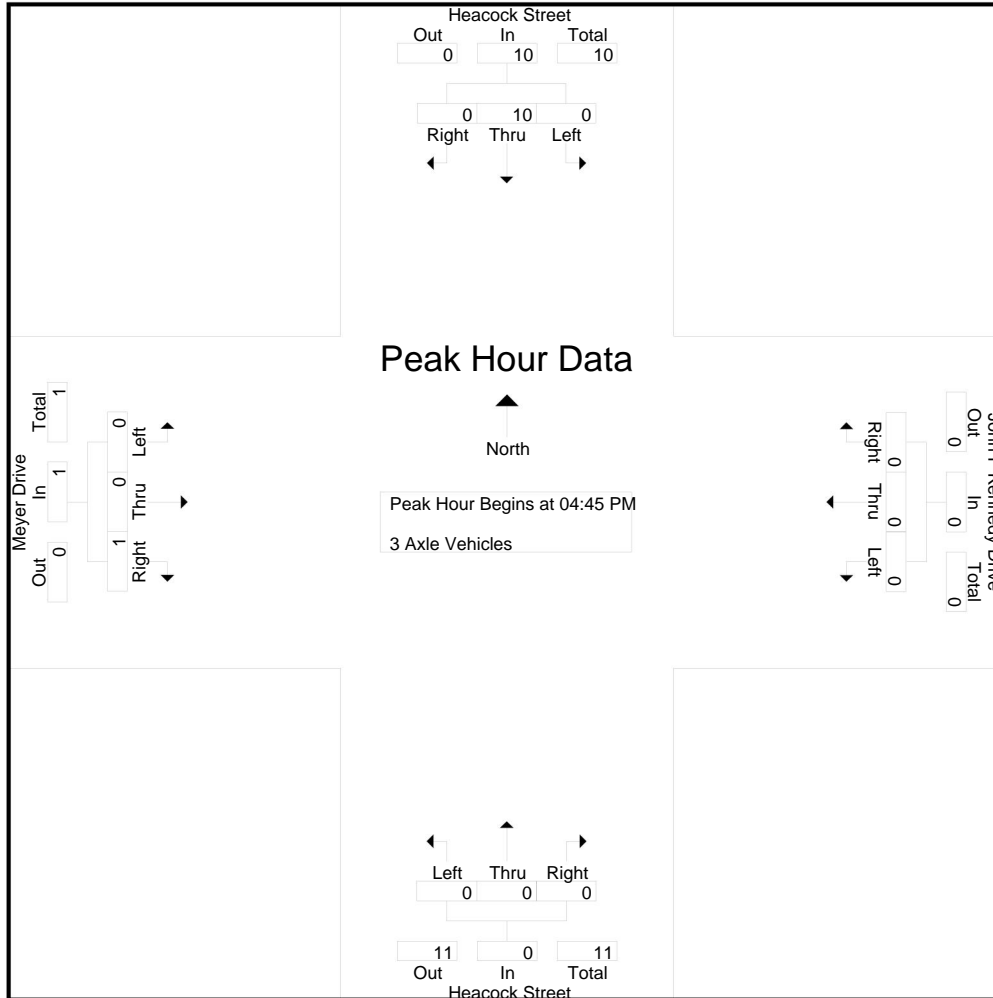
Start Time	Heacock Street Southbound					John F Kennedy Drive Westbound					Heacock Street Northbound					Meyer Drive Eastbound					Exclu. Total	Inclu. Total					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total							
04:00 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2
04:15 PM	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2
04:30 PM	0	2	0	0	2	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
04:45 PM	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Total	1	8	0	0	9	0	0	1	0	1	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	12
05:00 PM	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
05:15 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	0	1	0	1
05:45 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	6	0	0	6	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	0	0	1	0	1	0	8
Grand Total	1	14	0	0	15	0	0	1	0	1	0	3	0	0	3	0	0	1	0	1	0	0	1	0	1	0	20
Apprch %	6.7	93.3	0			0	0	100			0	100	0			0	0	100									
Total %	5	70	0		75	0	0	5		5	0	15	0		15	0	0	5		5	0	0	5		5	0	100

3.1-309

Start Time	Heacock Street Southbound				John F Kennedy Drive Westbound				Heacock Street Northbound				Meyer Drive Eastbound				Int. Total				
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total					
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
05:00 PM	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
05:15 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total Volume	0	10	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	11
% App. Total	0	100	0		0	0	0		0	0	0		0	0	0		0	0	100		
PHF	.000	.500	.000	.500	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.250	.550

City of Moreno Valley  
N/S: Heacock Street  
E/W: Meyer Drive / John F Kennedy Drive  
Weather: Clear

File Name : MRVHEMEPM  
Site Code : 05115223  
Start Date : 4/28/2015  
Page No : 2



3.1-310

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Meyer Drive / John F Kennedy Drive  
 Weather: Clear

File Name : MRVHEMEPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Heacock Street Southbound				John F Kennedy Drive Westbound				Heacock Street Northbound				Meyer Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:45 PM				04:45 PM				04:45 PM				04:45 PM				
+0 mins.	0	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	
+15 mins.	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	
+30 mins.	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	
Total Volume	0	10	0	10	0	0	0	0	0	0	0	0	0	0	1	1	
% App. Total	0	100	0		0	0	0		0	0	0		0	0	100		
PHF	.000	.500	.000	.500	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.250	

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Meyer Drive / John F Kennedy Drive  
 Weather: Clear

File Name : MRVHEMEPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	Heacock Street Southbound					John F Kennedy Drive Westbound					Heacock Street Northbound					Meyer Drive Eastbound					Exclu. Total	Inclu. Total	
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	0	3	0	0	3	0	0	1	0	1	0	3	0	0	3	0	0	0	0	0	0	0	7
04:15 PM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	4
04:30 PM	0	4	0	0	4	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	5
04:45 PM	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Total	0	12	0	0	12	0	0	1	0	1	0	6	0	0	6	0	0	0	0	0	0	0	19
05:00 PM	0	3	0	0	3	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	0	9
05:15 PM	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
05:30 PM	0	4	0	0	4	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	8
05:45 PM	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Total	0	14	0	0	14	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	0	0	24
Grand Total	0	26	0	0	26	0	0	1	0	1	0	16	0	0	16	0	0	0	0	0	0	0	43
Apprch %	0	100	0			0	0	100			0	100	0			0	0	0					
Total %	0	60.5	0		60.5	0	0	2.3		2.3	0	37.2	0		37.2	0	0	0			0		100

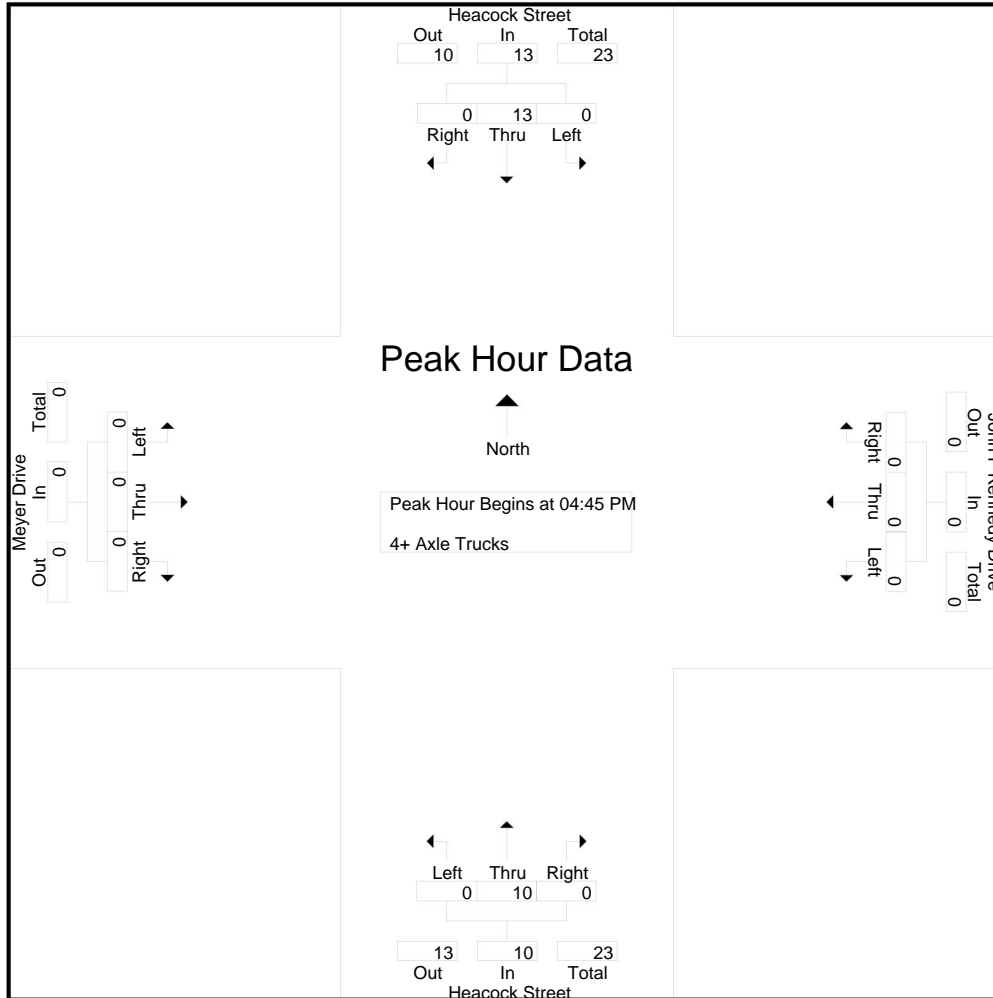
3.1-312

Start Time	Heacock Street Southbound				John F Kennedy Drive Westbound				Heacock Street Northbound				Meyer Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
05:00 PM	0	3	0	3	0	0	0	0	0	6	0	6	0	0	0	0	9
05:15 PM	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
05:30 PM	0	4	0	4	0	0	0	0	0	4	0	4	0	0	0	0	8
Total Volume	0	13	0	13	0	0	0	0	0	10	0	10	0	0	0	0	23
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.813	.000	.813	.000	.000	.000	.000	.000	.417	.000	.417	.000	.000	.000	.000	.639



City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Meyer Drive / John F Kennedy Drive  
 Weather: Clear

File Name : MRVHEMEPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 2



3.1-313

Counts Unlimited, Inc.  
 PO Box 1178  
 Corona, CA 92787  
 (951) 268-6268

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Meyer Drive / John F Kennedy Drive  
 Weather: Clear

File Name : MRVHEMEPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Heacock Street Southbound				John F Kennedy Drive Westbound				Heacock Street Northbound				Meyer Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:45 PM				04:45 PM				04:45 PM				04:45 PM				
+0 mins.	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	
+15 mins.	0	3	0	3	0	0	0	0	0	6	0	6	0	0	0	0	
+30 mins.	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	
+45 mins.	0	4	0	4	0	0	0	0	0	4	0	4	0	0	0	0	
Total Volume	0	13	0	13	0	0	0	0	0	10	0	10	0	0	0	0	
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.813	.000	.813	.000	.000	.000	.000	.000	.417	.000	.417	.000	.000	.000	.000	

3.1-314

Location: Moreno Valley  
 N/S: Heacock Street  
 E/W: Meyer Drive / John F Kennedy Drive



Date: 4/28/2015  
 Weather: Clear

**PEDESTRIANS**

	North Leg Heacock Street	East Leg Meyer Drive / John F Kennedy Drive	South Leg Heacock Street	West Leg Meyer Drive / John F Kennedy Drive	TOTAL
7:00 AM	3	5	0	0	8
7:15 AM	2	9	0	0	11
7:30 AM	0	6	0	0	6
7:45 AM	0	0	0	0	0
8:00 AM	8	12	0	0	20
8:15 AM	5	1	1	1	8
8:30 AM	0	3	0	0	3
8:45 AM	2	1	0	0	3
<b>TOTAL VOLUMES:</b>	20	37	1	1	59

	North Leg Heacock Street	East Leg Meyer Drive / John F Kennedy Drive	South Leg Heacock Street	West Leg Meyer Drive / John F Kennedy Drive	TOTAL
4:00 PM	0	0	0	0	0
4:15 PM	2	2	0	1	5
4:30 PM	0	1	0	0	1
4:45 PM	0	1	0	0	1
5:00 PM	0	0	0	0	0
5:15 PM	1	0	0	0	1
5:30 PM	4	8	0	0	12
5:45 PM	1	5	0	0	6
<b>TOTAL VOLUMES:</b>	8	17	0	1	26

Location: Moreno Valley  
 N/S: Heacock Street  
 E/W: Meyer Drive / John F Kennedy Drive



Date: 4/28/2015  
 Weather: Clear

**BICYCLES**

	North Leg Heacock Street	East Leg Meyer Drive / John F Kennedy Drive	South Leg Heacock Street	West Leg Meyer Drive / John F Kennedy Drive	TOTAL
7:00 AM	0	0	0	2	2
7:15 AM	0	2	0	0	2
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	2	0	2	4

	North Leg Heacock Street	East Leg Meyer Drive / John F Kennedy Drive	South Leg Heacock Street	West Leg Meyer Drive / John F Kennedy Drive	TOTAL
4:00 PM	2	0	0	1	3
4:15 PM	1	0	1	0	2
4:30 PM	0	1	0	1	2
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	1	0	0	1
5:45 PM	1	0	0	0	1
TOTAL VOLUMES:	4	2	1	2	9

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Gentian Avenue  
 Weather: Clear

File Name : MRVHEGEAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

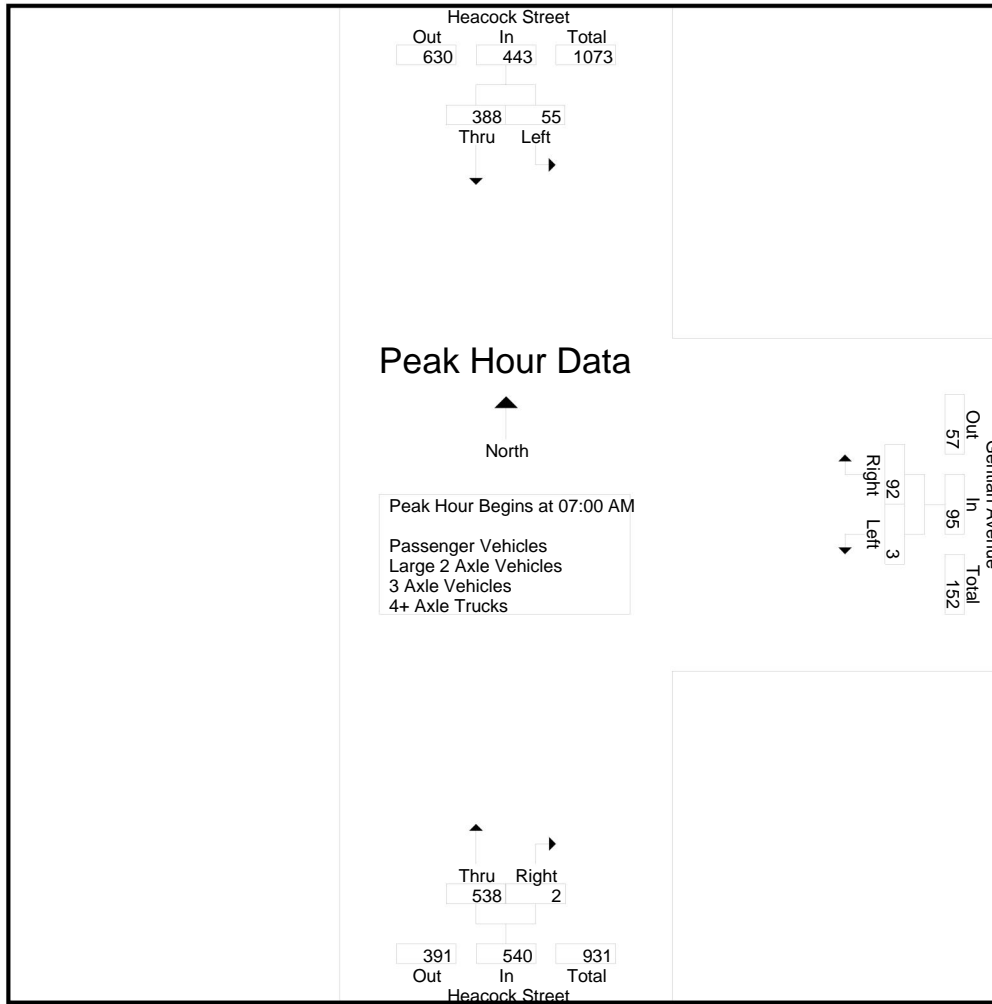
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Heacock Street Southbound			Gentian Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	10	92	102	2	24	26	130	0	130	258
07:15 AM	18	108	126	1	23	24	120	1	121	271
07:30 AM	17	89	106	0	20	20	157	0	157	283
07:45 AM	10	99	109	0	25	25	131	1	132	266
<b>Total</b>	<b>55</b>	<b>388</b>	<b>443</b>	<b>3</b>	<b>92</b>	<b>95</b>	<b>538</b>	<b>2</b>	<b>540</b>	<b>1078</b>
08:00 AM	4	60	64	0	12	12	118	0	118	194
08:15 AM	5	57	62	0	11	11	109	0	109	182
08:30 AM	4	64	68	3	11	14	83	2	85	167
08:45 AM	3	55	58	1	11	12	70	0	70	140
<b>Total</b>	<b>16</b>	<b>236</b>	<b>252</b>	<b>4</b>	<b>45</b>	<b>49</b>	<b>380</b>	<b>2</b>	<b>382</b>	<b>683</b>
<b>Grand Total</b>	<b>71</b>	<b>624</b>	<b>695</b>	<b>7</b>	<b>137</b>	<b>144</b>	<b>918</b>	<b>4</b>	<b>922</b>	<b>1761</b>
Apprch %	10.2	89.8		4.9	95.1		99.6	0.4		
Total %	4	35.4	39.5	0.4	7.8	8.2	52.1	0.2	52.4	
Passenger Vehicles	71	562	633	6	136	142	880	3	883	1658
% Passenger Vehicles	100	90.1	91.1	85.7	99.3	98.6	95.9	75	95.8	94.2
Large 2 Axle Vehicles	0	13	13	1	1	2	12	1	13	28
% Large 2 Axle Vehicles	0	2.1	1.9	14.3	0.7	1.4	1.3	25	1.4	1.6
3 Axle Vehicles	0	6	6	0	0	0	3	0	3	9
% 3 Axle Vehicles	0	1	0.9	0	0	0	0.3	0	0.3	0.5
4+ Axle Trucks	0	43	43	0	0	0	23	0	23	66
% 4+ Axle Trucks	0	6.9	6.2	0	0	0	2.5	0	2.5	3.7

Start Time	Heacock Street Southbound			Gentian Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	10	92	102	2	24	26	130	0	130	258
07:15 AM	18	108	126	1	23	24	120	1	121	271
07:30 AM	17	89	106	0	20	20	157	0	157	283
07:45 AM	10	99	109	0	25	25	131	1	132	266
<b>Total Volume</b>	<b>55</b>	<b>388</b>	<b>443</b>	<b>3</b>	<b>92</b>	<b>95</b>	<b>538</b>	<b>2</b>	<b>540</b>	<b>1078</b>
% App. Total	12.4	87.6		3.2	96.8		99.6	0.4		
PHF	.764	.898	.879	.375	.920	.913	.857	.500	.860	.952

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Gentian Avenue  
 Weather: Clear

File Name : MRVHEGEAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	10	92	102	2	24	26	130	0	130
+15 mins.	18	108	126	1	23	24	120	1	121
+30 mins.	17	89	106	0	20	20	157	0	157
+45 mins.	10	99	109	0	25	25	131	1	132
Total Volume	55	388	443	3	92	95	538	2	540
% App. Total	12.4	87.6		3.2	96.8		99.6	0.4	
PHF	.764	.898	.879	.375	.920	.913	.857	.500	.860

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Gentian Avenue  
 Weather: Clear

File Name : MRVHEGEAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- Passenger Vehicles

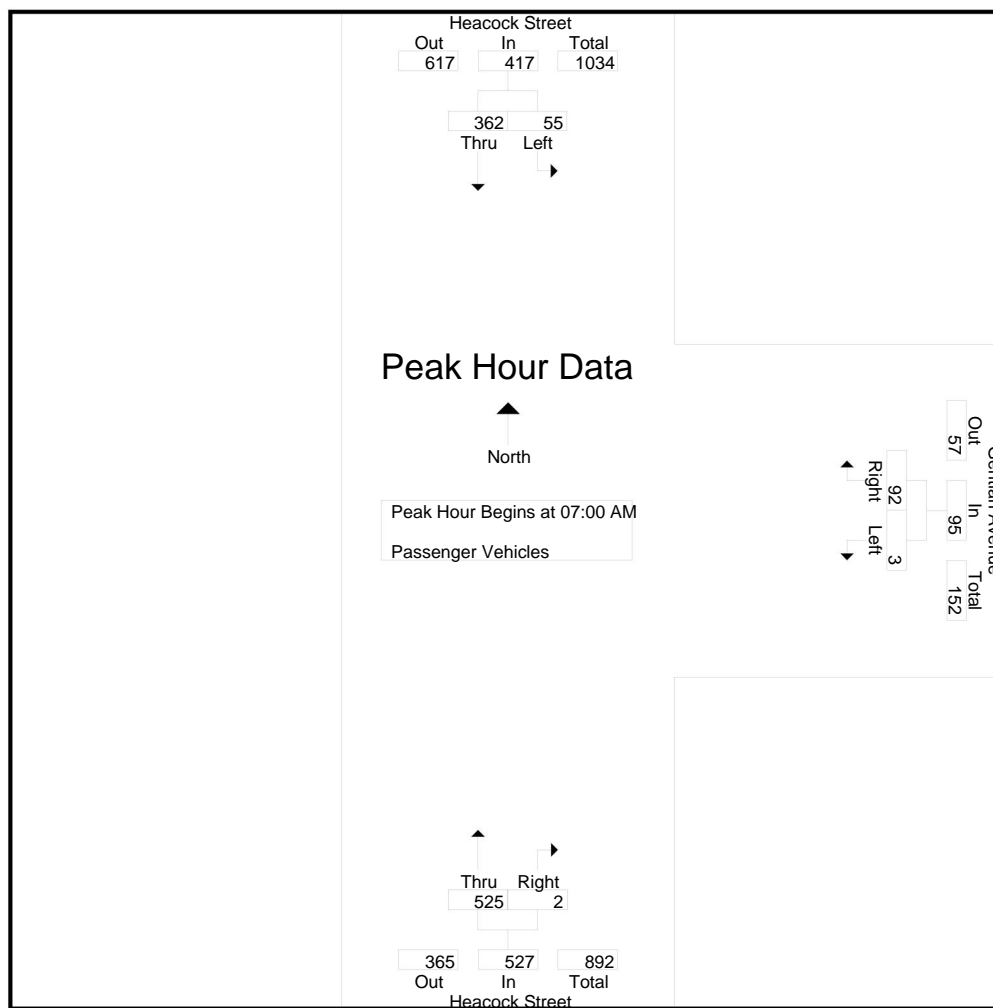
Start Time	Heacock Street Southbound			Gentian Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	10	86	96	2	24	26	128	0	128	250
07:15 AM	18	104	122	1	23	24	118	1	119	265
07:30 AM	17	85	102	0	20	20	154	0	154	276
07:45 AM	10	87	97	0	25	25	125	1	126	248
Total	55	362	417	3	92	95	525	2	527	1039
08:00 AM	4	52	56	0	12	12	106	0	106	174
08:15 AM	5	48	53	0	10	10	105	0	105	168
08:30 AM	4	52	56	3	11	14	78	1	79	149
08:45 AM	3	48	51	0	11	11	66	0	66	128
Total	16	200	216	3	44	47	355	1	356	619
Grand Total	71	562	633	6	136	142	880	3	883	1658
Apprch %	11.2	88.8		4.2	95.8		99.7	0.3		
Total %	4.3	33.9	38.2	0.4	8.2	8.6	53.1	0.2	53.3	

Start Time	Heacock Street Southbound			Gentian Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	10	86	96	2	24	26	128	0	128	250
07:15 AM	18	104	122	1	23	24	118	1	119	265
07:30 AM	17	85	102	0	20	20	154	0	154	276
07:45 AM	10	87	97	0	25	25	125	1	126	248
Total Volume	55	362	417	3	92	95	525	2	527	1039
% App. Total	13.2	86.8		3.2	96.8		99.6	0.4		
PHF	.764	.870	.855	.375	.920	.913	.852	.500	.856	.941

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Gentian Avenue  
 Weather: Clear

File Name : MRVHEGEAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	10	86	96	2	24	26	128	0	128
+15 mins.	18	104	122	1	23	24	118	1	119
+30 mins.	17	85	102	0	20	20	154	0	154
+45 mins.	10	87	97	0	25	25	125	1	126
Total Volume	55	362	417	3	92	95	525	2	527
% App. Total	13.2	86.8		3.2	96.8		99.6	0.4	
PHF	.764	.870	.855	.375	.920	.913	.852	.500	.856



City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Gentian Avenue  
 Weather: Clear

File Name : MRVHEGEAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

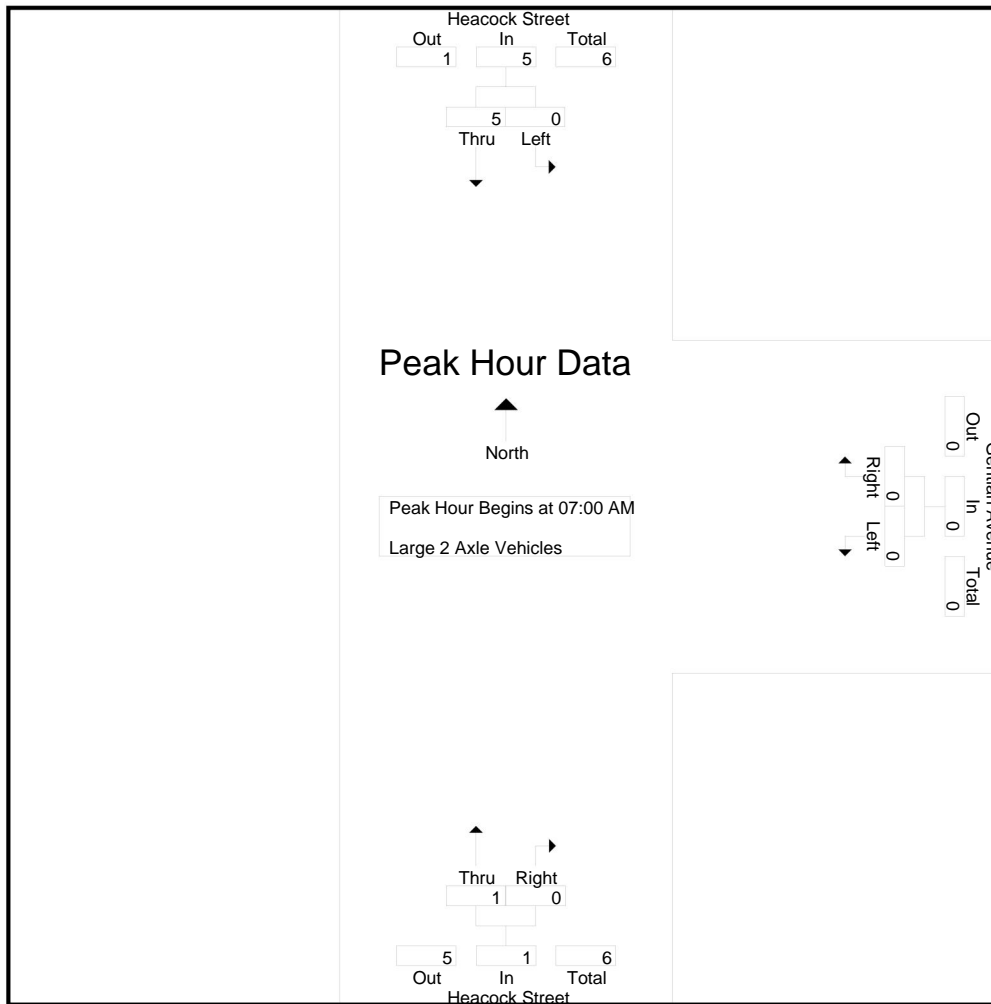
Groups Printed- Large 2 Axle Vehicles

Start Time	Heacock Street Southbound			Gentian Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	2	2	0	0	0	0	0	0	2
07:15 AM	0	1	1	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	2	2	0	0	0	1	0	1	3
Total	0	5	5	0	0	0	1	0	1	6
08:00 AM	0	2	2	0	0	0	6	0	6	8
08:15 AM	0	1	1	0	1	1	1	0	1	3
08:30 AM	0	3	3	0	0	0	2	1	3	6
08:45 AM	0	2	2	1	0	1	2	0	2	5
Total	0	8	8	1	1	2	11	1	12	22
Grand Total	0	13	13	1	1	2	12	1	13	28
Apprch %	0	100		50	50		92.3	7.7		
Total %	0	46.4	46.4	3.6	3.6	7.1	42.9	3.6	46.4	

Start Time	Heacock Street Southbound			Gentian Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	2	2	0	0	0	0	0	0	2
07:15 AM	0	1	1	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	2	2	0	0	0	1	0	1	3
Total Volume	0	5	5	0	0	0	1	0	1	6
% App. Total	0	100		0	0		100	0		
PHF	.000	.625	.625	.000	.000	.000	.250	.000	.250	.500

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Gentian Avenue  
 Weather: Clear

File Name : MRVHEGEAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	2	2	0	0	0	0	0	0
+15 mins.	0	1	1	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	2	2	0	0	0	1	0	1
Total Volume	0	5	5	0	0	0	1	0	1
% App. Total	0	100		0	0		100	0	
PHF	.000	.625	.625	.000	.000	.000	.250	.000	.250

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Gentian Avenue  
 Weather: Clear

File Name : MRVHEGEAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

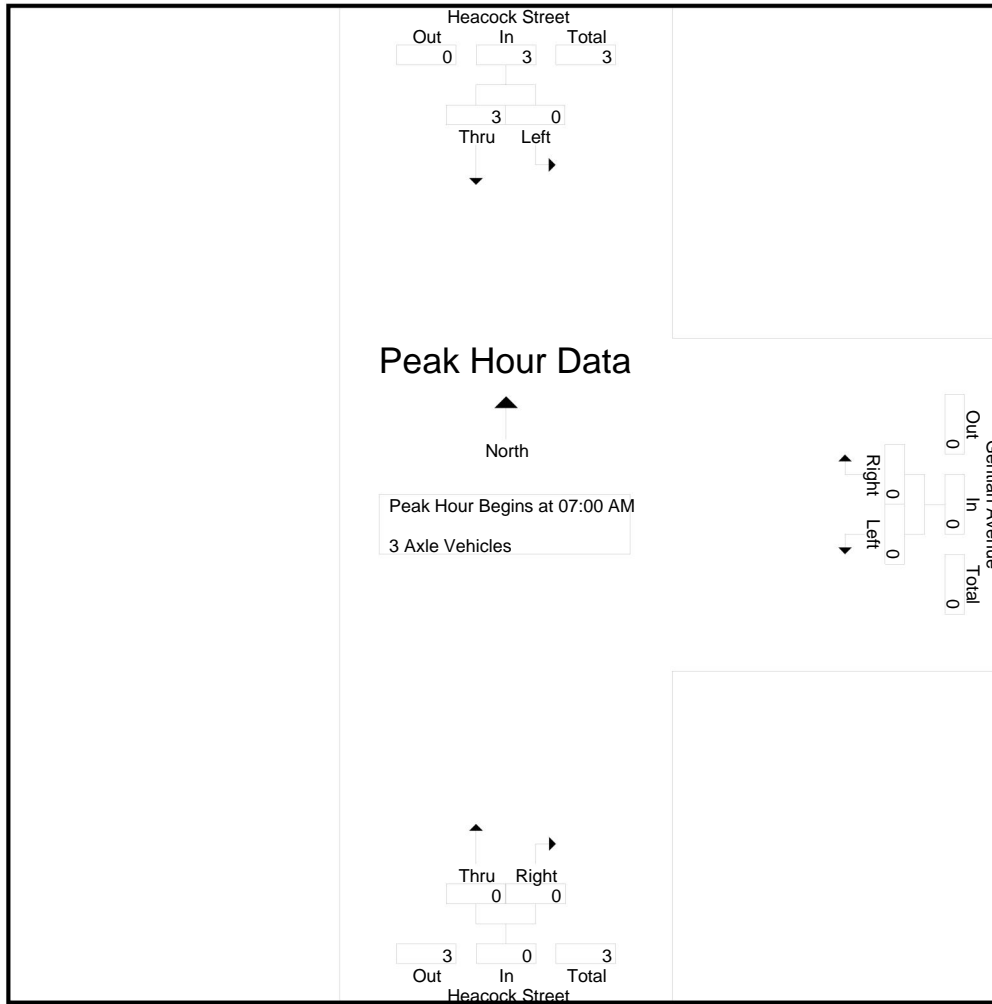
Groups Printed- 3 Axle Vehicles

Start Time	Heacock Street Southbound			Gentian Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	1	1	0	0	0	0	0	0	1
07:15 AM	0	1	1	0	0	0	0	0	0	1
07:30 AM	0	1	1	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	3	3	0	0	0	0	0	0	3
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	3	3	0	0	0	1	0	1	4
08:30 AM	0	0	0	0	0	0	2	0	2	2
08:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	3	3	0	0	0	3	0	3	6
Grand Total	0	6	6	0	0	0	3	0	3	9
Apprch %	0	100		0	0		100	0		
Total %	0	66.7	66.7	0	0	0	33.3	0	33.3	

Start Time	Heacock Street Southbound			Gentian Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	1	1	0	0	0	0	0	0	1
07:15 AM	0	1	1	0	0	0	0	0	0	1
07:30 AM	0	1	1	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	3	3	0	0	0	0	0	0	3
% App. Total	0	100		0	0		0	0		
PHF	.000	.750	.750	.000	.000	.000	.000	.000	.000	.750

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Gentian Avenue  
 Weather: Clear

File Name : MRVHEGEAM  
 Site Code : 05115223  
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Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	1	1	0	0	0	0	0	0
+15 mins.	0	1	1	0	0	0	0	0	0
+30 mins.	0	1	1	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	3	3	0	0	0	0	0	0
% App. Total	0	100		0	0		0	0	
PHF	.000	.750	.750	.000	.000	.000	.000	.000	.000

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Gentian Avenue  
 Weather: Clear

File Name : MRVHEGEAM  
 Site Code : 05115223  
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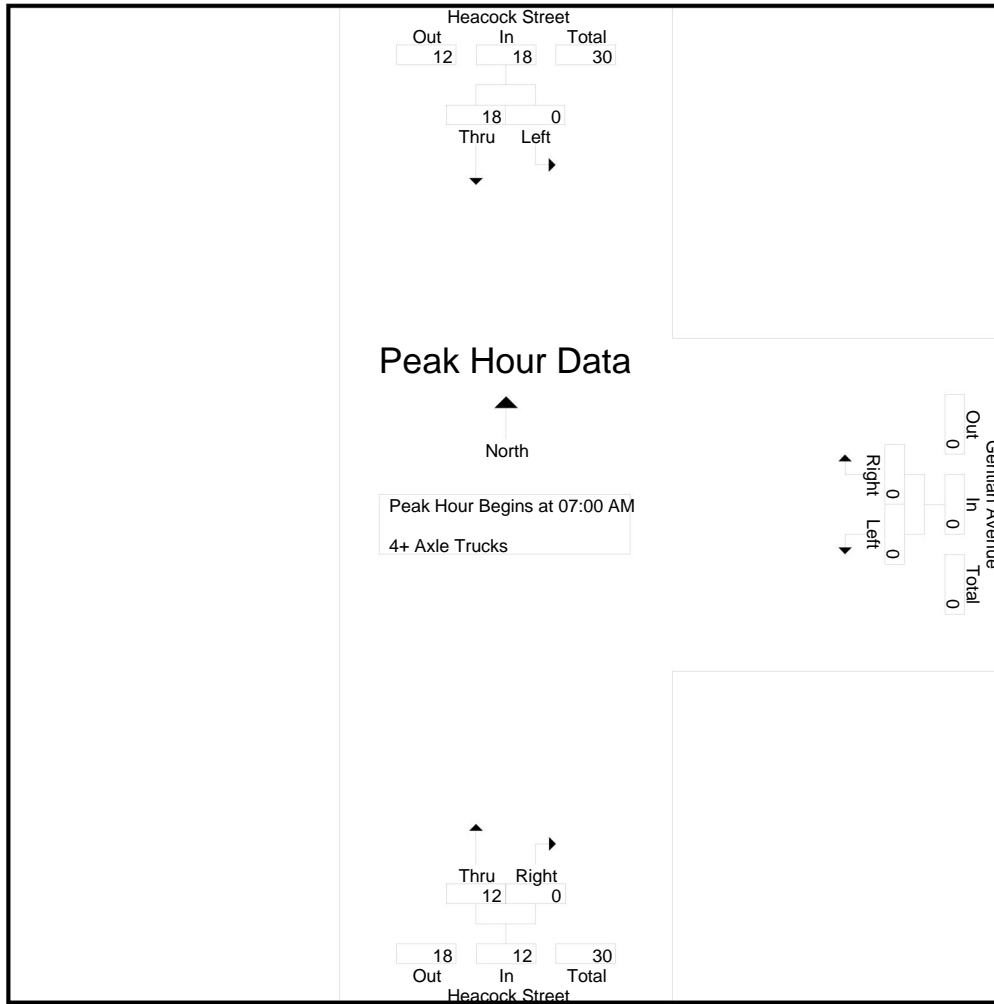
Groups Printed- 4+ Axle Trucks

Start Time	Heacock Street Southbound			Gentian Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	3	3	0	0	0	2	0	2	5
07:15 AM	0	2	2	0	0	0	2	0	2	4
07:30 AM	0	3	3	0	0	0	3	0	3	6
07:45 AM	0	10	10	0	0	0	5	0	5	15
Total	0	18	18	0	0	0	12	0	12	30
08:00 AM	0	6	6	0	0	0	6	0	6	12
08:15 AM	0	5	5	0	0	0	2	0	2	7
08:30 AM	0	9	9	0	0	0	1	0	1	10
08:45 AM	0	5	5	0	0	0	2	0	2	7
Total	0	25	25	0	0	0	11	0	11	36
Grand Total	0	43	43	0	0	0	23	0	23	66
Apprch %	0	100		0	0		100	0		
Total %	0	65.2	65.2	0	0	0	34.8	0	34.8	

Start Time	Heacock Street Southbound			Gentian Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	3	3	0	0	0	2	0	2	5
07:15 AM	0	2	2	0	0	0	2	0	2	4
07:30 AM	0	3	3	0	0	0	3	0	3	6
07:45 AM	0	10	10	0	0	0	5	0	5	15
Total Volume	0	18	18	0	0	0	12	0	12	30
% App. Total	0	100		0	0		100	0		
PHF	.000	.450	.450	.000	.000	.000	.600	.000	.600	.500

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Gentian Avenue  
 Weather: Clear

File Name : MRVHEGEAM  
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Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	3	3	0	0	0	2	0	2
+15 mins.	0	2	2	0	0	0	2	0	2
+30 mins.	0	3	3	0	0	0	3	0	3
+45 mins.	0	<b>10</b>	<b>10</b>	0	0	0	<b>5</b>	0	<b>5</b>
Total Volume	0	18	18	0	0	0	12	0	12
% App. Total	0	100		0	0		100	0	
PHF	.000	.450	.450	.000	.000	.000	.600	.000	.600

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Gentian Avenue  
 Weather: Clear

File Name : MRVHEGEPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
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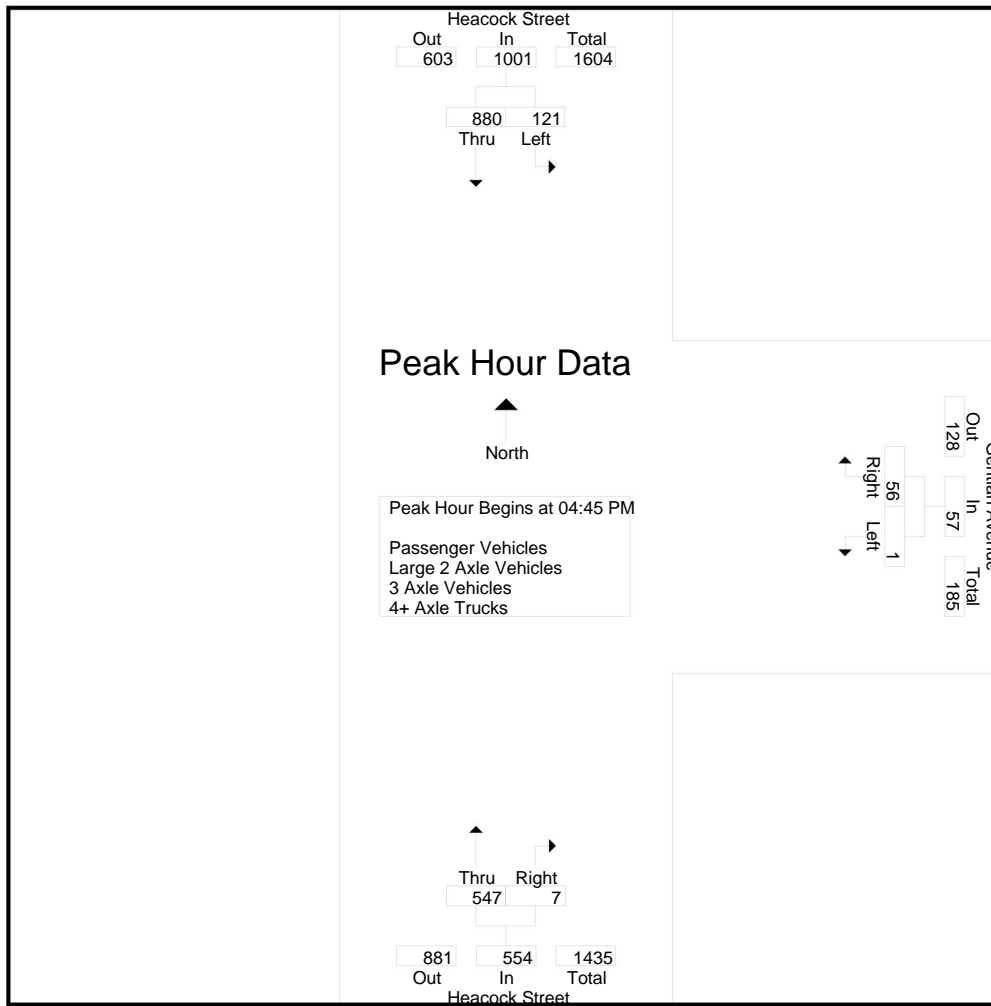
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Heacock Street Southbound			Gentian Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	16	131	147	0	18	18	87	1	88	253
04:15 PM	18	170	188	0	11	11	94	2	96	295
04:30 PM	20	191	211	1	14	15	155	0	155	381
04:45 PM	23	206	229	0	13	13	186	1	187	429
Total	77	698	775	1	56	57	522	4	526	1358
05:00 PM	35	205	240	1	14	15	130	5	135	390
05:15 PM	29	230	259	0	16	16	84	0	84	359
05:30 PM	34	239	273	0	13	13	147	1	148	434
05:45 PM	32	226	258	0	12	12	91	0	91	361
Total	130	900	1030	1	55	56	452	6	458	1544
Grand Total	207	1598	1805	2	111	113	974	10	984	2902
Apprch %	11.5	88.5		1.8	98.2		99	1		
Total %	7.1	55.1	62.2	0.1	3.8	3.9	33.6	0.3	33.9	
Passenger Vehicles	205	1536	1741	2	107	109	946	10	956	2806
% Passenger Vehicles	99	96.1	96.5	100	96.4	96.5	97.1	100	97.2	96.7
Large 2 Axle Vehicles	1	21	22	0	2	2	8	0	8	32
% Large 2 Axle Vehicles	0.5	1.3	1.2	0	1.8	1.8	0.8	0	0.8	1.1
3 Axle Vehicles	0	16	16	0	1	1	3	0	3	20
% 3 Axle Vehicles	0	1	0.9	0	0.9	0.9	0.3	0	0.3	0.7
4+ Axle Trucks	1	25	26	0	1	1	17	0	17	44
% 4+ Axle Trucks	0.5	1.6	1.4	0	0.9	0.9	1.7	0	1.7	1.5

Start Time	Heacock Street Southbound			Gentian Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	23	206	229	0	13	13	<b>186</b>	1	<b>187</b>	429
05:00 PM	35	205	240	1	14	15	130	5	135	390
05:15 PM	29	230	259	0	16	16	84	0	84	359
05:30 PM	34	<b>239</b>	<b>273</b>	0	13	13	147	1	148	<b>434</b>
Total Volume	121	880	1001	1	56	57	547	7	554	1612
% App. Total	12.1	87.9		1.8	98.2		98.7	1.3		
PHF	.864	.921	.917	.250	.875	.891	.735	.350	.741	.929

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Gentian Avenue  
 Weather: Clear

File Name : MRVHEGEP  
 Site Code : 05115223  
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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	05:00 PM			04:30 PM			04:15 PM		
+0 mins.	<b>35</b>	205	240	<b>1</b>	14	15	94	2	96
+15 mins.	29	230	259	0	13	13	155	0	155
+30 mins.	34	<b>239</b>	<b>273</b>	1	14	15	<b>186</b>	1	<b>187</b>
+45 mins.	32	226	258	0	<b>16</b>	<b>16</b>	130	<b>5</b>	135
Total Volume	130	900	1030	2	57	59	565	8	573
% App. Total	12.6	87.4		3.4	96.6		98.6	1.4	
PHF	.929	.941	.943	.500	.891	.922	.759	.400	.766



City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Gentian Avenue  
 Weather: Clear

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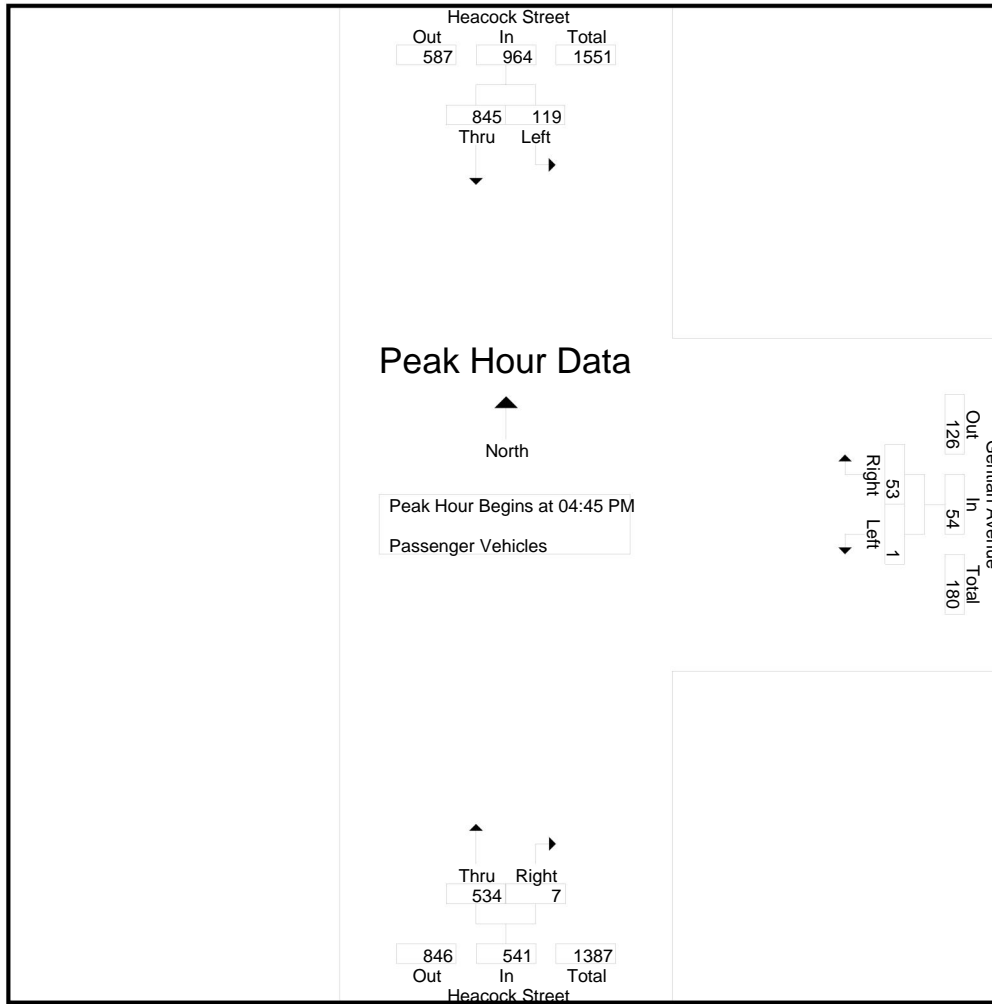
Groups Printed- Passenger Vehicles

Start Time	Heacock Street Southbound			Gentian Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	16	126	142	0	18	18	80	1	81	241
04:15 PM	18	164	182	0	11	11	90	2	92	285
04:30 PM	20	181	201	1	13	14	153	0	153	368
04:45 PM	23	196	219	0	12	12	183	1	184	415
Total	77	667	744	1	54	55	506	4	510	1309
05:00 PM	34	196	230	1	13	14	123	5	128	372
05:15 PM	28	221	249	0	15	15	84	0	84	348
05:30 PM	34	232	266	0	13	13	144	1	145	424
05:45 PM	32	220	252	0	12	12	89	0	89	353
Total	128	869	997	1	53	54	440	6	446	1497
Grand Total	205	1536	1741	2	107	109	946	10	956	2806
Apprch %	11.8	88.2		1.8	98.2		99	1		
Total %	7.3	54.7	62	0.1	3.8	3.9	33.7	0.4	34.1	

Start Time	Heacock Street Southbound			Gentian Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	23	196	219	0	12	12	<b>183</b>	1	<b>184</b>	415
05:00 PM	<b>34</b>	196	230	<b>1</b>	13	14	123	<b>5</b>	128	372
05:15 PM	28	221	249	0	<b>15</b>	<b>15</b>	84	0	84	348
05:30 PM	34	<b>232</b>	<b>266</b>	0	13	13	144	1	145	<b>424</b>
Total Volume	119	845	964	1	53	54	534	7	541	1559
% App. Total	12.3	87.7		1.9	98.1		98.7	1.3		
PHF	.875	.911	.906	.250	.883	.900	.730	.350	.735	.919

City of Moreno Valley  
 N/S: Heacock Street  
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 Weather: Clear

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Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	23	196	219	0	12	12	<b>183</b>	1	<b>184</b>
+15 mins.	<b>34</b>	196	230	1	13	14	123	<b>5</b>	128
+30 mins.	28	221	249	0	<b>15</b>	<b>15</b>	84	0	84
+45 mins.	34	<b>232</b>	<b>266</b>	0	13	13	144	1	145
Total Volume	119	845	964	1	53	54	534	7	541
% App. Total	12.3	87.7		1.9	98.1		98.7	1.3	
PHF	.875	.911	.906	.250	.883	.900	.730	.350	.735

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Gentian Avenue  
 Weather: Clear

File Name : MRVHEGEPM  
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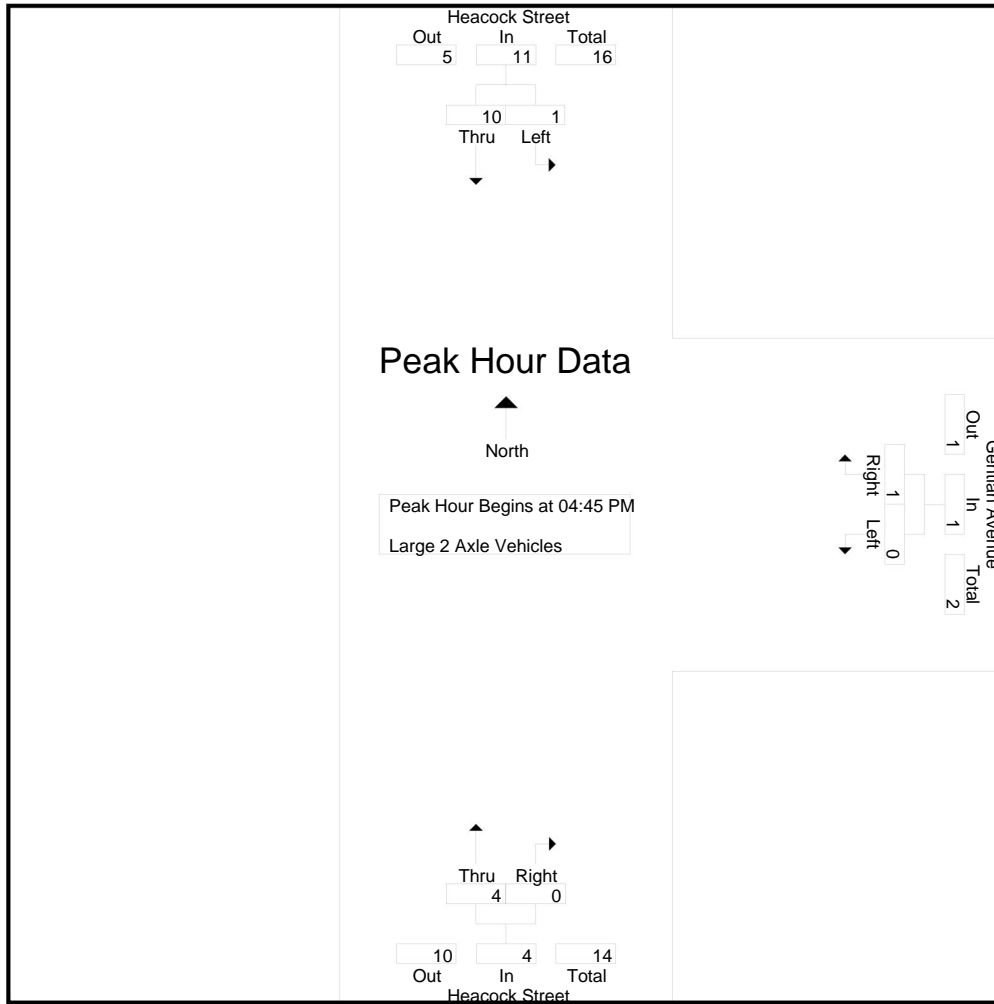
Groups Printed- Large 2 Axle Vehicles

Start Time	Heacock Street Southbound			Gentian Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	2	2	0	0	0	2	0	2	4
04:15 PM	0	3	3	0	0	0	0	0	0	3
04:30 PM	0	5	5	0	1	1	1	0	1	7
04:45 PM	0	3	3	0	1	1	2	0	2	6
Total	0	13	13	0	2	2	5	0	5	20
05:00 PM	1	1	2	0	0	0	2	0	2	4
05:15 PM	0	4	4	0	0	0	0	0	0	4
05:30 PM	0	2	2	0	0	0	0	0	0	2
05:45 PM	0	1	1	0	0	0	1	0	1	2
Total	1	8	9	0	0	0	3	0	3	12
Grand Total	1	21	22	0	2	2	8	0	8	32
Apprch %	4.5	95.5		0	100		100	0		
Total %	3.1	65.6	68.8	0	6.2	6.2	25	0	25	

Start Time	Heacock Street Southbound			Gentian Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	0	3	3	0	1	1	2	0	2	6
05:00 PM	1	1	2	0	0	0	2	0	2	4
05:15 PM	0	4	4	0	0	0	0	0	0	4
05:30 PM	0	2	2	0	0	0	0	0	0	2
Total Volume	1	10	11	0	1	1	4	0	4	16
% App. Total	9.1	90.9		0	100		100	0		
PHF	.250	.625	.688	.000	.250	.250	.500	.000	.500	.667

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Gentian Avenue  
 Weather: Clear

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Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	0	3	3	0	1	1	2	0	2
+15 mins.	1	1	2	0	0	0	2	0	2
+30 mins.	0	4	4	0	0	0	0	0	0
+45 mins.	0	2	2	0	0	0	0	0	0
Total Volume	1	10	11	0	1	1	4	0	4
% App. Total	9.1	90.9		0	100		100	0	
PHF	.250	.625	.688	.000	.250	.250	.500	.000	.500

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Gentian Avenue  
 Weather: Clear

File Name : MRVHEGEPM  
 Site Code : 05115223  
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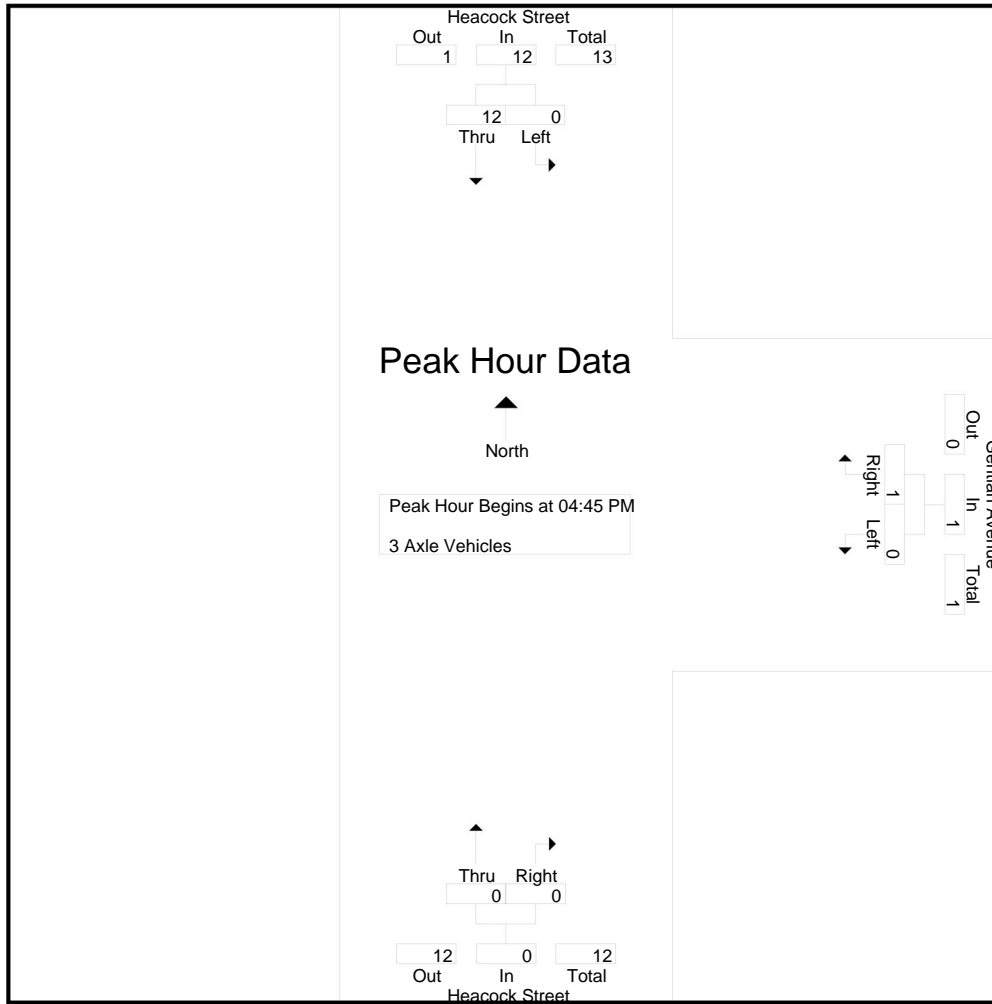
Groups Printed- 3 Axle Vehicles

Start Time	Heacock Street Southbound			Gentian Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	1	1	0	0	0	1	0	1	2
04:15 PM	0	0	0	0	0	0	1	0	1	1
04:30 PM	0	2	2	0	0	0	0	0	0	2
04:45 PM	0	4	4	0	0	0	0	0	0	4
Total	0	7	7	0	0	0	2	0	2	9
05:00 PM	0	5	5	0	1	1	0	0	0	6
05:15 PM	0	2	2	0	0	0	0	0	0	2
05:30 PM	0	1	1	0	0	0	0	0	0	1
05:45 PM	0	1	1	0	0	0	1	0	1	2
Total	0	9	9	0	1	1	1	0	1	11
Grand Total	0	16	16	0	1	1	3	0	3	20
Apprch %	0	100		0	100		100	0		
Total %	0	80	80	0	5	5	15	0	15	

Start Time	Heacock Street Southbound			Gentian Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	0	4	4	0	0	0	0	0	0	4
05:00 PM	0	5	5	0	1	1	0	0	0	6
05:15 PM	0	2	2	0	0	0	0	0	0	2
05:30 PM	0	1	1	0	0	0	0	0	0	1
Total Volume	0	12	12	0	1	1	0	0	0	13
% App. Total	0	100		0	100		0	0		
PHF	.000	.600	.600	.000	.250	.250	.000	.000	.000	.542

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Gentian Avenue  
 Weather: Clear

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Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	0	4	4	0	0	0	0	0	0
+15 mins.	0	5	5	0	1	1	0	0	0
+30 mins.	0	2	2	0	0	0	0	0	0
+45 mins.	0	1	1	0	0	0	0	0	0
Total Volume	0	12	12	0	1	1	0	0	0
% App. Total	0	100		0	100		0	0	
PHF	.000	.600	.600	.000	.250	.250	.000	.000	.000

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Gentian Avenue  
 Weather: Clear

File Name : MRVHEGEP  
 Site Code : 05115223  
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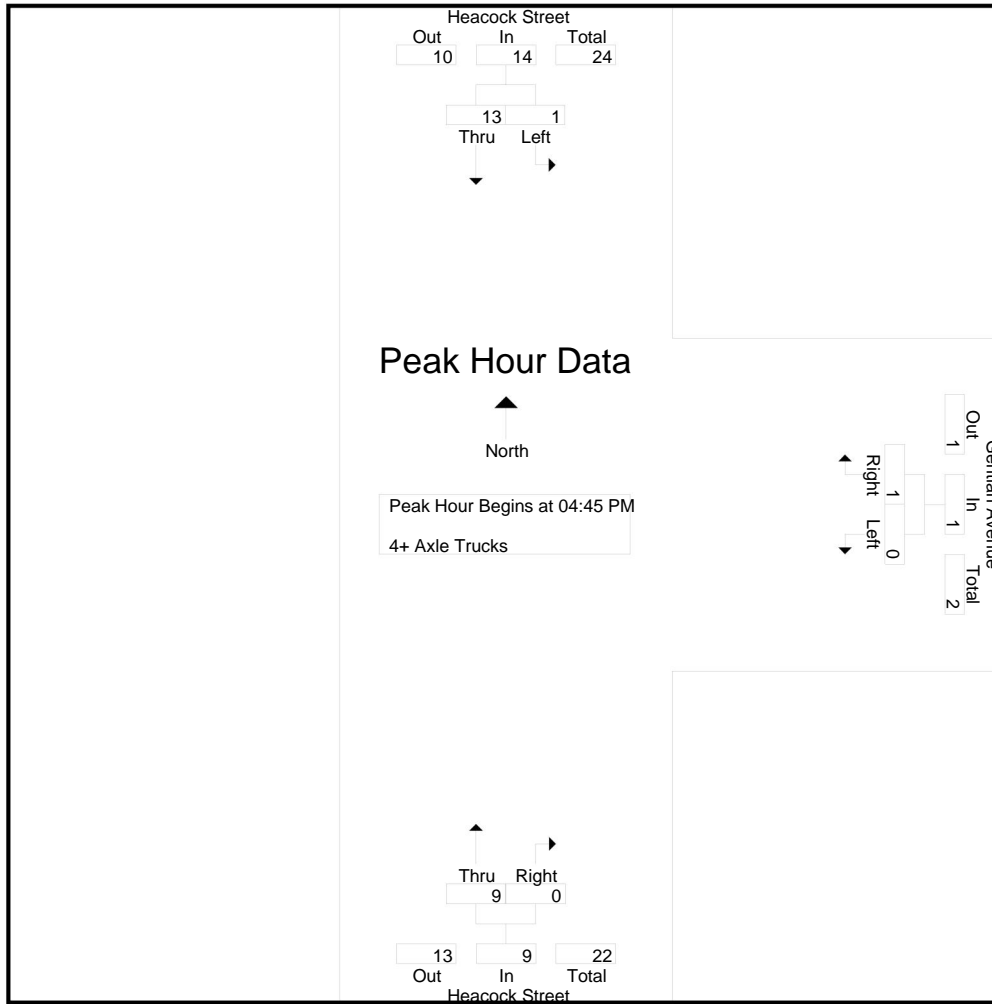
Groups Printed- 4+ Axle Trucks

Start Time	Heacock Street Southbound			Gentian Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	2	2	0	0	0	4	0	4	6
04:15 PM	0	3	3	0	0	0	3	0	3	6
04:30 PM	0	3	3	0	0	0	1	0	1	4
04:45 PM	0	3	3	0	0	0	1	0	1	4
Total	0	11	11	0	0	0	9	0	9	20
05:00 PM	0	3	3	0	0	0	5	0	5	8
05:15 PM	1	3	4	0	1	1	0	0	0	5
05:30 PM	0	4	4	0	0	0	3	0	3	7
05:45 PM	0	4	4	0	0	0	0	0	0	4
Total	1	14	15	0	1	1	8	0	8	24
Grand Total	1	25	26	0	1	1	17	0	17	44
Apprch %	3.8	96.2		0	100		100	0		
Total %	2.3	56.8	59.1	0	2.3	2.3	38.6	0	38.6	

Start Time	Heacock Street Southbound			Gentian Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	0	3	3	0	0	0	1	0	1	4
05:00 PM	0	3	3	0	0	0	5	0	5	8
05:15 PM	1	3	4	0	1	1	0	0	0	5
05:30 PM	0	4	4	0	0	0	3	0	3	7
Total Volume	1	13	14	0	1	1	9	0	9	24
% App. Total	7.1	92.9		0	100		100	0		
PHF	.250	.813	.875	.000	.250	.250	.450	.000	.450	.750

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Gentian Avenue  
 Weather: Clear

File Name : MRVHEGEPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	0	3	3	0	0	0	1	0	1
+15 mins.	0	3	3	0	0	0	5	0	5
+30 mins.	1	3	4	0	1	1	0	0	0
+45 mins.	0	4	4	0	0	0	3	0	3
Total Volume	1	13	14	0	1	1	9	0	9
% App. Total	7.1	92.9		0	100		100	0	
PHF	.250	.813	.875	.000	.250	.250	.450	.000	.450



Location: Moreno Valley  
 N/S: Heacock Street  
 E/W: Gentian Avenue



Date: 4/28/2015  
 Weather: Clear

PEDESTRIANS

	North Leg Heacock Street	East Leg Gentian Avenue	South Leg Heacock Street	West Leg Gentian Avenue	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg Heacock Street	East Leg Gentian Avenue	South Leg Heacock Street	West Leg Gentian Avenue	TOTAL
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

Location: Moreno Valley  
 N/S: Heacock Street  
 E/W: Gentian Avenue



Date: 4/28/2015  
 Weather: Clear

**BICYCLES**

	North Leg Heacock Street	East Leg Gentian Avenue	South Leg Heacock Street	West Leg Gentian Avenue	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg Heacock Street	East Leg Gentian Avenue	South Leg Heacock Street	West Leg Gentian Avenue	TOTAL
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Iris Avenue  
 Weather: Clear

File Name : MRVHEIRAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

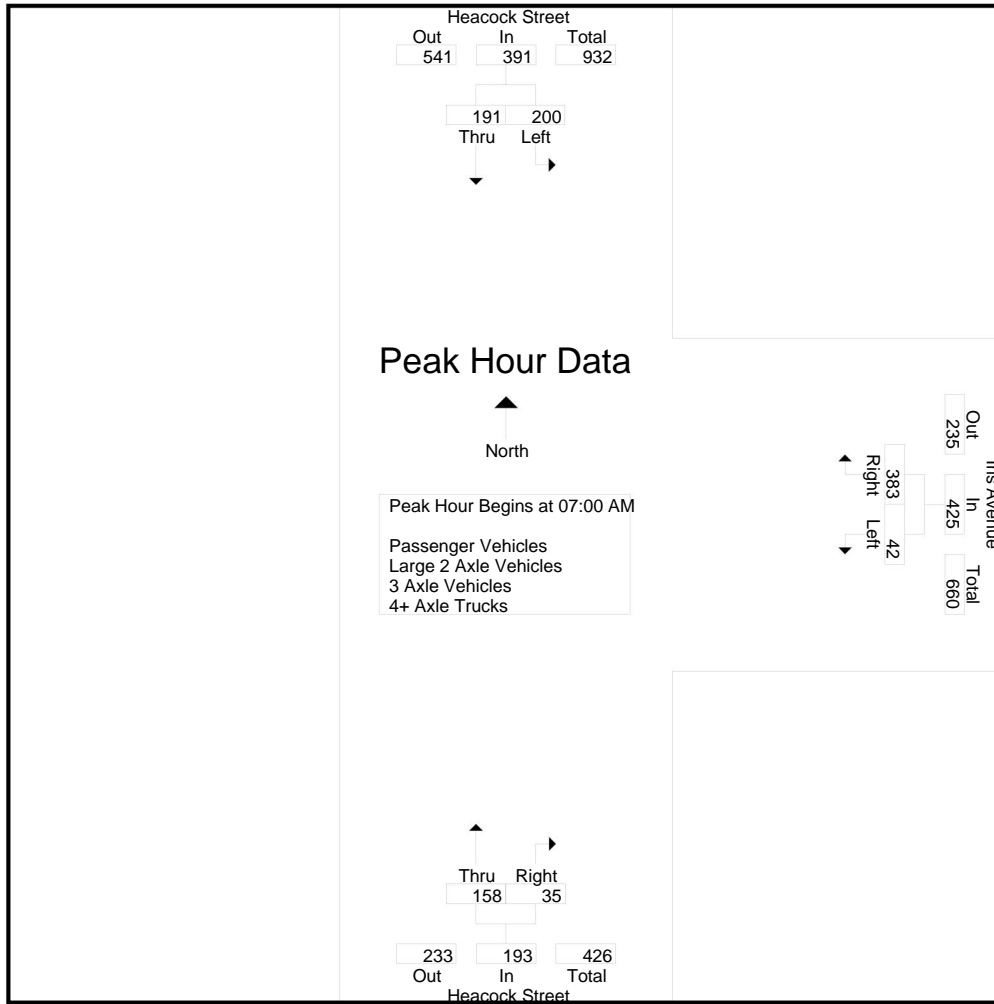
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Heacock Street Southbound			Iris Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	46	40	86	8	104	112	34	6	40	238
07:15 AM	50	73	123	14	82	96	40	10	50	269
07:30 AM	48	37	85	12	107	119	43	8	51	255
07:45 AM	56	41	97	8	90	98	41	11	52	247
Total	200	191	391	42	383	425	158	35	193	1009
08:00 AM	44	25	69	1	84	85	36	2	38	192
08:15 AM	34	25	59	3	80	83	25	3	28	170
08:30 AM	40	27	67	2	64	66	20	2	22	155
08:45 AM	42	17	59	1	54	55	16	3	19	133
Total	160	94	254	7	282	289	97	10	107	650
Grand Total	360	285	645	49	665	714	255	45	300	1659
Apprch %	55.8	44.2		6.9	93.1		85	15		
Total %	21.7	17.2	38.9	3	40.1	43	15.4	2.7	18.1	
Passenger Vehicles	354	235	589	44	660	704	227	42	269	1562
% Passenger Vehicles	98.3	82.5	91.3	89.8	99.2	98.6	89	93.3	89.7	94.2
Large 2 Axle Vehicles	2	8	10	4	1	5	2	3	5	20
% Large 2 Axle Vehicles	0.6	2.8	1.6	8.2	0.2	0.7	0.8	6.7	1.7	1.2
3 Axle Vehicles	1	3	4	0	1	1	2	0	2	7
% 3 Axle Vehicles	0.3	1.1	0.6	0	0.2	0.1	0.8	0	0.7	0.4
4+ Axle Trucks	3	39	42	1	3	4	24	0	24	70
% 4+ Axle Trucks	0.8	13.7	6.5	2	0.5	0.6	9.4	0	8	4.2

Start Time	Heacock Street Southbound			Iris Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	46	40	86	8	104	112	34	6	40	238
07:15 AM	50	73	123	14	82	96	40	10	50	269
07:30 AM	48	37	85	12	107	119	43	8	51	255
07:45 AM	56	41	97	8	90	98	41	11	52	247
Total Volume	200	191	391	42	383	425	158	35	193	1009
% App. Total	51.2	48.8		9.9	90.1		81.9	18.1		
PHF	.893	.654	.795	.750	.895	.893	.919	.795	.928	.938

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Iris Avenue  
 Weather: Clear

File Name : MRVHEIRAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	46	40	86	8	104	112	34	6	40
+15 mins.	50	<b>73</b>	<b>123</b>	<b>14</b>	82	96	40	10	50
+30 mins.	48	37	85	12	<b>107</b>	<b>119</b>	<b>43</b>	8	51
+45 mins.	<b>56</b>	41	97	8	90	98	41	<b>11</b>	<b>52</b>
Total Volume	200	191	391	42	383	425	158	35	193
% App. Total	51.2	48.8		9.9	90.1		81.9	18.1	
PHF	.893	.654	.795	.750	.895	.893	.919	.795	.928

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Iris Avenue  
 Weather: Clear

File Name : MRVHEIRAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- Passenger Vehicles

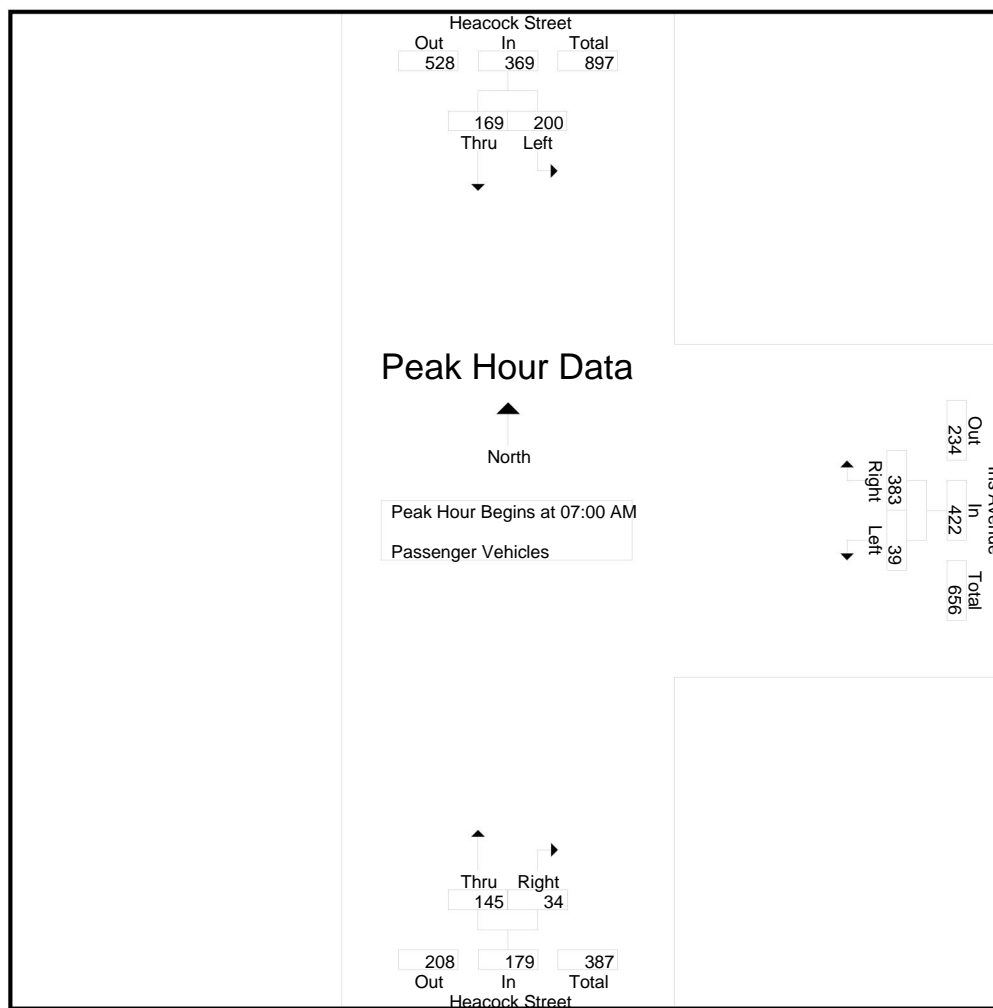
Start Time	Heacock Street Southbound			Iris Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	46	35	81	8	104	112	31	6	37	230
07:15 AM	50	71	121	14	82	96	38	10	48	265
07:30 AM	48	33	81	11	107	118	40	8	48	247
07:45 AM	56	30	86	6	90	96	36	10	46	228
Total	200	169	369	39	383	422	145	34	179	970
08:00 AM	44	17	61	1	80	81	27	2	29	171
08:15 AM	32	18	50	1	79	80	24	1	25	155
08:30 AM	38	18	56	2	64	66	17	2	19	141
08:45 AM	40	13	53	1	54	55	14	3	17	125
Total	154	66	220	5	277	282	82	8	90	592
Grand Total	354	235	589	44	660	704	227	42	269	1562
Apprch %	60.1	39.9		6.2	93.8		84.4	15.6		
Total %	22.7	15	37.7	2.8	42.3	45.1	14.5	2.7	17.2	

Start Time	Heacock Street Southbound			Iris Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	46	35	81	8	104	112	31	6	37	230
07:15 AM	50	<b>71</b>	<b>121</b>	<b>14</b>	82	96	<b>38</b>	<b>10</b>	<b>48</b>	<b>265</b>
07:30 AM	48	33	81	11	<b>107</b>	<b>118</b>	<b>40</b>	8	48	247
07:45 AM	<b>56</b>	30	86	6	90	96	36	10	46	228
Total Volume	200	169	369	39	383	422	145	34	179	970
% App. Total	54.2	45.8		9.2	90.8		81	19		
PHF	.893	.595	.762	.696	.895	.894	.906	.850	.932	.915

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Iris Avenue  
 Weather: Clear

File Name : MRVHEIRAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
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Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	46	35	81	8	104	112	31	6	37
+15 mins.	50	<b>71</b>	<b>121</b>	<b>14</b>	82	96	38	<b>10</b>	<b>48</b>
+30 mins.	48	33	81	11	<b>107</b>	<b>118</b>	<b>40</b>	8	48
+45 mins.	<b>56</b>	30	86	6	90	96	36	10	46
Total Volume	200	169	369	39	383	422	145	34	179
% App. Total	54.2	45.8		9.2	90.8		81	19	
PHF	.893	.595	.762	.696	.895	.894	.906	.850	.932

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Iris Avenue  
 Weather: Clear

File Name : MRVHEIRAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

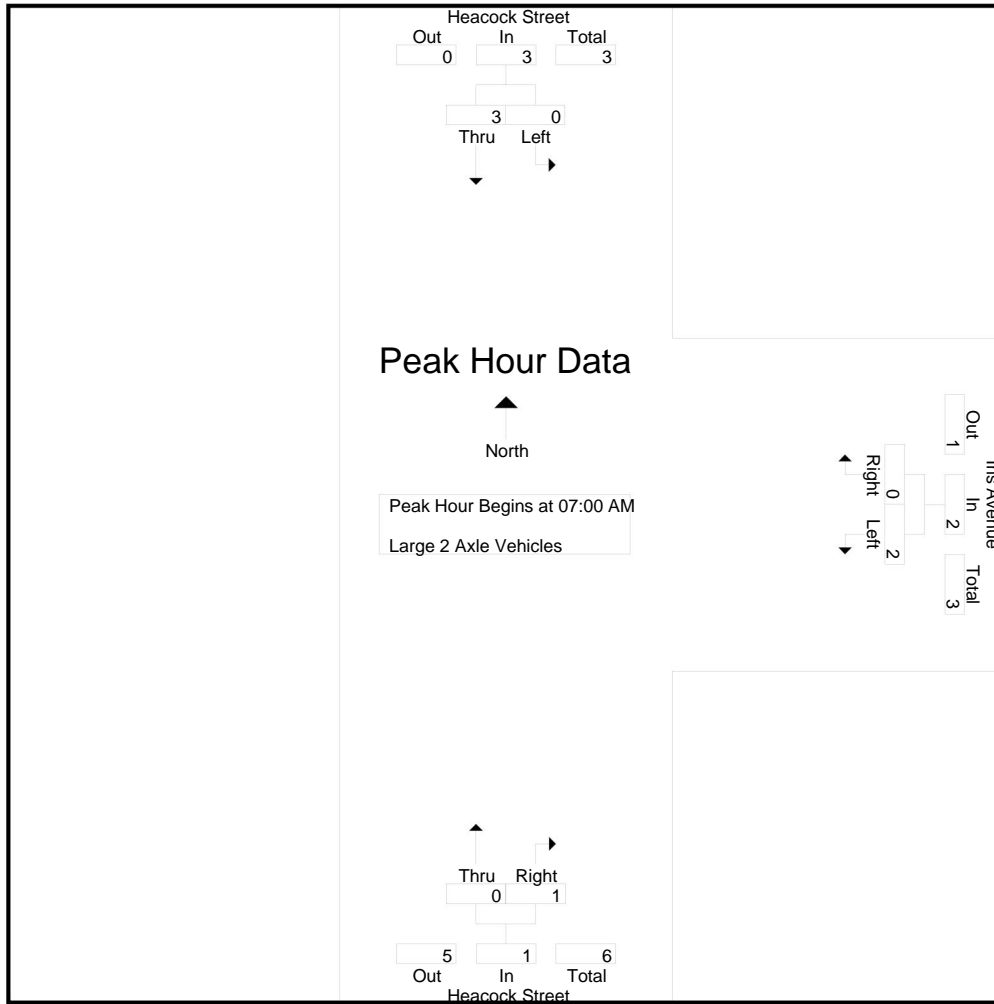
Groups Printed- Large 2 Axle Vehicles

Start Time	Heacock Street Southbound			Iris Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	1	1	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	2	2	2	0	2	0	1	1	5
Total	0	3	3	2	0	2	0	1	1	6
08:00 AM	0	3	3	0	1	1	1	0	1	5
08:15 AM	0	1	1	2	0	2	0	2	2	5
08:30 AM	1	0	1	0	0	0	1	0	1	2
08:45 AM	1	1	2	0	0	0	0	0	0	2
Total	2	5	7	2	1	3	2	2	4	14
Grand Total	2	8	10	4	1	5	2	3	5	20
Apprch %	20	80		80	20		40	60		
Total %	10	40	50	20	5	25	10	15	25	

Start Time	Heacock Street Southbound			Iris Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	1	1	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	2	2	2	0	2	0	1	1	5
Total Volume	0	3	3	2	0	2	0	1	1	6
% App. Total	0	100		100	0		0	100		
PHF	.000	.375	.375	.250	.000	.250	.000	.250	.250	.300

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Iris Avenue  
 Weather: Clear

File Name : MRVHEIRAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	1	1	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	2	2	2	0	2	0	1	1
Total Volume	0	3	3	2	0	2	0	1	1
% App. Total	0	100	100	100	0	100	0	100	100
PHF	.000	.375	.375	.250	.000	.250	.000	.250	.250



City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Iris Avenue  
 Weather: Clear

File Name : MRVHEIRAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

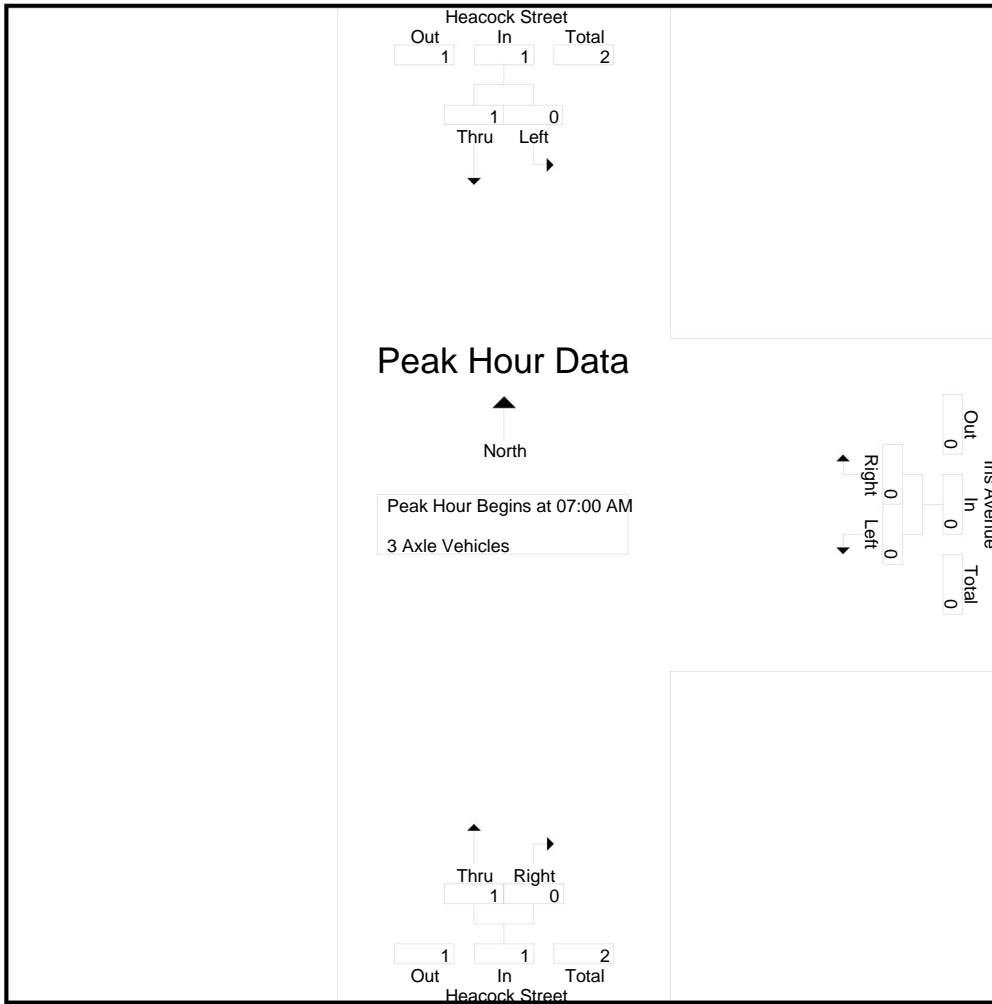
Groups Printed- 3 Axle Vehicles

Start Time	Heacock Street Southbound			Iris Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	0	1	0	1	1
07:15 AM	0	1	1	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	1	1	0	0	0	1	0	1	2
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	1	2	3	0	1	1	0	0	0	4
08:30 AM	0	0	0	0	0	0	1	0	1	1
08:45 AM	0	0	0	0	0	0	0	0	0	0
Total	1	2	3	0	1	1	1	0	1	5
Grand Total	1	3	4	0	1	1	2	0	2	7
Apprch %	25	75		0	100		100	0		
Total %	14.3	42.9	57.1	0	14.3	14.3	28.6	0	28.6	

Start Time	Heacock Street Southbound			Iris Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	0	0	0	0	0	1	0	1	1
07:15 AM	0	1	1	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	1	0	0	0	1	0	1	2
% App. Total	0	100		0	0		100	0		
PHF	.000	.250	.250	.000	.000	.000	.250	.000	.250	.500

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Iris Avenue  
 Weather: Clear

File Name : MRVHEIRAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	0	0	0	0	0	1	0	1
+15 mins.	0	1	1	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	1	1	0	0	0	1	0	1
% App. Total	0	100		0	0		100	0	
PHF	.000	.250	.250	.000	.000	.000	.250	.000	.250

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Iris Avenue  
 Weather: Clear

File Name : MRVHEIRAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

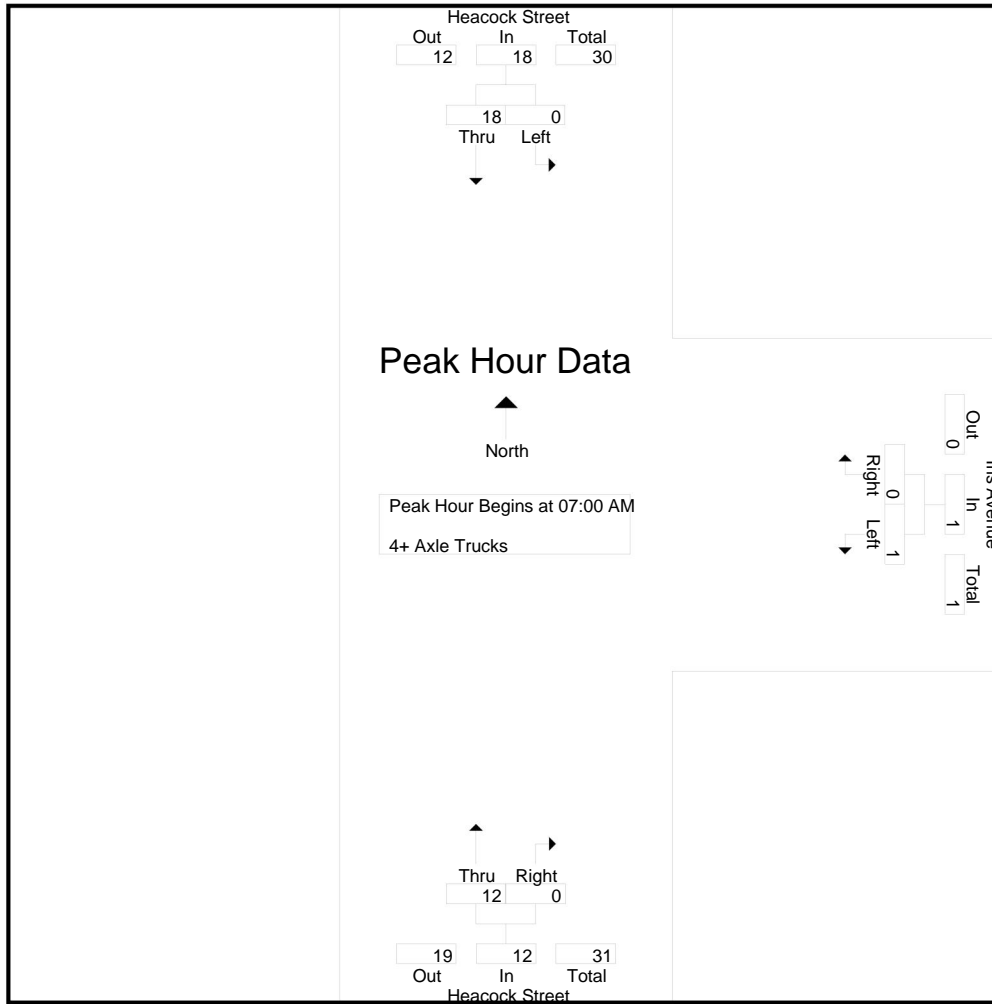
Groups Printed- 4+ Axle Trucks

Start Time	Heacock Street Southbound			Iris Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	4	4	0	0	0	2	0	2	6
07:15 AM	0	1	1	0	0	0	2	0	2	3
07:30 AM	0	4	4	1	0	1	3	0	3	8
07:45 AM	0	9	9	0	0	0	5	0	5	14
Total	0	18	18	1	0	1	12	0	12	31
08:00 AM	0	5	5	0	3	3	8	0	8	16
08:15 AM	1	4	5	0	0	0	1	0	1	6
08:30 AM	1	9	10	0	0	0	1	0	1	11
08:45 AM	1	3	4	0	0	0	2	0	2	6
Total	3	21	24	0	3	3	12	0	12	39
Grand Total	3	39	42	1	3	4	24	0	24	70
Apprch %	7.1	92.9		25	75		100	0		
Total %	4.3	55.7	60	1.4	4.3	5.7	34.3	0	34.3	

Start Time	Heacock Street Southbound			Iris Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	4	4	0	0	0	2	0	2	6
07:15 AM	0	1	1	0	0	0	2	0	2	3
07:30 AM	0	4	4	1	0	1	3	0	3	8
07:45 AM	0	9	9	0	0	0	5	0	5	14
Total Volume	0	18	18	1	0	1	12	0	12	31
% App. Total	0	100		100	0		100	0		
PHF	.000	.500	.500	.250	.000	.250	.600	.000	.600	.554

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Iris Avenue  
 Weather: Clear

File Name : MRVHEIRAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
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Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	4	4	0	0	0	2	0	2
+15 mins.	0	1	1	0	0	0	2	0	2
+30 mins.	0	4	4	1	0	1	3	0	3
+45 mins.	0	9	9	0	0	0	5	0	5
Total Volume	0	18	18	1	0	1	12	0	12
% App. Total	0	100		100	0		100	0	
PHF	.000	.500	.500	.250	.000	.250	.600	.000	.600

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Iris Avenue  
 Weather: Clear

File Name : MRVHEIRPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

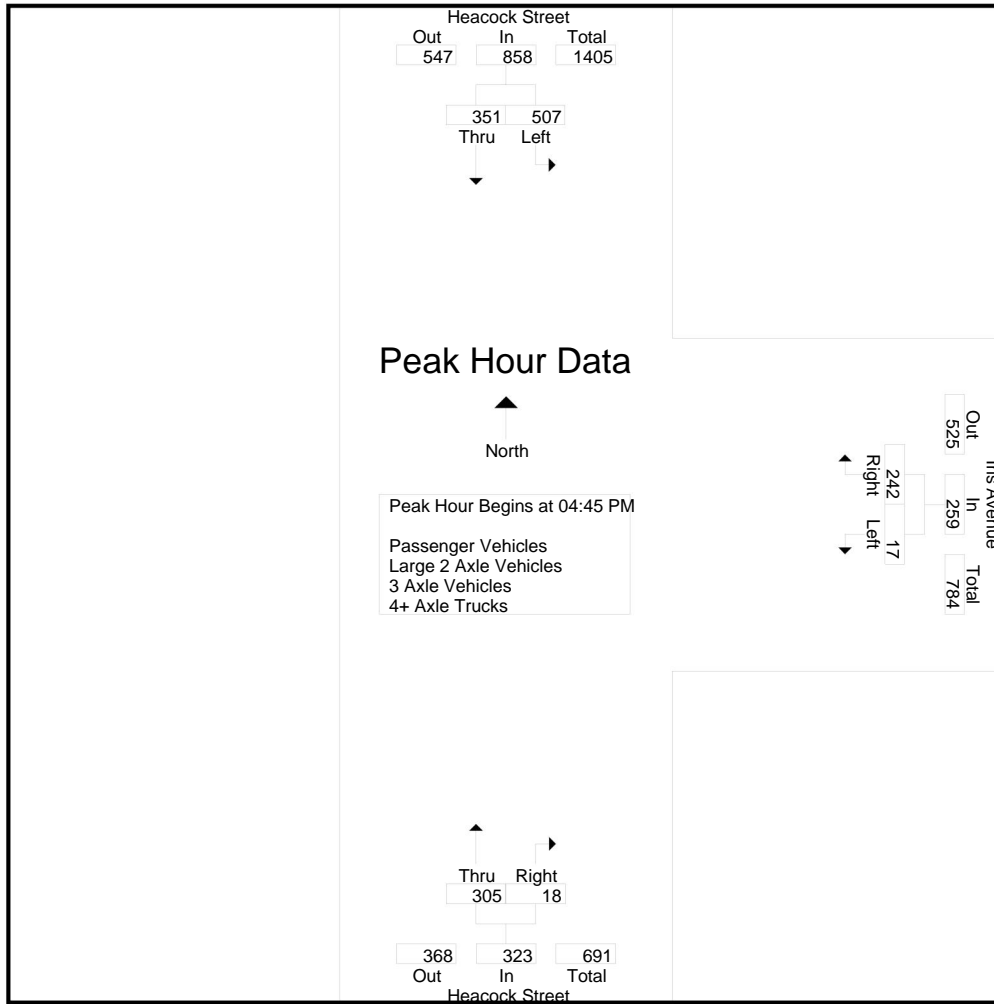
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Heacock Street Southbound			Iris Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	89	45	134	6	59	65	29	4	33	232
04:15 PM	86	68	154	6	57	63	42	3	45	262
04:30 PM	86	104	190	12	57	69	95	8	103	362
04:45 PM	118	103	221	8	54	62	130	8	138	421
Total	379	320	699	32	227	259	296	23	319	1277
05:00 PM	111	78	189	0	62	62	73	3	76	327
05:15 PM	148	76	224	2	52	54	31	2	33	311
05:30 PM	130	94	224	7	74	81	71	5	76	381
05:45 PM	134	98	232	4	57	61	37	6	43	336
Total	523	346	869	13	245	258	212	16	228	1355
Grand Total	902	666	1568	45	472	517	508	39	547	2632
Apprch %	57.5	42.5		8.7	91.3		92.9	7.1		
Total %	34.3	25.3	59.6	1.7	17.9	19.6	19.3	1.5	20.8	
Passenger Vehicles	894	620	1514	44	471	515	483	38	521	2550
% Passenger Vehicles	99.1	93.1	96.6	97.8	99.8	99.6	95.1	97.4	95.2	96.9
Large 2 Axle Vehicles	7	10	17	0	1	1	5	1	6	24
% Large 2 Axle Vehicles	0.8	1.5	1.1	0	0.2	0.2	1	2.6	1.1	0.9
3 Axle Vehicles	0	16	16	1	0	1	3	0	3	20
% 3 Axle Vehicles	0	2.4	1	2.2	0	0.2	0.6	0	0.5	0.8
4+ Axle Trucks	1	20	21	0	0	0	17	0	17	38
% 4+ Axle Trucks	0.1	3	1.3	0	0	0	3.3	0	3.1	1.4

Start Time	Heacock Street Southbound			Iris Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	118	<b>103</b>	221	<b>8</b>	54	62	<b>130</b>	<b>8</b>	<b>138</b>	<b>421</b>
05:00 PM	111	78	189	0	62	62	73	3	76	327
05:15 PM	<b>148</b>	76	<b>224</b>	2	52	54	31	2	33	311
05:30 PM	130	94	224	7	<b>74</b>	<b>81</b>	71	5	76	381
Total Volume	507	351	858	17	242	259	305	18	323	1440
% App. Total	59.1	40.9		6.6	93.4		94.4	5.6		
PHF	.856	.852	.958	.531	.818	.799	.587	.563	.585	.855

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Iris Avenue  
 Weather: Clear

File Name : MRVHEIRPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	05:00 PM			04:00 PM			04:15 PM		
+0 mins.	111	78	189	6	<b>59</b>	65	42	3	45
+15 mins.	<b>148</b>	76	224	6	57	63	95	<b>8</b>	103
+30 mins.	130	94	224	<b>12</b>	57	<b>69</b>	<b>130</b>	8	<b>138</b>
+45 mins.	134	<b>98</b>	<b>232</b>	8	54	62	73	3	76
Total Volume	523	346	869	32	227	259	340	22	362
% App. Total	60.2	39.8		12.4	87.6		93.9	6.1	
PHF	.883	.883	.936	.667	.962	.938	.654	.688	.656

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Iris Avenue  
 Weather: Clear

File Name : MRVHEIRPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

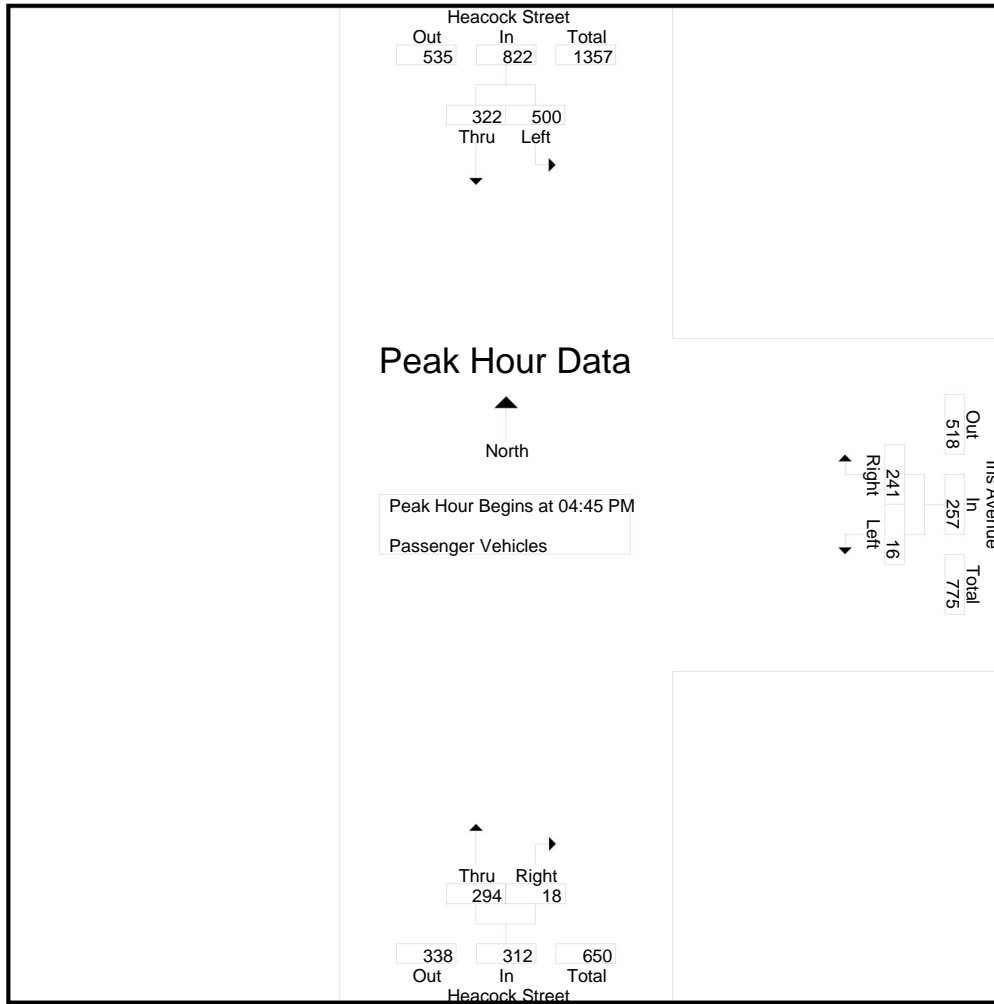
Groups Printed- Passenger Vehicles

Start Time	Heacock Street Southbound			Iris Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	89	43	132	6	59	65	23	4	27	224
04:15 PM	86	64	150	6	57	63	38	2	40	253
04:30 PM	85	98	183	12	57	69	93	8	101	353
04:45 PM	116	94	210	8	54	62	128	8	136	408
Total	376	299	675	32	227	259	282	22	304	1238
05:00 PM	110	69	179	0	61	61	67	3	70	310
05:15 PM	145	71	216	1	52	53	31	2	33	302
05:30 PM	129	88	217	7	74	81	68	5	73	371
05:45 PM	134	93	227	4	57	61	35	6	41	329
Total	518	321	839	12	244	256	201	16	217	1312
Grand Total	894	620	1514	44	471	515	483	38	521	2550
Apprch %	59	41		8.5	91.5		92.7	7.3		
Total %	35.1	24.3	59.4	1.7	18.5	20.2	18.9	1.5	20.4	

Start Time	Heacock Street Southbound			Iris Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	116	<b>94</b>	210	<b>8</b>	54	62	<b>128</b>	<b>8</b>	<b>136</b>	<b>408</b>
05:00 PM	110	69	179	0	61	61	67	3	70	310
05:15 PM	<b>145</b>	71	216	1	52	53	31	2	33	302
05:30 PM	129	88	<b>217</b>	7	<b>74</b>	<b>81</b>	68	5	73	371
Total Volume	500	322	822	16	241	257	294	18	312	1391
% App. Total	60.8	39.2		6.2	93.8		94.2	5.8		
PHF	.862	.856	.947	.500	.814	.793	.574	.563	.574	.852

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Iris Avenue  
 Weather: Clear

File Name : MRVHEIRPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	116	<b>94</b>	210	<b>8</b>	54	62	<b>128</b>	<b>8</b>	<b>136</b>
+15 mins.	110	69	179	0	61	61	67	3	70
+30 mins.	<b>145</b>	71	216	1	52	53	31	2	33
+45 mins.	129	88	<b>217</b>	7	<b>74</b>	<b>81</b>	68	5	73
Total Volume	500	322	822	16	241	257	294	18	312
% App. Total	60.8	39.2		6.2	93.8		94.2	5.8	
PHF	.862	.856	.947	.500	.814	.793	.574	.563	.574



City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Iris Avenue  
 Weather: Clear

File Name : MRVHEIRPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

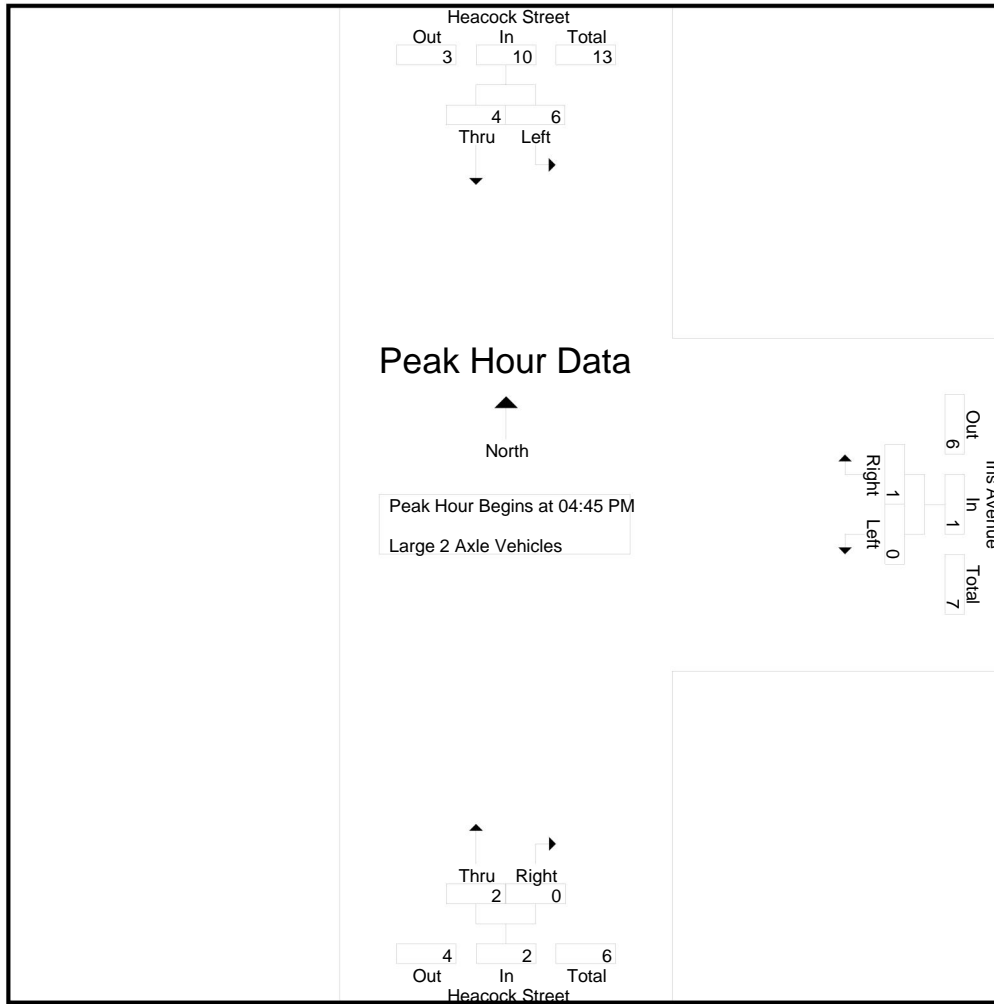
Groups Printed- Large 2 Axle Vehicles

Start Time	Heacock Street Southbound			Iris Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	1	1	0	0	0	1	0	1	2
04:15 PM	0	1	1	0	0	0	0	1	1	2
04:30 PM	1	3	4	0	0	0	1	0	1	5
04:45 PM	2	1	3	0	0	0	1	0	1	4
Total	3	6	9	0	0	0	3	1	4	13
05:00 PM	1	0	1	0	1	1	1	0	1	3
05:15 PM	2	2	4	0	0	0	0	0	0	4
05:30 PM	1	1	2	0	0	0	0	0	0	2
05:45 PM	0	1	1	0	0	0	1	0	1	2
Total	4	4	8	0	1	1	2	0	2	11
Grand Total	7	10	17	0	1	1	5	1	6	24
Apprch %	41.2	58.8		0	100		83.3	16.7		
Total %	29.2	41.7	70.8	0	4.2	4.2	20.8	4.2	25	

Start Time	Heacock Street Southbound			Iris Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	2	1	3	0	0	0	1	0	1	4
05:00 PM	1	0	1	0	1	1	1	0	1	3
05:15 PM	2	2	4	0	0	0	0	0	0	4
05:30 PM	1	1	2	0	0	0	0	0	0	2
Total Volume	6	4	10	0	1	1	2	0	2	13
% App. Total	60	40		0	100		100	0		
PHF	.750	.500	.625	.000	.250	.250	.500	.000	.500	.813

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Iris Avenue  
 Weather: Clear

File Name : MRVHEIRPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
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Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	2	1	3	0	0	0	1	0	1
+15 mins.	1	0	1	0	1	1	1	0	1
+30 mins.	2	2	4	0	0	0	0	0	0
+45 mins.	1	1	2	0	0	0	0	0	0
Total Volume	6	4	10	0	1	1	2	0	2
% App. Total	60	40		0	100		100	0	
PHF	.750	.500	.625	.000	.250	.250	.500	.000	.500

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Iris Avenue  
 Weather: Clear

File Name : MRVHEIRPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
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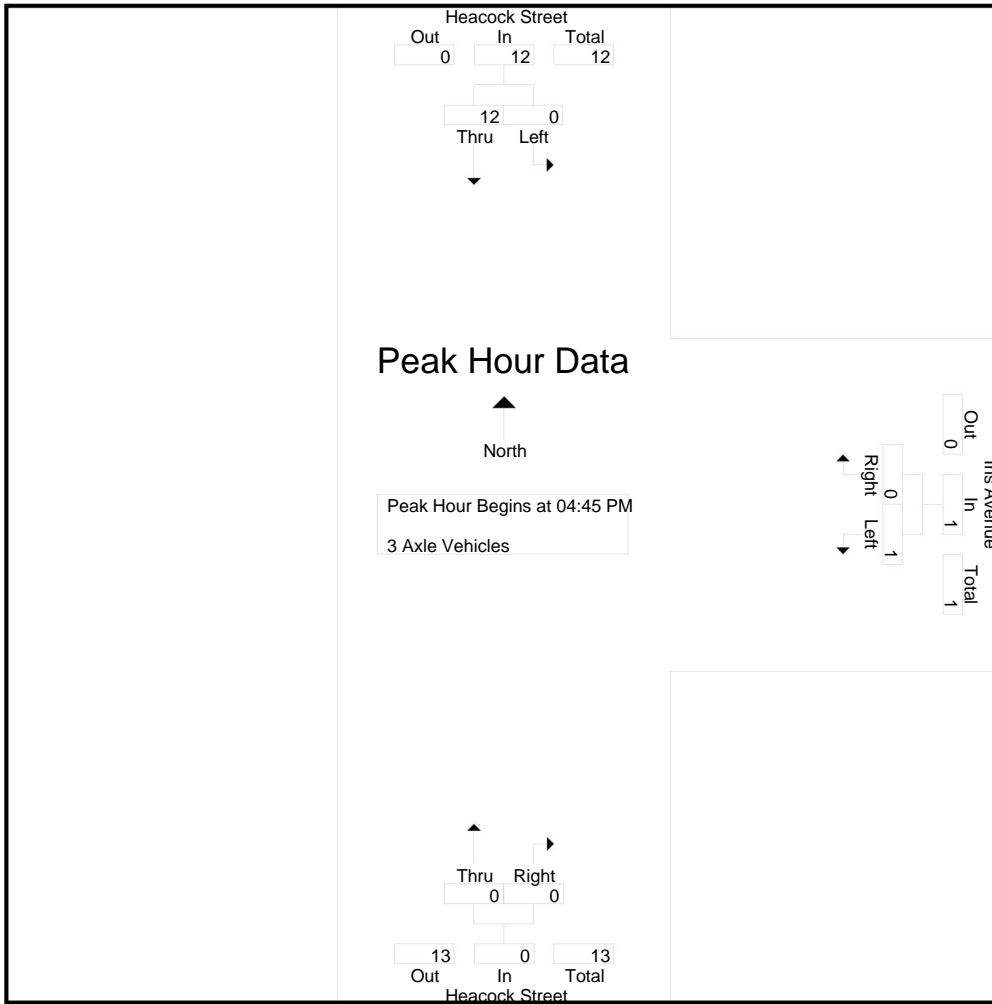
Groups Printed- 3 Axle Vehicles

Start Time	Heacock Street Southbound			Iris Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	1	1	0	0	0	1	0	1	2
04:15 PM	0	0	0	0	0	0	1	0	1	1
04:30 PM	0	2	2	0	0	0	0	0	0	2
04:45 PM	0	4	4	0	0	0	0	0	0	4
Total	0	7	7	0	0	0	2	0	2	9
05:00 PM	0	5	5	0	0	0	0	0	0	5
05:15 PM	0	2	2	1	0	1	0	0	0	3
05:30 PM	0	1	1	0	0	0	0	0	0	1
05:45 PM	0	1	1	0	0	0	1	0	1	2
Total	0	9	9	1	0	1	1	0	1	11
Grand Total	0	16	16	1	0	1	3	0	3	20
Apprch %	0	100		100	0		100	0		
Total %	0	80	80	5	0	5	15	0	15	

Start Time	Heacock Street Southbound			Iris Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	0	4	4	0	0	0	0	0	0	4
05:00 PM	0	5	5	0	0	0	0	0	0	5
05:15 PM	0	2	2	1	0	1	0	0	0	3
05:30 PM	0	1	1	0	0	0	0	0	0	1
Total Volume	0	12	12	1	0	1	0	0	0	13
% App. Total	0	100		100	0		0	0		
PHF	.000	.600	.600	.250	.000	.250	.000	.000	.000	.650

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Iris Avenue  
 Weather: Clear

File Name : MRVHEIRPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
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Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	0	4	4	0	0	0	0	0	0
+15 mins.	0	5	5	0	0	0	0	0	0
+30 mins.	0	2	2	1	0	1	0	0	0
+45 mins.	0	1	1	0	0	0	0	0	0
Total Volume	0	12	12	1	0	1	0	0	0
% App. Total	0	100		100	0		0	0	
PHF	.000	.600	.600	.250	.000	.250	.000	.000	.000

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Iris Avenue  
 Weather: Clear

File Name : MRVHEIRPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

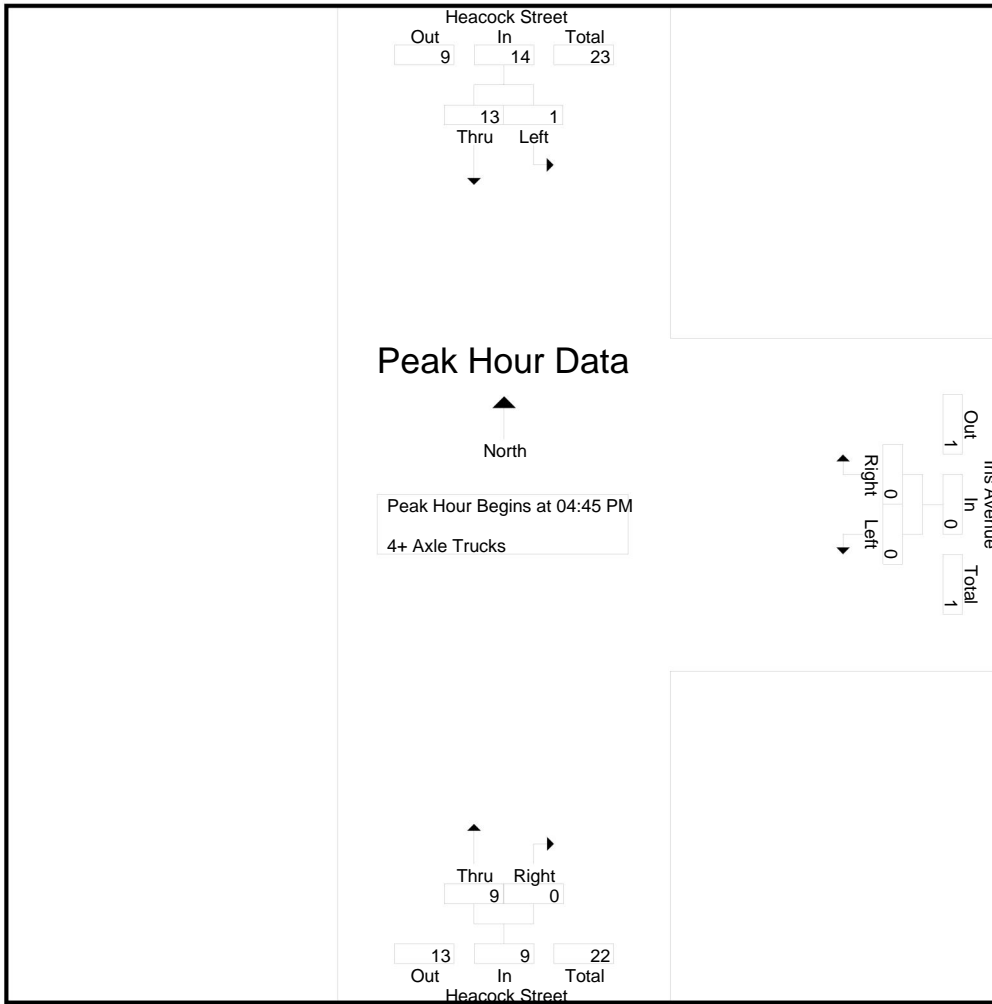
Groups Printed- 4+ Axle Trucks

Start Time	Heacock Street Southbound			Iris Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	0	4	0	4	4
04:15 PM	0	3	3	0	0	0	3	0	3	6
04:30 PM	0	1	1	0	0	0	1	0	1	2
04:45 PM	0	4	4	0	0	0	1	0	1	5
Total	0	8	8	0	0	0	9	0	9	17
05:00 PM	0	4	4	0	0	0	5	0	5	9
05:15 PM	1	1	2	0	0	0	0	0	0	2
05:30 PM	0	4	4	0	0	0	3	0	3	7
05:45 PM	0	3	3	0	0	0	0	0	0	3
Total	1	12	13	0	0	0	8	0	8	21
Grand Total	1	20	21	0	0	0	17	0	17	38
Apprch %	4.8	95.2		0	0		100	0		
Total %	2.6	52.6	55.3	0	0	0	44.7	0	44.7	

Start Time	Heacock Street Southbound			Iris Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	0	4	4	0	0	0	1	0	1	5
05:00 PM	0	4	4	0	0	0	5	0	5	9
05:15 PM	1	1	2	0	0	0	0	0	0	2
05:30 PM	0	4	4	0	0	0	3	0	3	7
Total Volume	1	13	14	0	0	0	9	0	9	23
% App. Total	7.1	92.9		0	0		100	0		
PHF	.250	.813	.875	.000	.000	.000	.450	.000	.450	.639

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Iris Avenue  
 Weather: Clear

File Name : MRVHEIRPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	0	4	4	0	0	0	1	0	1
+15 mins.	0	4	4	0	0	0	5	0	5
+30 mins.	1	1	2	0	0	0	0	0	0
+45 mins.	0	4	4	0	0	0	3	0	3
Total Volume	1	13	14	0	0	0	9	0	9
% App. Total	7.1	92.9		0	0	0	100	0	
PHF	.250	.813	.875	.000	.000	.000	.450	.000	.450

Location: Moreno Valley  
 N/S: Heacock Street  
 E/W: Iris Avenue



Date: 4/28/2015  
 Weather: Clear

**PEDESTRIANS**

	North Leg Heacock Street	East Leg Iris Avenue	South Leg Heacock Street	West Leg Iris Avenue	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg Heacock Street	East Leg Iris Avenue	South Leg Heacock Street	West Leg Iris Avenue	TOTAL
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

Location: Moreno Valley  
 N/S: Heacock Street  
 E/W: Iris Avenue



Date: 4/28/2015  
 Weather: Clear

**BICYCLES**

	North Leg Heacock Street	East Leg Iris Avenue	South Leg Heacock Street	West Leg Iris Avenue	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg Heacock Street	East Leg Iris Avenue	South Leg Heacock Street	West Leg Iris Avenue	TOTAL
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0



City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Krameria Avenue  
 Weather: Clear

File Name : MRVHEKRAM  
 Site Code : 05115223  
 Start Date : 5/5/2015  
 Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Heacock Street Southbound				Krameria Avenue Westbound				Heacock Street Northbound				Exclu. Total	Inclu. Total	Int. Total
	Start Time	Left	Thru	RTOR	App. Total	Left	Right	RTOR	App. Total	Thru	Right	RTOR			
07:00 AM	5	50	0	55	1	18	18	19	31	1	0	32	18	106	124
07:15 AM	5	78	0	83	0	12	11	12	53	0	0	53	11	148	159
07:30 AM	1	39	0	40	1	12	10	13	57	1	0	58	10	111	121
07:45 AM	5	48	0	53	4	5	0	9	47	3	0	50	0	112	112
Total	16	215	0	231	6	47	39	53	188	5	0	193	39	477	516
08:00 AM	1	13	0	14	2	6	4	8	44	1	0	45	4	67	71
08:15 AM	2	23	0	25	1	3	3	4	30	0	0	30	3	59	62
08:30 AM	3	25	0	28	1	6	4	7	21	0	0	21	4	56	60
08:45 AM	3	21	0	24	0	6	4	6	18	0	0	18	4	48	52
Total	9	82	0	91	4	21	15	25	113	1	0	114	15	230	245
Grand Total	25	297	0	322	10	68	54	78	301	6	0	307	54	707	761
Apprch %	7.8	92.2			12.8	87.2			98	2					
Total %	3.5	42		45.5	1.4	9.6		11	42.6	0.8		43.4	7.1	92.9	
Passenger Vehicles	12	257		269	5	60		117	265	4		269	0	0	655
% Passenger Vehicles	48	86.5	0	83.5	50	88.2	96.3	88.6	88	66.7	0	87.6	0	0	86.1
Large 2 Axle Vehicles	1	15		16	2	0		2	14	0		14	0	0	32
% Large 2 Axle Vehicles	4	5.1	0	5	20	0	0	1.5	4.7	0	0	4.6	0	0	4.2
3 Axle Vehicles	2	4		6	1	0		1	3	0		3	0	0	10
% 3 Axle Vehicles	8	1.3	0	1.9	10	0	0	0.8	1	0	0	1	0	0	1.3
4+ Axle Trucks	10	21		31	2	8		12	19	2		21	0	0	64
% 4+ Axle Trucks	40	7.1	0	9.6	20	11.8	3.7	9.1	6.3	33.3	0	6.8	0	0	8.4

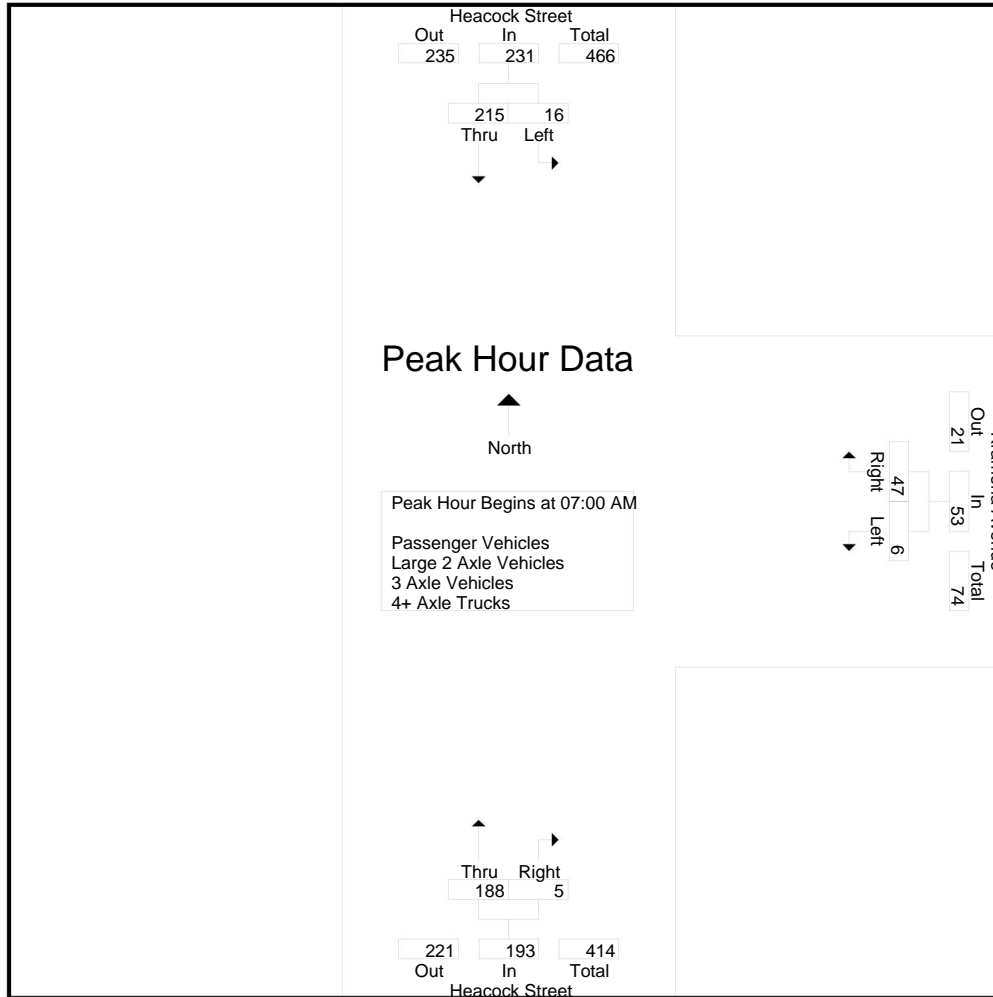
3.1.361

Start Time	Heacock Street Southbound			Krameria Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	5	50	55	1	18	19	31	1	32	106
07:15 AM	5	78	83	0	12	12	53	0	53	148
07:30 AM	1	39	40	1	12	13	57	1	58	111
07:45 AM	5	48	53	4	5	9	47	3	50	112
Total Volume	16	215	231	6	47	53	188	5	193	477
% App. Total	6.9	93.1		11.3	88.7		97.4	2.6		
PHF	.800	.689	.696	.375	.653	.697	.825	.417	.832	.806

Counts Unlimited, Inc.  
PO Box 1178  
Corona, CA 92878  
(951) 268-6268

City of Moreno Valley  
N/S: Heacock Street  
E/W: Krameria Avenue  
Weather: Clear

File Name : MRVHEKRAM  
Site Code : 05115223  
Start Date : 5/5/2015  
Page No : 2



3.1-362

Counts Unlimited, Inc.  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Krameria Avenue  
 Weather: Clear

File Name : MRVHEKRAM  
 Site Code : 05115223  
 Start Date : 5/5/2015  
 Page No : 3

Start Time	Heacock Street Southbound			Krameria Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Each Approach Begins at:										
	07:00 AM			07:00 AM			07:15 AM			
+0 mins.	5	50	55	1	18	19	53	0	53	
+15 mins.	5	78	83	0	12	12	57	1	58	
+30 mins.	1	39	40	1	12	13	47	3	50	
+45 mins.	5	48	53	4	5	9	44	1	45	
Total Volume	16	215	231	6	47	53	201	5	206	
% App. Total	6.9	93.1		11.3	88.7		97.6	2.4		
PHF	.800	.689	.696	.375	.653	.697	.882	.417	.888	

3.1-363

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Krameria Avenue  
 Weather: Clear

File Name : MRVHEKRAM  
 Site Code : 05115223  
 Start Date : 5/5/2015  
 Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Heacock Street Southbound				Krameria Avenue Westbound				Heacock Street Northbound				Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	RTOR	App. Total	Left	Right	RTOR	App. Total	Thru	Right	RTOR	App. Total			
07:00 AM	3	45	0	48	1	17	17	18	29	1	0	30	17	96	113
07:15 AM	2	74	0	76	0	12	11	12	50	0	0	50	11	138	149
07:30 AM	1	34	0	35	1	12	10	13	52	1	0	53	10	101	111
07:45 AM	2	40	0	42	2	4	0	6	43	2	0	45	0	93	93
Total	8	193	0	201	4	45	38	49	174	4	0	178	38	428	466
08:00 AM	0	11	0	11	0	4	3	4	39	0	0	39	3	54	57
08:15 AM	1	15	0	16	1	3	3	4	22	0	0	22	3	42	45
08:30 AM	2	21	0	23	0	4	4	4	16	0	0	16	4	43	47
08:45 AM	1	17	0	18	0	4	4	4	14	0	0	14	4	36	40
Total	4	64	0	68	1	15	14	16	91	0	0	91	14	175	189
Grand Total	12	257	0	269	5	60	52	65	265	4	0	269	52	603	655
Apprch %	4.5	95.5			7.7	92.3			98.5	1.5					
Total %	2	42.6		44.6	0.8	10		10.8	43.9	0.7		44.6	7.9	92.1	

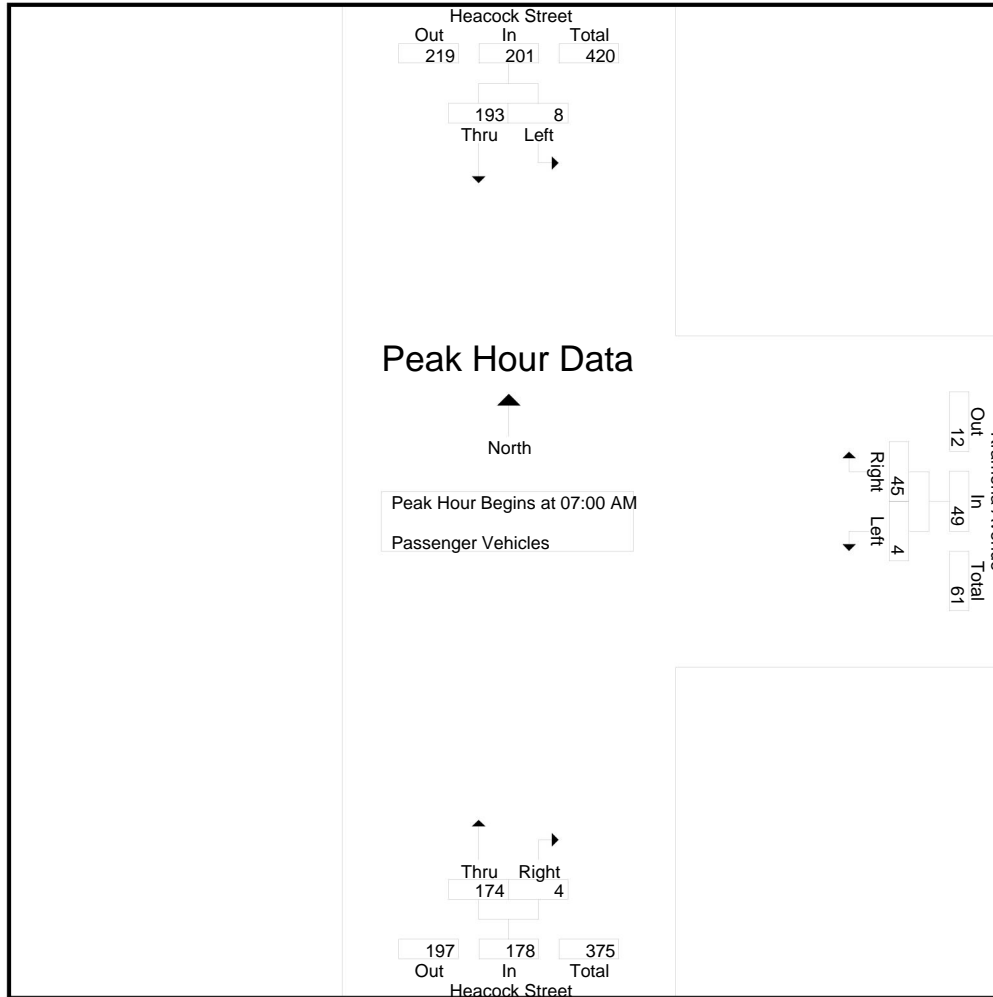
3.1-364

Start Time	Heacock Street Southbound			Krameria Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	3	45	48	1	17	18	29	1	30	96
07:15 AM	2	74	76	0	12	12	50	0	50	138
07:30 AM	1	34	35	1	12	13	52	1	53	101
07:45 AM	2	40	42	2	4	6	43	2	45	93
Total Volume	8	193	201	4	45	49	174	4	178	428
% App. Total	4	96		8.2	91.8		97.8	2.2		
PHF	.667	.652	.661	.500	.662	.681	.837	.500	.840	.775

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Corona, CA 92878  
(951) 268-6268

City of Moreno Valley  
N/S: Heacock Street  
E/W: Krameria Avenue  
Weather: Clear

File Name : MRVHEKRAM  
Site Code : 05115223  
Start Date : 5/5/2015  
Page No : 2



3.1-365

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City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Krameria Avenue  
 Weather: Clear

File Name : MRVHEKRAM  
 Site Code : 05115223  
 Start Date : 5/5/2015  
 Page No : 3

Start Time	Heacock Street Southbound			Krameria Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Each Approach Begins at:										
	07:00 AM			07:00 AM			07:00 AM			
+0 mins.	3	45	48	1	17	18	29	1	30	
+15 mins.	2	74	76	0	12	12	50	0	50	
+30 mins.	1	34	35	1	12	13	52	1	53	
+45 mins.	2	40	42	2	4	6	43	2	45	
Total Volume	8	193	201	4	45	49	174	4	178	
% App. Total	4	96		8.2	91.8		97.8	2.2		
PHF	.667	.652	.661	.500	.662	.681	.837	.500	.840	

3.1-366

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Krameria Avenue  
 Weather: Clear

File Name : MRVHEKRAM  
 Site Code : 05115223  
 Start Date : 5/5/2015  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

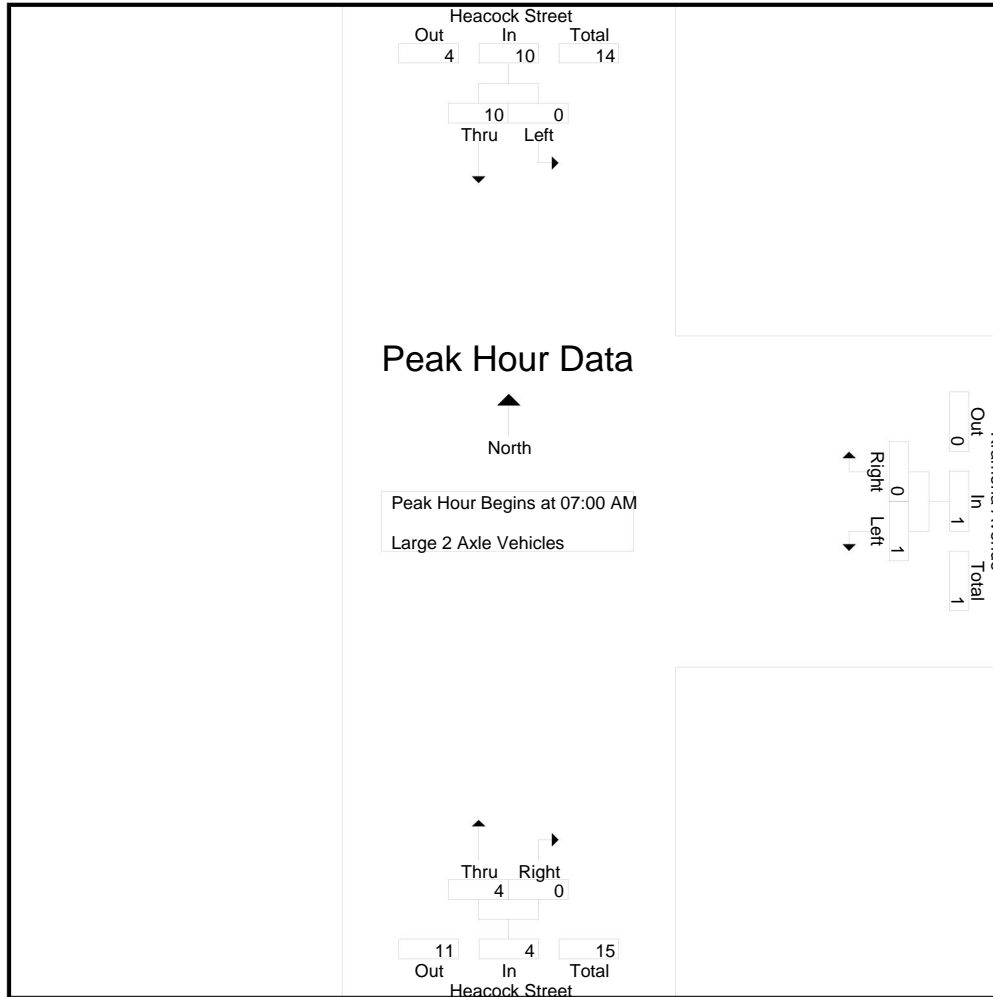
Start Time	Heacock Street Southbound				Krameria Avenue Westbound				Heacock Street Northbound				Exclu. Total	Inclu. Total	Int. Total	
	Left	Thru	RTOR	App. Total	Left	Right	RTOR	App. Total	Thru	Right	RTOR	App. Total				
07:00 AM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	2	2
07:15 AM	0	2	0	2	0	0	0	0	2	0	0	2	0	0	4	4
07:30 AM	0	3	0	3	0	0	0	0	1	0	0	1	0	0	4	4
07:45 AM	0	3	0	3	1	0	0	1	1	0	0	1	0	0	5	5
Total	0	10	0	10	1	0	0	1	4	0	0	4	0	0	15	15
08:00 AM	0	1	0	1	1	0	0	1	2	0	0	2	0	0	4	4
08:15 AM	0	3	0	3	0	0	0	0	6	0	0	6	0	0	9	9
08:30 AM	1	0	0	1	0	0	0	0	2	0	0	2	0	0	3	3
08:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1
Total	1	5	0	6	1	0	0	1	10	0	0	10	0	0	17	17
Grand Total	1	15	0	16	2	0	0	2	14	0	0	14	0	0	32	32
Apprch %	6.2	93.8			100	0			100	0						
Total %	3.1	46.9		50	6.2	0		6.2	43.8	0		43.8	0	0	100	

3.1-367

Start Time	Heacock Street Southbound			Krameria Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	2	2	0	0	0	0	0	0	2
07:15 AM	0	2	2	0	0	0	2	0	2	4
07:30 AM	0	3	3	0	0	0	1	0	1	4
07:45 AM	0	3	3	1	0	1	1	0	1	5
Total Volume	0	10	10	1	0	1	4	0	4	15
% App. Total	0	100		100	0		100	0		
PHF	.000	.833	.833	.250	.000	.250	.500	.000	.500	.750

City of Moreno Valley  
N/S: Heacock Street  
E/W: Krameria Avenue  
Weather: Clear

File Name : MRVHEKRAM  
Site Code : 05115223  
Start Date : 5/5/2015  
Page No : 2



3.1-368



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City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Krameria Avenue  
 Weather: Clear

File Name : MRVHEKRAM  
 Site Code : 05115223  
 Start Date : 5/5/2015  
 Page No : 3

Start Time	Heacock Street Southbound			Krameria Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Each Approach Begins at:										
	07:00 AM			07:00 AM			07:00 AM			
+0 mins.	0	2	2	0	0	0	0	0	0	
+15 mins.	0	2	2	0	0	0	2	0	2	
+30 mins.	0	3	3	0	0	0	1	0	1	
+45 mins.	0	3	3	1	0	1	1	0	1	
Total Volume	0	10	10	1	0	1	4	0	4	
% App. Total	0	100		100	0		100	0		
PHF	.000	.833	.833	.250	.000	.250	.500	.000	.500	

3.1-369

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Krameria Avenue  
 Weather: Clear

File Name : MRVHEKRAM  
 Site Code : 05115223  
 Start Date : 5/5/2015  
 Page No : 1

Groups Printed- 3 Axle Vehicles

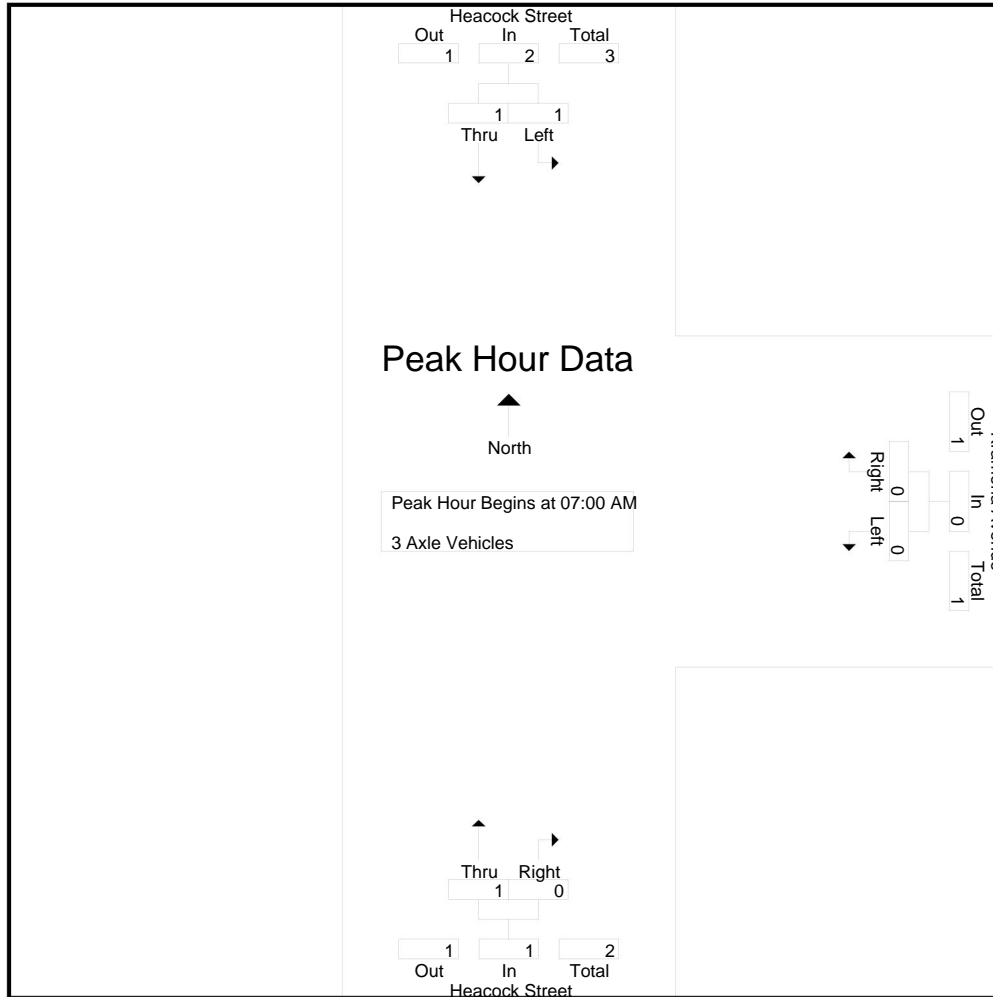
Start Time	Heacock Street Southbound				Krameria Avenue Westbound				Heacock Street Northbound				Exclu. Total	Inclu. Total	Int. Total	
	Left	Thru	RTOR	App. Total	Left	Right	RTOR	App. Total	Thru	Right	RTOR	App. Total				
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1
07:30 AM	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	1
07:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1
Total	1	1	0	2	0	0	0	0	0	1	0	0	1	0	3	3
08:00 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1
08:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	1
08:30 AM	0	2	0	2	1	0	0	1	0	0	0	0	0	0	3	3
08:45 AM	0	1	0	1	0	0	0	0	0	1	0	0	1	0	2	2
Total	1	3	0	4	1	0	0	1	0	2	0	0	2	0	7	7
Grand Total	2	4	0	6	1	0	0	1	0	3	0	0	3	0	10	10
Apprch %	33.3	66.7			100	0			100	0						
Total %	20	40		60	10	0		10	30	0		30		0	100	

3.1-370

Start Time	Heacock Street Southbound			Krameria Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	1	0	1	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	1	0	1	1
07:45 AM	0	1	1	0	0	0	0	0	0	1
Total Volume	1	1	2	0	0	0	1	0	1	3
% App. Total	50	50		0	0		100	0		
PHF	.250	.250	.500	.000	.000	.000	.250	.000	.250	.750

City of Moreno Valley  
N/S: Heacock Street  
E/W: Krameria Avenue  
Weather: Clear

File Name : MRVHEKRAM  
Site Code : 05115223  
Start Date : 5/5/2015  
Page No : 2



3.1-371

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City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Krameria Avenue  
 Weather: Clear

File Name : MRVHEKRAM  
 Site Code : 05115223  
 Start Date : 5/5/2015  
 Page No : 3

Start Time	Heacock Street Southbound			Krameria Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Each Approach Begins at:										
	07:00 AM			07:00 AM			07:00 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0
+15 mins.	1	0	1	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	1	0	1	1
+45 mins.	0	1	1	0	0	0	0	0	0	0
Total Volume	1	1	2	0	0	0	1	0	1	1
% App. Total	50	50		0	0		100	0		
PHF	.250	.250	.500	.000	.000	.000	.250	.000	.250	

3.1-372

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Krameria Avenue  
 Weather: Clear

File Name : MRVHEKRAM  
 Site Code : 05115223  
 Start Date : 5/5/2015  
 Page No : 1

Groups Printed- 4+ Axle Trucks

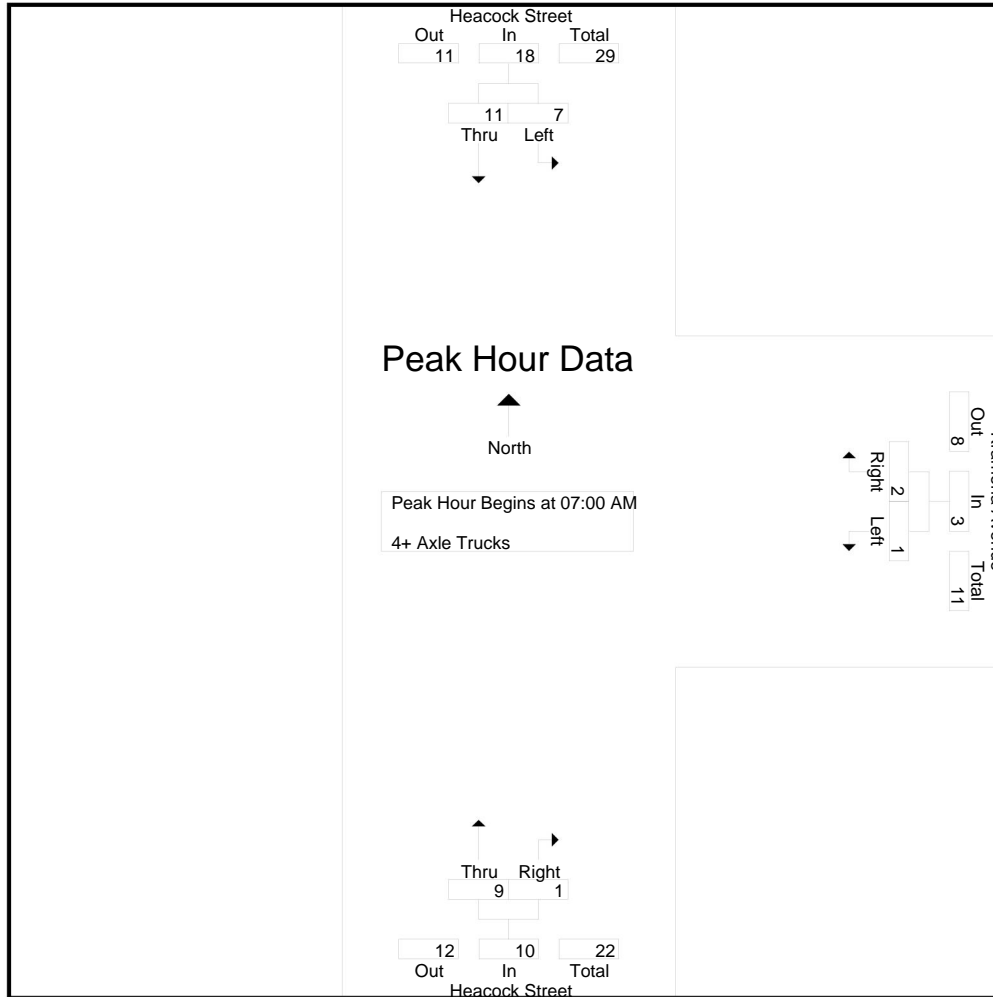
Start Time	Heacock Street Southbound				Krameria Avenue Westbound				Heacock Street Northbound				Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	RTOR	App. Total	Left	Right	RTOR	App. Total	Thru	Right	RTOR	App. Total			
07:00 AM	2	3	0	5	0	1	1	1	2	0	0	2	1	8	9
07:15 AM	2	2	0	4	0	0	0	0	1	0	0	1	0	5	5
07:30 AM	0	2	0	2	0	0	0	0	3	0	0	3	0	5	5
07:45 AM	3	4	0	7	1	1	0	2	3	1	0	4	0	13	13
Total	7	11	0	18	1	2	1	3	9	1	0	10	1	31	32
08:00 AM	0	1	0	1	1	2	1	3	3	1	0	4	1	8	9
08:15 AM	1	5	0	6	0	0	0	0	1	0	0	1	0	7	7
08:30 AM	0	2	0	2	0	2	0	2	3	0	0	3	0	7	7
08:45 AM	2	2	0	4	0	2	0	2	3	0	0	3	0	9	9
Total	3	10	0	13	1	6	1	7	10	1	0	11	1	31	32
Grand Total	10	21	0	31	2	8	2	10	19	2	0	21	2	62	64
Apprch %	32.3	67.7			20	80			90.5	9.5					
Total %	16.1	33.9		50	3.2	12.9		16.1	30.6	3.2		33.9	3.1	96.9	

3.1-373

Start Time	Heacock Street Southbound			Krameria Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	2	3	5	0	1	1	2	0	2	8
07:15 AM	2	2	4	0	0	0	1	0	1	5
07:30 AM	0	2	2	0	0	0	3	0	3	5
07:45 AM	3	4	7	1	1	2	3	1	4	13
Total Volume	7	11	18	1	2	3	9	1	10	31
% App. Total	38.9	61.1		33.3	66.7		90	10		
PHF	.583	.688	.643	.250	.500	.375	.750	.250	.625	.596

City of Moreno Valley  
N/S: Heacock Street  
E/W: Krameria Avenue  
Weather: Clear

File Name : MRVHEKRAM  
Site Code : 05115223  
Start Date : 5/5/2015  
Page No : 2



3.1-374

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City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Krameria Avenue  
 Weather: Clear

File Name : MRVHEKRAM  
 Site Code : 05115223  
 Start Date : 5/5/2015  
 Page No : 3

Start Time	Heacock Street Southbound			Krameria Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Each Approach Begins at:										
	07:00 AM			07:00 AM			07:00 AM			
+0 mins.	2	3	5	0	1	1	2	0	2	
+15 mins.	2	2	4	0	0	0	1	0	1	
+30 mins.	0	2	2	0	0	0	3	0	3	
+45 mins.	3	4	7	1	1	2	3	1	4	
Total Volume	7	11	18	1	2	3	9	1	10	
% App. Total	38.9	61.1		33.3	66.7		90	10		
PHF	.583	.688	.643	.250	.500	.375	.750	.250	.625	

3.1-375

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Krameria Avenue  
 Weather: Clear

File Name : MRVHEKRPM  
 Site Code : 05115223  
 Start Date : 5/5/2015  
 Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Heacock Street Southbound				Krameria Avenue Westbound				Heacock Street Northbound				Exclu. Total	Inclu. Total	Int. Total
	Start Time	Left	Thru	RTOR	App. Total	Left	Right	RTOR	App. Total	Thru	Right	RTOR			
04:00 PM	11	48	0	59	2	5	4	7	27	0	0	27	4	93	97
04:15 PM	5	84	0	89	1	6	4	7	35	0	0	35	4	131	135
04:30 PM	6	100	0	106	2	6	5	8	113	3	0	116	5	230	235
04:45 PM	9	99	0	108	0	2	2	2	108	11	0	119	2	229	231
Total	31	331	0	362	5	19	15	24	283	14	0	297	15	683	698
05:00 PM	10	80	0	90	0	6	6	6	59	0	0	59	6	155	161
05:15 PM	6	73	0	79	1	7	6	8	34	0	0	34	6	121	127
05:30 PM	8	119	0	127	2	2	0	4	72	1	0	73	0	204	204
05:45 PM	3	109	0	112	1	3	3	4	47	0	0	47	3	163	166
Total	27	381	0	408	4	18	15	22	212	1	0	213	15	643	658
Grand Total	58	712	0	770	9	37	30	46	495	15	0	510	30	1326	1356
Apprch %	7.5	92.5			19.6	80.4			97.1	2.9					
Total %	4.4	53.7		58.1	0.7	2.8		3.5	37.3	1.1		38.5	2.2	97.8	
Passenger Vehicles	41	663		704	7	22		49	464	15		479	0	0	1232
% Passenger Vehicles	70.7	93.1	0	91.4	77.8	59.5	66.7	64.5	93.7	100	0	93.9	0	0	90.9
Large 2 Axle Vehicles	1	13		14	0	0		0	7	0		7	0	0	21
% Large 2 Axle Vehicles	1.7	1.8	0	1.8	0	0	0	0	1.4	0	0	1.4	0	0	1.5
3 Axle Vehicles	3	24		27	0	1		2	5	0		5	0	0	34
% 3 Axle Vehicles	5.2	3.4	0	3.5	0	2.7	3.3	2.6	1	0	0	1	0	0	2.5
4+ Axle Trucks	13	12		25	2	14		25	19	0		19	0	0	69
% 4+ Axle Trucks	22.4	1.7	0	3.2	22.2	37.8	30	32.9	3.8	0	0	3.7	0	0	5.1

3.1-376

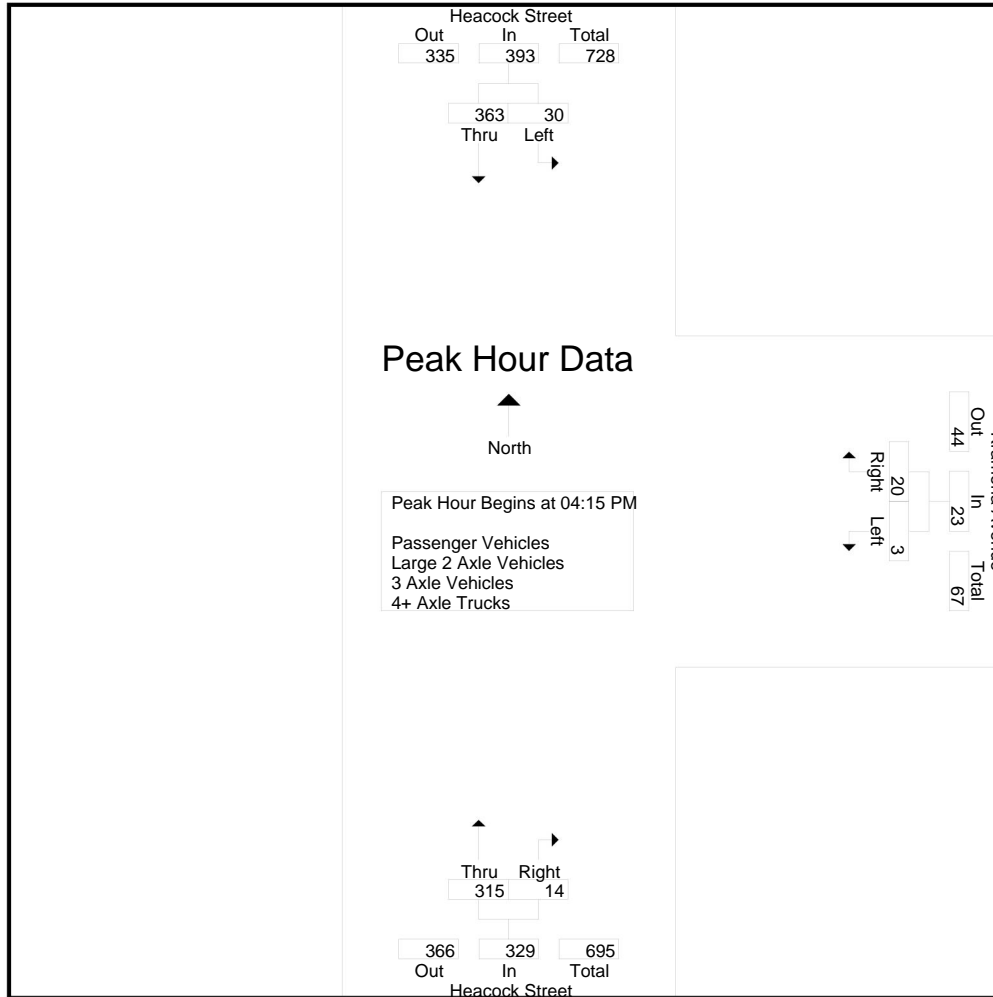
Start Time	Heacock Street Southbound			Krameria Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:15 PM										
04:15 PM	5	84	89	1	6	7	35	0	35	131
04:30 PM	6	100	106	2	6	8	113	3	116	230
04:45 PM	9	99	108	0	2	2	108	11	119	229
05:00 PM	10	80	90	0	6	6	59	0	59	155
Total Volume	30	363	393	3	20	23	315	14	329	745
% App. Total	7.6	92.4		13	87		95.7	4.3		
PHF	.750	.908	.910	.375	.833	.719	.697	.318	.691	.810



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City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Krameria Avenue  
 Weather: Clear

File Name : MRVHEKRPM  
 Site Code : 05115223  
 Start Date : 5/5/2015  
 Page No : 2



3.1-377

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 Corona, CA 92878  
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City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Krameria Avenue  
 Weather: Clear

File Name : MRVHEKRPM  
 Site Code : 05115223  
 Start Date : 5/5/2015  
 Page No : 3

Start Time	Heacock Street Southbound			Krameria Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Each Approach Begins at:										
	05:00 PM			04:00 PM			04:15 PM			
+0 mins.	10	80	90	2	5	7	35	0	35	
+15 mins.	6	73	79	1	6	7	113	3	116	
+30 mins.	8	119	127	2	6	8	108	11	119	
+45 mins.	3	109	112	0	2	2	59	0	59	
Total Volume	27	381	408	5	19	24	315	14	329	
% App. Total	6.6	93.4		20.8	79.2		95.7	4.3		
PHF	.675	.800	.803	.625	.792	.750	.697	.318	.691	

3.1-378

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Krameria Avenue  
 Weather: Clear

File Name : MRVHEKRPM  
 Site Code : 05115223  
 Start Date : 5/5/2015  
 Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Heacock Street Southbound				Krameria Avenue Westbound				Heacock Street Northbound				Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	RTOR	App. Total	Left	Right	RTOR	App. Total	Thru	Right	RTOR	App. Total			
04:00 PM	8	40	0	48	2	2	1	4	21	0	0	21	1	73	74
04:15 PM	5	78	0	83	0	1	1	1	34	0	0	34	1	118	119
04:30 PM	5	96	0	101	1	4	4	5	106	3	0	109	4	215	219
04:45 PM	7	93	0	100	0	2	2	2	105	11	0	116	2	218	220
Total	25	307	0	332	3	9	8	12	266	14	0	280	8	624	632
05:00 PM	8	72	0	80	0	5	5	5	55	0	0	55	5	140	145
05:15 PM	2	67	0	69	1	5	4	6	30	0	0	30	4	105	109
05:30 PM	5	113	0	118	2	0	0	2	68	1	0	69	0	189	189
05:45 PM	1	104	0	105	1	3	3	4	45	0	0	45	3	154	157
Total	16	356	0	372	4	13	12	17	198	1	0	199	12	588	600
Grand Total	41	663	0	704	7	22	20	29	464	15	0	479	20	1212	1232
Apprch %	5.8	94.2			24.1	75.9			96.9	3.1					
Total %	3.4	54.7		58.1	0.6	1.8		2.4	38.3	1.2		39.5	1.6	98.4	

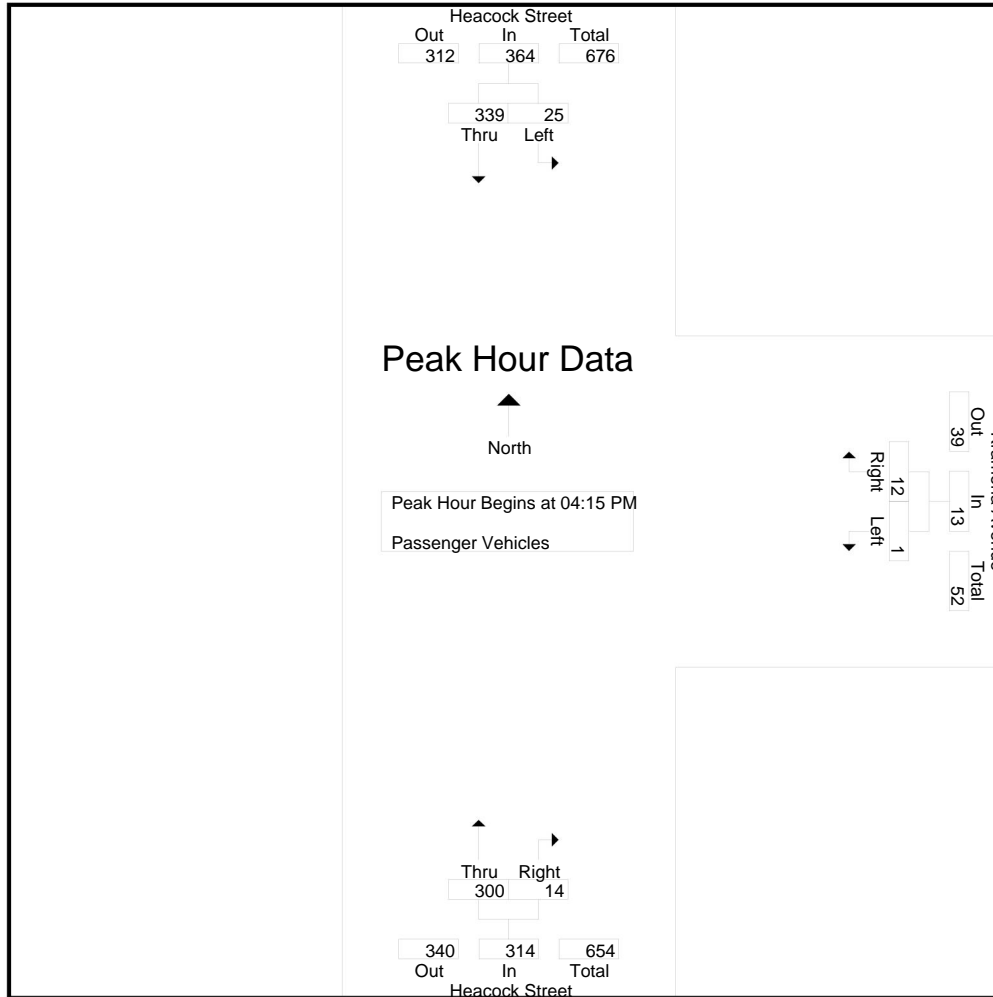
3.1-379

Start Time	Heacock Street Southbound			Krameria Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:15 PM										
04:15 PM	5	78	83	0	1	1	34	0	34	118
04:30 PM	5	96	101	1	4	5	106	3	109	215
04:45 PM	7	93	100	0	2	2	105	11	116	218
05:00 PM	8	72	80	0	5	5	55	0	55	140
Total Volume	25	339	364	1	12	13	300	14	314	691
% App. Total	6.9	93.1		7.7	92.3		95.5	4.5		
PHF	.781	.883	.901	.250	.600	.650	.708	.318	.677	.792

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Corona, CA 92878  
(951) 268-6268

City of Moreno Valley  
N/S: Heacock Street  
E/W: Krameria Avenue  
Weather: Clear

File Name : MRVHEKRPM  
Site Code : 05115223  
Start Date : 5/5/2015  
Page No : 2



3.1-380

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 Corona, CA 92878  
 (951) 268-6268

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Krameria Avenue  
 Weather: Clear

File Name : MRVHEKRPM  
 Site Code : 05115223  
 Start Date : 5/5/2015  
 Page No : 3

Start Time	Heacock Street Southbound			Krameria Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1										
Peak Hour for Each Approach Begins at:										
	04:15 PM			04:15 PM			04:15 PM			
+0 mins.	5	78	83	0	1	1	34	0	34	
+15 mins.	5	96	101	1	4	5	106	3	109	
+30 mins.	7	93	100	0	2	2	105	11	116	
+45 mins.	8	72	80	0	5	5	55	0	55	
Total Volume	25	339	364	1	12	13	300	14	314	
% App. Total	6.9	93.1		7.7	92.3		95.5	4.5		
PHF	.781	.883	.901	.250	.600	.650	.708	.318	.677	

3.1-381

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Krameria Avenue  
 Weather: Clear

File Name : MRVHEKRPM  
 Site Code : 05115223  
 Start Date : 5/5/2015  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

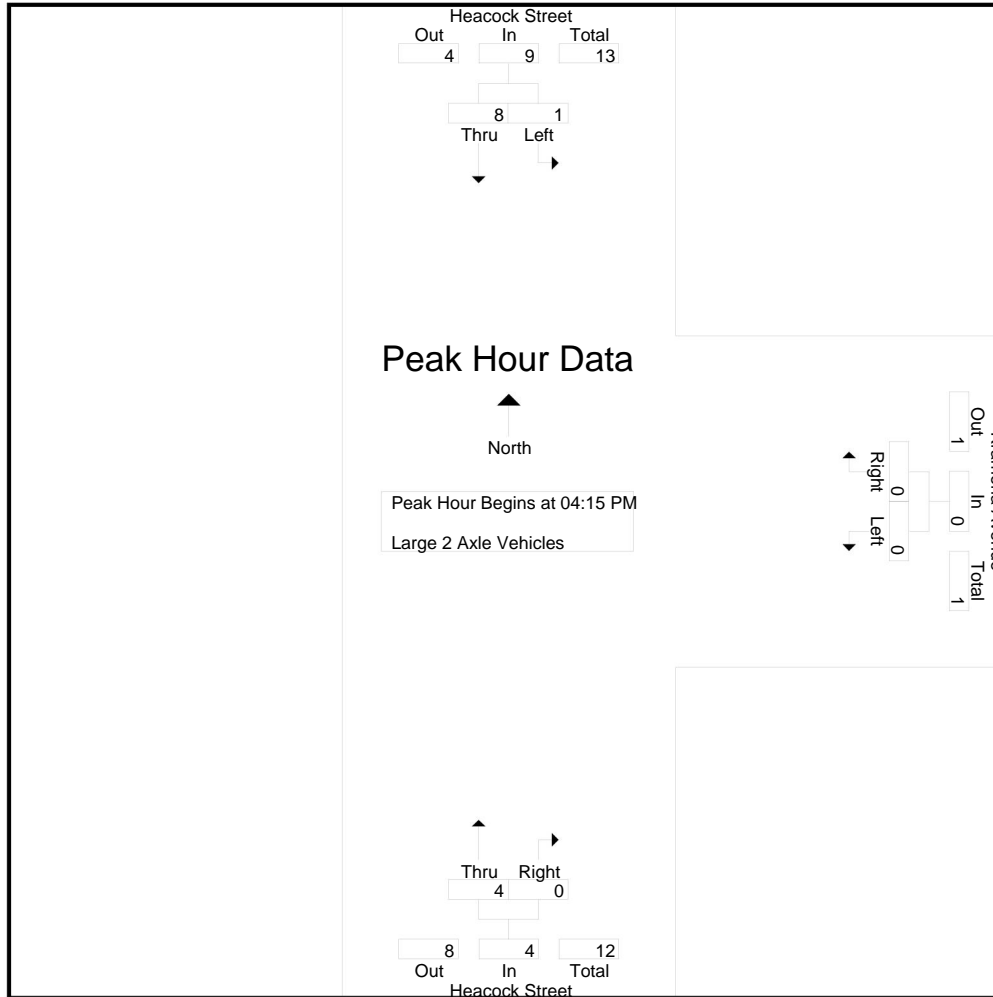
Start Time	Heacock Street Southbound				Krameria Avenue Westbound				Heacock Street Northbound				Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	RTOR	App. Total	Left	Right	RTOR	App. Total	Thru	Right	RTOR	App. Total			
04:00 PM	0	3	0	3	0	0	0	0	1	0	0	1	0	4	4
04:15 PM	0	2	0	2	0	0	0	0	1	0	0	1	0	3	3
04:30 PM	0	2	0	2	0	0	0	0	2	0	0	2	0	4	4
04:45 PM	0	3	0	3	0	0	0	0	1	0	0	1	0	4	4
Total	0	10	0	10	0	0	0	0	5	0	0	5	0	15	15
05:00 PM	1	1	0	2	0	0	0	0	0	0	0	0	0	2	2
05:15 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	1	1
05:30 PM	0	1	0	1	0	0	0	0	1	0	0	1	0	2	2
05:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	1	1
Total	1	3	0	4	0	0	0	0	2	0	0	2	0	6	6
Grand Total	1	13	0	14	0	0	0	0	7	0	0	7	0	21	21
Apprch %	7.1	92.9			0	0			100	0					
Total %	4.8	61.9		66.7	0	0			33.3	0		33.3	0	100	

3.1-382

Start Time	Heacock Street Southbound			Krameria Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:15 PM										
04:15 PM	0	2	2	0	0	0	1	0	1	3
04:30 PM	0	2	2	0	0	0	2	0	2	4
04:45 PM	0	3	3	0	0	0	1	0	1	4
05:00 PM	1	1	2	0	0	0	0	0	0	2
Total Volume	1	8	9	0	0	0	4	0	4	13
% App. Total	11.1	88.9		0	0		100	0		
PHF	.250	.667	.750	.000	.000	.000	.500	.000	.500	.813

City of Moreno Valley  
N/S: Heacock Street  
E/W: Krameria Avenue  
Weather: Clear

File Name : MRVHEKRPM  
Site Code : 05115223  
Start Date : 5/5/2015  
Page No : 2



3.1-383

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City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Krameria Avenue  
 Weather: Clear

File Name : MRVHEKRPM  
 Site Code : 05115223  
 Start Date : 5/5/2015  
 Page No : 3

Start Time	Heacock Street Southbound			Krameria Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1										
Peak Hour for Each Approach Begins at:										
	04:15 PM			04:15 PM			04:15 PM			
+0 mins.	0	2	2	0	0	0	1	0	1	
+15 mins.	0	2	2	0	0	0	2	0	2	
+30 mins.	0	3	3	0	0	0	1	0	1	
+45 mins.	1	1	2	0	0	0	0	0	0	
Total Volume	1	8	9	0	0	0	4	0	4	
% App. Total	11.1	88.9		0	0		100	0		
PHF	.250	.667	.750	.000	.000	.000	.500	.000	.500	

3.1-384



City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Krameria Avenue  
 Weather: Clear

File Name : MRVHEKRPM  
 Site Code : 05115223  
 Start Date : 5/5/2015  
 Page No : 1

Groups Printed- 3 Axle Vehicles

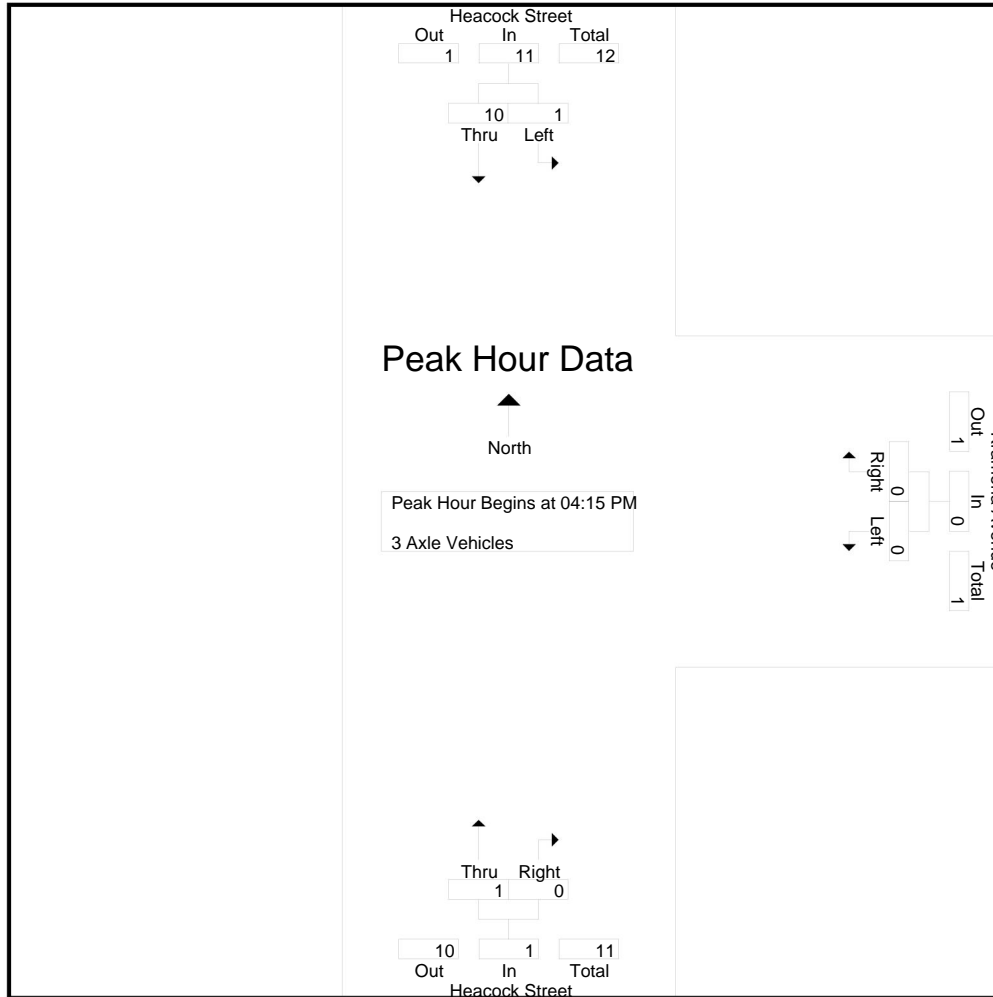
Start Time	Heacock Street Southbound				Krameria Avenue Westbound				Heacock Street Northbound				Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	RTOR	App. Total	Left	Right	RTOR	App. Total	Thru	Right	RTOR	App. Total			
04:00 PM	0	4	0	4	0	1	1	1	3	0	0	3	1	8	9
04:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	1	1
04:30 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	2	2
04:45 PM	1	2	0	3	0	0	0	0	1	0	0	1	0	4	4
Total	1	9	0	10	0	1	1	1	4	0	0	4	1	15	16
05:00 PM	0	5	0	5	0	0	0	0	0	0	0	0	0	5	5
05:15 PM	1	3	0	4	0	0	0	0	1	0	0	1	0	5	5
05:30 PM	1	4	0	5	0	0	0	0	0	0	0	0	0	5	5
05:45 PM	0	3	0	3	0	0	0	0	0	0	0	0	0	3	3
Total	2	15	0	17	0	0	0	0	1	0	0	1	0	18	18
Grand Total	3	24	0	27	0	1	1	1	5	0	0	5	1	33	34
Apprch %	11.1	88.9			0	100			100	0					
Total %	9.1	72.7		81.8	0	3		3	15.2	0		15.2	2.9	97.1	

3.1-385

Start Time	Heacock Street Southbound			Krameria Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:15 PM										
04:15 PM	0	1	1	0	0	0	0	0	0	1
04:30 PM	0	2	2	0	0	0	0	0	0	2
04:45 PM	1	2	3	0	0	0	1	0	1	4
05:00 PM	0	5	5	0	0	0	0	0	0	5
Total Volume	1	10	11	0	0	0	1	0	1	12
% App. Total	9.1	90.9		0	0		100	0		
PHF	.250	.500	.550	.000	.000	.000	.250	.000	.250	.600

City of Moreno Valley  
N/S: Heacock Street  
E/W: Krameria Avenue  
Weather: Clear

File Name : MRVHEKRPM  
Site Code : 05115223  
Start Date : 5/5/2015  
Page No : 2



3.1-386

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 (951) 268-6268

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Krameria Avenue  
 Weather: Clear

File Name : MRVHEKRPM  
 Site Code : 05115223  
 Start Date : 5/5/2015  
 Page No : 3

Start Time	Heacock Street Southbound			Krameria Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1										
Peak Hour for Each Approach Begins at:										
	04:15 PM			04:15 PM			04:15 PM			
+0 mins.	0	1	1	0	0	0	0	0	0	0
+15 mins.	0	2	2	0	0	0	0	0	0	0
+30 mins.	1	2	3	0	0	0	1	0	1	1
+45 mins.	0	5	5	0	0	0	0	0	0	0
Total Volume	1	10	11	0	0	0	1	0	1	1
% App. Total	9.1	90.9		0	0		100	0		
PHF	.250	.500	.550	.000	.000	.000	.250	.000	.250	

3.1-387

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Krameria Avenue  
 Weather: Clear

File Name : MRVHEKRPM  
 Site Code : 05115223  
 Start Date : 5/5/2015  
 Page No : 1

Groups Printed- 4+ Axle Trucks

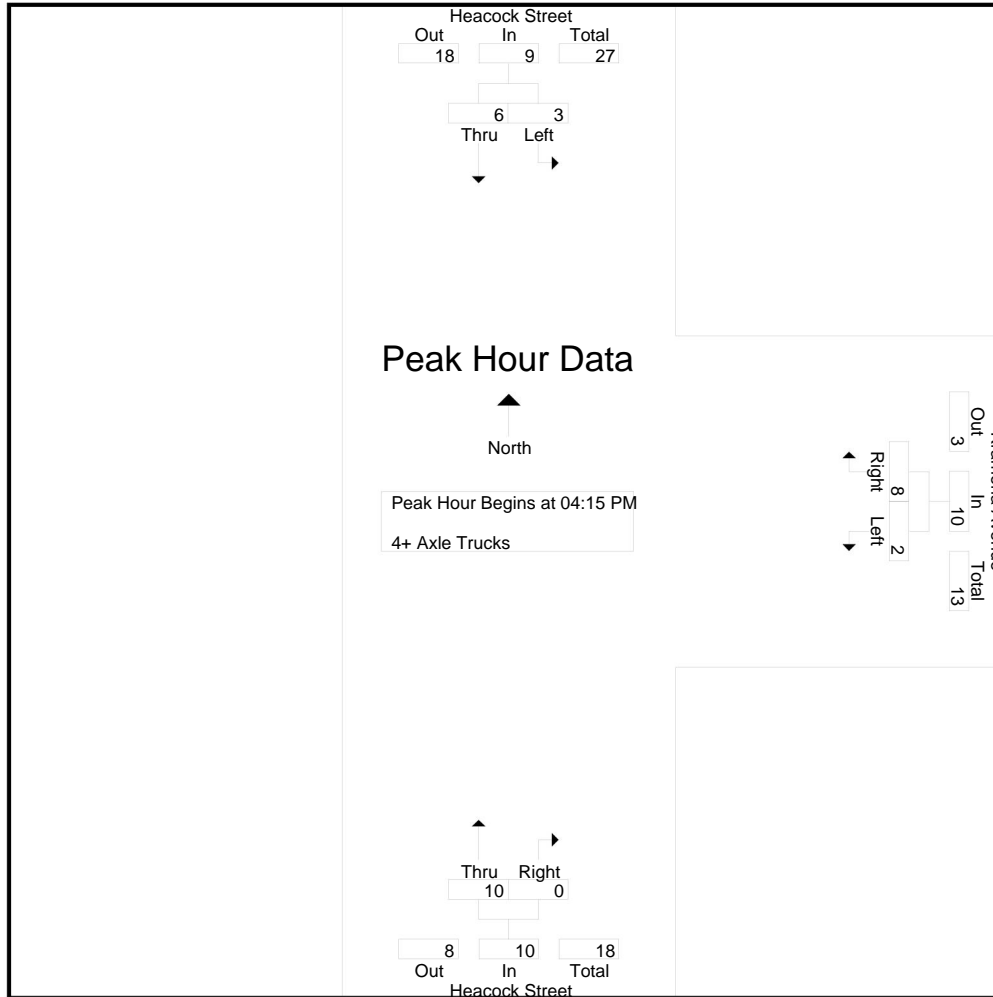
Start Time	Heacock Street Southbound				Krameria Avenue Westbound				Heacock Street Northbound				Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	RTOR	App. Total	Left	Right	RTOR	App. Total	Thru	Right	RTOR	App. Total			
04:00 PM	3	1	0	4	0	2	2	2	2	0	0	2	2	8	10
04:15 PM	0	3	0	3	1	5	3	6	0	0	0	0	3	9	12
04:30 PM	1	0	0	1	1	2	1	3	5	0	0	5	1	9	10
04:45 PM	1	1	0	2	0	0	0	0	1	0	0	1	0	3	3
Total	5	5	0	10	2	9	6	11	8	0	0	8	6	29	35
05:00 PM	1	2	0	3	0	1	1	1	4	0	0	4	1	8	9
05:15 PM	3	3	0	6	0	2	2	2	2	0	0	2	2	10	12
05:30 PM	2	1	0	3	0	2	0	2	3	0	0	3	0	8	8
05:45 PM	2	1	0	3	0	0	0	0	2	0	0	2	0	5	5
Total	8	7	0	15	0	5	3	5	11	0	0	11	3	31	34
Grand Total	13	12	0	25	2	14	9	16	19	0	0	19	9	60	69
Apprch %	52	48			12.5	87.5			100	0					
Total %	21.7	20		41.7	3.3	23.3		26.7	31.7	0		31.7	13	87	

3.1-388

Start Time	Heacock Street Southbound			Krameria Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:15 PM										
04:15 PM	0	3	3	1	5	6	0	0	0	9
04:30 PM	1	0	1	1	2	3	5	0	5	9
04:45 PM	1	1	2	0	0	0	1	0	1	3
05:00 PM	1	2	3	0	1	1	4	0	4	8
Total Volume	3	6	9	2	8	10	10	0	10	29
% App. Total	33.3	66.7		20	80		100	0		
PHF	.750	.500	.750	.500	.400	.417	.500	.000	.500	.806

City of Moreno Valley  
N/S: Heacock Street  
E/W: Krameria Avenue  
Weather: Clear

File Name : MRVHEKRPM  
Site Code : 05115223  
Start Date : 5/5/2015  
Page No : 2



3.1-389

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 (951) 268-6268

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Krameria Avenue  
 Weather: Clear

File Name : MRVHEKRPM  
 Site Code : 05115223  
 Start Date : 5/5/2015  
 Page No : 3

Start Time	Heacock Street Southbound			Krameria Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1										
Peak Hour for Each Approach Begins at:										
	04:15 PM			04:15 PM			04:15 PM			
+0 mins.	0	3	3	1	5	6	0	0	0	
+15 mins.	1	0	1	1	2	3	5	0	5	
+30 mins.	1	1	2	0	0	0	1	0	1	
+45 mins.	1	2	3	0	1	1	4	0	4	
Total Volume	3	6	9	2	8	10	10	0	10	
% App. Total	33.3	66.7		20	80		100	0		
PHF	.750	.500	.750	.500	.400	.417	.500	.000	.500	

3.1-390

Location: Moreno Valley  
 N/S: Heacock Street  
 E/W: Krameria Avenue



Date: 5/5/2015  
 Weather: Clear

**PEDESTRIANS**

	North Leg Heacock Street	East Leg Krameria Avenue	South Leg Heacock Street	West Leg Krameria Avenue	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
<b>TOTAL VOLUMES:</b>	0	0	0	0	0

	North Leg Heacock Street	East Leg Krameria Avenue	South Leg Heacock Street	West Leg Krameria Avenue	TOTAL
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	1	0	0	1	2
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
<b>TOTAL VOLUMES:</b>	1	0	0	1	2

Location: Moreno Valley  
 N/S: Heacock Street  
 E/W: Krameria Avenue



Date: 5/5/2015  
 Weather: Clear

**BICYCLES**

	North Leg Heacock Street	East Leg Krameria Avenue	South Leg Heacock Street	West Leg Krameria Avenue	TOTAL
7:00 AM	0	0	0	1	1
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
<b>TOTAL VOLUMES:</b>	0	0	0	1	1

	North Leg Heacock Street	East Leg Krameria Avenue	South Leg Heacock Street	West Leg Krameria Avenue	TOTAL
4:00 PM	0	0	0	1	1
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
<b>TOTAL VOLUMES:</b>	0	0	0	1	1



City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cardinal Avenue  
 Weather: Clear

File Name : MRVHECDAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

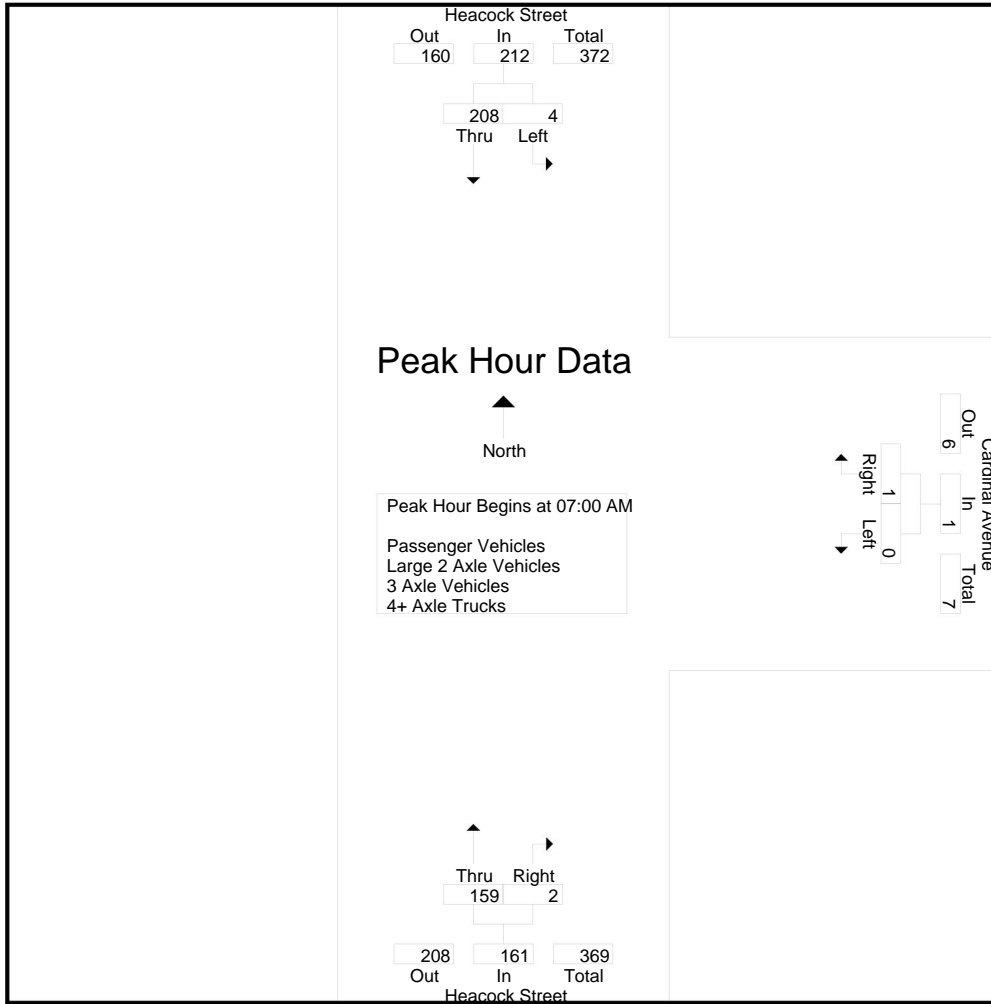
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Heacock Street Southbound			Cardinal Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	45	45	0	0	0	29	0	29	74
07:15 AM	1	80	81	0	1	1	50	0	50	132
07:30 AM	2	44	46	0	0	0	35	1	36	82
07:45 AM	1	39	40	0	0	0	45	1	46	86
Total	4	208	212	0	1	1	159	2	161	374
08:00 AM	0	18	18	2	0	2	28	0	28	48
08:15 AM	1	21	22	0	0	0	22	1	23	45
08:30 AM	0	21	21	0	0	0	12	0	12	33
08:45 AM	1	17	18	0	0	0	14	0	14	32
Total	2	77	79	2	0	2	76	1	77	158
Grand Total	6	285	291	2	1	3	235	3	238	532
Apprch %	2.1	97.9		66.7	33.3		98.7	1.3		
Total %	1.1	53.6	54.7	0.4	0.2	0.6	44.2	0.6	44.7	
Passenger Vehicles	5	251	256	2	1	3	213	2	215	474
% Passenger Vehicles	83.3	88.1	88	100	100	100	90.6	66.7	90.3	89.1
Large 2 Axle Vehicles	1	5	6	0	0	0	8	0	8	14
% Large 2 Axle Vehicles	16.7	1.8	2.1	0	0	0	3.4	0	3.4	2.6
3 Axle Vehicles	0	11	11	0	0	0	2	1	3	14
% 3 Axle Vehicles	0	3.9	3.8	0	0	0	0.9	33.3	1.3	2.6
4+ Axle Trucks	0	18	18	0	0	0	12	0	12	30
% 4+ Axle Trucks	0	6.3	6.2	0	0	0	5.1	0	5	5.6

Start Time	Heacock Street Southbound			Cardinal Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	45	45	0	0	0	29	0	29	74
07:15 AM	1	80	81	0	1	1	50	0	50	132
07:30 AM	2	44	46	0	0	0	35	1	36	82
07:45 AM	1	39	40	0	0	0	45	1	46	86
Total Volume	4	208	212	0	1	1	159	2	161	374
% App. Total	1.9	98.1		0	100		98.8	1.2		
PHF	.500	.650	.654	.000	.250	.250	.795	.500	.805	.708

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cardinal Avenue  
 Weather: Clear

File Name : MRVHECDAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:15 AM			07:00 AM		
+0 mins.	0	45	45	0	1	1	29	0	29
+15 mins.	1	80	81	0	0	0	50	0	50
+30 mins.	2	44	46	0	0	0	35	1	36
+45 mins.	1	39	40	2	0	2	45	1	46
Total Volume	4	208	212	2	1	3	159	2	161
% App. Total	1.9	98.1		66.7	33.3		98.8	1.2	
PHF	.500	.650	.654	.250	.250	.375	.795	.500	.805

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cardinal Avenue  
 Weather: Clear

File Name : MRVHECDAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

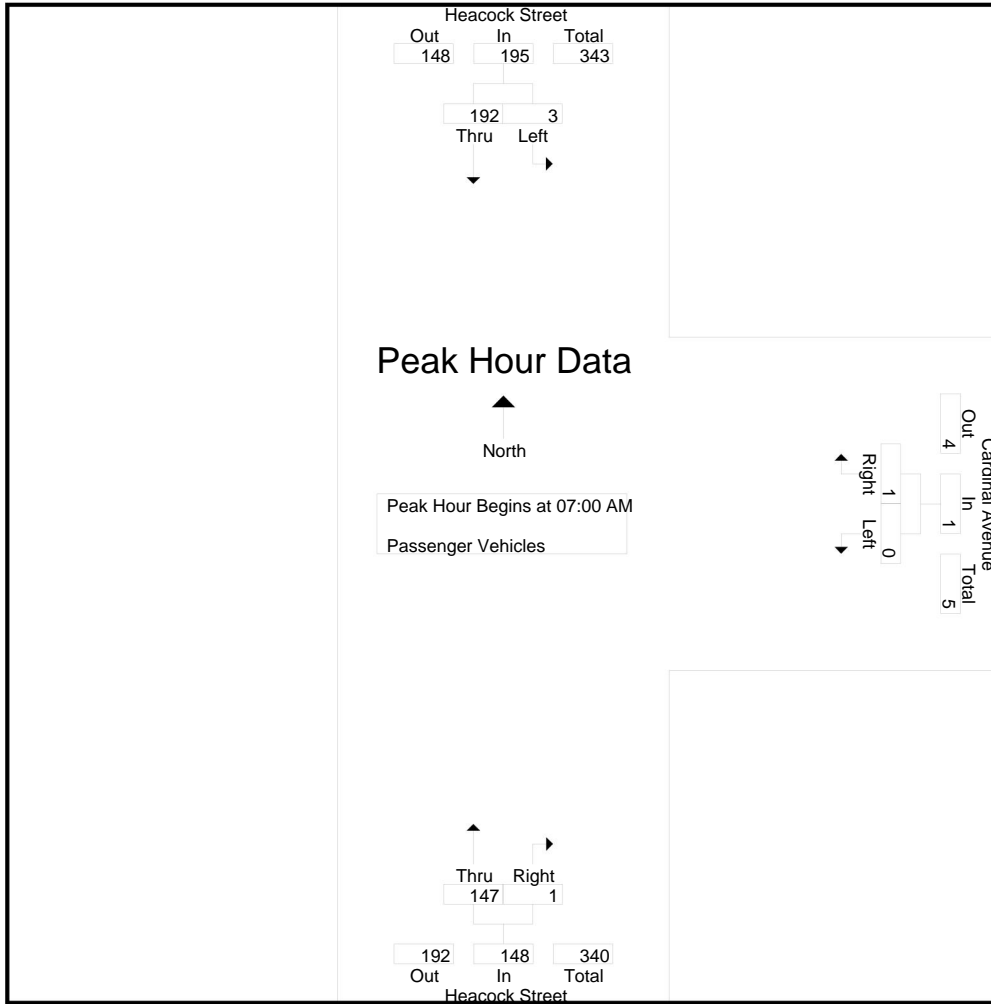
Groups Printed- Passenger Vehicles

Start Time	Heacock Street Southbound			Cardinal Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	38	38	0	0	0	27	0	27	65
07:15 AM	1	80	81	0	1	1	46	0	46	128
07:30 AM	1	39	40	0	0	0	34	0	34	74
07:45 AM	1	35	36	0	0	0	40	1	41	77
Total	3	192	195	0	1	1	147	1	148	344
08:00 AM	0	13	13	2	0	2	25	0	25	40
08:15 AM	1	17	18	0	0	0	20	1	21	39
08:30 AM	0	17	17	0	0	0	10	0	10	27
08:45 AM	1	12	13	0	0	0	11	0	11	24
Total	2	59	61	2	0	2	66	1	67	130
Grand Total	5	251	256	2	1	3	213	2	215	474
Apprch %	2	98		66.7	33.3		99.1	0.9		
Total %	1.1	53	54	0.4	0.2	0.6	44.9	0.4	45.4	

Start Time	Heacock Street Southbound			Cardinal Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	38	38	0	0	0	27	0	27	65
07:15 AM	1	80	81	0	1	1	46	0	46	128
07:30 AM	1	39	40	0	0	0	34	0	34	74
07:45 AM	1	35	36	0	0	0	40	1	41	77
Total Volume	3	192	195	0	1	1	147	1	148	344
% App. Total	1.5	98.5		0	100		99.3	0.7		
PHF	.750	.600	.602	.000	.250	.250	.799	.250	.804	.672

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cardinal Avenue  
 Weather: Clear

File Name : MRVHECDAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
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Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	38	38	0	0	0	27	0	27
+15 mins.	1	80	81	0	1	1	46	0	46
+30 mins.	1	39	40	0	0	0	34	0	34
+45 mins.	1	35	36	0	0	0	40	1	41
Total Volume	3	192	195	0	1	1	147	1	148
% App. Total	1.5	98.5		0	100		99.3	0.7	
PHF	.750	.600	.602	.000	.250	.250	.799	.250	.804

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cardinal Avenue  
 Weather: Clear

File Name : MRVHECDAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
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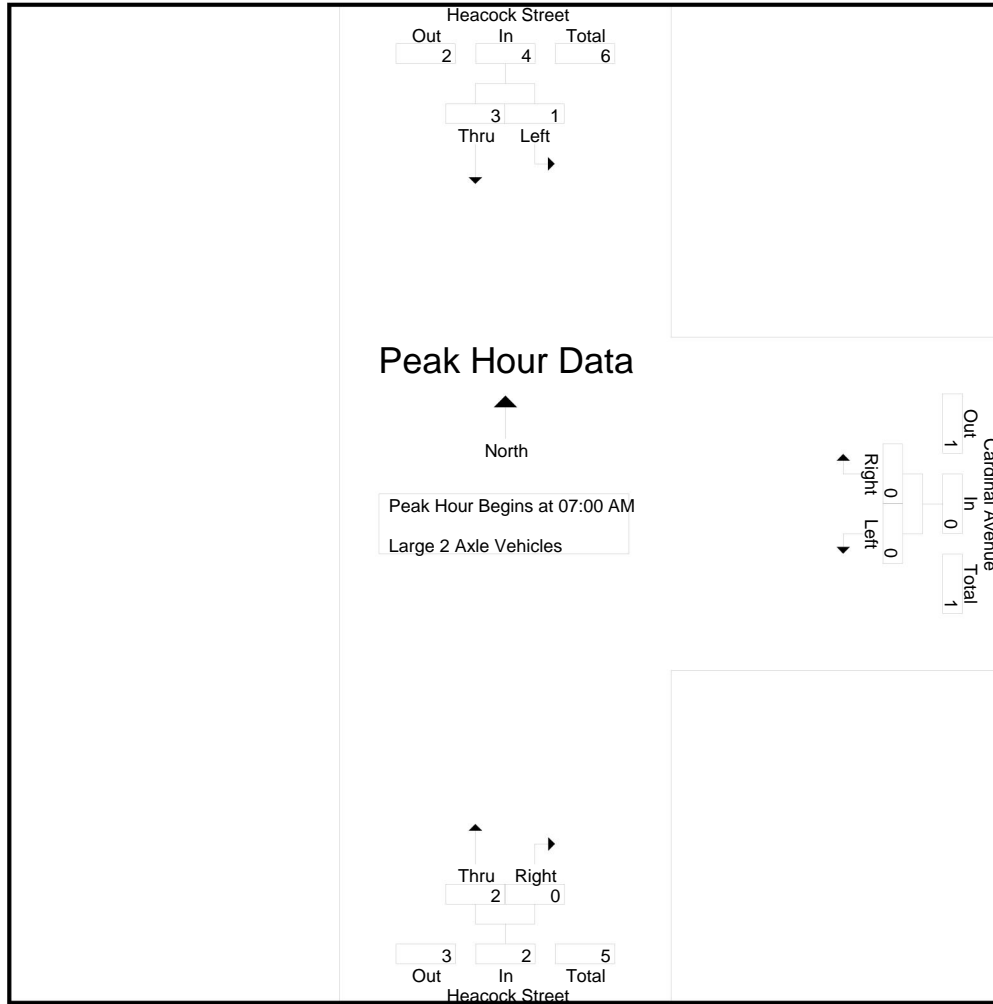
Groups Printed- Large 2 Axle Vehicles

Start Time	Heacock Street Southbound			Cardinal Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	0	1	0	1	1
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	1	0	1	0	0	0	0	0	0	1
07:45 AM	0	3	3	0	0	0	1	0	1	4
Total	1	3	4	0	0	0	2	0	2	6
08:00 AM	0	0	0	0	0	0	3	0	3	3
08:15 AM	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	1	1	0	0	0	2	0	2	3
08:45 AM	0	1	1	0	0	0	1	0	1	2
Total	0	2	2	0	0	0	6	0	6	8
Grand Total	1	5	6	0	0	0	8	0	8	14
Apprch %	16.7	83.3		0	0		100	0		
Total %	7.1	35.7	42.9	0	0	0	57.1	0	57.1	

Start Time	Heacock Street Southbound			Cardinal Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	0	0	0	0	0	1	0	1	1
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	1	0	1	0	0	0	0	0	0	1
07:45 AM	0	3	3	0	0	0	1	0	1	4
Total Volume	1	3	4	0	0	0	2	0	2	6
% App. Total	25	75		0	0		100	0		
PHF	.250	.250	.333	.000	.000	.000	.500	.000	.500	.375

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cardinal Avenue  
 Weather: Clear

File Name : MRVHECDAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	0	0	0	0	0	1	0	1
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	1	0	1	0	0	0	0	0	0
+45 mins.	0	3	3	0	0	0	1	0	1
Total Volume	1	3	4	0	0	0	2	0	2
% App. Total	25	75		0	0		100	0	
PHF	.250	.250	.333	.000	.000	.000	.500	.000	.500

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cardinal Avenue  
 Weather: Clear

File Name : MRVHECDAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

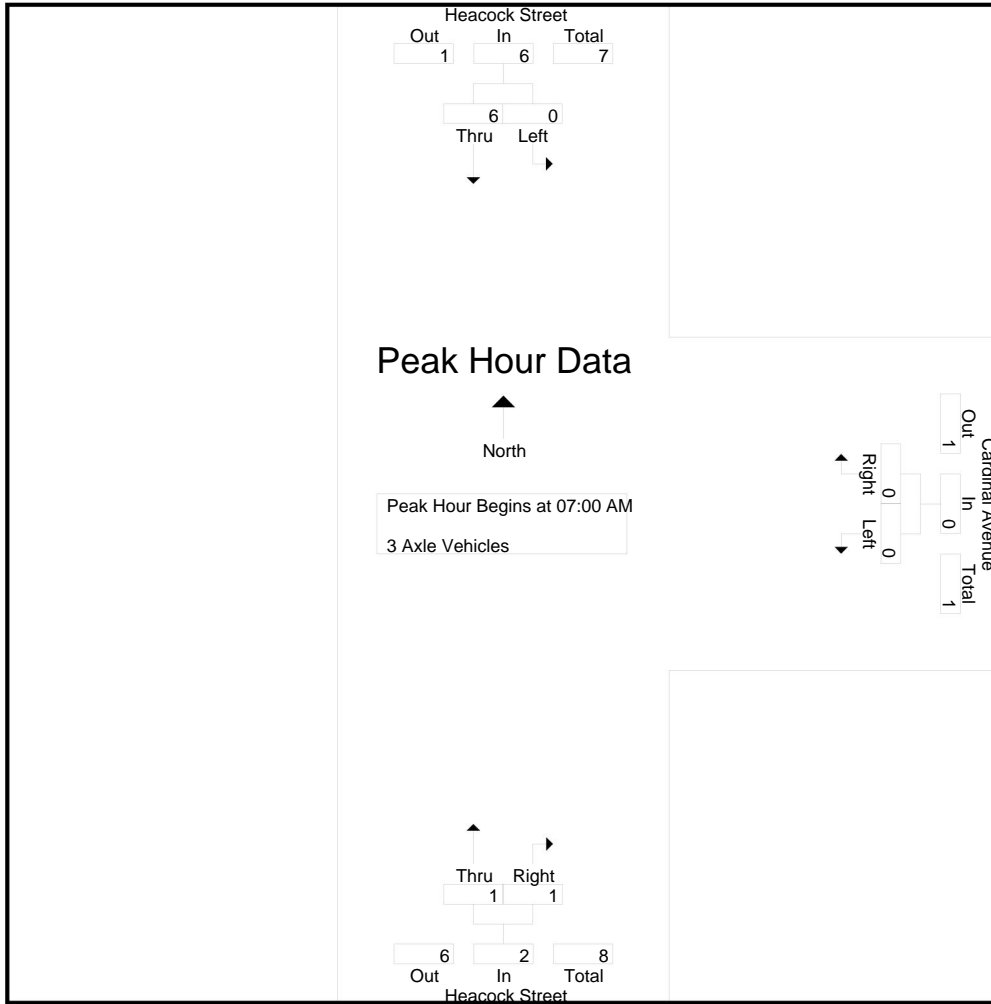
Groups Printed- 3 Axle Vehicles

Start Time	Heacock Street Southbound			Cardinal Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	4	4	0	0	0	0	0	0	4
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	2	2	0	0	0	1	1	2	4
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	6	6	0	0	0	1	1	2	8
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	3	3	0	0	0	0	0	0	3
08:30 AM	0	1	1	0	0	0	0	0	0	1
08:45 AM	0	1	1	0	0	0	1	0	1	2
Total	0	5	5	0	0	0	1	0	1	6
Grand Total	0	11	11	0	0	0	2	1	3	14
Apprch %	0	100		0	0		66.7	33.3		
Total %	0	78.6	78.6	0	0	0	14.3	7.1	21.4	

Start Time	Heacock Street Southbound			Cardinal Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	4	4	0	0	0	0	0	0	4
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	2	2	0	0	0	1	1	2	4
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	6	6	0	0	0	1	1	2	8
% App. Total	0	100		0	0		50	50		
PHF	.000	.375	.375	.000	.000	.000	.250	.250	.250	.500

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cardinal Avenue  
 Weather: Clear

File Name : MRVHECDAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	4	4	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	2	2	0	0	0	1	1	2
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	6	6	0	0	0	1	1	2
% App. Total	0	100		0	0		50	50	
PHF	.000	.375	.375	.000	.000	.000	.250	.250	.250



City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cardinal Avenue  
 Weather: Clear

File Name : MRVHECDAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

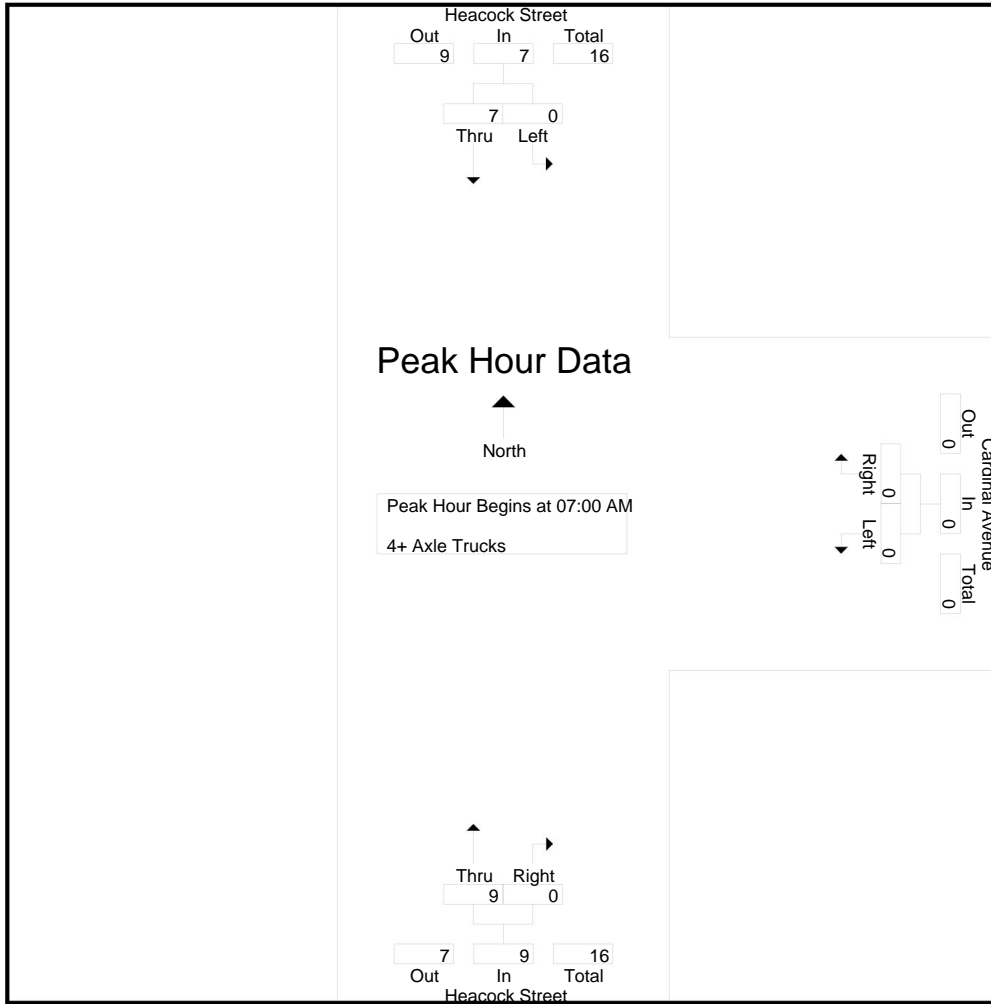
Groups Printed- 4+ Axle Trucks

Start Time	Heacock Street Southbound			Cardinal Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	3	3	0	0	0	1	0	1	4
07:15 AM	0	0	0	0	0	0	4	0	4	4
07:30 AM	0	3	3	0	0	0	0	0	0	3
07:45 AM	0	1	1	0	0	0	4	0	4	5
Total	0	7	7	0	0	0	9	0	9	16
08:00 AM	0	5	5	0	0	0	0	0	0	5
08:15 AM	0	1	1	0	0	0	2	0	2	3
08:30 AM	0	2	2	0	0	0	0	0	0	2
08:45 AM	0	3	3	0	0	0	1	0	1	4
Total	0	11	11	0	0	0	3	0	3	14
Grand Total	0	18	18	0	0	0	12	0	12	30
Apprch %	0	100		0	0		100	0		
Total %	0	60	60	0	0	0	40	0	40	

Start Time	Heacock Street Southbound			Cardinal Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	3	3	0	0	0	1	0	1	4
07:15 AM	0	0	0	0	0	0	4	0	4	4
07:30 AM	0	3	3	0	0	0	0	0	0	3
07:45 AM	0	1	1	0	0	0	4	0	4	5
Total Volume	0	7	7	0	0	0	9	0	9	16
% App. Total	0	100		0	0		100	0		
PHF	.000	.583	.583	.000	.000	.000	.563	.000	.563	.800

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cardinal Avenue  
 Weather: Clear

File Name : MRVHECDAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	3	3	0	0	0	1	0	1
+15 mins.	0	0	0	0	0	0	4	0	4
+30 mins.	0	3	3	0	0	0	0	0	0
+45 mins.	0	1	1	0	0	0	4	0	4
Total Volume	0	7	7	0	0	0	9	0	9
% App. Total	0	100		0	0		100	0	
PHF	.000	.583	.583	.000	.000	.000	.563	.000	.563

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cardinal Avenue  
 Weather: Clear

File Name : MRVHECDPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

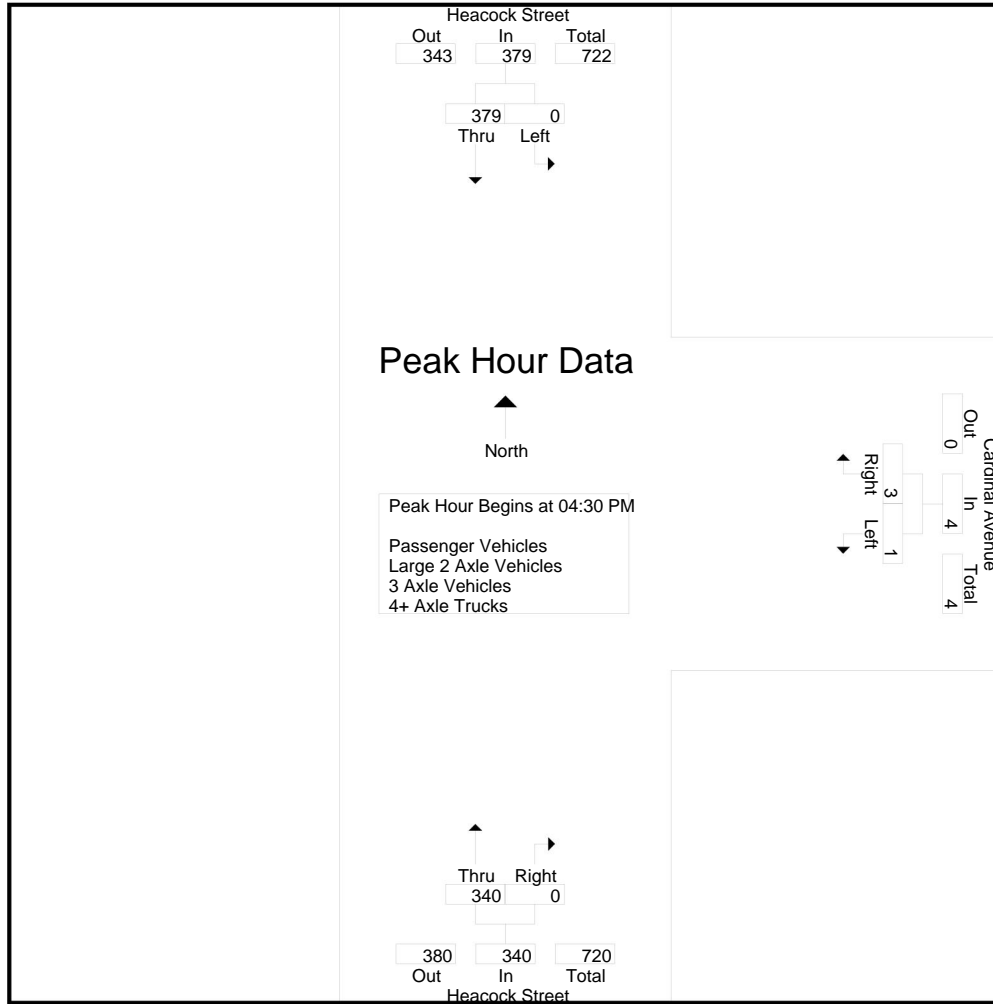
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Heacock Street Southbound			Cardinal Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	48	48	1	2	3	28	0	28	79
04:15 PM	0	70	70	0	1	1	36	0	36	107
04:30 PM	0	118	118	0	1	1	134	0	134	253
04:45 PM	0	103	103	0	0	0	130	0	130	233
Total	0	339	339	1	4	5	328	0	328	672
05:00 PM	0	74	74	1	2	3	48	0	48	125
05:15 PM	0	84	84	0	0	0	28	0	28	112
05:30 PM	3	90	93	0	0	0	81	1	82	175
05:45 PM	4	90	94	0	0	0	43	3	46	140
Total	7	338	345	1	2	3	200	4	204	552
Grand Total	7	677	684	2	6	8	528	4	532	1224
Apprch %	1	99		25	75		99.2	0.8		
Total %	0.6	55.3	55.9	0.2	0.5	0.7	43.1	0.3	43.5	
Passenger Vehicles	7	629	636	2	5	7	504	4	508	1151
% Passenger Vehicles	100	92.9	93	100	83.3	87.5	95.5	100	95.5	94
Large 2 Axle Vehicles	0	11	11	0	1	1	6	0	6	18
% Large 2 Axle Vehicles	0	1.6	1.6	0	16.7	12.5	1.1	0	1.1	1.5
3 Axle Vehicles	0	17	17	0	0	0	12	0	12	29
% 3 Axle Vehicles	0	2.5	2.5	0	0	0	2.3	0	2.3	2.4
4+ Axle Trucks	0	20	20	0	0	0	6	0	6	26
% 4+ Axle Trucks	0	3	2.9	0	0	0	1.1	0	1.1	2.1

Start Time	Heacock Street Southbound			Cardinal Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	0	118	118	0	1	1	134	0	134	253
04:45 PM	0	103	103	0	0	0	130	0	130	233
05:00 PM	0	74	74	1	2	3	48	0	48	125
05:15 PM	0	84	84	0	0	0	28	0	28	112
Total Volume	0	379	379	1	3	4	340	0	340	723
% App. Total	0	100		25	75		100	0		
PHF	.000	.803	.803	.250	.375	.333	.634	.000	.634	.714

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cardinal Avenue  
 Weather: Clear

File Name : MRVHECDPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:30 PM		04:00 PM			04:15 PM			
+0 mins.	0	118	118	1	2	3	36	0	36
+15 mins.	0	103	103	0	1	1	134	0	134
+30 mins.	0	74	74	0	1	1	130	0	130
+45 mins.	0	84	84	0	0	0	48	0	48
Total Volume	0	379	379	1	4	5	348	0	348
% App. Total	0	100		20	80		100	0	
PHF	.000	.803	.803	.250	.500	.417	.649	.000	.649

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cardinal Avenue  
 Weather: Clear

File Name : MRVHECDPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

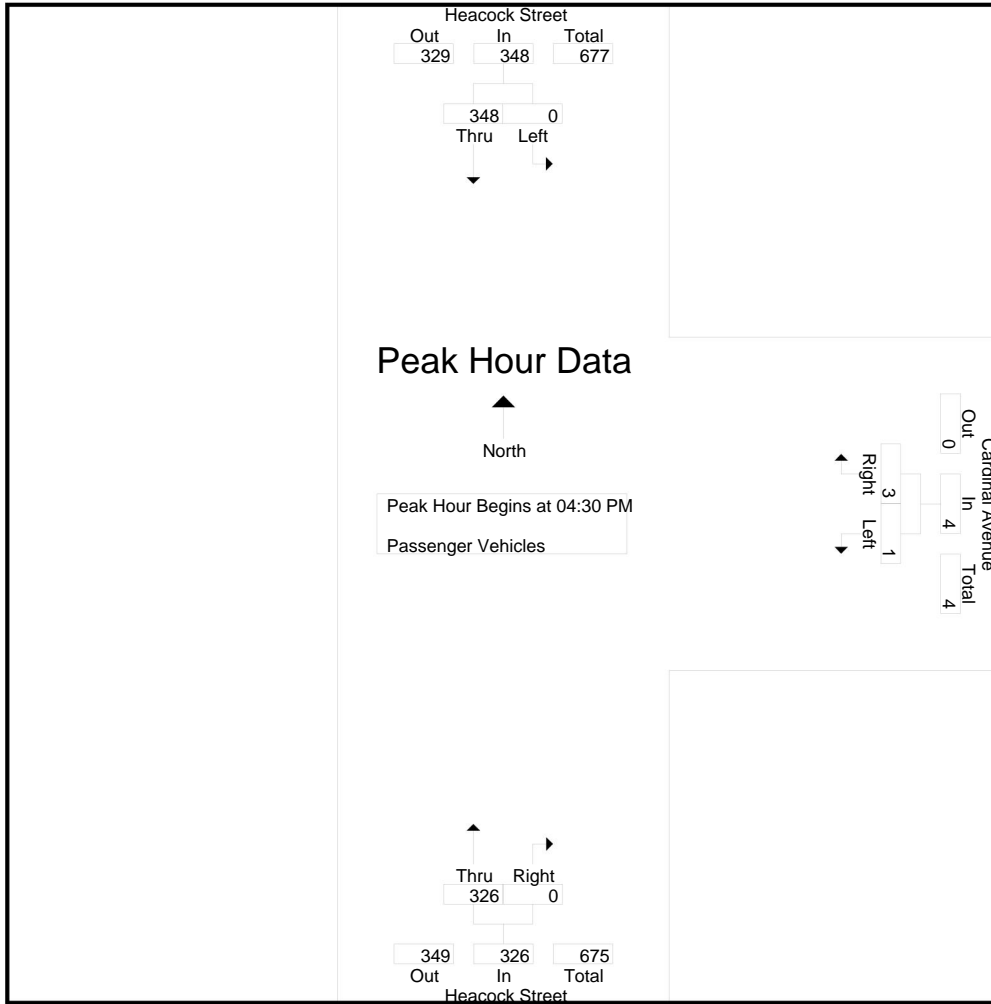
Groups Printed- Passenger Vehicles

Start Time	Heacock Street Southbound			Cardinal Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	44	44	1	1	2	25	0	25	71
04:15 PM	0	65	65	0	1	1	35	0	35	101
04:30 PM	0	109	109	0	1	1	132	0	132	242
04:45 PM	0	98	98	0	0	0	123	0	123	221
Total	0	316	316	1	3	4	315	0	315	635
05:00 PM	0	68	68	1	2	3	46	0	46	117
05:15 PM	0	73	73	0	0	0	25	0	25	98
05:30 PM	3	84	87	0	0	0	78	1	79	166
05:45 PM	4	88	92	0	0	0	40	3	43	135
Total	7	313	320	1	2	3	189	4	193	516
Grand Total	7	629	636	2	5	7	504	4	508	1151
Apprch %	1.1	98.9		28.6	71.4		99.2	0.8		
Total %	0.6	54.6	55.3	0.2	0.4	0.6	43.8	0.3	44.1	

Start Time	Heacock Street Southbound			Cardinal Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	0	109	109	0	1	1	132	0	132	242
04:45 PM	0	98	98	0	0	0	123	0	123	221
05:00 PM	0	68	68	1	2	3	46	0	46	117
05:15 PM	0	73	73	0	0	0	25	0	25	98
Total Volume	0	348	348	1	3	4	326	0	326	678
% App. Total	0	100		25	75		100	0		
PHF	.000	.798	.798	.250	.375	.333	.617	.000	.617	.700

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cardinal Avenue  
 Weather: Clear

File Name : MRVHECDPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:30 PM			04:30 PM			04:30 PM		
+0 mins.	0	109	109	0	1	1	132	0	132
+15 mins.	0	98	98	0	0	0	123	0	123
+30 mins.	0	68	68	1	2	3	46	0	46
+45 mins.	0	73	73	0	0	0	25	0	25
Total Volume	0	348	348	1	3	4	326	0	326
% App. Total	0	100		25	75		100	0	
PHF	.000	.798	.798	.250	.375	.333	.617	.000	.617

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cardinal Avenue  
 Weather: Clear

File Name : MRVHECDPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

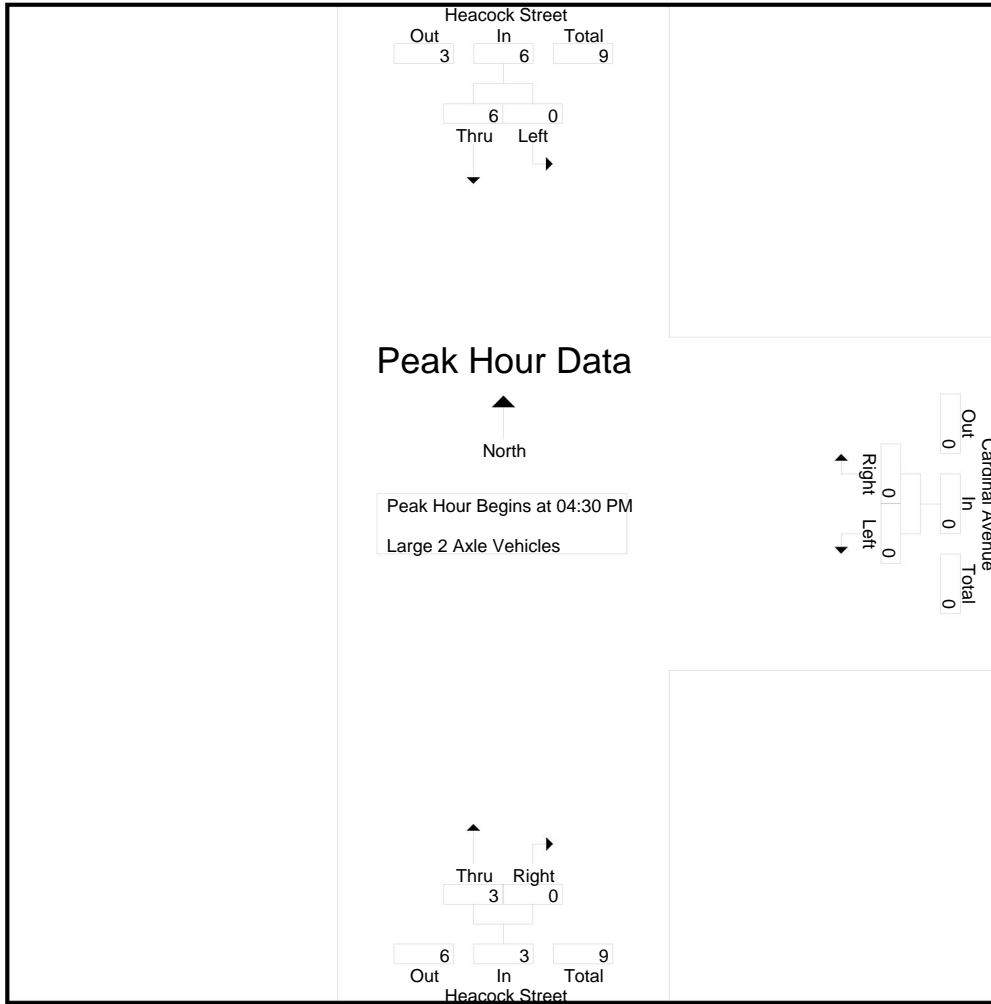
Groups Printed- Large 2 Axle Vehicles

Start Time	Heacock Street Southbound			Cardinal Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	2	2	0	1	1	2	0	2	5
04:15 PM	0	1	1	0	0	0	0	0	0	1
04:30 PM	0	3	3	0	0	0	1	0	1	4
04:45 PM	0	1	1	0	0	0	1	0	1	2
Total	0	7	7	0	1	1	4	0	4	12
05:00 PM	0	0	0	0	0	0	1	0	1	1
05:15 PM	0	2	2	0	0	0	0	0	0	2
05:30 PM	0	1	1	0	0	0	0	0	0	1
05:45 PM	0	1	1	0	0	0	1	0	1	2
Total	0	4	4	0	0	0	2	0	2	6
Grand Total	0	11	11	0	1	1	6	0	6	18
Apprch %	0	100		0	100		100	0		
Total %	0	61.1	61.1	0	5.6	5.6	33.3	0	33.3	

Start Time	Heacock Street Southbound			Cardinal Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	0	3	3	0	0	0	1	0	1	4
04:45 PM	0	1	1	0	0	0	1	0	1	2
05:00 PM	0	0	0	0	0	0	1	0	1	1
05:15 PM	0	2	2	0	0	0	0	0	0	2
Total Volume	0	6	6	0	0	0	3	0	3	9
% App. Total	0	100		0	0		100	0		
PHF	.000	.500	.500	.000	.000	.000	.750	.000	.750	.563

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cardinal Avenue  
 Weather: Clear

File Name : MRVHECDPM  
 Site Code : 05115223  
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Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:30 PM			04:30 PM			04:30 PM		
+0 mins.	0	3	3	0	0	0	1	0	1
+15 mins.	0	1	1	0	0	0	1	0	1
+30 mins.	0	0	0	0	0	0	1	0	1
+45 mins.	0	2	2	0	0	0	0	0	0
Total Volume	0	6	6	0	0	0	3	0	3
% App. Total	0	100		0	0		100	0	
PHF	.000	.500	.500	.000	.000	.000	.750	.000	.750



City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cardinal Avenue  
 Weather: Clear

File Name : MRVHECDPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

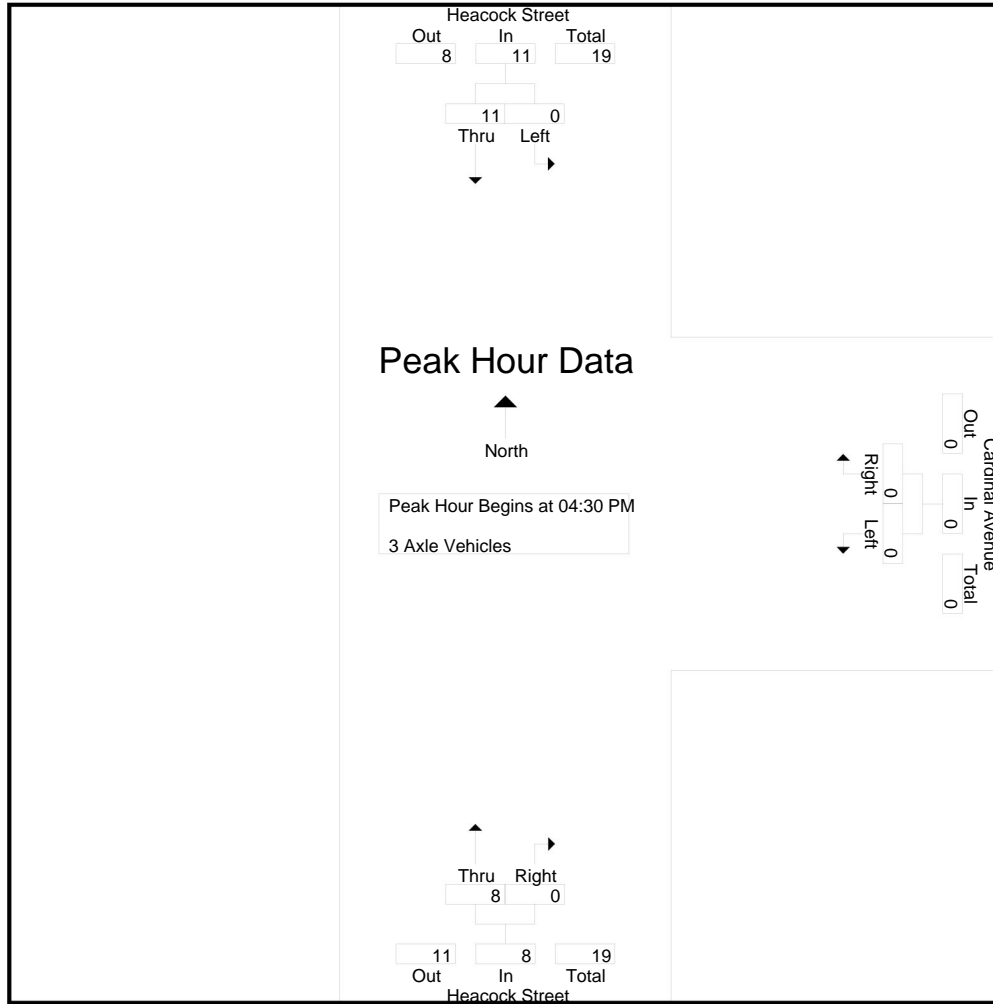
Groups Printed- 3 Axle Vehicles

Start Time	Heacock Street Southbound			Cardinal Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	2	2	0	0	0	1	0	1	3
04:30 PM	0	0	0	0	0	0	1	0	1	1
04:45 PM	0	2	2	0	0	0	3	0	3	5
Total	0	4	4	0	0	0	5	0	5	9
05:00 PM	0	4	4	0	0	0	1	0	1	5
05:15 PM	0	5	5	0	0	0	3	0	3	8
05:30 PM	0	3	3	0	0	0	2	0	2	5
05:45 PM	0	1	1	0	0	0	1	0	1	2
Total	0	13	13	0	0	0	7	0	7	20
Grand Total	0	17	17	0	0	0	12	0	12	29
Apprch %	0	100		0	0		100	0		
Total %	0	58.6	58.6	0	0	0	41.4	0	41.4	

Start Time	Heacock Street Southbound			Cardinal Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	0	0	0	0	0	0	1	0	1	1
04:45 PM	0	2	2	0	0	0	3	0	3	5
05:00 PM	0	4	4	0	0	0	1	0	1	5
05:15 PM	0	5	5	0	0	0	3	0	3	8
Total Volume	0	11	11	0	0	0	8	0	8	19
% App. Total	0	100		0	0		100	0		
PHF	.000	.550	.550	.000	.000	.000	.667	.000	.667	.594

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cardinal Avenue  
 Weather: Clear

File Name : MRVHECDPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
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Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:30 PM			04:30 PM			04:30 PM		
+0 mins.	0	0	0	0	0	0	1	0	1
+15 mins.	0	2	2	0	0	0	3	0	3
+30 mins.	0	4	4	0	0	0	1	0	1
+45 mins.	0	5	5	0	0	0	3	0	3
Total Volume	0	11	11	0	0	0	8	0	8
% App. Total	0	100		0	0		100	0	
PHF	.000	.550	.550	.000	.000	.000	.667	.000	.667

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cardinal Avenue  
 Weather: Clear

File Name : MRVHECDPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

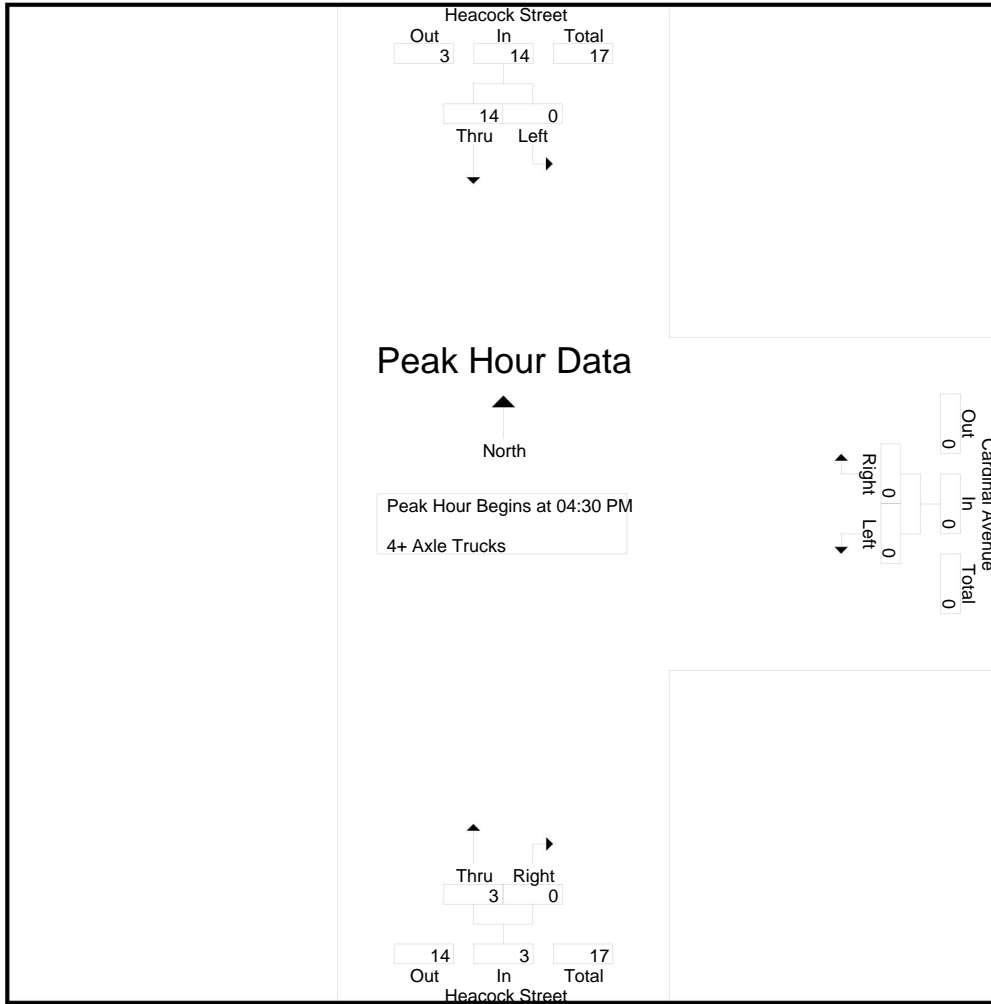
Groups Printed- 4+ Axle Trucks

Start Time	Heacock Street Southbound			Cardinal Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	2	2	0	0	0	1	0	1	3
04:15 PM	0	2	2	0	0	0	0	0	0	2
04:30 PM	0	6	6	0	0	0	0	0	0	6
04:45 PM	0	2	2	0	0	0	3	0	3	5
Total	0	12	12	0	0	0	4	0	4	16
05:00 PM	0	2	2	0	0	0	0	0	0	2
05:15 PM	0	4	4	0	0	0	0	0	0	4
05:30 PM	0	2	2	0	0	0	1	0	1	3
05:45 PM	0	0	0	0	0	0	1	0	1	1
Total	0	8	8	0	0	0	2	0	2	10
Grand Total	0	20	20	0	0	0	6	0	6	26
Apprch %	0	100		0	0		100	0		
Total %	0	76.9	76.9	0	0	0	23.1	0	23.1	

Start Time	Heacock Street Southbound			Cardinal Avenue Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	0	6	6	0	0	0	0	0	0	6
04:45 PM	0	2	2	0	0	0	3	0	3	5
05:00 PM	0	2	2	0	0	0	0	0	0	2
05:15 PM	0	4	4	0	0	0	0	0	0	4
Total Volume	0	14	14	0	0	0	3	0	3	17
% App. Total	0	100		0	0		100	0		
PHF	.000	.583	.583	.000	.000	.000	.250	.000	.250	.708

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Cardinal Avenue  
 Weather: Clear

File Name : MRVHECDPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:30 PM			04:30 PM			04:30 PM		
+0 mins.	0	6	6	0	0	0	0	0	0
+15 mins.	0	2	2	0	0	0	3	0	3
+30 mins.	0	2	2	0	0	0	0	0	0
+45 mins.	0	4	4	0	0	0	0	0	0
Total Volume	0	14	14	0	0	0	3	0	3
% App. Total	0	100		0	0		100	0	
PHF	.000	.583	.583	.000	.000	.000	.250	.000	.250

Location: Moreno Valley  
 N/S: Heacock Street  
 E/W: Cardinal Avenue



Date: 4/28/2015  
 Weather: Clear

**PEDESTRIANS**

	North Leg Heacock Street	East Leg Cardinal Avenue	South Leg Heacock Street	West Leg Cardinal Avenue	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
<b>TOTAL VOLUMES:</b>	0	0	0	0	0

	North Leg Heacock Street	East Leg Cardinal Avenue	South Leg Heacock Street	West Leg Cardinal Avenue	TOTAL
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	1	0	0	1
5:00 PM	0	1	0	0	1
5:15 PM	0	1	0	0	1
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
<b>TOTAL VOLUMES:</b>	0	3	0	0	3

Location: Moreno Valley  
 N/S: Heacock Street  
 E/W: Cardinal Avenue



Date: 4/28/2015  
 Weather: Clear

**BICYCLES**

	North Leg Heacock Street	East Leg Cardinal Avenue	South Leg Heacock Street	West Leg Cardinal Avenue	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
<b>TOTAL VOLUMES:</b>	0	0	0	0	0

	North Leg Heacock Street	East Leg Cardinal Avenue	South Leg Heacock Street	West Leg Cardinal Avenue	TOTAL
4:00 PM	0	1	0	0	1
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
<b>TOTAL VOLUMES:</b>	0	1	0	0	1

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVHESMAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

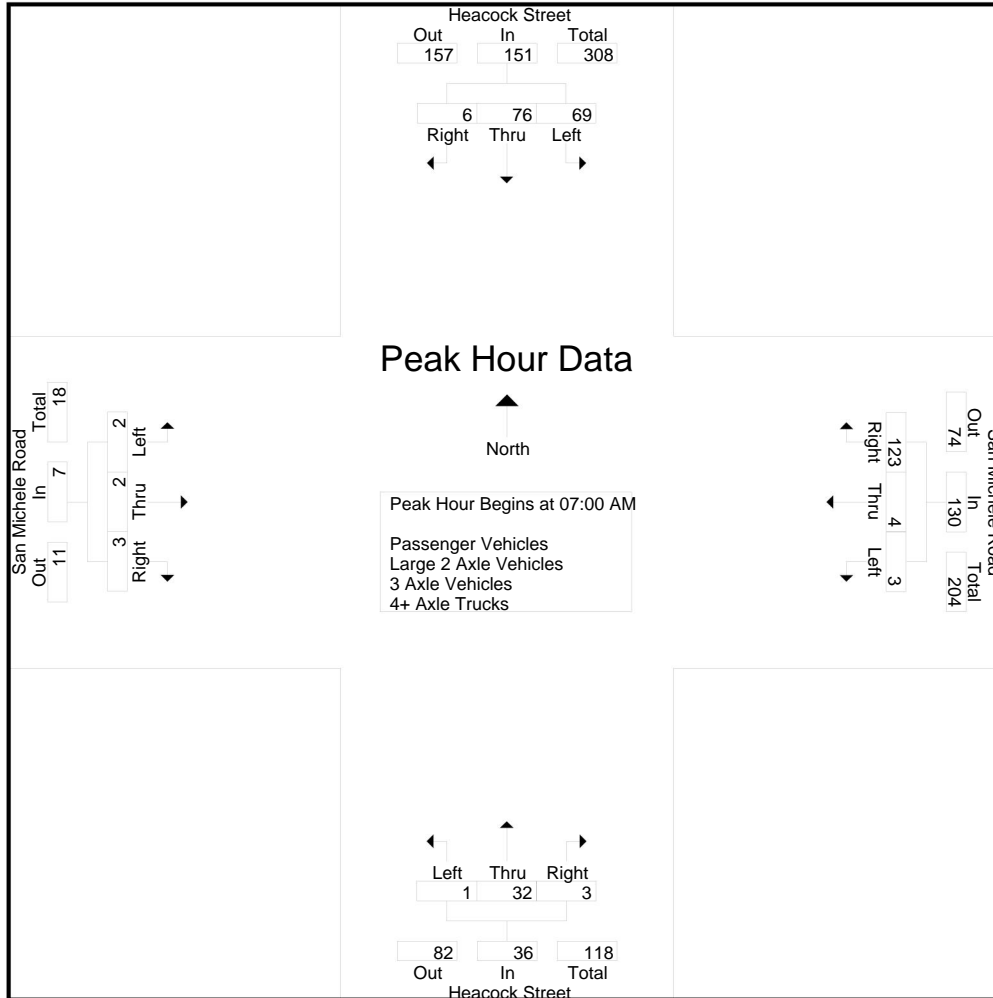
	Heacock Street Southbound					San Michele Road Westbound					Heacock Street Northbound					San Michele Road Eastbound					Exclu. Total	Inclu. Total
	Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR		
07:00 AM	7	17	2	0	26	1	2	20	6	23	1	8	2	0	11	0	2	1	1	3	7	63
07:15 AM	30	24	2	1	56	1	0	41	21	42	0	7	0	0	7	2	0	1	0	3	22	108
07:30 AM	14	17	2	0	33	1	1	31	11	33	0	6	0	0	6	0	0	1	1	1	12	73
07:45 AM	18	18	0	0	36	0	1	31	12	32	0	11	1	0	12	0	0	0	0	0	12	80
<b>Total</b>	<b>69</b>	<b>76</b>	<b>6</b>	<b>1</b>	<b>151</b>	<b>3</b>	<b>4</b>	<b>123</b>	<b>50</b>	<b>130</b>	<b>1</b>	<b>32</b>	<b>3</b>	<b>0</b>	<b>36</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>2</b>	<b>7</b>	<b>53</b>	<b>324</b>
08:00 AM	12	8	0	0	20	0	0	23	3	23	0	5	1	0	6	0	0	0	0	0	3	49
08:15 AM	9	9	1	1	19	1	1	16	7	18	0	6	0	0	6	0	0	1	0	1	8	44
08:30 AM	11	7	2	1	20	0	1	10	2	11	0	1	0	0	1	0	0	0	0	0	3	32
08:45 AM	6	10	1	0	17	1	1	11	5	13	0	4	1	0	5	0	0	1	0	1	5	36
<b>Total</b>	<b>38</b>	<b>34</b>	<b>4</b>	<b>2</b>	<b>76</b>	<b>2</b>	<b>3</b>	<b>60</b>	<b>17</b>	<b>65</b>	<b>0</b>	<b>16</b>	<b>2</b>	<b>0</b>	<b>18</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>19</b>	<b>161</b>
<b>Grand Total</b>	<b>107</b>	<b>110</b>	<b>10</b>	<b>3</b>	<b>227</b>	<b>5</b>	<b>7</b>	<b>183</b>	<b>67</b>	<b>195</b>	<b>1</b>	<b>48</b>	<b>5</b>	<b>0</b>	<b>54</b>	<b>2</b>	<b>2</b>	<b>5</b>	<b>2</b>	<b>9</b>	<b>72</b>	<b>485</b>
Apprch %	47.1	48.5	4.4			2.6	3.6	93.8			1.9	88.9	9.3			22.2	22.2	55.6				
Total %	22.1	22.7	2.1		46.8	1	1.4	37.7		40.2	0.2	9.9	1		11.1	0.4	0.4	1		1.9	12.9	87.1
Passenger Vehicles	96	93	8		200	2	5	170		237	1	39	3		43	2	0	4		8	0	0
% Passenger Vehicles	89.7	84.5	80	100	87	40	71.4	92.9	89.6	90.5	100	81.2	60	0	79.6	100	0	80	100	72.7	0	0
Large 2 Axle Vehicles	1	5	2		8	1	2	3		8	0	5	1		6	0	0	1		1	0	0
% Large 2 Axle Vehicles	0.9	4.5	20	0	3.5	20	28.6	1.6	3	3.1	0	10.4	20	0	11.1	0	0	20	0	9.1	0	0
3 Axle Vehicles	2	4	0		6	0	0	1		1	0	0	0		0	0	2	0		2	0	0
% 3 Axle Vehicles	1.9	3.6	0	0	2.6	0	0	0.5	0	0.4	0	0	0	0	0	0	100	0	0	18.2	0	0
4+ Axle Trucks	8	8	0		16	2	0	9		16	0	4	1		5	0	0	0		0	0	0
% 4+ Axle Trucks	7.5	7.3	0	0	7	40	0	4.9	7.5	6.1	0	8.3	20	0	9.3	0	0	0	0	0	0	0

3.1-415

Start Time	Heacock Street Southbound				San Michele Road Westbound				Heacock Street Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	7	17	2	26	1	2	20	23	1	8	2	11	0	2	1	3	63
07:15 AM	30	24	2	56	1	0	41	42	0	7	0	7	2	0	1	3	108
07:30 AM	14	17	2	33	1	1	31	33	0	6	0	6	0	0	1	73	
07:45 AM	18	18	0	36	0	1	31	32	0	11	1	12	0	0	0	80	
Total Volume	69	76	6	151	3	4	123	130	1	32	3	36	2	2	3	324	
% App. Total	45.7	50.3	4		2.3	3.1	94.6		2.8	88.9	8.3		28.6	28.6	42.9		
PHF	.575	.792	.750	.674	.750	.500	.750	.774	.250	.727	.375	.750	.250	.250	.750	.583	.750

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVHESMAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
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3.1-416



Counts Unlimited, Inc.  
 PO Box 1178  
 Corona, CA 92787  
 (951) 268-6268

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVHESMAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Heacock Street Southbound				San Michele Road Westbound				Heacock Street Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	7	17	2	26	1	2	20	23	1	8	2	11	0	2	1	3	
+15 mins.	30	24	2	56	1	0	41	42	0	7	0	7	2	0	1	3	
+30 mins.	14	17	2	33	1	1	31	33	0	6	0	6	0	0	1	1	
+45 mins.	18	18	0	36	0	1	31	32	0	11	1	12	0	0	0	0	
Total Volume	69	76	6	151	3	4	123	130	1	32	3	36	2	2	3	7	
% App. Total	45.7	50.3	4		2.3	3.1	94.6		2.8	88.9	8.3		28.6	28.6	42.9		
PHF	.575	.792	.750	.674	.750	.500	.750	.774	.250	.727	.375	.750	.250	.250	.750	.583	

3.1-417

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVHESMAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- Passenger Vehicles

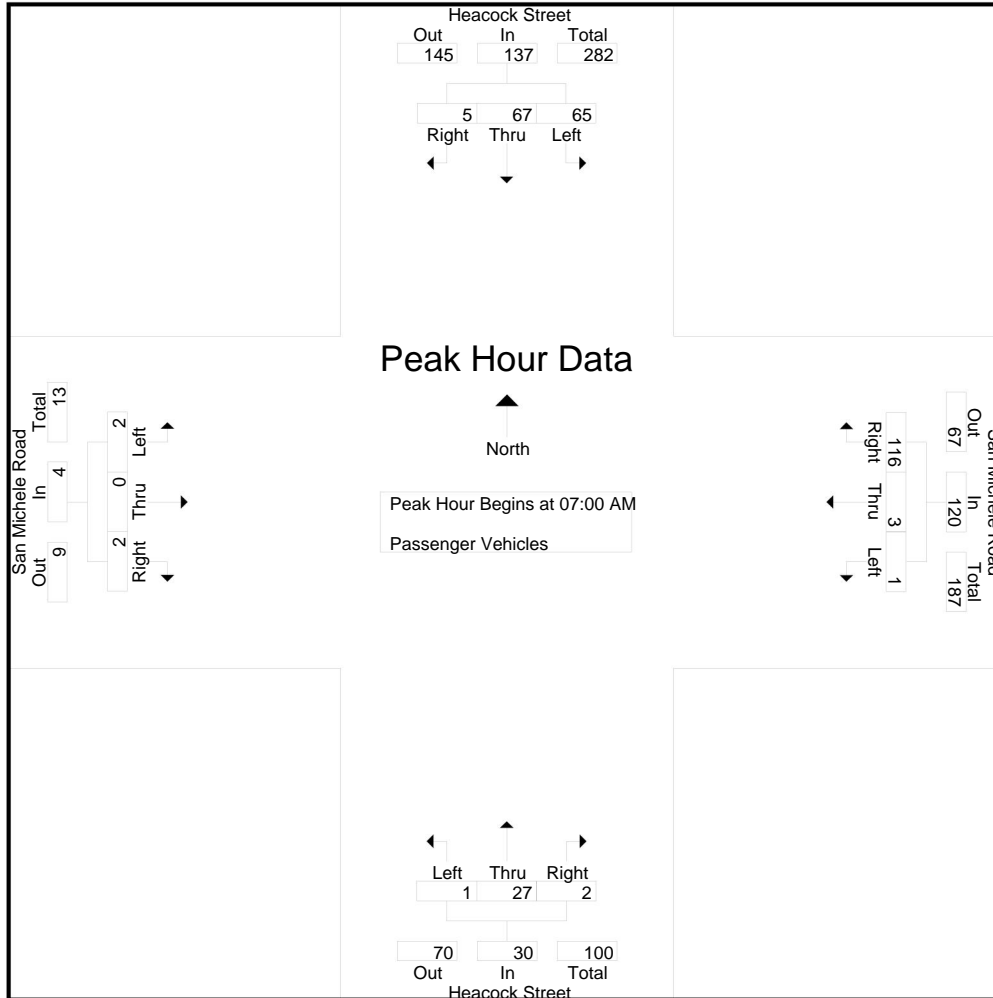
Start Time	Heacock Street Southbound					San Michele Road Westbound					Heacock Street Northbound					San Michele Road Eastbound					Exclu. Total	Inclu. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total		
07:00 AM	5	15	1	0	21	1	2	20	6	23	1	6	1	0	8	0	0	1	1	1	7	53
07:15 AM	30	23	2	1	55	0	0	38	20	38	0	6	0	0	6	2	0	0	0	2	21	101
07:30 AM	13	14	2	0	29	0	1	31	10	32	0	6	0	0	6	0	0	1	1	1	11	68
07:45 AM	17	15	0	0	32	0	0	27	9	27	0	9	1	0	10	0	0	0	0	0	9	69
Total	65	67	5	1	137	1	3	116	45	120	1	27	2	0	30	2	0	2	2	4	48	291
08:00 AM	10	7	0	0	17	0	0	22	3	22	0	3	1	0	4	0	0	0	0	0	3	43
08:15 AM	5	8	1	1	14	1	1	14	6	16	0	6	0	0	6	0	0	1	0	1	7	37
08:30 AM	11	4	1	1	16	0	0	8	2	8	0	1	0	0	1	0	0	0	0	0	3	25
08:45 AM	5	7	1	0	13	0	1	10	4	11	0	2	0	0	2	0	0	1	0	1	4	27
Total	31	26	3	2	60	1	2	54	15	57	0	12	1	0	13	0	0	2	0	2	17	132
Grand Total	96	93	8	3	197	2	5	170	60	177	1	39	3	0	43	2	0	4	2	6	65	423
Apprch %	48.7	47.2	4.1			1.1	2.8	96			2.3	90.7	7			33.3	0	66.7				
Total %	22.7	22	1.9		46.6	0.5	1.2	40.2		41.8	0.2	9.2	0.7		10.2	0.5	0	0.9		1.4	13.3	86.7

3.1-418

Start Time	Heacock Street Southbound				San Michele Road Westbound				Heacock Street Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	5	15	1	21	1	2	20	23	1	6	1	8	0	0	1	1	53
07:15 AM	30	23	2	55	0	0	38	38	0	6	0	6	2	0	0	2	101
07:30 AM	13	14	2	29	0	1	31	32	0	6	0	6	0	0	1	1	68
07:45 AM	17	15	0	32	0	0	27	27	0	9	1	10	0	0	0	0	69
Total Volume	65	67	5	137	1	3	116	120	1	27	2	30	2	0	2	4	291
% App. Total	47.4	48.9	3.6		0.8	2.5	96.7		3.3	90	6.7		50	0	50		
PHF	.542	.728	.625	.623	.250	.375	.763	.789	.250	.750	.500	.750	.250	.000	.500	.500	.720

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVHESMAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 2



3.1-419

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 Corona, CA 92787  
 (951) 268-6268

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVHESMAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Heacock Street Southbound				San Michele Road Westbound				Heacock Street Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	5	15	1	21	1	2	20	23	1	6	1	8	0	0	1	1	
+15 mins.	30	23	2	55	0	0	38	38	0	6	0	6	2	0	0	2	
+30 mins.	13	14	2	29	0	1	31	32	0	6	0	6	0	0	1	1	
+45 mins.	17	15	0	32	0	0	27	27	0	9	1	10	0	0	0	0	
Total Volume	65	67	5	137	1	3	116	120	1	27	2	30	2	0	2	4	
% App. Total	47.4	48.9	3.6		0.8	2.5	96.7		3.3	90	6.7		50	0	50		
PHF	.542	.728	.625	.623	.250	.375	.763	.789	.250	.750	.500	.750	.250	.000	.500	.500	

3.1-420

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVHESMAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

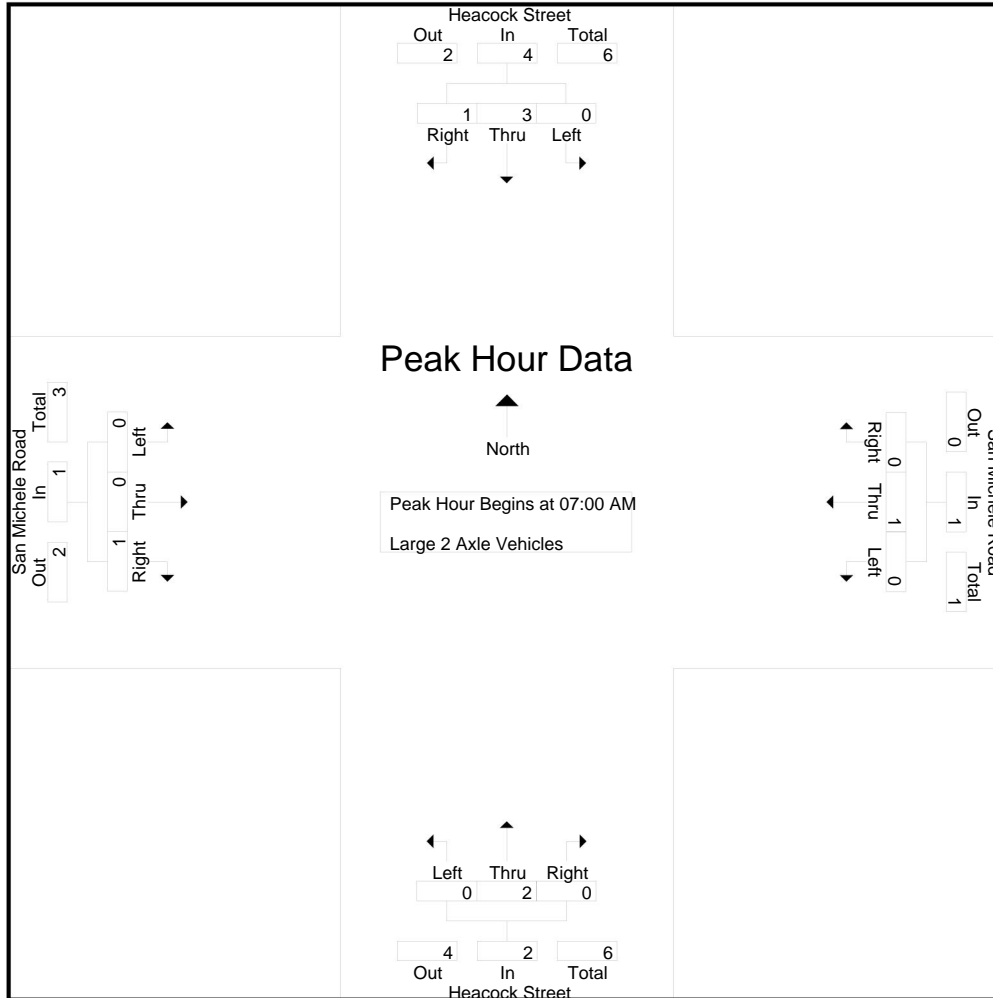
Start Time	Heacock Street Southbound					San Michele Road Westbound					Heacock Street Northbound					San Michele Road Eastbound					Exclu. Total	Inclu. Total					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total							
07:00 AM	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
07:45 AM	0	3	0	0	3	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	5
Total	0	3	1	0	4	0	1	0	1	1	0	2	0	0	2	0	0	1	0	1	0	0	0	0	0	1	8
08:00 AM	0	0	0	0	0	0	0	1	0	1	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	3
08:15 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:30 AM	0	2	1	0	3	0	1	2	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
08:45 AM	0	0	0	0	0	1	0	0	1	1	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	1	3
Total	1	2	1	0	4	1	1	3	1	5	0	3	1	0	4	0	0	0	0	0	0	0	0	0	0	1	13
Grand Total	1	5	2	0	8	1	2	3	2	6	0	5	1	0	6	0	0	1	0	1	0	0	0	0	0	2	21
Apprch %	12.5	62.5	25			16.7	33.3	50			0	83.3	16.7			0	0	100									
Total %	4.8	23.8	9.5		38.1	4.8	9.5	14.3		28.6	0	23.8	4.8		28.6	0	0	4.8		4.8						8.7	91.3

3.1-421

Start Time	Heacock Street Southbound				San Michele Road Westbound				Heacock Street Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	1	1	0	0	0	0	0	1	0	1	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	3	0	3	0	1	0	1	0	1	0	1	0	0	0	0	5
Total Volume	0	3	1	4	0	1	0	1	0	2	0	2	0	0	1	1	8
% App. Total	0	75	25		0	100	0		0	100	0		0	0	100		
PHF	.000	.250	.250	.333	.000	.250	.000	.250	.000	.500	.000	.500	.000	.000	.250	.250	.400

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVHESMAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 2



3.1-422

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVHESMAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Heacock Street Southbound				San Michele Road Westbound				Heacock Street Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	0	1	1	0	0	0	0	0	1	0	1	0	0	0	0	
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
+45 mins.	0	3	0	3	0	1	0	1	0	1	0	1	0	0	0	0	
Total Volume	0	3	1	4	0	1	0	1	0	2	0	2	0	0	1	1	
% App. Total	0	75	25		0	100	0		0	100	0		0	0	100		
PHF	.000	.250	.250	.333	.000	.250	.000	.250	.000	.500	.000	.500	.000	.000	.250	.250	

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVHESMAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- 3 Axle Vehicles

Start Time	Heacock Street Southbound					San Michele Road Westbound					Heacock Street Northbound					San Michele Road Eastbound					Exclu. Total	Inclu. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total		
07:00 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	3
07:15 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	2	0	0	3	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	5
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2
Total	1	2	0	0	3	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	4
Grand Total	2	4	0	0	6	0	0	1	0	1	0	0	0	0	0	2	0	0	2	0	9	
Apprch %	33.3	66.7	0			0	0	100			0	0	0		0	100	0					
Total %	22.2	44.4	0		66.7	0	0	11.1		11.1	0	0	0		0	22.2	0		22.2	0	100	

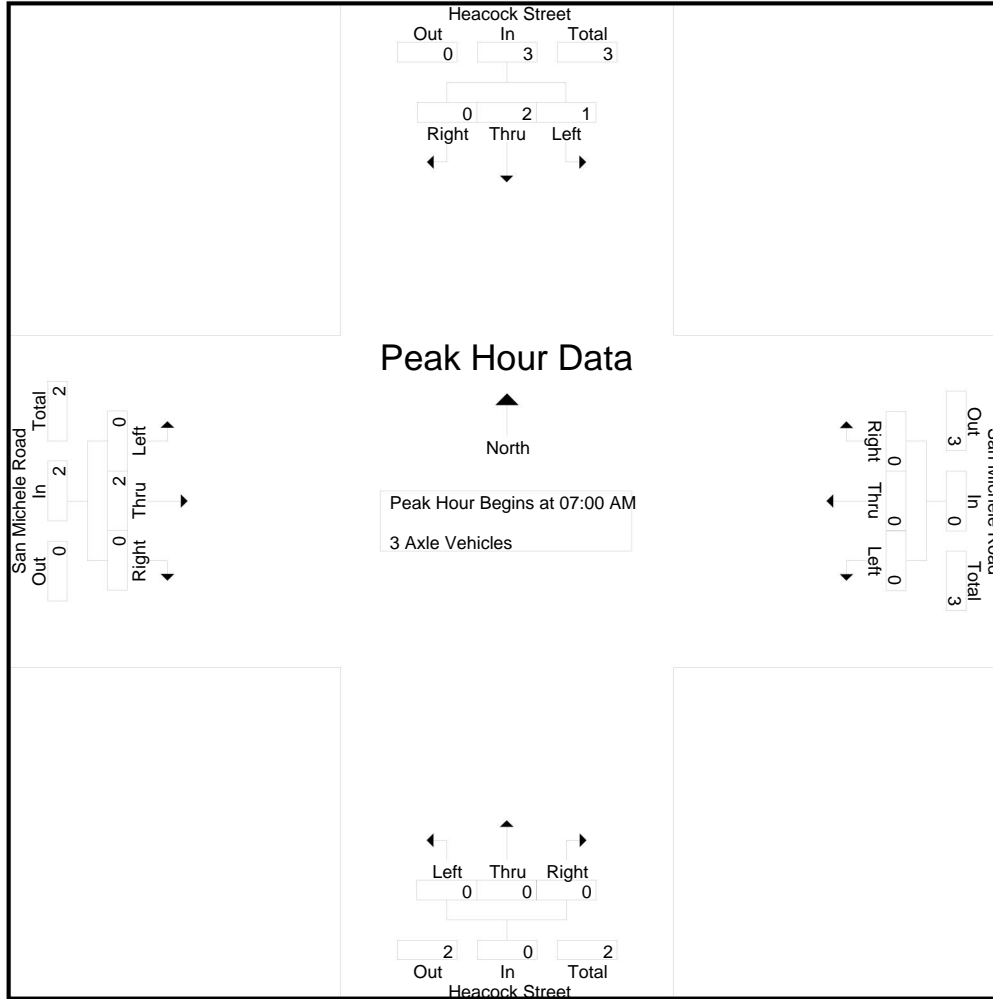
3.1-424

Start Time	Heacock Street Southbound				San Michele Road Westbound				Heacock Street Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	2	0	2	3
07:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	1	2	0	3	0	0	0	0	0	0	0	0	0	2	0	2	5
% App. Total	33.3	66.7	0		0	0	0		0	0	0		0	100	0		
PHF	.250	.500	.000	.750	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.417



City of Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVHESMAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 2



3.1-425

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVHESMAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Heacock Street Southbound				San Michele Road Westbound				Heacock Street Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	1	0	0	1	0	0	0	0	0	0	0	0	0	2	0	2	
+15 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	
+30 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Volume	1	2	0	3	0	0	0	0	0	0	0	0	0	2	0	2	
% App. Total	33.3	66.7	0		0	0	0		0	0	0		0	100	0		
PHF	.250	.500	.000	.750	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVHESMAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- 4+ Axle Trucks

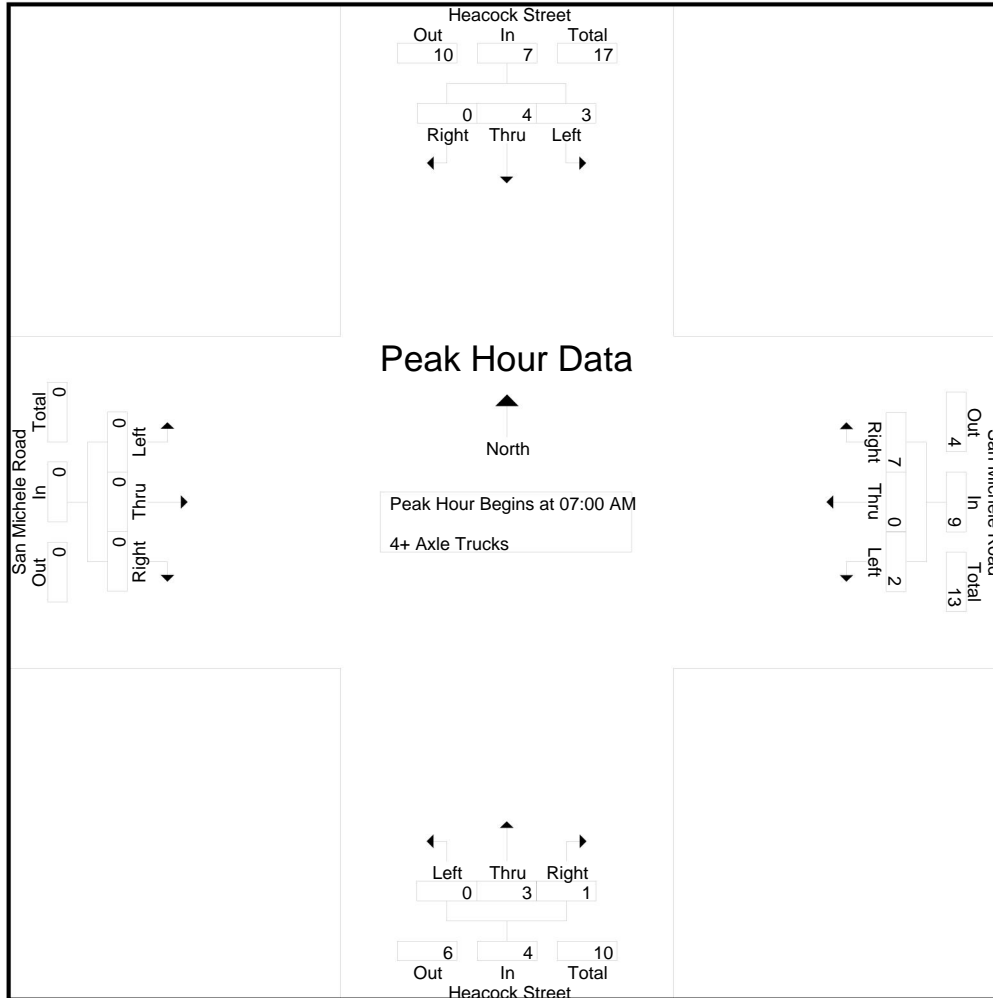
Start Time	Heacock Street Southbound					San Michele Road Westbound					Heacock Street Northbound					San Michele Road Eastbound					Exclu. Total	Inclu. Total	
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	1	2	0	0	3	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	0	5
07:15 AM	0	0	0	0	0	1	0	3	1	4	0	1	0	0	1	0	0	0	0	0	0	1	5
07:30 AM	1	2	0	0	3	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	4
07:45 AM	1	0	0	0	1	0	0	4	3	4	0	1	0	0	1	0	0	0	0	0	0	3	6
Total	3	4	0	0	7	2	0	7	4	9	0	3	1	0	4	0	0	0	0	0	0	4	20
08:00 AM	2	1	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
08:15 AM	2	0	0	0	2	0	0	2	1	2	0	0	0	0	0	0	0	0	0	0	0	1	4
08:30 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:45 AM	1	2	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	4
Total	5	4	0	0	9	0	0	2	1	2	0	1	0	0	1	0	0	0	0	0	0	1	12
Grand Total	8	8	0	0	16	2	0	9	5	11	0	4	1	0	5	0	0	0	0	0	0	5	32
Apprch %	50	50	0			18.2	0	81.8			0	80	20			0	0	0					
Total %	25	25	0		50	6.2	0	28.1		34.4	0	12.5	3.1		15.6	0	0	0			0	13.5	86.5

3.1-427

Start Time	Heacock Street Southbound				San Michele Road Westbound				Heacock Street Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	1	2	0	3	0	0	0	0	0	1	1	2	0	0	0	0	5
07:15 AM	0	0	0	0	1	0	3	4	0	1	0	1	0	0	0	0	5
07:30 AM	1	2	0	3	1	0	0	1	0	0	0	0	0	0	0	0	4
07:45 AM	1	0	0	1	0	0	4	4	0	1	0	1	0	0	0	0	6
Total Volume	3	4	0	7	2	0	7	9	0	3	1	4	0	0	0	0	20
% App. Total	42.9	57.1	0		22.2	0	77.8		0	75	25		0	0	0		
PHF	.750	.500	.000	.583	.500	.000	.438	.563	.000	.750	.250	.500	.000	.000	.000	.000	.833

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVHESMAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 2



3.1-428

Counts Unlimited, Inc.  
 PO Box 1178  
 Corona, CA 92787  
 (951) 268-6268

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVHESMAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Heacock Street Southbound				San Michele Road Westbound				Heacock Street Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	1	2	0	3	0	0	0	0	0	1	1	2	0	0	0	0	
+15 mins.	0	0	0	0	1	0	3	4	0	1	0	1	0	0	0	0	
+30 mins.	1	2	0	3	1	0	0	1	0	0	0	0	0	0	0	0	
+45 mins.	1	0	0	1	0	0	4	4	0	1	0	1	0	0	0	0	
Total Volume	3	4	0	7	2	0	7	9	0	3	1	4	0	0	0	0	
% App. Total	42.9	57.1	0		22.2	0	77.8		0	75	25		0	0	0		
PHF	.750	.500	.000	.583	.500	.000	.438	.563	.000	.750	.250	.500	.000	.000	.000	.000	

3.1-429

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVHESMPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

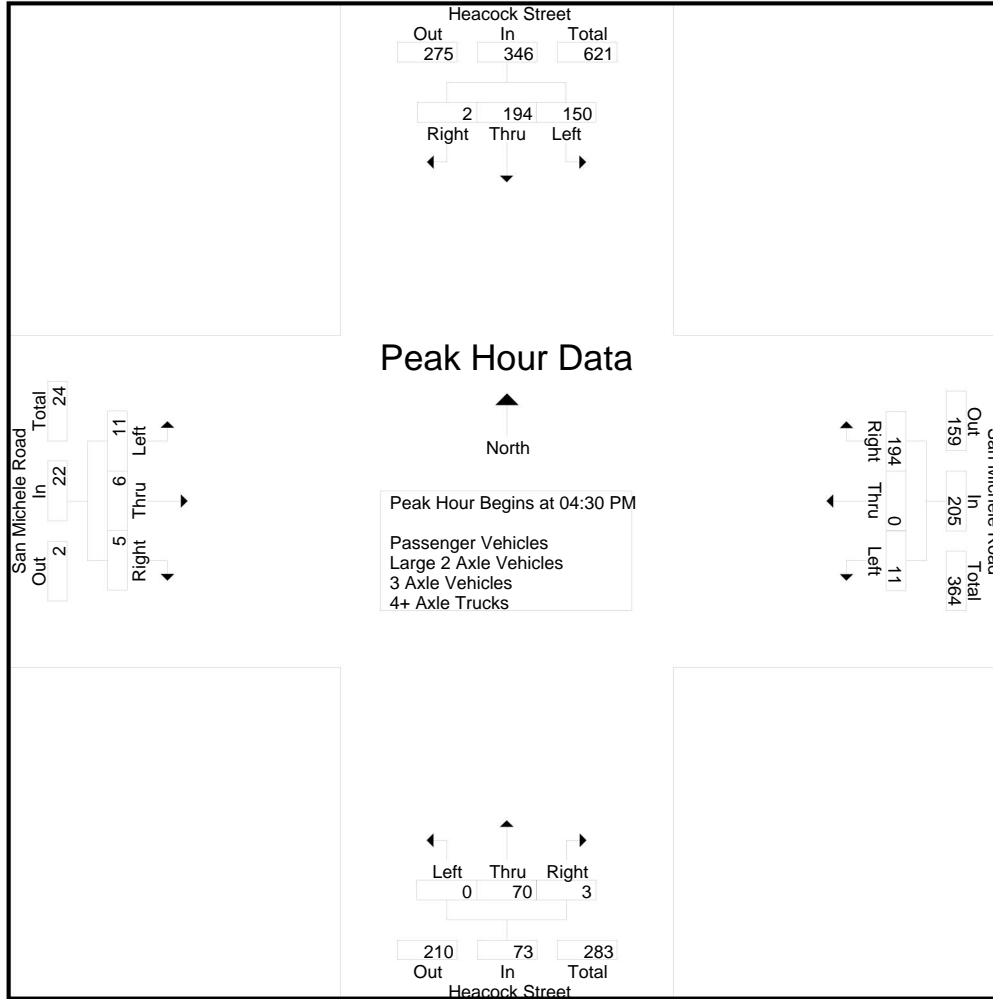
	Heacock Street Southbound					San Michele Road Westbound					Heacock Street Northbound					San Michele Road Eastbound					Exclu. Total	Inclu. Total
	Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR		
04:00 PM	19	24	0	0	43	1	0	24	0	25	0	3	2	0	5	1	2	1	0	4	0	77
04:15 PM	26	20	1	0	47	0	0	24	0	24	0	12	0	0	12	0	0	2	0	2	0	85
04:30 PM	50	45	1	0	96	7	0	81	0	88	0	33	1	2	34	9	2	2	0	13	2	231
04:45 PM	46	55	1	0	102	4	0	56	0	60	0	26	1	0	27	1	3	2	0	6	0	195
<b>Total</b>	<b>141</b>	<b>144</b>	<b>3</b>	<b>0</b>	<b>288</b>	<b>12</b>	<b>0</b>	<b>185</b>	<b>0</b>	<b>197</b>	<b>0</b>	<b>74</b>	<b>4</b>	<b>2</b>	<b>78</b>	<b>11</b>	<b>7</b>	<b>7</b>	<b>0</b>	<b>25</b>	<b>2</b>	<b>588</b>
05:00 PM	25	51	0	0	76	0	0	33	0	33	0	9	0	0	9	0	0	0	0	0	0	118
05:15 PM	29	43	0	0	72	0	0	24	0	24	0	2	1	1	3	1	1	1	0	3	1	102
05:30 PM	28	51	0	0	79	3	0	53	0	56	0	11	0	1	11	0	0	0	0	0	1	146
05:45 PM	28	39	0	0	67	0	0	31	2	31	0	8	0	0	8	0	0	1	0	1	2	107
<b>Total</b>	<b>110</b>	<b>184</b>	<b>0</b>	<b>0</b>	<b>294</b>	<b>3</b>	<b>0</b>	<b>141</b>	<b>2</b>	<b>144</b>	<b>0</b>	<b>30</b>	<b>1</b>	<b>2</b>	<b>31</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>4</b>	<b>4</b>	<b>473</b>
<b>Grand Total</b>	<b>251</b>	<b>328</b>	<b>3</b>	<b>0</b>	<b>582</b>	<b>15</b>	<b>0</b>	<b>326</b>	<b>2</b>	<b>341</b>	<b>0</b>	<b>104</b>	<b>5</b>	<b>4</b>	<b>109</b>	<b>12</b>	<b>8</b>	<b>9</b>	<b>0</b>	<b>29</b>	<b>6</b>	<b>1061</b>
Apprch %	43.1	56.4	0.5			4.4	0	95.6			0	95.4	4.6			41.4	27.6	31				
Total %	23.7	30.9	0.3		54.9	1.4	0	30.7		32.1	0	9.8	0.5		10.3	1.1	0.8	0.8		2.7	0.6	99.4
Passenger Vehicles	248	309	3		560	15	0	309		326	0	100	5		109	12	8	9		29	0	0
% Passenger Vehicles	98.8	94.2	100	0	96.2	100	0	94.8	100	95	0	96.2	100	100	96.5	100	100	100	0	100	0	0
Large 2 Axle Vehicles	1	5	0		6	0	0	6		6	0	3	0		3	0	0	0		0	0	0
% Large 2 Axle Vehicles	0.4	1.5	0	0	1	0	0	1.8	0	1.7	0	2.9	0	0	2.7	0	0	0	0	0	0	0
3 Axle Vehicles	0	6	0		6	0	0	7		7	0	1	0		1	0	0	0		0	0	0
% 3 Axle Vehicles	0	1.8	0	0	1	0	0	2.1	0	2	0	1	0	0	0.9	0	0	0	0	0	0	0
4+ Axle Trucks	2	8	0		10	0	0	4		4	0	0	0		0	0	0	0		0	0	0
% 4+ Axle Trucks	0.8	2.4	0	0	1.7	0	0	1.2	0	1.2	0	0	0	0	0	0	0	0	0	0	0	0

3.1-430

Start Time	Heacock Street Southbound				San Michele Road Westbound				Heacock Street Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	50	45	1	96	7	0	81	88	0	33	1	34	9	2	2	13	231
04:45 PM	46	55	1	102	4	0	56	60	0	26	1	27	1	3	2	6	195
05:00 PM	25	51	0	76	0	0	33	33	0	9	0	9	0	0	0	0	118
05:15 PM	29	43	0	72	0	0	24	24	0	2	1	3	1	1	1	3	102
Total Volume	150	194	2	346	11	0	194	205	0	70	3	73	11	6	5	22	646
% App. Total	43.4	56.1	0.6		5.4	0	94.6		0	95.9	4.1		50	27.3	22.7		
PHF	.750	.882	.500	.848	.393	.000	.599	.582	.000	.530	.750	.537	.306	.500	.625	.423	.699

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVHESMPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 2



3.1-431

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVHESMPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Heacock Street Southbound				San Michele Road Westbound				Heacock Street Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:15 PM				04:15 PM				04:00 PM				
+0 mins.	50	45	1	96	0	0	24	24	0	12	0	12	1	2	1	4	
+15 mins.	46	55	1	102	7	0	81	88	0	33	1	34	0	0	2	2	
+30 mins.	25	51	0	76	4	0	56	60	0	26	1	27	9	2	2	13	
+45 mins.	29	43	0	72	0	0	33	33	0	9	0	9	1	3	2	6	
Total Volume	150	194	2	346	11	0	194	205	0	80	2	82	11	7	7	25	
% App. Total	43.4	56.1	0.6		5.4	0	94.6		0	97.6	2.4		44	28	28		
PHF	.750	.882	.500	.848	.393	.000	.599	.582	.000	.606	.500	.603	.306	.583	.875	.481	



City of Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVHESMPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- Passenger Vehicles

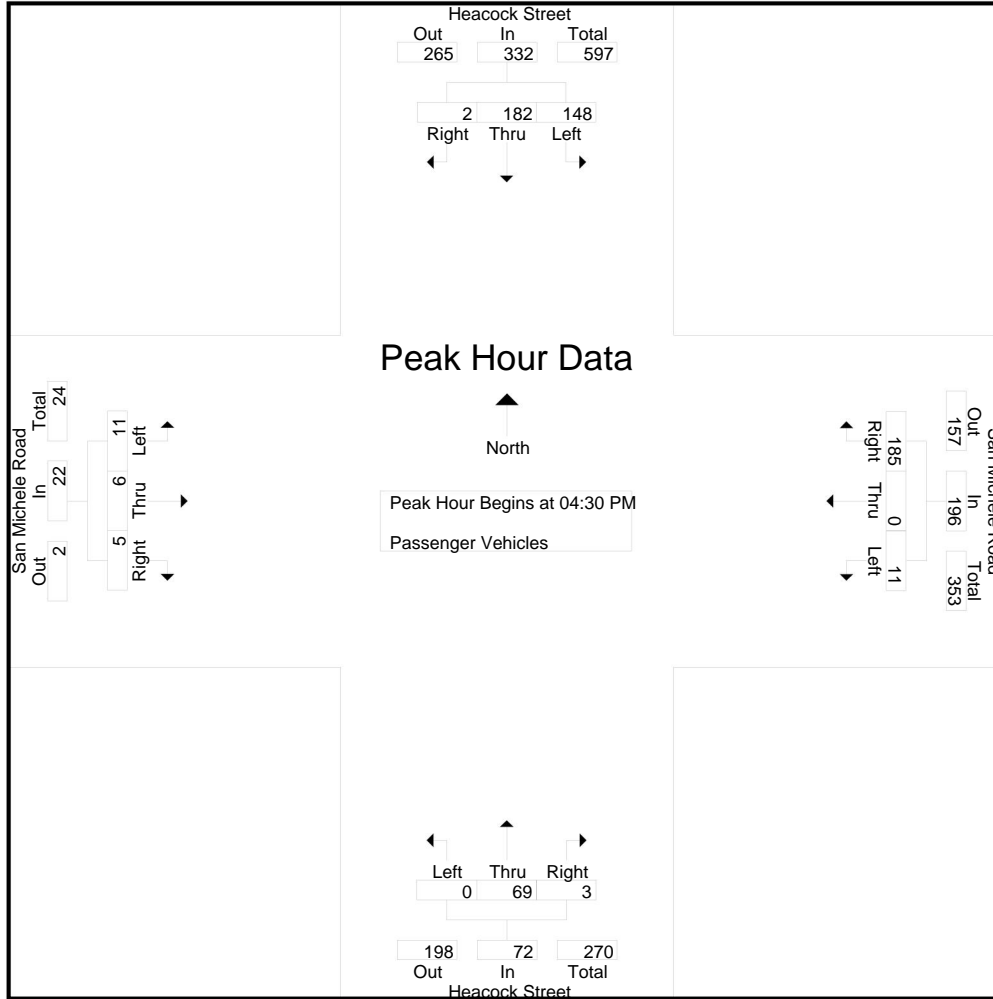
Start Time	Heacock Street Southbound					San Michele Road Westbound					Heacock Street Northbound					San Michele Road Eastbound					Exclu. Total	Inclu. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total		
04:00 PM	19	22	0	0	41	1	0	23	0	24	0	3	2	0	5	1	2	1	0	4	0	74
04:15 PM	25	20	1	0	46	0	0	23	0	23	0	12	0	0	12	0	0	2	0	2	0	83
04:30 PM	48	42	1	0	91	7	0	79	0	86	0	32	1	2	33	9	2	2	0	13	2	223
04:45 PM	46	53	1	0	100	4	0	53	0	57	0	26	1	0	27	1	3	2	0	6	0	190
Total	138	137	3	0	278	12	0	178	0	190	0	73	4	2	77	11	7	7	0	25	2	570
05:00 PM	25	49	0	0	74	0	0	31	0	31	0	9	0	0	9	0	0	0	0	0	0	114
05:15 PM	29	38	0	0	67	0	0	22	0	22	0	2	1	1	3	1	1	1	0	3	1	95
05:30 PM	28	48	0	0	76	3	0	51	0	54	0	10	0	1	10	0	0	0	0	0	1	140
05:45 PM	28	37	0	0	65	0	0	27	2	27	0	6	0	0	6	0	0	1	0	1	2	99
Total	110	172	0	0	282	3	0	131	2	134	0	27	1	2	28	1	1	2	0	4	4	448
Grand Total	248	309	3	0	560	15	0	309	2	324	0	100	5	4	105	12	8	9	0	29	6	1018
Apprch %	44.3	55.2	0.5			4.6	0	95.4			0	95.2	4.8			41.4	27.6	31				
Total %	24.4	30.4	0.3		55	1.5	0	30.4		31.8	0	9.8	0.5		10.3	1.2	0.8	0.9		2.8	0.6	99.4

3.1-433

Start Time	Heacock Street Southbound				San Michele Road Westbound				Heacock Street Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	48	42	1	91	7	0	79	86	0	32	1	33	9	2	2	13	223
04:45 PM	46	53	1	100	4	0	53	57	0	26	1	27	1	3	2	6	190
05:00 PM	25	49	0	74	0	0	31	31	0	9	0	9	0	0	0	0	114
05:15 PM	29	38	0	67	0	0	22	22	0	2	1	3	1	1	1	3	95
Total Volume	148	182	2	332	11	0	185	196	0	69	3	72	11	6	5	22	622
% App. Total	44.6	54.8	0.6		5.6	0	94.4		0	95.8	4.2		50	27.3	22.7		
PHF	.771	.858	.500	.830	.393	.000	.585	.570	.000	.539	.750	.545	.306	.500	.625	.423	.697

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVHESMPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 2



3.1-434

Counts Unlimited, Inc.  
 PO Box 1178  
 Corona, CA 92787  
 (951) 268-6268

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVHESMPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Heacock Street Southbound				San Michele Road Westbound				Heacock Street Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:30 PM				04:30 PM				04:30 PM				
+0 mins.	<b>48</b>	42	<b>1</b>	91	<b>7</b>	0	<b>79</b>	<b>86</b>	0	<b>32</b>	<b>1</b>	<b>33</b>	<b>9</b>	2	<b>2</b>	<b>13</b>	
+15 mins.	46	<b>53</b>	1	<b>100</b>	4	0	53	57	0	26	1	27	1	<b>3</b>	2	6	
+30 mins.	25	49	0	74	0	0	31	31	0	9	0	9	0	0	0	0	
+45 mins.	29	38	0	67	0	0	22	22	0	2	1	3	1	1	1	3	
Total Volume	148	182	2	332	11	0	185	196	0	69	3	72	11	6	5	22	
% App. Total	44.6	54.8	0.6		5.6	0	94.4		0	95.8	4.2		50	27.3	22.7		
PHF	.771	.858	.500	.830	.393	.000	.585	.570	.000	.539	.750	.545	.306	.500	.625	.423	

3.1-435

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVHESMPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

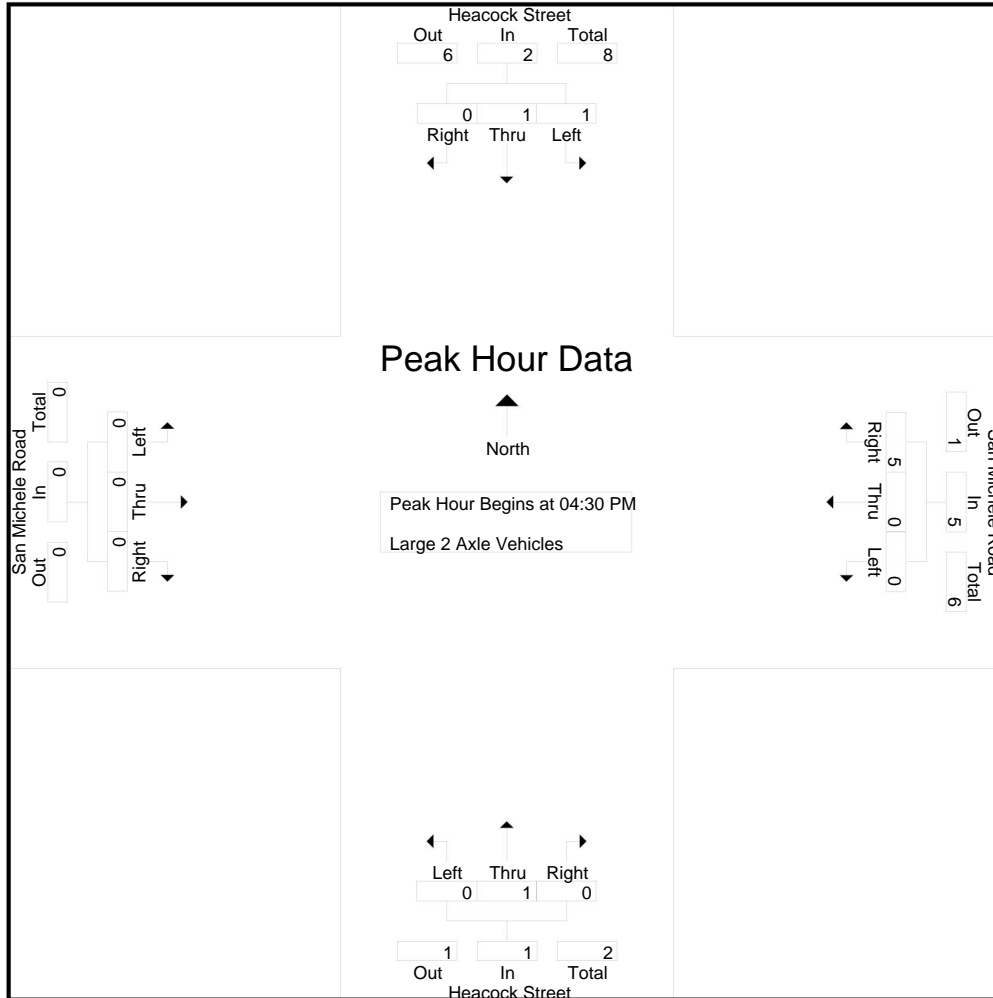
Start Time	Heacock Street Southbound					San Michele Road Westbound					Heacock Street Northbound					San Michele Road Eastbound					Exclu. Total	Inclu. Total					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total							
04:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:30 PM	1	1	0	0	2	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	4
04:45 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	1	2	0	0	3	0	0	3	0	3	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	7
05:00 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
05:30 PM	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	3
05:45 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	3	0	0	3	0	0	3	0	3	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	8
Grand Total	1	5	0	0	6	0	0	6	0	6	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	15
Apprch %	16.7	83.3	0			0	0	100			0	100	0			0	0	0									
Total %	6.7	33.3	0		40	0	0	40		40	0	20	0		20	0	0	0		0					0	0	100

3.1-436

Start Time	Heacock Street Southbound				San Michele Road Westbound				Heacock Street Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	1	1	0	2	0	0	1	1	0	1	0	1	0	0	0	0	4
04:45 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	2
Total Volume	1	1	0	2	0	0	5	5	0	1	0	1	0	0	0	0	8
% App. Total	50	50	0		0	0	100		0	100	0		0	0	0		
PHF	.250	.250	.000	.250	.000	.000	.625	.625	.000	.250	.000	.250	.000	.000	.000	.000	.500

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVHESMPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 2



3.1-437

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVHESMPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Heacock Street Southbound				San Michele Road Westbound				Heacock Street Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:30 PM				04:30 PM				04:30 PM				
+0 mins.	1	1	0	2	0	0	1	1	0	1	0	1	0	0	0	0	
+15 mins.	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	
+30 mins.	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	
+45 mins.	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	
Total Volume	1	1	0	2	0	0	5	5	0	1	0	1	0	0	0	0	
% App. Total	50	50	0		0	0	100		0	100	0		0	0	0		
PHF	.250	.250	.000	.250	.000	.000	.625	.625	.000	.250	.000	.250	.000	.000	.000	.000	

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVHESMPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- 3 Axle Vehicles

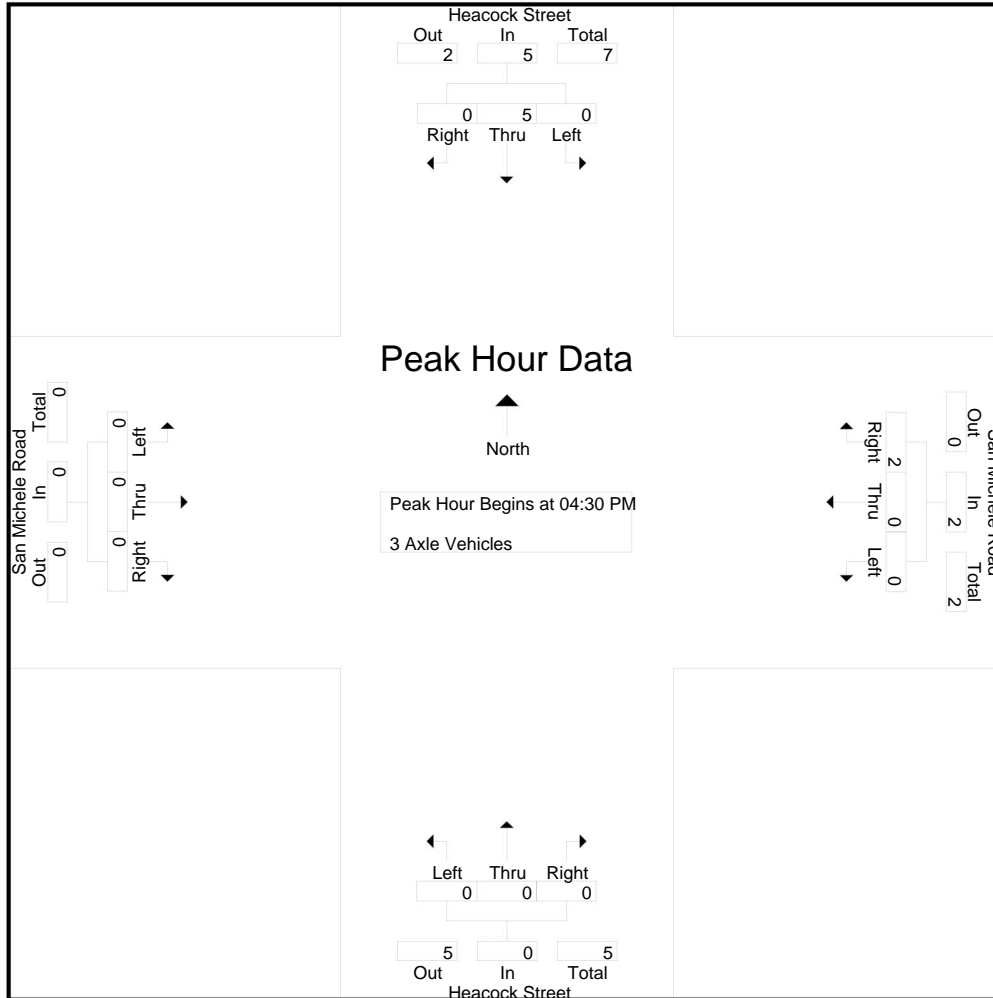
Start Time	Heacock Street Southbound					San Michele Road Westbound					Heacock Street Northbound					San Michele Road Eastbound					Exclu. Total	Inclu. Total			
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total					
04:00 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	2	0	0	2	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
05:00 PM	0	2	0	0	2	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
05:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:45 PM	0	1	0	0	1	0	0	3	0	3	0	1	0	0	1	0	0	0	0	0	0	0	0	0	5
Total	0	4	0	0	4	0	0	5	0	5	0	1	0	0	1	0	0	0	0	0	0	0	0	0	10
Grand Total	0	6	0	0	6	0	0	7	0	7	0	1	0	0	1	0	0	0	0	0	0	0	0	0	14
Apprch %	0	100	0			0	0	100			0	100	0			0	0	0			0	0	0	0	
Total %	0	42.9	0		42.9	0	0	50		50	0	7.1	0		7.1	0	0	0		0	0	0	0	0	100

3.1-439

Start Time	Heacock Street Southbound				San Michele Road Westbound				Heacock Street Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
04:45 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
05:00 PM	0	2	0	2	0	0	1	1	0	0	0	0	0	0	0	0	3
05:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	5	0	5	0	0	2	2	0	0	0	0	0	0	0	0	7
% App. Total	0	100	0		0	0	100		0	0	0		0	0	0		
PHF	.000	.625	.000	.625	.000	.000	.500	.500	.000	.000	.000	.000	.000	.000	.000	.000	.583

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVHESMPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 2



3.1-440



City of Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road  
 Weather: Clear

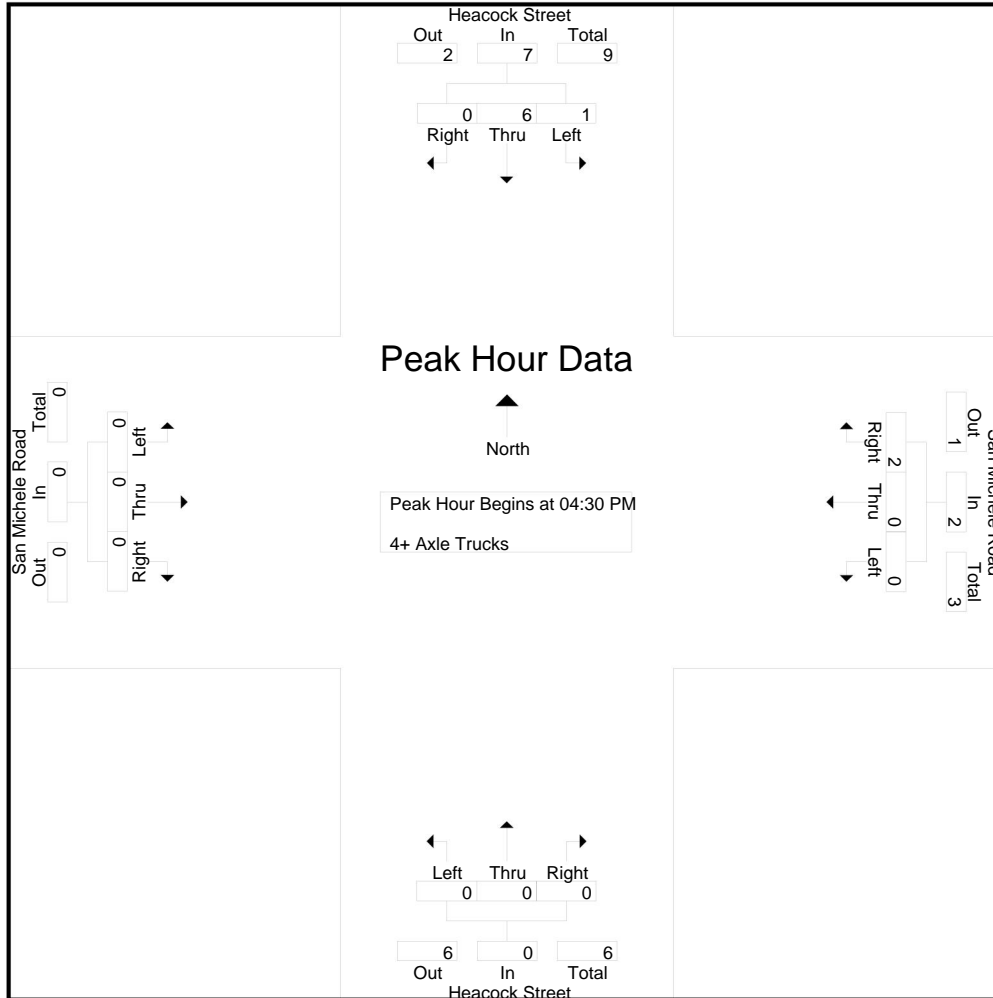
File Name : MRVHESMPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Heacock Street Southbound				San Michele Road Westbound				Heacock Street Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:30 PM				04:30 PM				04:30 PM				
+0 mins.	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	
+15 mins.	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	
+30 mins.	0	2	0	2	0	0	1	1	0	0	0	0	0	0	0	0	
+45 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	
Total Volume	0	5	0	5	0	0	2	2	0	0	0	0	0	0	0	0	
% App. Total	0	100	0		0	0	100		0	0	0		0	0	0		
PHF	.000	.625	.000	.625	.000	.000	.500	.500	.000	.000	.000	.000	.000	.000	.000	.000	



City of Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVHESMPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 2



3.1-443

Counts Unlimited, Inc.  
 PO Box 1178  
 Corona, CA 92787  
 (951) 268-6268

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVHESMPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Heacock Street Southbound				San Michele Road Westbound				Heacock Street Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:30 PM				04:30 PM				04:30 PM				
+0 mins.	1	2	0	3	0	0	0	0	0	0	0	0	0	0	0	0	
+15 mins.	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
+45 mins.	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	
Total Volume	1	6	0	7	0	0	2	2	0	0	0	0	0	0	0	0	
% App. Total	14.3	85.7	0		0	0	100		0	0	0		0	0	0		
PHF	.250	.375	.000	.438	.000	.000	.250	.250	.000	.000	.000	.000	.000	.000	.000	.000	

3.1-444

Location: Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road



Date: 4/28/2015  
 Weather: Clear

PEDESTRIANS

	North Leg Heacock Street	East Leg San Michele Road	South Leg Heacock Street	West Leg San Michele Road	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg Heacock Street	East Leg San Michele Road	South Leg Heacock Street	West Leg San Michele Road	TOTAL
4:00 PM	0	1	0	0	1
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	1	0	1
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	1	0	1
TOTAL VOLUMES:	0	1	2	0	3

3-1-445

Location: Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road



Date: 4/28/2015  
 Weather: Clear

**BICYCLES**

	North Leg Heacock Street	East Leg San Michele Road	South Leg Heacock Street	West Leg San Michele Road	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
<b>TOTAL VOLUMES:</b>	0	0	0	0	0

	North Leg Heacock Street	East Leg San Michele Road	South Leg Heacock Street	West Leg San Michele Road	TOTAL
4:00 PM	0	1	0	0	1
4:15 PM	0	0	0	0	0
4:30 PM	0	1	0	0	1
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	1	0	0	1
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
<b>TOTAL VOLUMES:</b>	0	3	0	0	3

3-1-446

City of Moreno Valley  
 N/S: Heacok Street  
 E/W: Harley Knox Boulevard  
 Weather: Sunny

File Name : MRV/HEHKAM  
 Site Code : 00000097  
 Start Date : 5/16/2013  
 Page No : 1

Groups Printed- Total Volume

Start Time	Heacok Street Southbound				Harley Knox Boulevard Westbound				Webster Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	1	1	2	0	122	0	122	0	2	0	2	0	99	0	99	225
07:15 AM	0	0	0	0	0	99	0	99	0	0	0	0	0	93	0	93	192
07:30 AM	0	0	0	0	0	67	0	67	1	0	1	2	0	91	1	92	161
07:45 AM	0	0	0	0	0	69	0	69	0	0	0	0	0	75	0	75	144
Total	0	1	1	2	0	357	0	357	1	2	1	4	0	358	1	359	722
08:00 AM	0	0	0	0	0	59	0	59	2	0	0	2	0	59	0	59	120
08:15 AM	0	0	0	0	0	56	0	56	0	0	1	1	0	74	1	75	132
08:30 AM	0	0	0	0	0	54	0	54	1	0	0	1	0	69	0	69	124
08:45 AM	0	0	0	0	0	32	0	32	0	0	0	0	0	50	0	50	82
Total	0	0	0	0	0	201	0	201	3	0	1	4	0	252	1	253	458
Grand Total	0	1	1	2	0	558	0	558	4	2	2	8	0	610	2	612	1180
Apprch %	0	50	50		0	100	0		50	25	25		0	99.7	0.3		
Total %	0	0.1	0.1	0.2	0	47.3	0	47.3	0.3	0.2	0.2	0.7	0	51.7	0.2	51.9	

Start Time	Heacok Street Southbound				Harley Knox Boulevard Westbound				Webster Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	1	1	2	0	122	0	122	0	2	0	2	0	99	0	99	225
07:15 AM	0	0	0	0	0	99	0	99	0	0	0	0	0	93	0	93	192
07:30 AM	0	0	0	0	0	67	0	67	1	0	1	2	0	91	1	92	161
07:45 AM	0	0	0	0	0	69	0	69	0	0	0	0	0	75	0	75	144
Total Volume	0	1	1	2	0	357	0	357	1	2	1	4	0	358	1	359	722
% App. Total	0	50	50		0	100	0		25	50	25		0	99.7	0.3		
PHF	.000	.250	.250	.250	.000	.732	.000	.732	.250	.250	.250	.500	.000	.904	.250	.907	.802

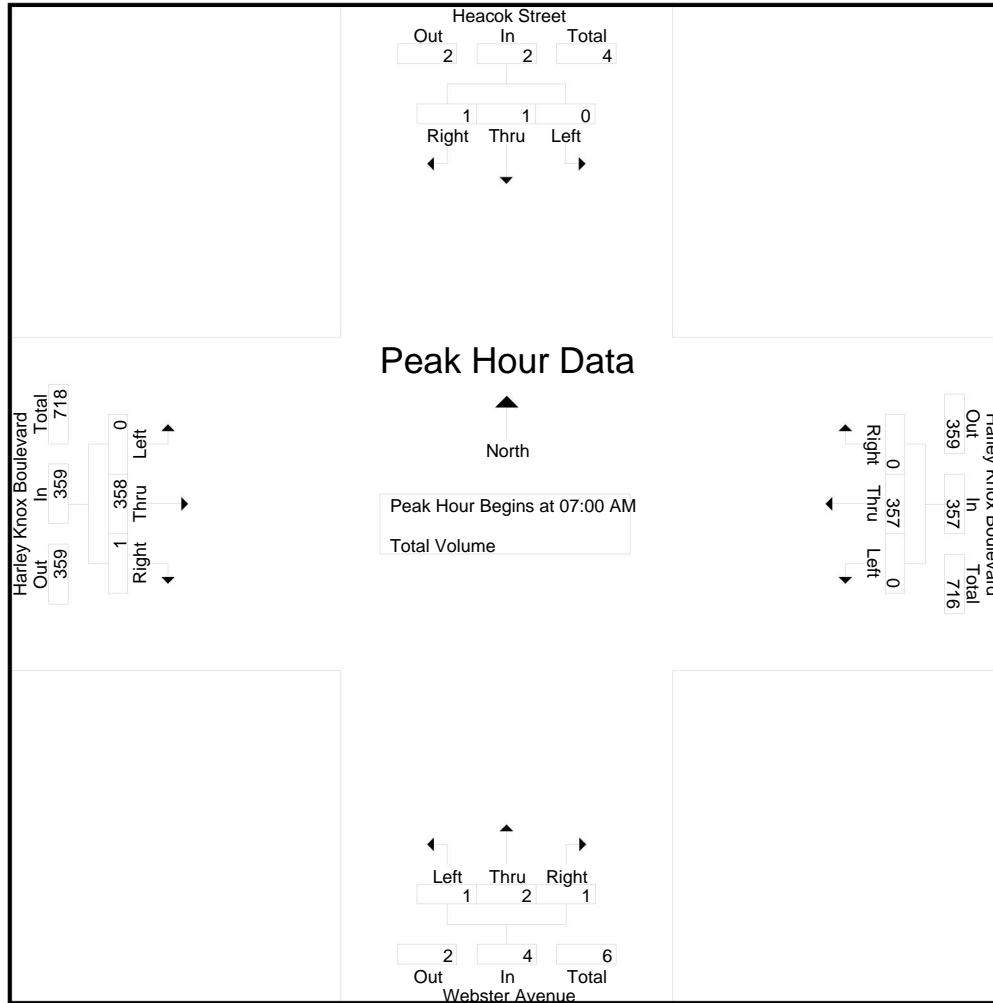
3.1-447

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:00 AM

City of Moreno Valley  
 N/S: Heacok Street  
 E/W: Harley Knox Boulevard  
 Weather: Sunny

File Name : MRVHEHKAM  
 Site Code : 00000097  
 Start Date : 5/16/2013  
 Page No : 2



3.1-448

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:30 AM				07:00 AM			
+0 mins.	0	1	1	2	0	122	0	122	1	0	1	2	0	99	0	99
+15 mins.	0	0	0	0	0	99	0	99	0	0	0	0	0	93	0	93
+30 mins.	0	0	0	0	0	67	0	67	2	0	0	2	0	91	1	92
+45 mins.	0	0	0	0	0	69	0	69	0	0	1	1	0	75	0	75
Total Volume	0	1	1	2	0	357	0	357	3	0	2	5	0	358	1	359
% App. Total	0	50	50		0	100	0		60	0	40		0	99.7	0.3	
PHF	.000	.250	.250	.250	.000	.732	.000	.732	.375	.000	.500	.625	.000	.904	.250	.907



City of Moreno Valley  
 N/S: Heacok Street  
 E/W: Harley Knox Boulevard  
 Weather: Sunny

File Name : MRV/HEHKPM  
 Site Code : 00000097  
 Start Date : 5/16/2013  
 Page No : 1

Groups Printed- Total Volume

Start Time	Heacok Street Southbound				Harley Knox Boulevard Westbound				Webster Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	0	0	0	2	94	0	96	1	0	0	1	0	99	0	99	196
04:15 PM	0	0	0	0	0	90	0	90	0	0	1	1	0	122	0	122	213
04:30 PM	0	0	0	0	0	80	0	80	0	0	0	0	0	119	0	119	199
04:45 PM	0	1	0	1	0	74	0	74	1	0	0	1	1	94	0	95	171
Total	0	1	0	1	2	338	0	340	2	0	1	3	1	434	0	435	779
05:00 PM	0	0	0	0	0	78	0	78	0	0	0	0	0	114	0	114	192
05:15 PM	0	0	0	0	0	54	0	54	0	1	0	1	0	107	1	108	163
05:30 PM	0	0	1	1	1	54	0	55	0	0	0	0	0	100	0	100	156
05:45 PM	0	0	0	0	0	63	0	63	0	0	1	1	0	111	0	111	175
Total	0	0	1	1	1	249	0	250	0	1	1	2	0	432	1	433	686
Grand Total	0	1	1	2	3	587	0	590	2	1	2	5	1	866	1	868	1465
Apprch %	0	50	50		0.5	99.5	0		40	20	40		0.1	99.8	0.1		
Total %	0	0.1	0.1	0.1	0.2	40.1	0	40.3	0.1	0.1	0.1	0.3	0.1	59.1	0.1	59.2	

Start Time	Heacok Street Southbound				Harley Knox Boulevard Westbound				Webster Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	0	0	0	2	<b>94</b>	0	<b>96</b>	1	0	0	1	0	99	0	99	196
04:15 PM	0	0	0	0	0	90	0	90	0	0	1	1	0	<b>122</b>	0	<b>122</b>	<b>213</b>
04:30 PM	0	0	0	0	0	80	0	80	0	0	0	0	0	119	0	119	199
04:45 PM	0	<b>1</b>	0	<b>1</b>	0	74	0	74	1	0	0	1	<b>1</b>	94	0	95	171
Total Volume	0	1	0	1	2	338	0	340	2	0	1	3	1	434	0	435	779
% App. Total	0	100	0		0.6	99.4	0		66.7	0	33.3		0.2	99.8	0		
PHF	.000	.250	.000	.250	.250	.899	.000	.885	.500	.000	.250	.750	.250	.889	.000	.891	.914

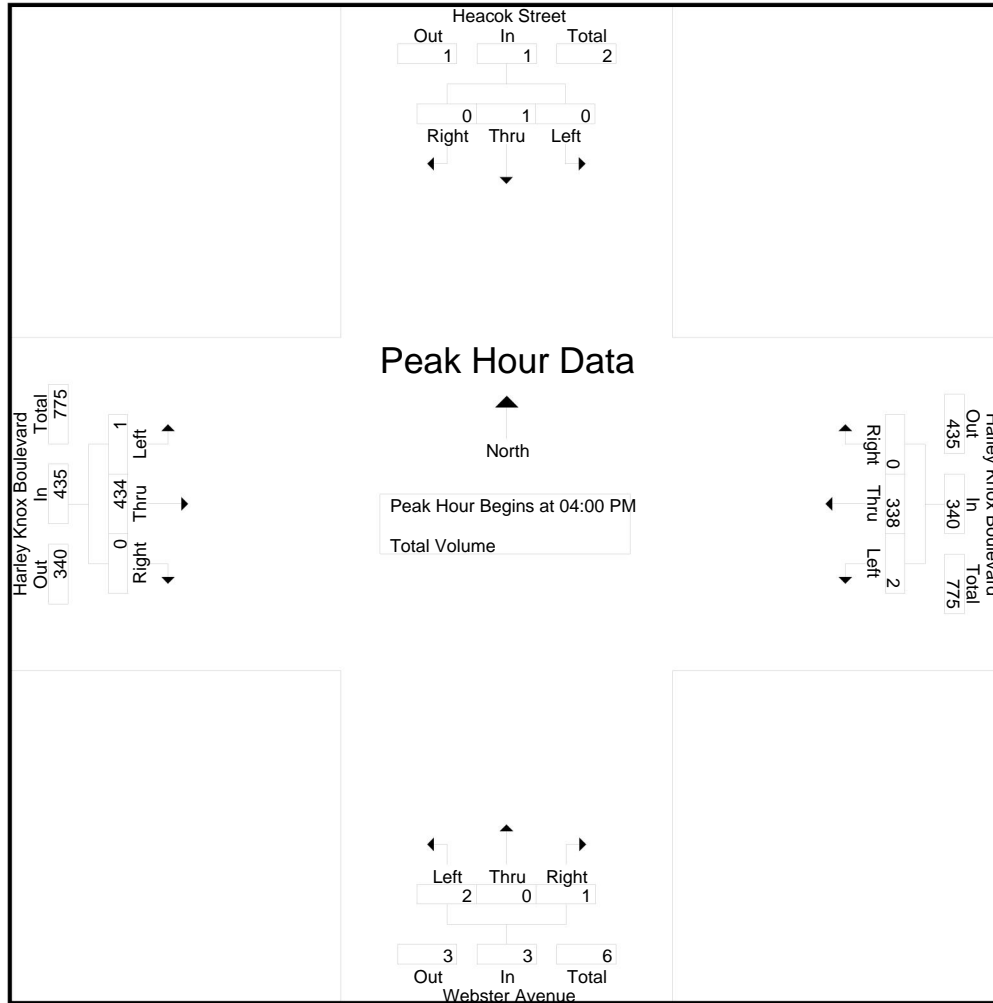
3.1-449

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:00 PM

City of Moreno Valley  
 N/S: Heacok Street  
 E/W: Harley Knox Boulevard  
 Weather: Sunny

File Name : MRVHEHKPM  
 Site Code : 00000097  
 Start Date : 5/16/2013  
 Page No : 2



3.1-450

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:45 PM				04:00 PM				04:00 PM				04:15 PM			
+0 mins.	0	1	0	1	2	94	0	96	1	0	0	1	0	122	0	122
+15 mins.	0	0	0	0	0	90	0	90	0	0	1	1	0	119	0	119
+30 mins.	0	0	0	0	0	80	0	80	0	0	0	0	1	94	0	95
+45 mins.	0	0	1	1	0	74	0	74	1	0	0	1	0	114	0	114
Total Volume	0	1	1	2	2	338	0	340	2	0	1	3	1	449	0	450
% App. Total	0	50	50		0.6	99.4	0		66.7	0	33.3		0.2	99.8	0	
PHF	.000	.250	.250	.500	.250	.899	.000	.885	.500	.000	.250	.750	.250	.920	.000	.922

City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVINSMAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Indian Avenue Southbound					San Michele Road Westbound					Indian Avenue Northbound					San Michele Road Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR			
07:00 AM	1	0	0	0	1	12	40	0	0	52	88	1	17	3	106	0	10	11	0	21	3	180	183
07:15 AM	1	0	0	0	1	10	84	3	1	97	90	2	16	6	108	0	9	10	5	19	12	225	237
07:30 AM	1	0	1	1	2	12	18	2	1	32	48	2	24	5	74	1	17	6	3	24	10	132	142
07:45 AM	0	2	1	1	3	12	19	0	0	31	36	2	26	9	64	2	9	8	1	19	11	117	128
<b>Total</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>7</b>	<b>46</b>	<b>161</b>	<b>5</b>	<b>2</b>	<b>212</b>	<b>262</b>	<b>7</b>	<b>83</b>	<b>23</b>	<b>352</b>	<b>3</b>	<b>45</b>	<b>35</b>	<b>9</b>	<b>83</b>	<b>36</b>	<b>654</b>	<b>690</b>
08:00 AM	2	1	2	2	5	6	10	0	0	16	26	7	14	2	47	0	8	9	3	17	7	85	92
08:15 AM	5	2	1	1	8	9	9	3	0	21	15	2	15	5	32	0	6	4	2	10	8	71	79
08:30 AM	2	0	1	0	3	5	4	3	0	12	24	1	9	1	34	0	5	13	0	18	1	67	68
08:45 AM	1	0	0	0	1	4	7	2	0	13	9	1	15	1	25	0	4	7	2	11	3	50	53
<b>Total</b>	<b>10</b>	<b>3</b>	<b>4</b>	<b>3</b>	<b>17</b>	<b>24</b>	<b>30</b>	<b>8</b>	<b>0</b>	<b>62</b>	<b>74</b>	<b>11</b>	<b>53</b>	<b>9</b>	<b>138</b>	<b>0</b>	<b>23</b>	<b>33</b>	<b>7</b>	<b>56</b>	<b>19</b>	<b>273</b>	<b>292</b>
<b>Grand Total</b>	<b>13</b>	<b>5</b>	<b>6</b>	<b>5</b>	<b>24</b>	<b>70</b>	<b>191</b>	<b>13</b>	<b>2</b>	<b>274</b>	<b>336</b>	<b>18</b>	<b>136</b>	<b>32</b>	<b>490</b>	<b>3</b>	<b>68</b>	<b>68</b>	<b>16</b>	<b>139</b>	<b>55</b>	<b>927</b>	<b>982</b>
Apprch %	54.2	20.8	25			25.5	69.7	4.7			68.6	3.7	27.8			2.2	48.9	48.9					
Total %	1.4	0.5	0.6		2.6	7.6	20.6	1.4		29.6	36.2	1.9	14.7		52.9	0.3	7.3	7.3		15	5.6	94.4	
Passenger Vehicles	10	1	4		19	61	188	12		263	308	14	125		479	1	56	56		127	0	0	888
% Passenger Vehicles	76.9	20	66.7	80	65.5	87.1	98.4	92.3	100	95.3	91.7	77.8	91.9	100	91.8	33.3	82.4	82.4	87.5	81.9	0	0	90.4
Large 2 Axle Vehicles	0	1	1		2	4	0	0		4	19	1	7		27	1	0	10		13	0	0	46
% Large 2 Axle Vehicles	0	20	16.7	0	6.9	5.7	0	0	0	1.4	5.7	5.6	5.1	0	5.2	33.3	0	14.7	12.5	8.4	0	0	4.7
3 Axle Vehicles	0	2	0		2	0	0	0		0	1	1	0		2	0	3	0		3	0	0	7
% 3 Axle Vehicles	0	40	0	0	6.9	0	0	0	0	0	0.3	5.6	0	0	0.4	0	4.4	0	0	1.9	0	0	0.7
4+ Axle Trucks	3	1	1		6	5	3	1		9	8	2	4		14	1	9	2		12	0	0	41
% 4+ Axle Trucks	23.1	20	16.7	20	20.7	7.1	1.6	7.7	0	3.3	2.4	11.1	2.9	0	2.7	33.3	13.2	2.9	0	7.7	0	0	4.2

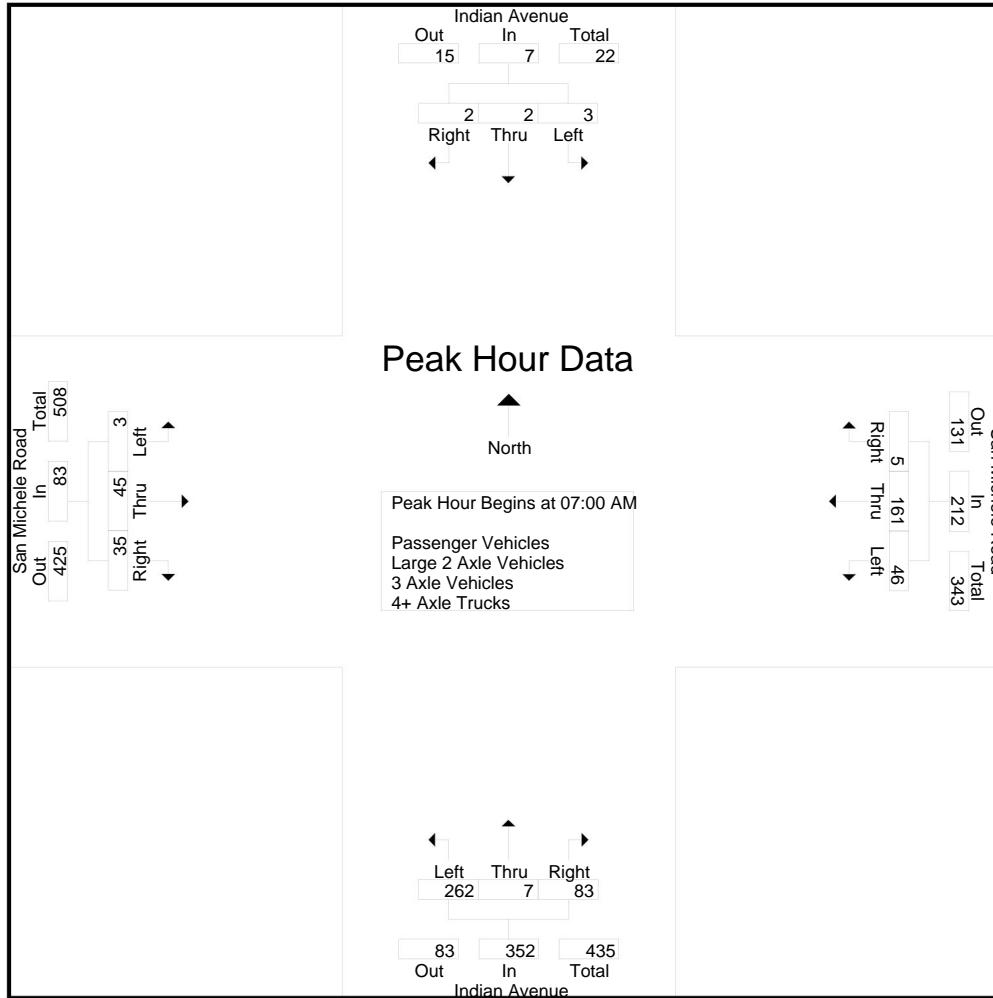
3.1-451

	Indian Avenue Southbound				San Michele Road Westbound				Indian Avenue Northbound				San Michele Road Eastbound				Int. Total	
	Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right		App. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 07:00 AM																		
07:00 AM	1	0	0		1	12	40	0	52	88	1	17	106	0	10	11	21	180
07:15 AM	1	0	0		1	10	84	3	97	90	2	16	108	0	9	10	19	225
07:30 AM	1	0	1		2	12	18	2	32	48	2	24	74	1	17	6	24	132
07:45 AM	0	2	1		3	12	19	0	31	36	2	26	64	2	9	8	19	117
<b>Total Volume</b>	<b>3</b>	<b>2</b>	<b>2</b>		<b>7</b>	<b>46</b>	<b>161</b>	<b>5</b>	<b>212</b>	<b>262</b>	<b>7</b>	<b>83</b>	<b>352</b>	<b>3</b>	<b>45</b>	<b>35</b>	<b>83</b>	<b>654</b>
% App. Total	42.9	28.6	28.6			21.7	75.9	2.4		74.4	2	23.6		3.6	54.2	42.2		
PHF	.750	.250	.500		.583	.958	.479	.417	.546	.728	.875	.798	.815	.375	.662	.795	.865	.727

Counts Unlimited, Inc.  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVINSMAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 2



3.1-452

Counts Unlimited, Inc.  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVINSMAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Indian Avenue Southbound				San Michele Road Westbound				Indian Avenue Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:45 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	2	1	3	12	40	0	52	88	1	17	106	0	10	11	21	
+15 mins.	2	1	2	5	10	84	3	97	90	2	16	108	0	9	10	19	
+30 mins.	5	2	1	8	12	18	2	32	48	2	24	74	1	17	6	24	
+45 mins.	2	0	1	3	12	19	0	31	36	2	26	64	2	9	8	19	
Total Volume	9	5	5	19	46	161	5	212	262	7	83	352	3	45	35	83	
% App. Total	47.4	26.3	26.3		21.7	75.9	2.4		74.4	2	23.6		3.6	54.2	42.2		
PHF	.450	.625	.625	.594	.958	.479	.417	.546	.728	.875	.798	.815	.375	.662	.795	.865	

3.1-453

City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: San Michele Road  
 Weather: Clear

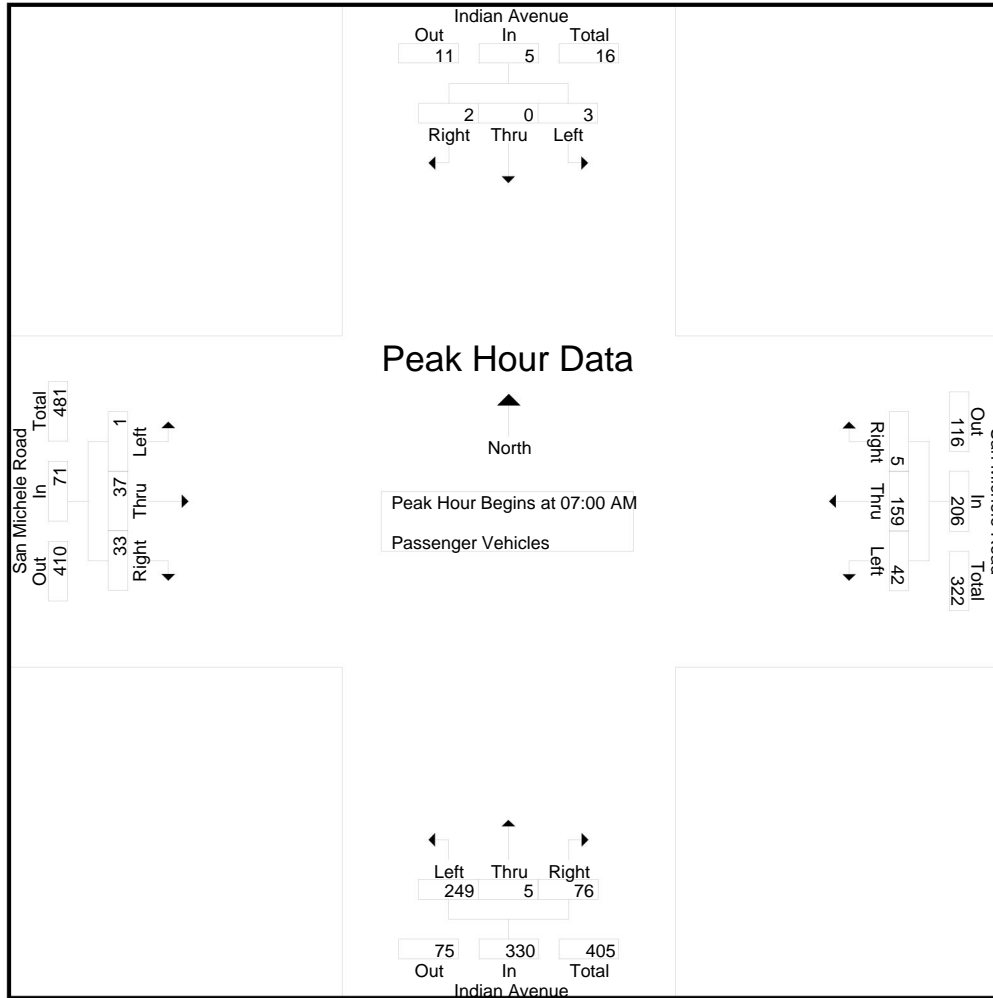
File Name : MRVINSMAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Indian Avenue Southbound					San Michele Road Westbound					Indian Avenue Northbound					San Michele Road Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	1	0	0	0	1	12	40	0	0	52	87	1	14	3	102	0	7	10	0	17	3	172	175
07:15 AM	1	0	0	0	1	9	83	3	1	95	85	0	16	6	101	0	8	10	5	18	12	215	227
07:30 AM	1	0	1	1	2	10	18	2	1	30	44	2	22	5	68	0	15	5	2	20	9	120	129
07:45 AM	0	0	1	1	1	11	18	0	0	29	33	2	24	9	59	1	7	8	1	16	11	105	116
Total	3	0	2	2	5	42	159	5	2	206	249	5	76	23	330	1	37	33	8	71	35	612	647
08:00 AM	2	1	2	2	5	5	10	0	0	15	21	5	12	2	38	0	7	4	2	11	6	69	75
08:15 AM	4	0	0	0	4	7	8	3	0	18	15	2	14	5	31	0	3	3	2	6	7	59	66
08:30 AM	1	0	0	0	1	5	4	3	0	12	16	1	8	1	25	0	5	10	0	15	1	53	54
08:45 AM	0	0	0	0	0	2	7	1	0	10	7	1	15	1	23	0	4	6	2	10	3	43	46
Total	7	1	2	2	10	19	29	7	0	55	59	9	49	9	117	0	19	23	6	42	17	224	241
Grand Total	10	1	4	4	15	61	188	12	2	261	308	14	125	32	447	1	56	56	14	113	52	836	888
Apprch %	66.7	6.7	26.7			23.4	72	4.6			68.9	3.1	28			0.9	49.6	49.6					
Total %	1.2	0.1	0.5		1.8	7.3	22.5	1.4		31.2	36.8	1.7	15		53.5	0.1	6.7	6.7		13.5	5.9	94.1	

3.1-454

Start Time	Indian Avenue Southbound				San Michele Road Westbound				Indian Avenue Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	1	0	0	1	12	40	0	52	87	1	14	102	0	7	10	17	172
07:15 AM	1	0	0	1	9	83	3	95	85	0	16	101	0	8	10	18	215
07:30 AM	1	0	1	2	10	18	2	30	44	2	22	68	0	15	5	20	120
07:45 AM	0	0	1	1	11	18	0	29	33	2	24	59	1	7	8	16	105
Total Volume	3	0	2	5	42	159	5	206	249	5	76	330	1	37	33	71	612
% App. Total	60	0	40		20.4	77.2	2.4		75.5	1.5	23		1.4	52.1	46.5		
PHF	.750	.000	.500	.625	.875	.479	.417	.542	.716	.625	.792	.809	.250	.617	.825	.888	.712



3.1-455

Counts Unlimited, Inc.  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVINSMAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Indian Avenue Southbound				San Michele Road Westbound				Indian Avenue Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	1	0	0	1	12	40	0	52	87	1	14	102	0	7	10	17	
+15 mins.	1	0	0	1	9	83	3	95	85	0	16	101	0	8	10	18	
+30 mins.	1	0	1	2	10	18	2	30	44	2	22	68	0	15	5	20	
+45 mins.	0	0	1	1	11	18	0	29	33	2	24	59	1	7	8	16	
Total Volume	3	0	2	5	42	159	5	206	249	5	76	330	1	37	33	71	
% App. Total	60	0	40		20.4	77.2	2.4		75.5	1.5	23		1.4	52.1	46.5		
PHF	.750	.000	.500	.625	.875	.479	.417	.542	.716	.625	.792	.809	.250	.617	.825	.888	

3.1-456



City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: San Michele Road  
 Weather: Clear

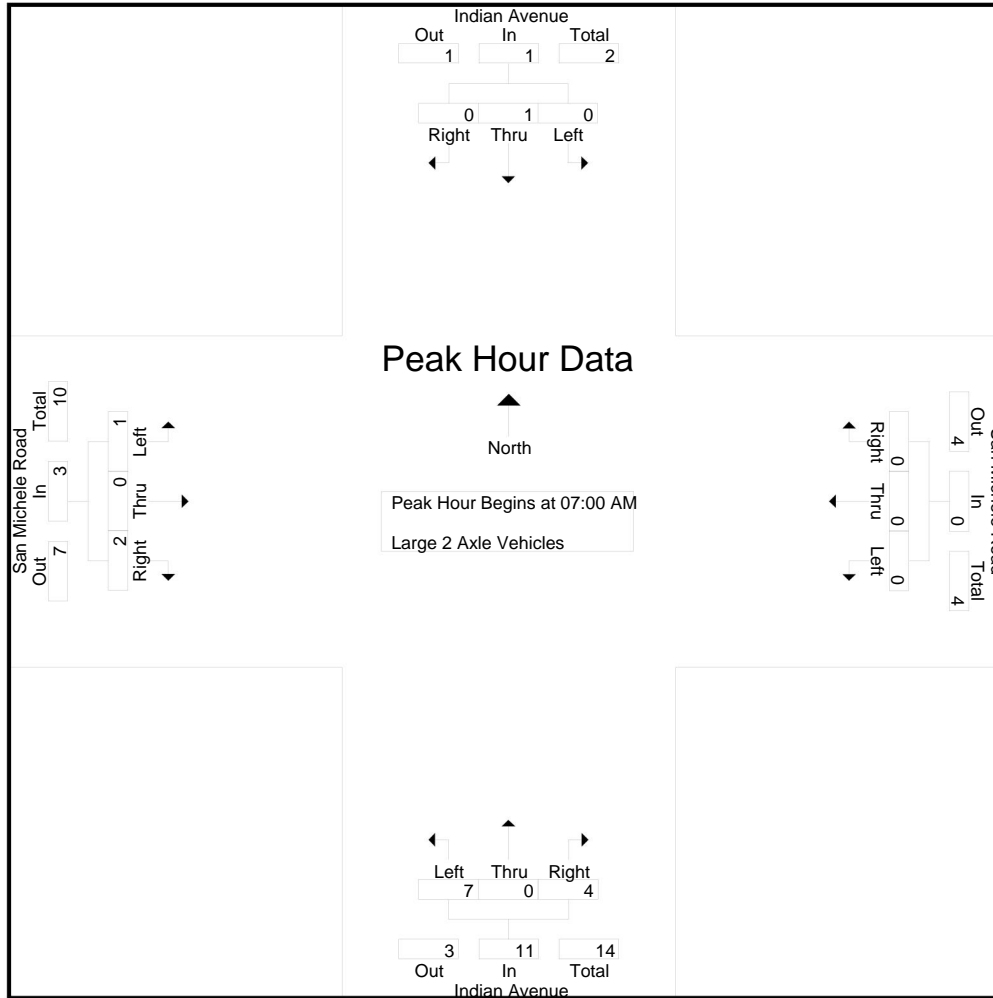
File Name : MRVINSMAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

Start Time	Indian Avenue Southbound					San Michele Road Westbound					Indian Avenue Northbound					San Michele Road Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	0	1	0	2	2
07:15 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	2	2
07:30 AM	0	0	0	0	0	0	0	0	0	0	3	0	2	0	5	1	0	1	1	2	1	7	8
07:45 AM	0	1	0	0	1	0	0	0	0	0	2	0	1	0	3	0	0	0	0	0	0	4	4
Total	0	1	0	0	1	0	0	0	0	0	7	0	4	0	11	1	0	2	1	3	1	15	16
08:00 AM	0	0	0	0	0	1	0	0	0	1	4	1	1	0	6	0	0	3	1	3	1	10	11
08:15 AM	0	0	0	0	0	1	0	0	0	1	0	0	1	0	1	0	0	1	0	1	0	3	3
08:30 AM	0	0	1	0	1	0	0	0	0	0	7	0	1	0	8	0	0	3	0	3	0	12	12
08:45 AM	0	0	0	0	0	2	0	0	0	2	1	0	0	0	1	0	0	1	0	1	0	4	4
Total	0	0	1	0	1	4	0	0	0	4	12	1	3	0	16	0	0	8	1	8	1	29	30
Grand Total	0	1	1	0	2	4	0	0	0	4	19	1	7	0	27	1	0	10	2	11	2	44	46
Apprch %	0	50	50			100	0	0			70.4	3.7	25.9			9.1	0	90.9					
Total %	0	2.3	2.3		4.5	9.1	0	0		9.1	43.2	2.3	15.9		61.4	2.3	0	22.7		25	4.3	95.7	

3.1-457

Start Time	Indian Avenue Southbound				San Michele Road Westbound				Indian Avenue Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	1	2
07:15 AM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	2
07:30 AM	0	0	0	0	0	0	0	0	3	0	2	5	1	0	1	2	7
07:45 AM	0	1	0	1	0	0	0	0	2	0	1	3	0	0	0	0	4
Total Volume	0	1	0	1	0	0	0	0	7	0	4	11	1	0	2	3	15
% App. Total	0	100	0		0	0	0		63.6	0	36.4		33.3	0	66.7		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.583	.000	.500	.550	.250	.000	.500	.375	.536



City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVINSMAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Indian Avenue Southbound				San Michele Road Westbound				Indian Avenue Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	1	
+15 mins.	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	
+30 mins.	0	0	0	0	0	0	0	0	3	0	2	5	1	0	1	2	
+45 mins.	0	1	0	1	0	0	0	0	2	0	1	3	0	0	0	0	
Total Volume	0	1	0	1	0	0	0	0	7	0	4	11	1	0	2	3	
% App. Total	0	100	0		0	0	0		63.6	0	36.4		33.3	0	66.7		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.583	.000	.500	.550	.250	.000	.500	.375	

City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: San Michele Road  
 Weather: Clear

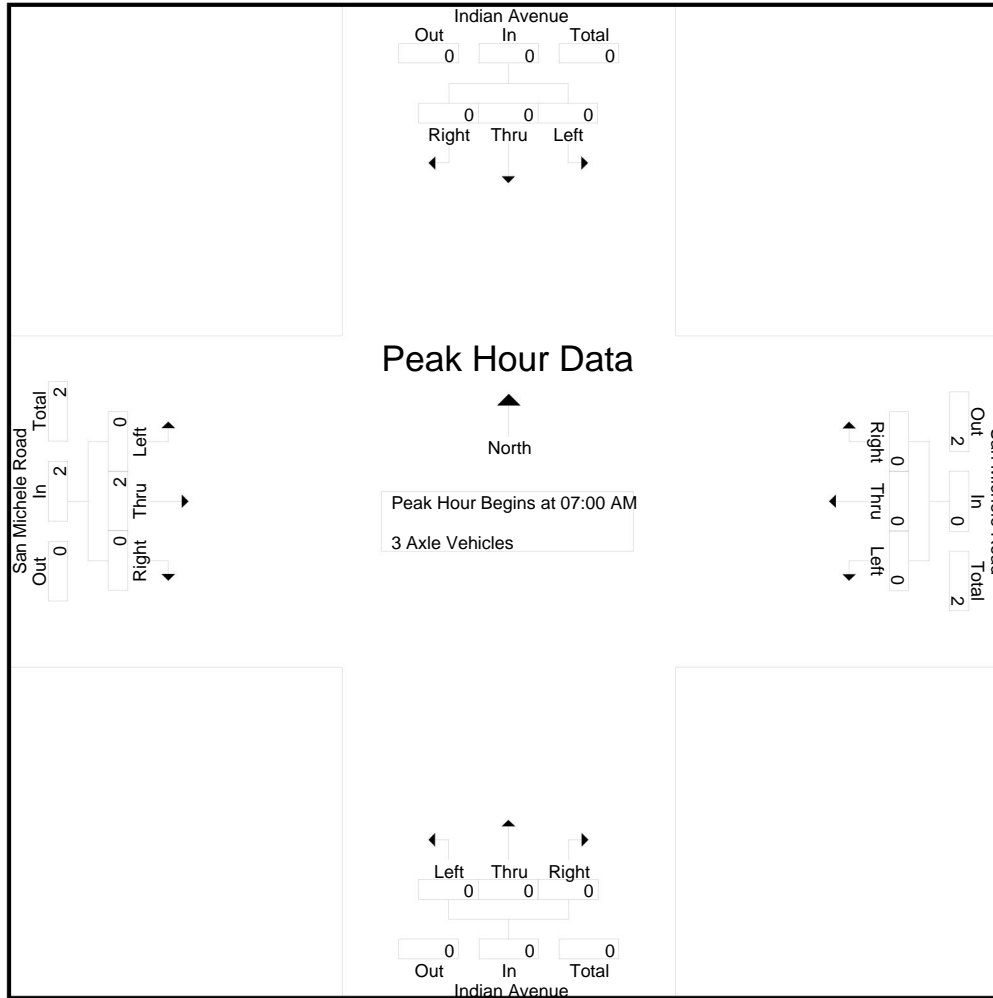
File Name : MRVINSMAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- 3 Axle Vehicles

Start Time	Indian Avenue Southbound					San Michele Road Westbound					Indian Avenue Northbound					San Michele Road Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	2	2
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	2	2
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	1
08:15 AM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	3	3
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1	1
Total	0	2	0	0	2	0	0	0	0	0	1	1	0	0	2	0	1	0	0	1	0	5	5
Grand Total	0	2	0	0	2	0	0	0	0	0	1	1	0	0	2	0	3	0	0	3	0	7	7
Apprch %	0	100	0			0	0	0			50	50	0			0	100	0			0	100	
Total %	0	28.6	0		28.6	0	0	0		0	14.3	14.3	0		28.6	0	42.9	0		42.9	0	100	

3.1-460

Start Time	Indian Avenue Southbound				San Michele Road Westbound				Indian Avenue Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
% App. Total	0	0	0		0	0	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.250



3.1-461

Counts Unlimited, Inc.  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVINSMAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Indian Avenue Southbound				San Michele Road Westbound				Indian Avenue Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	

3.1-462

City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: San Michele Road  
 Weather: Clear

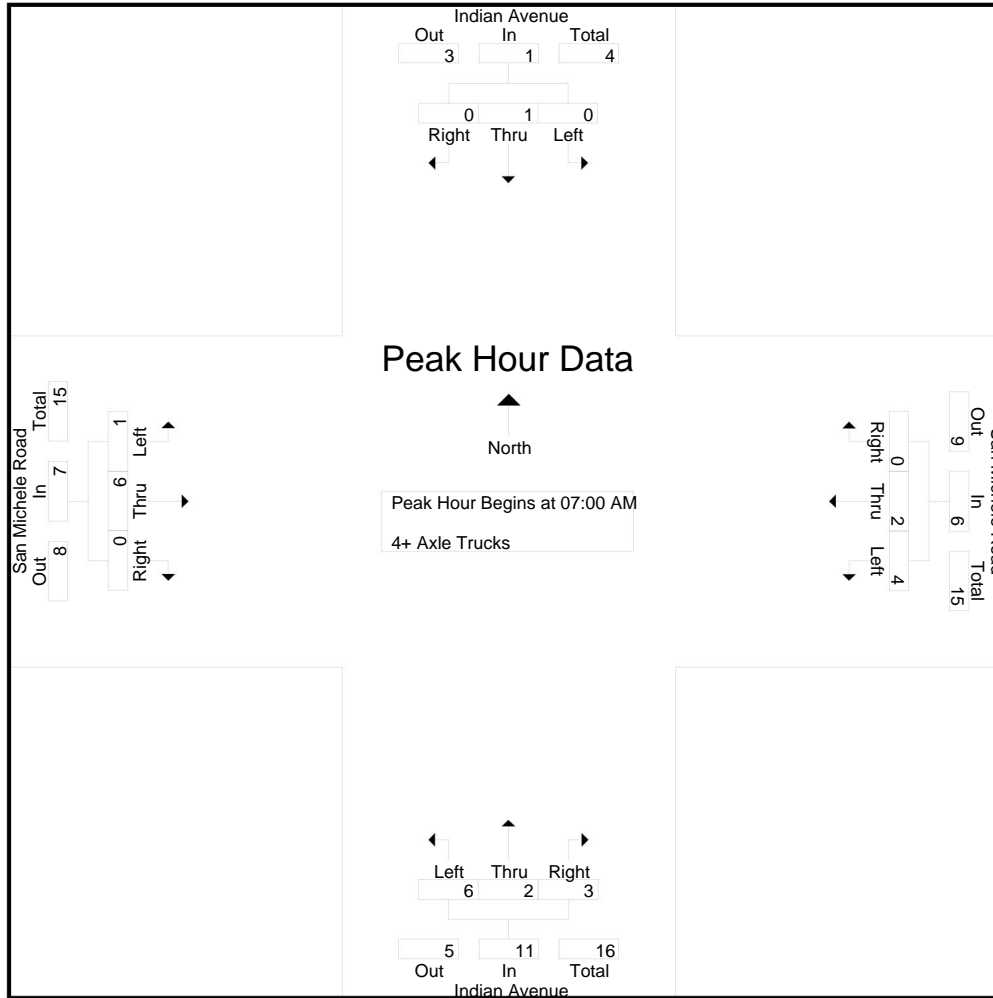
File Name : MRVINSMAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	Indian Avenue Southbound					San Michele Road Westbound					Indian Avenue Northbound					San Michele Road Eastbound					Exclu. Total	Inclu. Total	Int. Total	
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total				
07:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	2	0	3	0	1	0	0	1	0	0	4	4
07:15 AM	0	0	0	0	0	1	1	0	0	2	3	2	0	0	5	0	1	0	0	1	0	0	8	8
07:30 AM	0	0	0	0	0	2	0	0	0	2	1	0	0	0	1	0	2	0	0	2	0	0	5	5
07:45 AM	0	1	0	0	1	1	1	0	0	2	1	0	1	0	2	1	2	0	0	3	0	0	8	8
Total	0	1	0	0	1	4	2	0	0	6	6	2	3	0	11	1	6	0	0	7	0	0	25	25
08:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	1	2	0	3	0	0	5	5
08:15 AM	1	0	1	1	2	1	1	0	0	2	0	0	0	0	0	0	2	0	0	2	1	0	6	7
08:30 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	2	2
08:45 AM	1	0	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	2
Total	3	0	1	1	4	1	1	1	0	3	2	0	1	0	3	0	3	2	0	5	1	0	15	16
Grand Total	3	1	1	1	5	5	3	1	0	9	8	2	4	0	14	1	9	2	0	12	1	0	40	41
Apprch %	60	20	20			55.6	33.3	11.1			57.1	14.3	28.6			8.3	75	16.7						
Total %	7.5	2.5	2.5		12.5	12.5	7.5	2.5		22.5	20	5	10		35	2.5	22.5	5		30	2.4		97.6	

3.1-463

Start Time	Indian Avenue Southbound				San Michele Road Westbound				Indian Avenue Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	1	0	2	3	0	1	0	1	4
07:15 AM	0	0	0	0	1	1	0	2	3	2	0	5	0	1	0	1	8
07:30 AM	0	0	0	0	2	0	0	2	1	0	0	1	0	2	0	2	5
07:45 AM	0	1	0	1	1	1	0	2	1	0	1	2	1	2	0	3	8
Total Volume	0	1	0	1	4	2	0	6	6	2	3	11	1	6	0	7	25
% App. Total	0	100	0		66.7	33.3	0		54.5	18.2	27.3		14.3	85.7	0		
PHF	.000	.250	.000	.250	.500	.500	.000	.750	.500	.250	.375	.550	.250	.750	.000	.583	.781



3.1-464



City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVINSMAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Indian Avenue Southbound				San Michele Road Westbound				Indian Avenue Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	0	0	0	0	0	0	0	1	0	2	3	0	1	0	1	
+15 mins.	0	0	0	0	1	1	0	2	3	2	0	5	0	1	0	1	
+30 mins.	0	0	0	0	2	0	0	2	1	0	0	1	0	2	0	2	
+45 mins.	0	1	0	1	1	1	0	2	1	0	1	2	1	2	0	3	
Total Volume	0	1	0	1	4	2	0	6	6	2	3	11	1	6	0	7	
% App. Total	0	100	0		66.7	33.3	0		54.5	18.2	27.3		14.3	85.7	0		
PHF	.000	.250	.000	.250	.500	.500	.000	.750	.500	.250	.375	.550	.250	.750	.000	.583	

City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVINSMPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Indian Avenue Southbound					San Michele Road Westbound					Indian Avenue Northbound					San Michele Road Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR			
04:00 PM	5	7	1	1	13	8	21	1	1	30	40	1	25	6	66	0	14	30	14	44	22	153	175
04:15 PM	4	4	3	1	11	27	39	3	1	69	46	5	14	4	65	4	11	20	7	35	13	180	193
04:30 PM	51	55	8	3	114	51	90	15	8	156	84	15	40	30	139	1	52	51	2	104	43	513	556
04:45 PM	37	54	4	2	95	51	77	25	5	153	77	17	37	13	131	3	54	107	19	164	39	543	582
Total	97	120	16	7	233	137	227	44	15	408	247	38	116	53	401	8	131	208	42	347	117	1389	1506
05:00 PM	9	8	5	2	22	14	22	2	1	38	50	8	18	9	76	1	18	41	18	60	30	196	226
05:15 PM	1	6	2	0	9	9	23	1	0	33	29	6	14	5	49	0	10	28	15	38	20	129	149
05:30 PM	5	3	0	0	8	5	44	0	0	49	44	1	14	8	59	3	56	84	30	143	38	259	297
05:45 PM	4	9	0	0	13	9	67	7	2	83	55	2	20	11	77	0	32	38	10	70	23	243	266
Total	19	26	7	2	52	37	156	10	3	203	178	17	66	33	261	4	116	191	73	311	111	827	938
Grand Total	116	146	23	9	285	174	383	54	18	611	425	55	182	86	662	12	247	399	115	658	228	2216	2444
Apprch %	40.7	51.2	8.1			28.5	62.7	8.8			64.2	8.3	27.5			1.8	37.5	60.6					
Total %	5.2	6.6	1		12.9	7.9	17.3	2.4		27.6	19.2	2.5	8.2		29.9	0.5	11.1	18		29.7	9.3	90.7	
Passenger Vehicles	115	135	21		279	168	369	54		609	385	45	178		693	11	239	361		722	0	0	2303
% Passenger Vehicles	99.1	92.5	91.3	88.9	94.9	96.6	96.3	100		96.8	90.6	81.8	97.8	98.8	92.6	91.7	96.8	90.5	96.5	93.4	0	0	94.2
Large 2 Axle Vehicles	0	4	0		4	2	4	0		6	35	2	1		38	0	3	38		45	0	0	93
% Large 2 Axle Vehicles	0	2.7	0	0	1.4	1.1	1	0	0	1	8.2	3.6	0.5	0	5.1	0	1.2	9.5	3.5	5.8	0	0	3.8
3 Axle Vehicles	0	1	0		1	1	7	0		8	4	4	0		8	0	0	0		0	0	0	17
% 3 Axle Vehicles	0	0.7	0	0	0.3	0.6	1.8	0	0	1.3	0.9	7.3	0	0	1.1	0	0	0	0	0	0	0	0.7
4+ Axle Trucks	1	6	2		10	3	3	0		6	1	4	3		9	1	5	0		6	0	0	31
% 4+ Axle Trucks	0.9	4.1	8.7	11.1	3.4	1.7	0.8	0	0	1	0.2	7.3	1.6	1.2	1.2	8.3	2	0	0	0.8	0	0	1.3

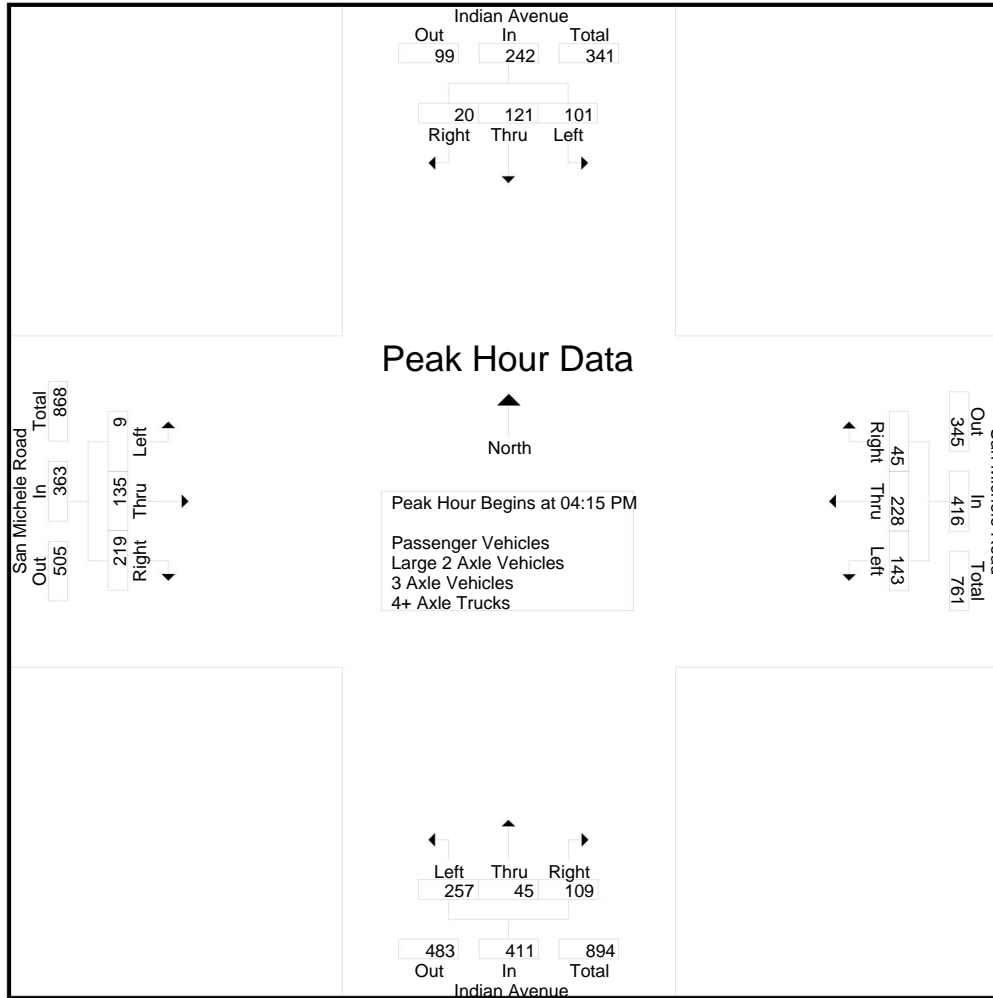
3.1.466

	Indian Avenue Southbound				San Michele Road Westbound				Indian Avenue Northbound				San Michele Road Eastbound				Int. Total	
	Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right		App. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 04:15 PM																		
04:15 PM	4	4	3		11	27	39	3	69	46	5	14	65	4	11	20	35	180
04:30 PM	51	55	8		114	51	90	15	156	84	15	40	139	1	52	51	104	513
04:45 PM	37	54	4		95	51	77	25	153	77	17	37	131	3	54	107	164	543
05:00 PM	9	8	5		22	14	22	2	38	50	8	18	76	1	18	41	60	196
Total Volume	101	121	20		242	143	228	45	416	257	45	109	411	9	135	219	363	1432
% App. Total	41.7	50	8.3			34.4	54.8	10.8		62.5	10.9	26.5		2.5	37.2	60.3		
PHF	.495	.550	.625		.531	.701	.633	.450	.667	.765	.662	.681	.739	.563	.625	.512	.553	.659

Counts Unlimited, Inc.  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVINSMPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 2



3.1-467

Counts Unlimited, Inc.  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVINSMPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Indian Avenue Southbound				San Michele Road Westbound				Indian Avenue Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:15 PM				04:15 PM				04:15 PM				04:45 PM				
+0 mins.	4	4	3	11	27	39	3	69	46	5	14	65	3	54	107	164	
+15 mins.	51	55	8	114	51	90	15	156	84	15	40	139	1	18	41	60	
+30 mins.	37	54	4	95	51	77	25	153	77	17	37	131	0	10	28	38	
+45 mins.	9	8	5	22	14	22	2	38	50	8	18	76	3	56	84	143	
Total Volume	101	121	20	242	143	228	45	416	257	45	109	411	7	138	260	405	
% App. Total	41.7	50	8.3		34.4	54.8	10.8		62.5	10.9	26.5		1.7	34.1	64.2		
PHF	.495	.550	.625	.531	.701	.633	.450	.667	.765	.662	.681	.739	.583	.616	.607	.617	

3.1-468

City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVINSMPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- Passenger Vehicles

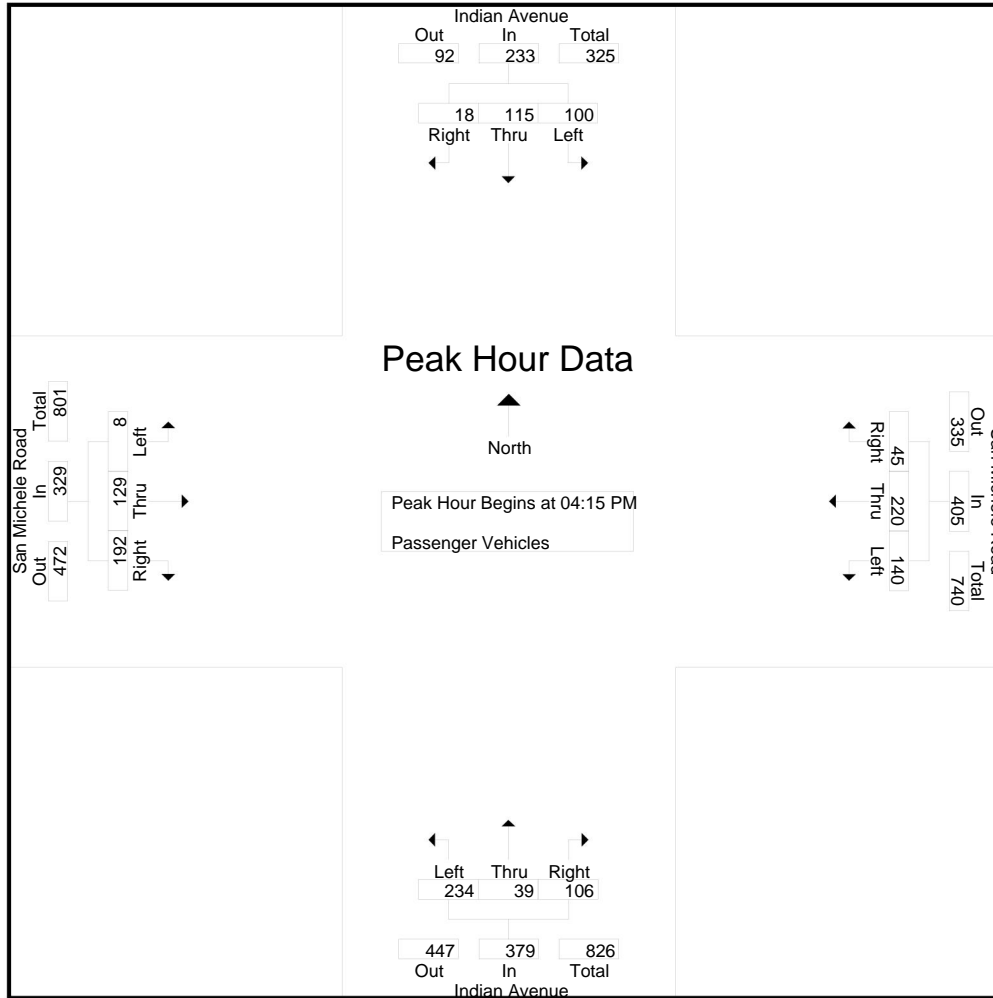
Start Time	Indian Avenue Southbound					San Michele Road Westbound					Indian Avenue Northbound					San Michele Road Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	5	6	1	1	12	7	20	1	1	28	30	0	25	6	55	0	13	25	12	38	20	133	153
04:15 PM	4	3	2	1	9	26	37	3	1	66	42	4	12	4	58	3	11	13	6	27	12	160	172
04:30 PM	51	53	8	3	112	50	88	15	8	153	79	14	39	29	132	1	49	47	2	97	42	494	536
04:45 PM	37	52	3	1	92	50	76	25	5	151	71	15	37	13	123	3	52	95	18	150	37	516	553
Total	97	114	14	6	225	133	221	44	15	398	222	33	113	52	368	7	125	180	38	312	111	1303	1414
05:00 PM	8	7	5	2	20	14	19	2	1	35	42	6	18	9	66	1	17	37	18	55	30	176	206
05:15 PM	1	5	2	0	8	9	20	1	0	30	26	4	14	5	44	0	10	27	15	37	20	119	139
05:30 PM	5	3	0	0	8	4	42	0	0	46	43	1	13	8	57	3	55	82	30	140	38	251	289
05:45 PM	4	6	0	0	10	8	67	7	2	82	52	1	20	11	73	0	32	35	10	67	23	232	255
Total	18	21	7	2	46	35	148	10	3	193	163	12	65	33	240	4	114	181	73	299	111	778	889
Grand Total	115	135	21	8	271	168	369	54	18	591	385	45	178	85	608	11	239	361	111	611	222	2081	2303
Apprch %	42.4	49.8	7.7			28.4	62.4	9.1			63.3	7.4	29.3			1.8	39.1	59.1					
Total %	5.5	6.5	1		13	8.1	17.7	2.6		28.4	18.5	2.2	8.6		29.2	0.5	11.5	17.3		29.4	9.6	90.4	

3.1-469

Start Time	Indian Avenue Southbound				San Michele Road Westbound				Indian Avenue Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	4	3	2	9	26	37	3	66	42	4	12	58	3	11	13	27	160
04:30 PM	51	53	8	112	50	88	15	153	79	14	39	132	1	49	47	97	494
04:45 PM	37	52	3	92	50	76	25	151	71	15	37	123	3	52	95	150	516
05:00 PM	8	7	5	20	14	19	2	35	42	6	18	66	1	17	37	55	176
Total Volume	100	115	18	233	140	220	45	405	234	39	106	379	8	129	192	329	1346
% App. Total	42.9	49.4	7.7		34.6	54.3	11.1		61.7	10.3	28		2.4	39.2	58.4		
PHF	.490	.542	.563	.520	.700	.625	.450	.662	.741	.650	.679	.718	.667	.620	.505	.548	.652

City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVINSMPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 2



3.1-470

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 Corona, CA 92878  
 (951) 268-6268

City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVINSMPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Indian Avenue Southbound				San Michele Road Westbound				Indian Avenue Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:15 PM				04:15 PM				04:15 PM				04:15 PM				
+0 mins.	4	3	2	9	26	37	3	66	42	4	12	58	3	11	13	27	
+15 mins.	51	53	8	112	50	88	15	153	79	14	39	132	1	49	47	97	
+30 mins.	37	52	3	92	50	76	25	151	71	15	37	123	3	52	95	150	
+45 mins.	8	7	5	20	14	19	2	35	42	6	18	66	1	17	37	55	
Total Volume	100	115	18	233	140	220	45	405	234	39	106	379	8	129	192	329	
% App. Total	42.9	49.4	7.7		34.6	54.3	11.1		61.7	10.3	28		2.4	39.2	58.4		
PHF	.490	.542	.563	.520	.700	.625	.450	.662	.741	.650	.679	.718	.667	.620	.505	.548	

3.1-471

City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVINSMPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

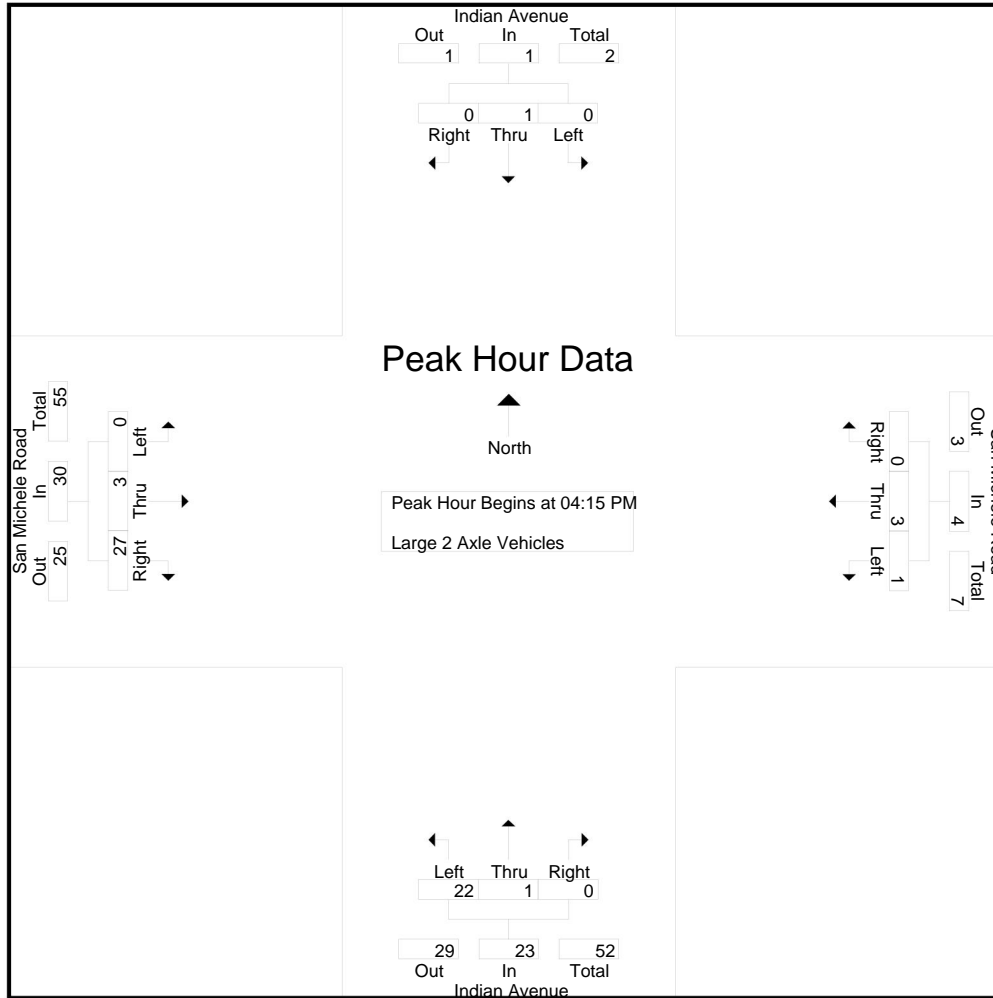
Groups Printed- Large 2 Axle Vehicles

Start Time	Indian Avenue Southbound					San Michele Road Westbound					Indian Avenue Northbound					San Michele Road Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	0	1	0	0	1	1	0	0	0	1	9	0	0	0	9	0	0	5	2	5	2	16	18
04:15 PM	0	1	0	0	1	1	2	0	0	3	4	0	0	0	4	0	0	7	1	7	1	15	16
04:30 PM	0	0	0	0	0	0	0	0	0	0	5	0	0	0	5	0	1	4	0	5	0	10	10
04:45 PM	0	0	0	0	0	0	1	0	0	1	5	0	0	0	5	0	1	12	1	13	1	19	20
Total	0	2	0	0	2	2	3	0	0	5	23	0	0	0	23	0	2	28	4	30	4	60	64
05:00 PM	0	0	0	0	0	0	0	0	0	0	8	1	0	0	9	0	1	4	0	5	0	14	14
05:15 PM	0	0	0	0	0	0	1	0	0	1	3	1	0	0	4	0	0	1	0	1	0	6	6
05:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	0	2	0	2	0	4	4
05:45 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	5	5
Total	0	2	0	0	2	0	1	0	0	1	12	2	1	0	15	0	1	10	0	11	0	29	29
Grand Total	0	4	0	0	4	2	4	0	0	6	35	2	1	0	38	0	3	38	4	41	4	89	93
Apprch %	0	100	0			33.3	66.7	0			92.1	5.3	2.6			0	7.3	92.7					
Total %	0	4.5	0		4.5	2.2	4.5	0		6.7	39.3	2.2	1.1		42.7	0	3.4	42.7		46.1	4.3	95.7	

3.1-472

Start Time	Indian Avenue Southbound				San Michele Road Westbound				Indian Avenue Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	1	0	1	1	2	0	3	4	0	0	4	0	0	7	7	15
04:30 PM	0	0	0	0	0	0	0	0	5	0	0	5	0	1	4	5	10
04:45 PM	0	0	0	0	0	1	0	1	5	0	0	5	0	1	12	13	19
05:00 PM	0	0	0	0	0	0	0	0	8	1	0	9	0	1	4	5	14
Total Volume	0	1	0	1	1	3	0	4	22	1	0	23	0	3	27	30	58
% App. Total	0	100	0		25	75	0		95.7	4.3	0		0	10	90		
PHF	.000	.250	.000	.250	.250	.375	.000	.333	.688	.250	.000	.639	.000	.750	.563	.577	.763





Counts Unlimited, Inc.  
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 (951) 268-6268

City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVINSMPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Indian Avenue Southbound				San Michele Road Westbound				Indian Avenue Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:15 PM				04:15 PM				04:15 PM				04:15 PM				
+0 mins.	0	1	0	1	1	2	0	3	4	0	0	4	0	0	7	7	
+15 mins.	0	0	0	0	0	0	0	0	5	0	0	5	0	1	4	5	
+30 mins.	0	0	0	0	0	1	0	1	5	0	0	5	0	1	12	13	
+45 mins.	0	0	0	0	0	0	0	0	8	1	0	9	0	1	4	5	
Total Volume	0	1	0	1	1	3	0	4	22	1	0	23	0	3	27	30	
% App. Total	0	100	0		25	75	0		95.7	4.3	0		0	10	90		
PHF	.000	.250	.000	.250	.250	.375	.000	.333	.688	.250	.000	.639	.000	.750	.563	.577	

3.1-474

City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVINSMPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- 3 Axle Vehicles

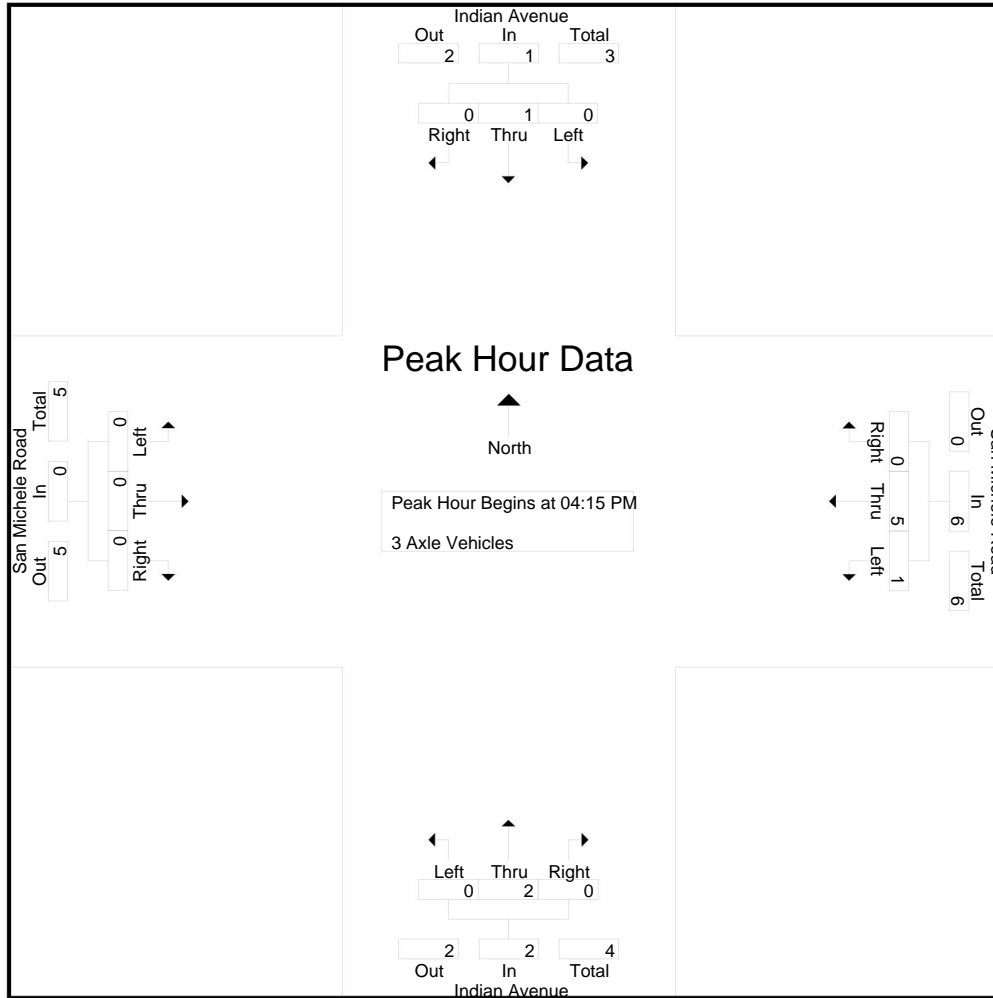
Start Time	Indian Avenue Southbound					San Michele Road Westbound					Indian Avenue Northbound					San Michele Road Eastbound					Exclu. Total	Inclu. Total	Int. Total	
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total				
04:00 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	2	2
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	1	0	0	1	0	2	0	0	2	0	1	0	0	1	0	0	0	0	0	0	0	4	4
04:45 PM	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	2	2
Total	0	1	0	0	1	1	2	0	0	3	1	3	0	0	4	0	0	0	0	0	0	0	8	8
05:00 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3	3
05:15 PM	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	2	2
05:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	3	3
Total	0	0	0	0	0	0	5	0	0	5	3	1	0	0	4	0	0	0	0	0	0	0	9	9
Grand Total	0	1	0	0	1	1	7	0	0	8	4	4	0	0	8	0	0	0	0	0	0	0	17	17
Apprch %	0	100	0			12.5	87.5	0			50	50	0			0	0	0			0	0		
Total %	0	5.9	0		5.9	5.9	41.2	0		47.1	23.5	23.5	0		47.1	0	0	0		0	0	100		

3.1-475

Start Time	Indian Avenue Southbound				San Michele Road Westbound				Indian Avenue Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	1	0	1	0	2	0	2	0	1	0	1	0	0	0	0	4
04:45 PM	0	0	0	0	1	0	0	1	0	1	0	1	0	0	0	0	2
05:00 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	3
Total Volume	0	1	0	1	1	5	0	6	0	2	0	2	0	0	0	0	9
% App. Total	0	100	0		16.7	83.3	0		0	100	0		0	0	0		
PHF	.000	.250	.000	.250	.250	.417	.000	.500	.000	.500	.000	.500	.000	.000	.000	.000	.563

City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVINSMPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 2



3.1-476

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 (951) 268-6268

City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVINSMPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Indian Avenue Southbound				San Michele Road Westbound				Indian Avenue Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:15 PM				04:15 PM				04:15 PM				04:15 PM				
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
+15 mins.	0	1	0	1	0	2	0	2	0	1	0	1	0	0	0	0	
+30 mins.	0	0	0	0	1	0	0	1	0	1	0	1	0	0	0	0	
+45 mins.	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	
Total Volume	0	1	0	1	1	5	0	6	0	2	0	2	0	0	0	0	
% App. Total	0	100	0		16.7	83.3	0		0	100	0		0	0	0		
PHF	.000	.250	.000	.250	.250	.417	.000	.500	.000	.500	.000	.500	.000	.000	.000	.000	

3.1-477

City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVINSMPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- 4+ Axle Trucks

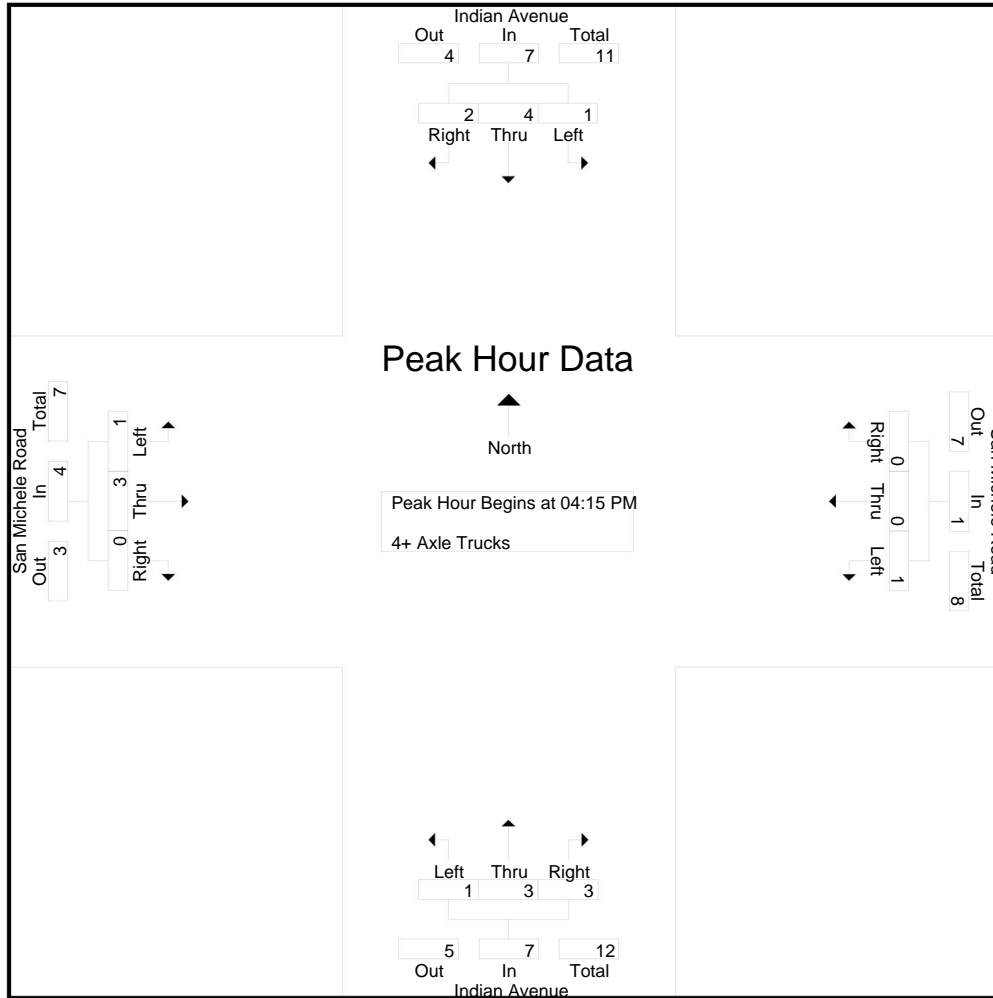
Start Time	Indian Avenue Southbound					San Michele Road Westbound					Indian Avenue Northbound					San Michele Road Eastbound					Exclu. Total	Inclu. Total	Int. Total				
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total							
04:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	2	2	0	2	2
04:15 PM	0	0	1	0	1	0	0	0	0	0	0	1	2	0	3	1	0	0	0	1	0	0	0	0	0	5	5
04:30 PM	0	1	0	0	1	1	0	0	0	1	0	0	1	1	1	0	2	0	0	2	1	0	0	0	1	5	6
04:45 PM	0	2	1	1	3	0	0	0	0	0	1	1	0	0	2	0	1	0	0	1	1	0	0	0	1	6	7
Total	0	3	2	1	5	1	1	0	0	2	1	2	3	1	6	1	4	0	0	5	2	0	0	0	2	18	20
05:00 PM	1	1	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	3	3
05:15 PM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
05:30 PM	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3	3
05:45 PM	0	1	0	0	1	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	3	3
Total	1	3	0	0	4	2	2	0	0	4	0	2	0	0	2	0	1	0	0	1	0	0	0	0	0	11	11
Grand Total	1	6	2	1	9	3	3	0	0	6	1	4	3	1	8	1	5	0	0	6	2	0	0	0	2	29	31
Apprch %	11.1	66.7	22.2			50	50	0			12.5	50	37.5			16.7	83.3	0									
Total %	3.4	20.7	6.9		31	10.3	10.3	0		20.7	3.4	13.8	10.3		27.6	3.4	17.2	0		20.7	6.5				93.5		

3.1-478

Start Time	Indian Avenue Southbound				San Michele Road Westbound				Indian Avenue Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	0	1	1	0	0	0	0	0	1	2	3	1	0	0	1	5
04:30 PM	0	1	0	1	1	0	0	1	0	0	1	1	0	2	0	2	5
04:45 PM	0	2	1	3	0	0	0	0	1	1	0	2	0	1	0	1	6
05:00 PM	1	1	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
Total Volume	1	4	2	7	1	0	0	1	1	3	3	7	1	3	0	4	19
% App. Total	14.3	57.1	28.6		100	0	0		14.3	42.9	42.9		25	75	0		
PHF	.250	.500	.500	.583	.250	.000	.000	.250	.250	.750	.375	.583	.250	.375	.000	.500	.792

City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVINSMPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 2



3.1-479

Counts Unlimited, Inc.  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVINSMPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Indian Avenue Southbound				San Michele Road Westbound				Indian Avenue Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:15 PM				04:15 PM				04:15 PM				04:15 PM				
+0 mins.	0	0	1	1	0	0	0	0	0	1	2	3	1	0	0	1	
+15 mins.	0	1	0	1	1	0	0	1	0	0	1	1	0	2	0	2	
+30 mins.	0	2	1	3	0	0	0	0	1	1	0	2	0	1	0	1	
+45 mins.	1	1	0	2	0	0	0	0	0	1	0	1	0	0	0	0	
Total Volume	1	4	2	7	1	0	0	1	1	3	3	7	1	3	0	4	
% App. Total	14.3	57.1	28.6		100	0	0		14.3	42.9	42.9		25	75	0		
PHF	.250	.500	.500	.583	.250	.000	.000	.250	.250	.750	.375	.583	.250	.375	.000	.500	

3.1-480



Location: Moreno Valley  
 N/S: Indian Avenue  
 E/W: San Michele Road



Date: 4/28/2015  
 Weather: Clear

**PEDESTRIANS**

	North Leg Indian Avenue	East Leg San Michele Road	South Leg Indian Avenue	West Leg San Michele Road	TOTAL
7:00 AM	2	0	0	2	4
7:15 AM	7	0	0	3	10
7:30 AM	0	0	0	4	4
7:45 AM	0	0	0	21	21
8:00 AM	0	0	0	4	4
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	1	1
8:45 AM	0	0	0	0	0
<b>TOTAL VOLUMES:</b>	9	0	0	35	44

	North Leg Indian Avenue	East Leg San Michele Road	South Leg Indian Avenue	West Leg San Michele Road	TOTAL
4:00 PM	0	0	0	11	11
4:15 PM	0	0	3	15	18
4:30 PM	0	0	15	164	179
4:45 PM	3	0	2	123	128
5:00 PM	1	1	0	22	24
5:15 PM	2	0	1	7	10
5:30 PM	0	0	0	9	9
5:45 PM	4	2	3	9	18
<b>TOTAL VOLUMES:</b>	10	3	24	360	397

Location: Moreno Valley  
 N/S: Indian Avenue  
 E/W: San Michele Road



Date: 4/28/2015  
 Weather: Clear

**BICYCLES**

	North Leg Indian Avenue	East Leg San Michele Road	South Leg Indian Avenue	West Leg San Michele Road	TOTAL
7:00 AM	1	0	0	0	1
7:15 AM	1	0	0	0	1
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
<b>TOTAL VOLUMES:</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>

	North Leg Indian Avenue	East Leg San Michele Road	South Leg Indian Avenue	West Leg San Michele Road	TOTAL
4:00 PM	0	0	0	0	0
4:15 PM	0	0	1	1	2
4:30 PM	0	0	0	0	0
4:45 PM	0	0	2	0	2
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
<b>TOTAL VOLUMES:</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>4</b>

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Driveway  
 Weather: Clear

File Name : MRV\_Heacock\_DW AM  
 Site Code : 05120414  
 Start Date : 10/29/2020  
 Page No : 1

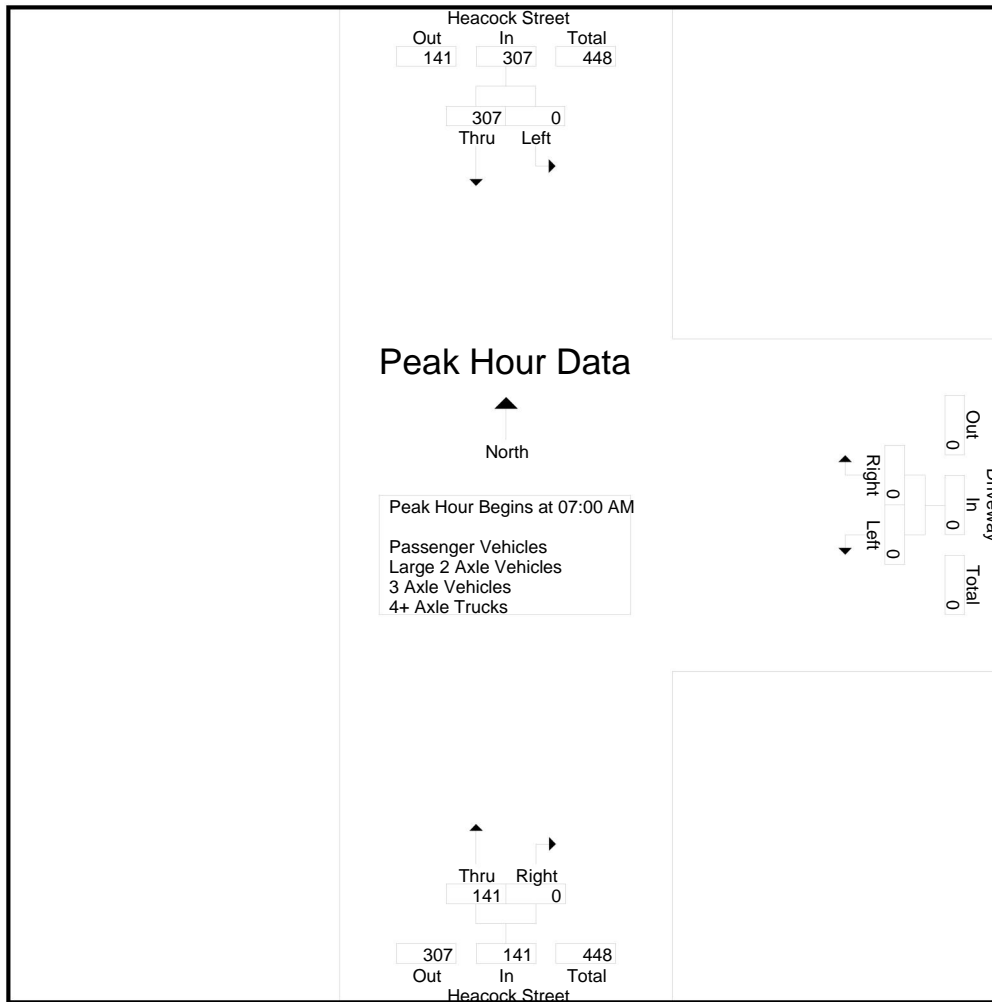
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Heacock Street Southbound			Driveway Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	86	86	0	0	0	30	0	30	116
07:15 AM	0	94	94	0	0	0	36	0	36	130
07:30 AM	0	59	59	0	0	0	39	0	39	98
07:45 AM	0	68	68	0	0	0	36	0	36	104
Total	0	307	307	0	0	0	141	0	141	448
08:00 AM	0	44	44	0	0	0	34	0	34	78
08:15 AM	0	35	35	0	0	0	40	0	40	75
08:30 AM	0	33	33	0	0	0	37	0	37	70
08:45 AM	0	28	28	0	0	0	35	0	35	63
Total	0	140	140	0	0	0	146	0	146	286
Grand Total	0	447	447	0	0	0	287	0	287	734
Apprch %	0	100		0	0		100	0		
Total %	0	60.9	60.9	0	0	0	39.1	0	39.1	
Passenger Vehicles	0	351	351	0	0	0	216	0	216	567
% Passenger Vehicles	0	78.5	78.5	0	0	0	75.3	0	75.3	77.2
Large 2 Axle Vehicles	0	21	21	0	0	0	14	0	14	35
% Large 2 Axle Vehicles	0	4.7	4.7	0	0	0	4.9	0	4.9	4.8
3 Axle Vehicles	0	24	24	0	0	0	18	0	18	42
% 3 Axle Vehicles	0	5.4	5.4	0	0	0	6.3	0	6.3	5.7
4+ Axle Trucks	0	51	51	0	0	0	39	0	39	90
% 4+ Axle Trucks	0	11.4	11.4	0	0	0	13.6	0	13.6	12.3

Start Time	Heacock Street Southbound			Driveway Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	86	86	0	0	0	30	0	30	116
07:15 AM	0	<b>94</b>	<b>94</b>	0	0	0	36	0	36	<b>130</b>
07:30 AM	0	59	59	0	0	0	<b>39</b>	0	<b>39</b>	98
07:45 AM	0	68	68	0	0	0	36	0	36	104
Total Volume	0	307	307	0	0	0	141	0	141	448
% App. Total	0	100		0	0		100	0		
PHF	.000	.816	.816	.000	.000	.000	.904	.000	.904	.862

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Driveway  
 Weather: Clear

File Name : MRV\_Heacock\_DW AM  
 Site Code : 05120414  
 Start Date : 10/29/2020  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:30 AM		
+0 mins.	0	86	86	0	0	0	39	0	39
+15 mins.	0	<b>94</b>	<b>94</b>	0	0	0	36	0	36
+30 mins.	0	59	59	0	0	0	34	0	34
+45 mins.	0	68	68	0	0	0	<b>40</b>	0	<b>40</b>
Total Volume	0	307	307	0	0	0	149	0	149
% App. Total	0	100		0	0		100	0	
PHF	.000	.816	.816	.000	.000	.000	.931	.000	.931

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Driveway  
 Weather: Clear

File Name : MRV\_Heacock\_DW AM  
 Site Code : 05120414  
 Start Date : 10/29/2020  
 Page No : 1

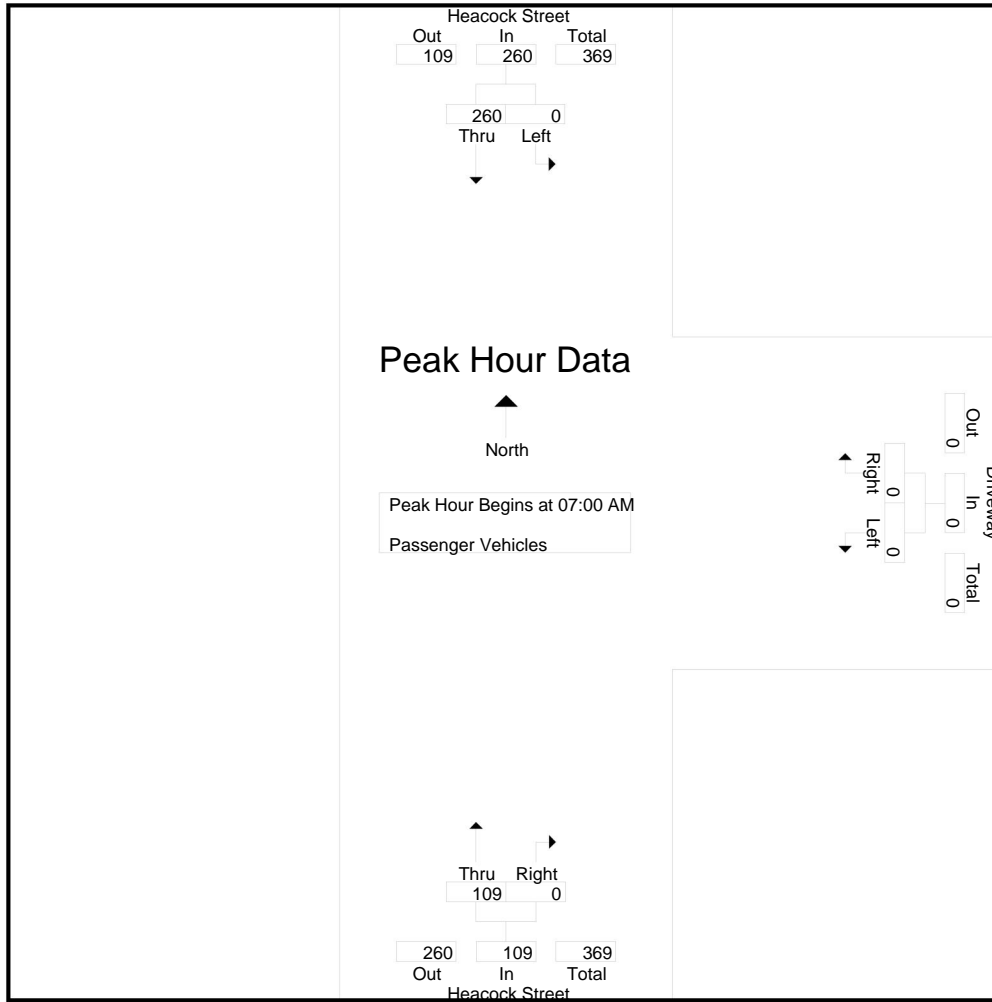
Groups Printed- Passenger Vehicles

Start Time	Heacock Street Southbound			Driveway Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	76	76	0	0	0	26	0	26	102
07:15 AM	0	81	81	0	0	0	24	0	24	105
07:30 AM	0	49	49	0	0	0	32	0	32	81
07:45 AM	0	54	54	0	0	0	27	0	27	81
Total	0	260	260	0	0	0	109	0	109	369
08:00 AM	0	30	30	0	0	0	27	0	27	57
08:15 AM	0	21	21	0	0	0	28	0	28	49
08:30 AM	0	24	24	0	0	0	29	0	29	53
08:45 AM	0	16	16	0	0	0	23	0	23	39
Total	0	91	91	0	0	0	107	0	107	198
Grand Total	0	351	351	0	0	0	216	0	216	567
Apprch %	0	100		0	0		100	0		
Total %	0	61.9	61.9	0	0	0	38.1	0	38.1	

Start Time	Heacock Street Southbound			Driveway Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	76	76	0	0	0	26	0	26	102
07:15 AM	0	<b>81</b>	<b>81</b>	0	0	0	24	0	24	<b>105</b>
07:30 AM	0	49	49	0	0	0	<b>32</b>	0	<b>32</b>	81
07:45 AM	0	54	54	0	0	0	27	0	27	81
Total Volume	0	260	260	0	0	0	109	0	109	369
% App. Total	0	100		0	0		100	0		
PHF	.000	.802	.802	.000	.000	.000	.852	.000	.852	.879

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Driveway  
 Weather: Clear

File Name : MRV\_Heacock\_DW AM  
 Site Code : 05120414  
 Start Date : 10/29/2020  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	76	76	0	0	0	26	0	26
+15 mins.	0	<b>81</b>	<b>81</b>	0	0	0	24	0	24
+30 mins.	0	49	49	0	0	0	<b>32</b>	0	<b>32</b>
+45 mins.	0	54	54	0	0	0	27	0	27
Total Volume	0	260	260	0	0	0	109	0	109
% App. Total	0	100		0	0		100	0	
PHF	.000	.802	.802	.000	.000	.000	.852	.000	.852

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Driveway  
 Weather: Clear

File Name : MRV\_Heacock\_DW AM  
 Site Code : 05120414  
 Start Date : 10/29/2020  
 Page No : 1

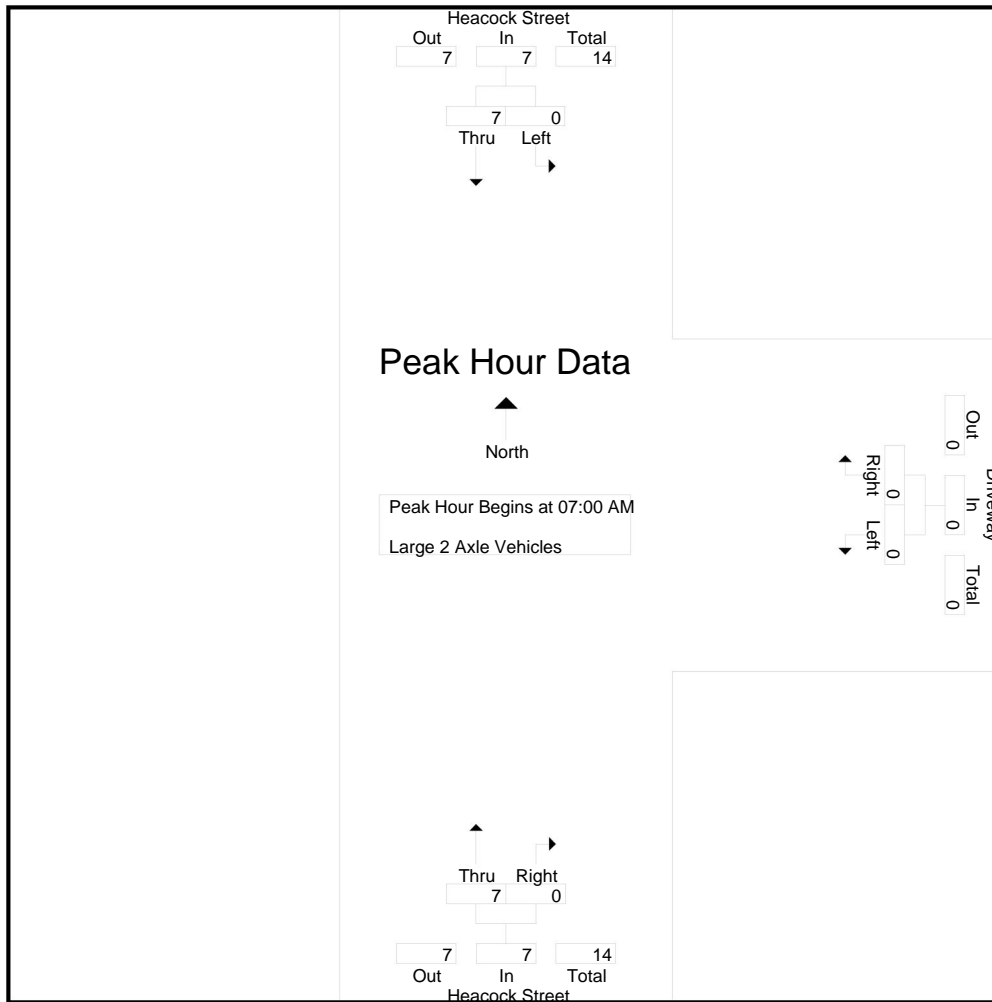
Groups Printed- Large 2 Axle Vehicles

Start Time	Heacock Street Southbound			Driveway Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	3	3	0	0	0	0	0	0	3
07:15 AM	0	0	0	0	0	0	2	0	2	2
07:30 AM	0	0	0	0	0	0	2	0	2	2
07:45 AM	0	4	4	0	0	0	3	0	3	7
Total	0	7	7	0	0	0	7	0	7	14
08:00 AM	0	4	4	0	0	0	4	0	4	8
08:15 AM	0	5	5	0	0	0	1	0	1	6
08:30 AM	0	2	2	0	0	0	1	0	1	3
08:45 AM	0	3	3	0	0	0	1	0	1	4
Total	0	14	14	0	0	0	7	0	7	21
Grand Total	0	21	21	0	0	0	14	0	14	35
Apprch %	0	100		0	0		100	0		
Total %	0	60	60	0	0	0	40	0	40	

Start Time	Heacock Street Southbound			Driveway Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	3	3	0	0	0	0	0	0	3
07:15 AM	0	0	0	0	0	0	2	0	2	2
07:30 AM	0	0	0	0	0	0	2	0	2	2
07:45 AM	0	4	4	0	0	0	3	0	3	7
Total Volume	0	7	7	0	0	0	7	0	7	14
% App. Total	0	100		0	0		100	0		
PHF	.000	.438	.438	.000	.000	.000	.583	.000	.583	.500

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Driveway  
 Weather: Clear

File Name : MRV\_Heacock\_DW AM  
 Site Code : 05120414  
 Start Date : 10/29/2020  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	3	3	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	2	0	2
+30 mins.	0	0	0	0	0	0	2	0	2
+45 mins.	0	4	4	0	0	0	3	0	3
Total Volume	0	7	7	0	0	0	7	0	7
% App. Total	0	100		0	0		100	0	
PHF	.000	.438	.438	.000	.000	.000	.583	.000	.583



City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Driveway  
 Weather: Clear

File Name : MRV\_Heacock\_DW AM  
 Site Code : 05120414  
 Start Date : 10/29/2020  
 Page No : 1

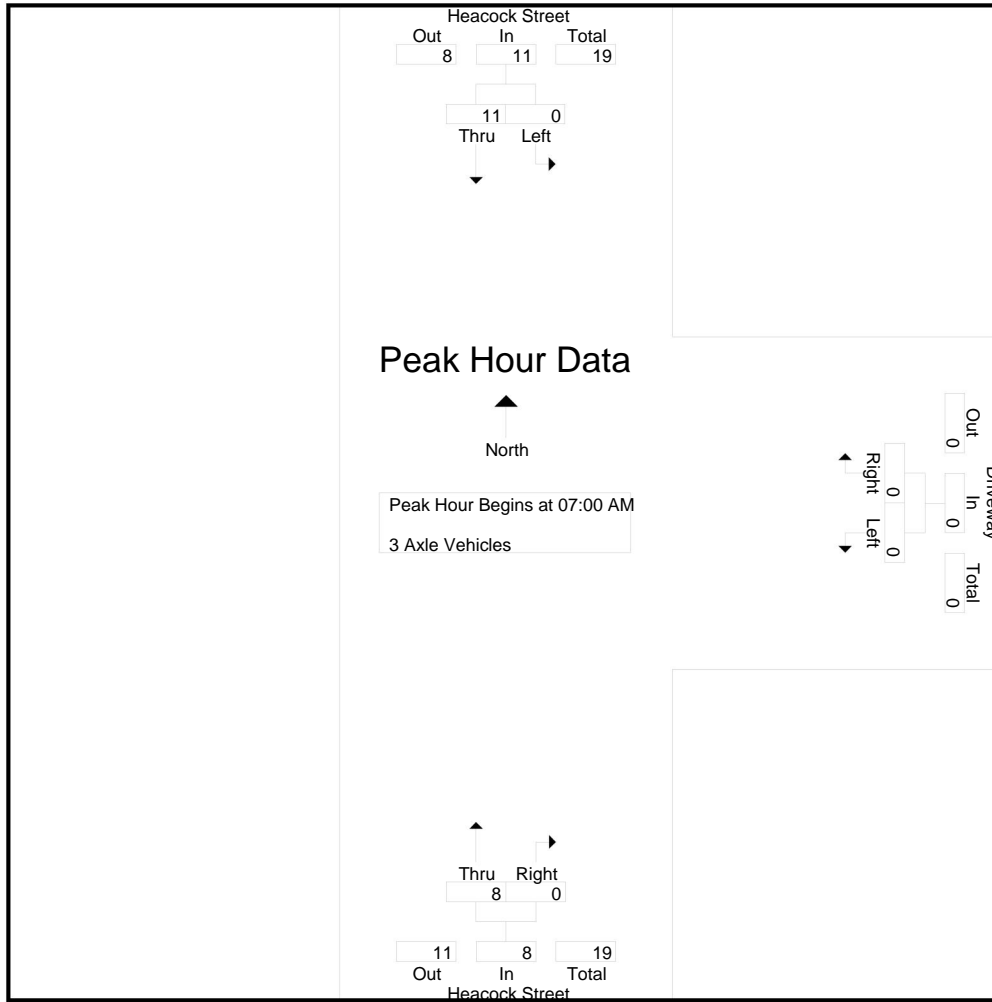
Groups Printed- 3 Axle Vehicles

Start Time	Heacock Street Southbound			Driveway Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	1	1	0	0	0	1	0	1	2
07:15 AM	0	3	3	0	0	0	5	0	5	8
07:30 AM	0	5	5	0	0	0	1	0	1	6
07:45 AM	0	2	2	0	0	0	1	0	1	3
Total	0	11	11	0	0	0	8	0	8	19
08:00 AM	0	3	3	0	0	0	0	0	0	3
08:15 AM	0	2	2	0	0	0	4	0	4	6
08:30 AM	0	4	4	0	0	0	3	0	3	7
08:45 AM	0	4	4	0	0	0	3	0	3	7
Total	0	13	13	0	0	0	10	0	10	23
Grand Total	0	24	24	0	0	0	18	0	18	42
Apprch %	0	100		0	0		100	0		
Total %	0	57.1	57.1	0	0	0	42.9	0	42.9	

Start Time	Heacock Street Southbound			Driveway Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	1	1	0	0	0	1	0	1	2
07:15 AM	0	3	3	0	0	0	5	0	5	8
07:30 AM	0	5	5	0	0	0	1	0	1	6
07:45 AM	0	2	2	0	0	0	1	0	1	3
Total Volume	0	11	11	0	0	0	8	0	8	19
% App. Total	0	100		0	0		100	0		
PHF	.000	.550	.550	.000	.000	.000	.400	.000	.400	.594

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Driveway  
 Weather: Clear

File Name : MRV\_Heacock\_DW AM  
 Site Code : 05120414  
 Start Date : 10/29/2020  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	1	1	0	0	0	1	0	1
+15 mins.	0	3	3	0	0	0	5	0	5
+30 mins.	0	5	5	0	0	0	1	0	1
+45 mins.	0	2	2	0	0	0	1	0	1
Total Volume	0	11	11	0	0	0	8	0	8
% App. Total	0	100		0	0		100	0	
PHF	.000	.550	.550	.000	.000	.000	.400	.000	.400

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Driveway  
 Weather: Clear

File Name : MRV\_Heacock\_DW AM  
 Site Code : 05120414  
 Start Date : 10/29/2020  
 Page No : 1

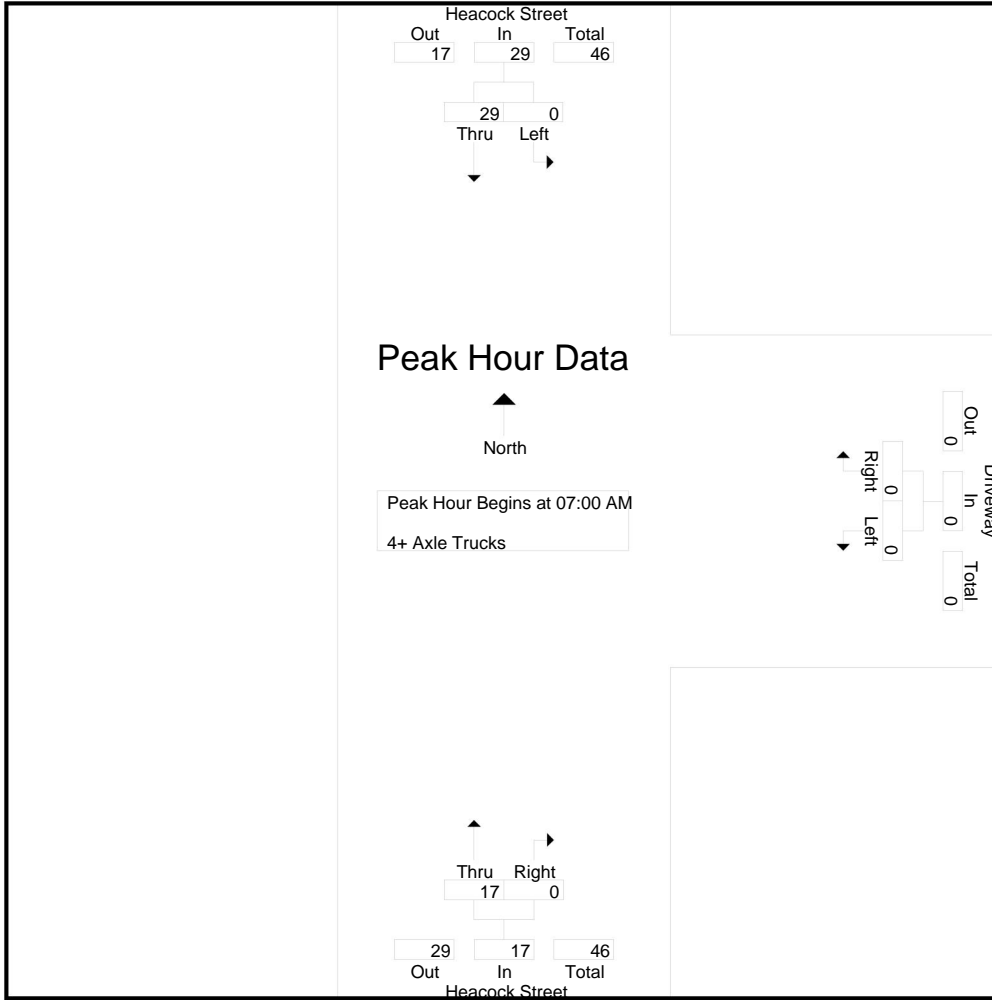
Groups Printed- 4+ Axle Trucks

Start Time	Heacock Street Southbound			Driveway Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	6	6	0	0	0	3	0	3	9
07:15 AM	0	10	10	0	0	0	5	0	5	15
07:30 AM	0	5	5	0	0	0	4	0	4	9
07:45 AM	0	8	8	0	0	0	5	0	5	13
Total	0	29	29	0	0	0	17	0	17	46
08:00 AM	0	7	7	0	0	0	3	0	3	10
08:15 AM	0	7	7	0	0	0	7	0	7	14
08:30 AM	0	3	3	0	0	0	4	0	4	7
08:45 AM	0	5	5	0	0	0	8	0	8	13
Total	0	22	22	0	0	0	22	0	22	44
Grand Total	0	51	51	0	0	0	39	0	39	90
Apprch %	0	100		0	0		100	0		
Total %	0	56.7	56.7	0	0	0	43.3	0	43.3	

Start Time	Heacock Street Southbound			Driveway Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	6	6	0	0	0	3	0	3	9
07:15 AM	0	<b>10</b>	<b>10</b>	0	0	0	<b>5</b>	0	<b>5</b>	<b>15</b>
07:30 AM	0	5	5	0	0	0	4	0	4	9
07:45 AM	0	8	8	0	0	0	5	0	5	13
Total Volume	0	29	29	0	0	0	17	0	17	46
% App. Total	0	100		0	0		100	0		
PHF	.000	.725	.725	.000	.000	.000	.850	.000	.850	.767

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Driveway  
 Weather: Clear

File Name : MRV\_Heacock\_DW AM  
 Site Code : 05120414  
 Start Date : 10/29/2020  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	6	6	0	0	0	3	0	3
+15 mins.	0	<b>10</b>	<b>10</b>	0	0	0	<b>5</b>	0	<b>5</b>
+30 mins.	0	5	5	0	0	0	4	0	4
+45 mins.	0	8	8	0	0	0	5	0	5
Total Volume	0	29	29	0	0	0	17	0	17
% App. Total	0	100		0	0		100	0	
PHF	.000	.725	.725	.000	.000	.000	.850	.000	.850

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Driveway  
 Weather: Clear

File Name : MRV\_Heacock\_DW PM  
 Site Code : 05120414  
 Start Date : 10/28/2020  
 Page No : 1

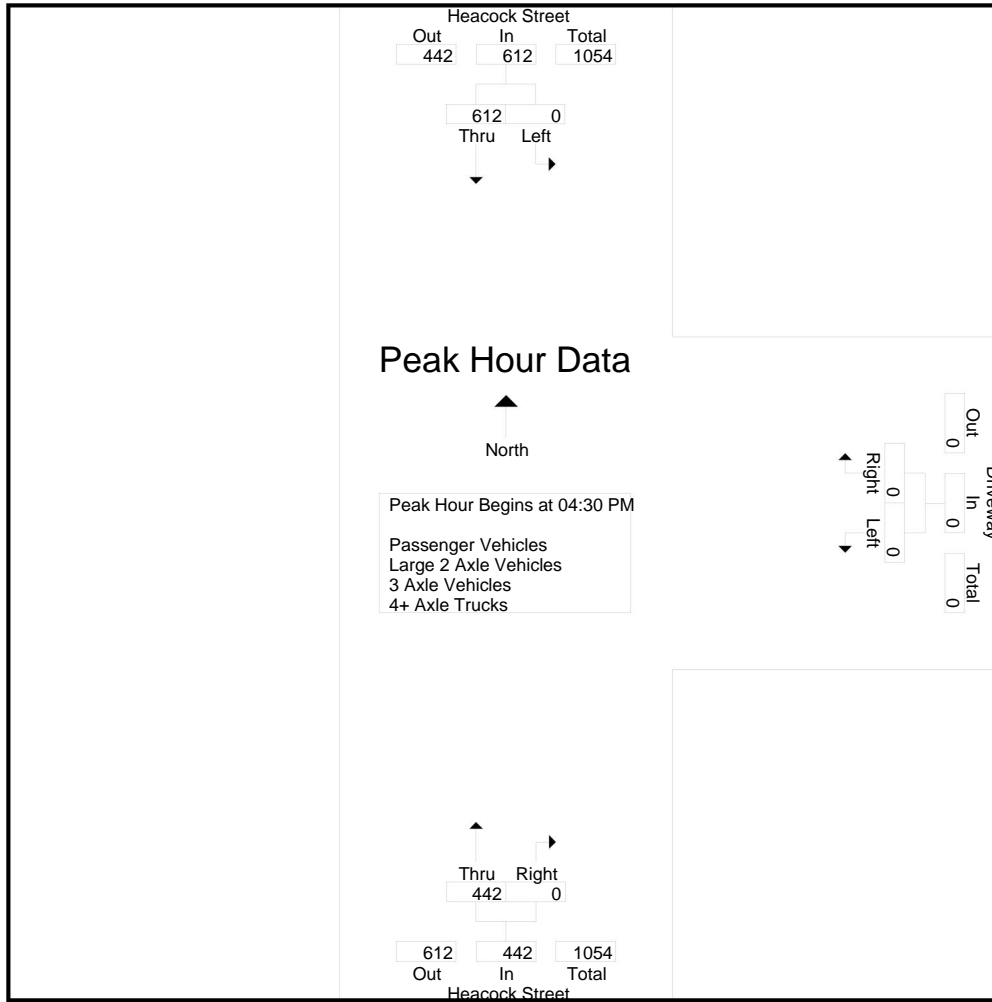
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Heacock Street Southbound			Driveway Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	106	106	0	0	0	107	0	107	213
04:15 PM	0	117	117	0	0	0	95	0	95	212
04:30 PM	0	157	157	0	0	0	155	0	155	312
04:45 PM	0	162	162	0	0	0	105	0	105	267
Total	0	542	542	0	0	0	462	0	462	1004
05:00 PM	0	134	134	0	0	0	96	0	96	230
05:15 PM	0	159	159	0	0	0	86	0	86	245
05:30 PM	0	134	134	0	0	0	109	0	109	243
05:45 PM	0	132	132	0	0	0	100	0	100	232
Total	0	559	559	0	0	0	391	0	391	950
Grand Total	0	1101	1101	0	0	0	853	0	853	1954
Apprch %	0	100		0	0		100	0		
Total %	0	56.3	56.3	0	0	0	43.7	0	43.7	
Passenger Vehicles	0	998	998	0	0	0	773	0	773	1771
% Passenger Vehicles	0	90.6	90.6	0	0	0	90.6	0	90.6	90.6
Large 2 Axle Vehicles	0	19	19	0	0	0	15	0	15	34
% Large 2 Axle Vehicles	0	1.7	1.7	0	0	0	1.8	0	1.8	1.7
3 Axle Vehicles	0	35	35	0	0	0	12	0	12	47
% 3 Axle Vehicles	0	3.2	3.2	0	0	0	1.4	0	1.4	2.4
4+ Axle Trucks	0	49	49	0	0	0	53	0	53	102
% 4+ Axle Trucks	0	4.5	4.5	0	0	0	6.2	0	6.2	5.2

Start Time	Heacock Street Southbound			Driveway Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	0	157	157	0	0	0	155	0	155	312
04:45 PM	0	162	162	0	0	0	105	0	105	267
05:00 PM	0	134	134	0	0	0	96	0	96	230
05:15 PM	0	159	159	0	0	0	86	0	86	245
Total Volume	0	612	612	0	0	0	442	0	442	1054
% App. Total	0	100		0	0		100	0		
PHF	.000	.944	.944	.000	.000	.000	.713	.000	.713	.845

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Driveway  
 Weather: Clear

File Name : MRV\_Heacock\_DW PM  
 Site Code : 05120414  
 Start Date : 10/28/2020  
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:30 PM			04:00 PM			04:00 PM		
+0 mins.	0	157	157	0	0	0	107	0	107
+15 mins.	0	<b>162</b>	<b>162</b>	0	0	0	95	0	95
+30 mins.	0	134	134	0	0	0	<b>155</b>	0	<b>155</b>
+45 mins.	0	159	159	0	0	0	105	0	105
Total Volume	0	612	612	0	0	0	462	0	462
% App. Total	0	100		0	0		100	0	
PHF	.000	.944	.944	.000	.000	.000	.745	.000	.745

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Driveway  
 Weather: Clear

File Name : MRV\_Heacock\_DW PM  
 Site Code : 05120414  
 Start Date : 10/28/2020  
 Page No : 1

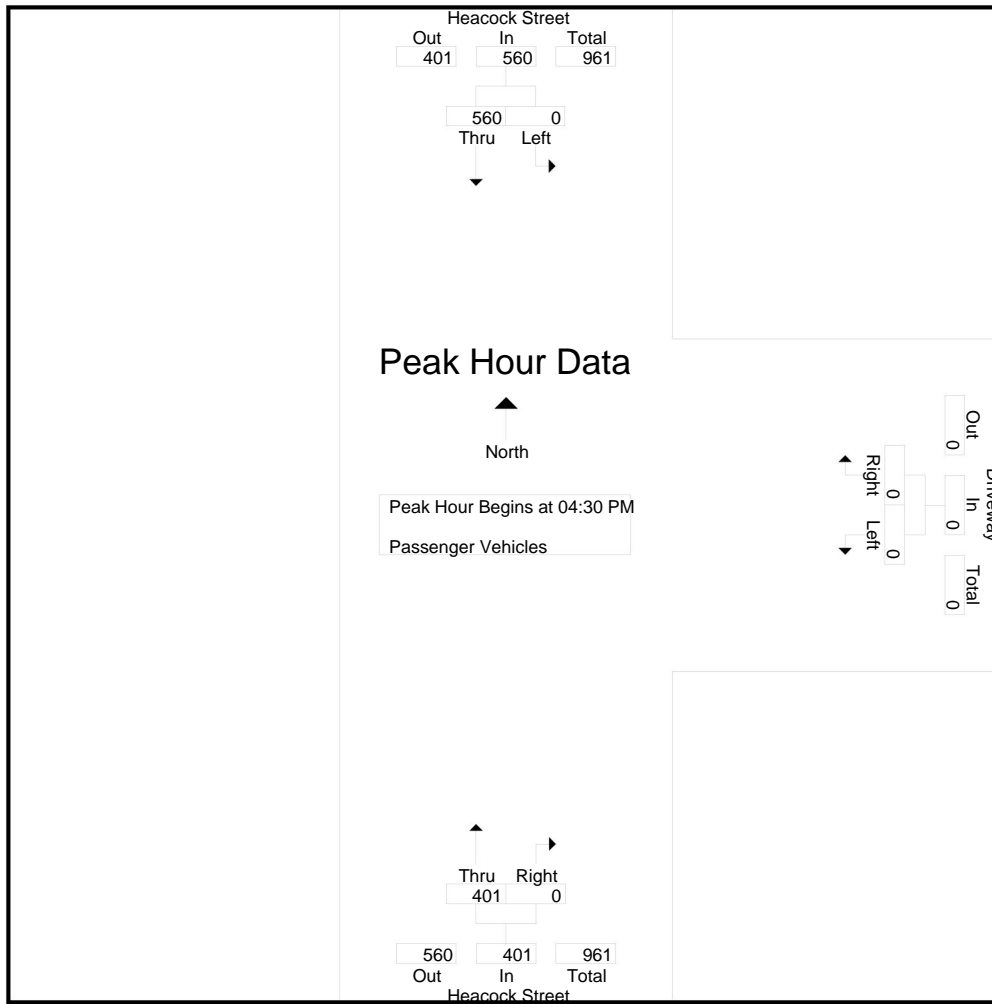
Groups Printed- Passenger Vehicles

Start Time	Heacock Street Southbound			Driveway Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	87	87	0	0	0	102	0	102	189
04:15 PM	0	106	106	0	0	0	88	0	88	194
04:30 PM	0	136	136	0	0	0	148	0	148	284
04:45 PM	0	149	149	0	0	0	93	0	93	242
Total	0	478	478	0	0	0	431	0	431	909
05:00 PM	0	123	123	0	0	0	88	0	88	211
05:15 PM	0	152	152	0	0	0	72	0	72	224
05:30 PM	0	124	124	0	0	0	95	0	95	219
05:45 PM	0	121	121	0	0	0	87	0	87	208
Total	0	520	520	0	0	0	342	0	342	862
Grand Total	0	998	998	0	0	0	773	0	773	1771
Apprch %	0	100		0	0		100	0		
Total %	0	56.4	56.4	0	0	0	43.6	0	43.6	

Start Time	Heacock Street Southbound			Driveway Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	0	136	136	0	0	0	<b>148</b>	0	<b>148</b>	<b>284</b>
04:45 PM	0	149	149	0	0	0	93	0	93	242
05:00 PM	0	123	123	0	0	0	88	0	88	211
05:15 PM	0	<b>152</b>	<b>152</b>	0	0	0	72	0	72	224
Total Volume	0	560	560	0	0	0	401	0	401	961
% App. Total	0	100		0	0		100	0		
PHF	.000	.921	.921	.000	.000	.000	.677	.000	.677	.846

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Driveway  
 Weather: Clear

File Name : MRV\_Heacock\_DW PM  
 Site Code : 05120414  
 Start Date : 10/28/2020  
 Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:30 PM			04:30 PM			04:30 PM		
+0 mins.	0	136	136	0	0	0	<b>148</b>	0	<b>148</b>
+15 mins.	0	149	149	0	0	0	93	0	93
+30 mins.	0	123	123	0	0	0	88	0	88
+45 mins.	0	<b>152</b>	<b>152</b>	0	0	0	72	0	72
Total Volume	0	560	560	0	0	0	401	0	401
% App. Total	0	100		0	0		100	0	
PHF	.000	.921	.921	.000	.000	.000	.677	.000	.677



City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Driveway  
 Weather: Clear

File Name : MRV\_Heacock\_DW PM  
 Site Code : 05120414  
 Start Date : 10/28/2020  
 Page No : 1

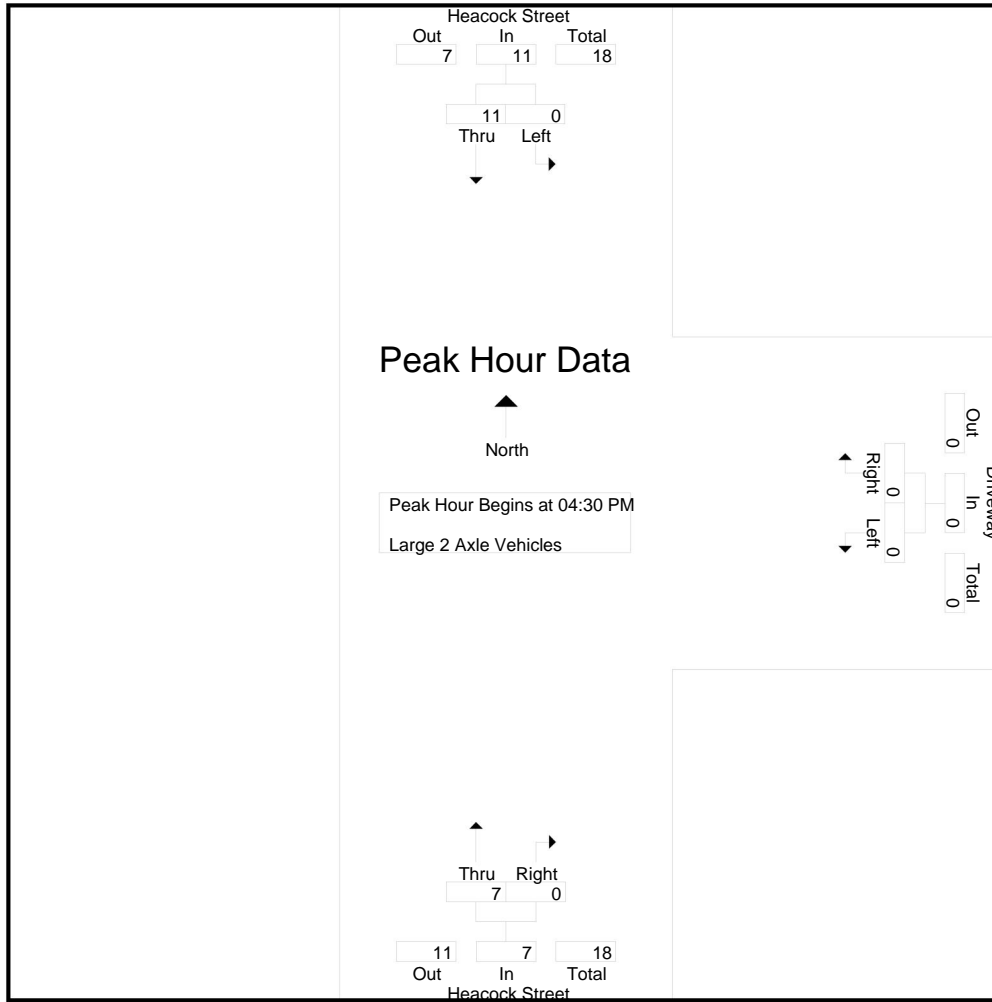
Groups Printed- Large 2 Axle Vehicles

Start Time	Heacock Street Southbound			Driveway Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	5	5	0	0	0	2	0	2	7
04:15 PM	0	1	1	0	0	0	2	0	2	3
04:30 PM	0	3	3	0	0	0	1	0	1	4
04:45 PM	0	4	4	0	0	0	1	0	1	5
Total	0	13	13	0	0	0	6	0	6	19
05:00 PM	0	3	3	0	0	0	2	0	2	5
05:15 PM	0	1	1	0	0	0	3	0	3	4
05:30 PM	0	1	1	0	0	0	2	0	2	3
05:45 PM	0	1	1	0	0	0	2	0	2	3
Total	0	6	6	0	0	0	9	0	9	15
Grand Total	0	19	19	0	0	0	15	0	15	34
Apprch %	0	100		0	0		100	0		
Total %	0	55.9	55.9	0	0	0	44.1	0	44.1	

Start Time	Heacock Street Southbound			Driveway Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	0	3	3	0	0	0	1	0	1	4
04:45 PM	0	4	4	0	0	0	1	0	1	5
05:00 PM	0	3	3	0	0	0	2	0	2	5
05:15 PM	0	1	1	0	0	0	3	0	3	4
Total Volume	0	11	11	0	0	0	7	0	7	18
% App. Total	0	100		0	0		100	0		
PHF	.000	.688	.688	.000	.000	.000	.583	.000	.583	.900

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Driveway  
 Weather: Clear

File Name : MRV\_Heacock\_DW PM  
 Site Code : 05120414  
 Start Date : 10/28/2020  
 Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:30 PM			04:30 PM			04:30 PM		
+0 mins.	0	3	3	0	0	0	1	0	1
+15 mins.	0	4	4	0	0	0	1	0	1
+30 mins.	0	3	3	0	0	0	2	0	2
+45 mins.	0	1	1	0	0	0	3	0	3
Total Volume	0	11	11	0	0	0	7	0	7
% App. Total	0	100		0	0		100	0	
PHF	.000	.688	.688	.000	.000	.000	.583	.000	.583

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Driveway  
 Weather: Clear

File Name : MRV\_Heacock\_DW PM  
 Site Code : 05120414  
 Start Date : 10/28/2020  
 Page No : 1

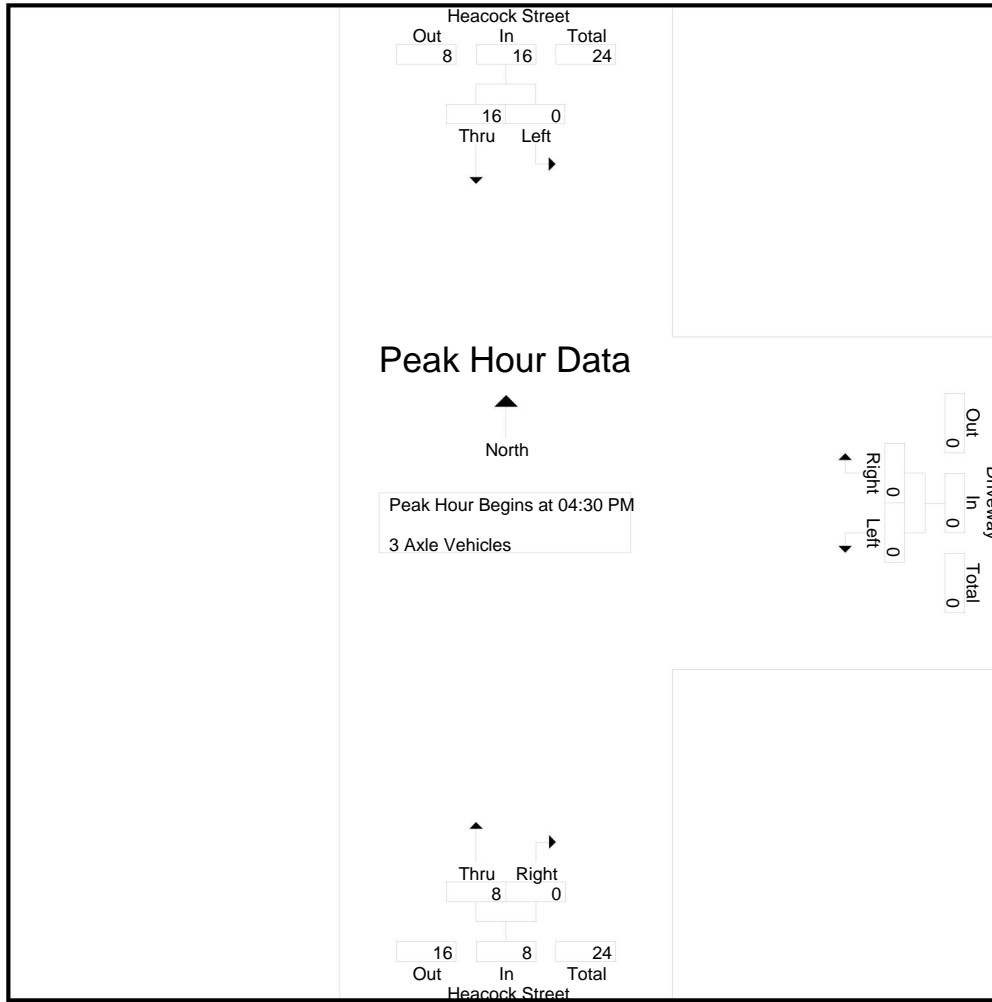
Groups Printed- 3 Axle Vehicles

Start Time	Heacock Street Southbound			Driveway Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	8	8	0	0	0	1	0	1	9
04:15 PM	0	6	6	0	0	0	0	0	0	6
04:30 PM	0	11	11	0	0	0	2	0	2	13
04:45 PM	0	0	0	0	0	0	2	0	2	2
Total	0	25	25	0	0	0	5	0	5	30
05:00 PM	0	3	3	0	0	0	1	0	1	4
05:15 PM	0	2	2	0	0	0	3	0	3	5
05:30 PM	0	3	3	0	0	0	1	0	1	4
05:45 PM	0	2	2	0	0	0	2	0	2	4
Total	0	10	10	0	0	0	7	0	7	17
Grand Total	0	35	35	0	0	0	12	0	12	47
Apprch %	0	100		0	0		100	0		
Total %	0	74.5	74.5	0	0	0	25.5	0	25.5	

Start Time	Heacock Street Southbound			Driveway Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	0	11	11	0	0	0	2	0	2	13
04:45 PM	0	0	0	0	0	0	2	0	2	2
05:00 PM	0	3	3	0	0	0	1	0	1	4
05:15 PM	0	2	2	0	0	0	3	0	3	5
Total Volume	0	16	16	0	0	0	8	0	8	24
% App. Total	0	100		0	0		100	0		
PHF	.000	.364	.364	.000	.000	.000	.667	.000	.667	.462

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Driveway  
 Weather: Clear

File Name : MRV\_Heacock\_DW PM  
 Site Code : 05120414  
 Start Date : 10/28/2020  
 Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:30 PM			04:30 PM			04:30 PM		
+0 mins.	0	11	11	0	0	0	2	0	2
+15 mins.	0	0	0	0	0	0	2	0	2
+30 mins.	0	3	3	0	0	0	1	0	1
+45 mins.	0	2	2	0	0	0	3	0	3
Total Volume	0	16	16	0	0	0	8	0	8
% App. Total	0	100		0	0		100	0	
PHF	.000	.364	.364	.000	.000	.000	.667	.000	.667

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Driveway  
 Weather: Clear

File Name : MRV\_Heacock\_DW PM  
 Site Code : 05120414  
 Start Date : 10/28/2020  
 Page No : 1

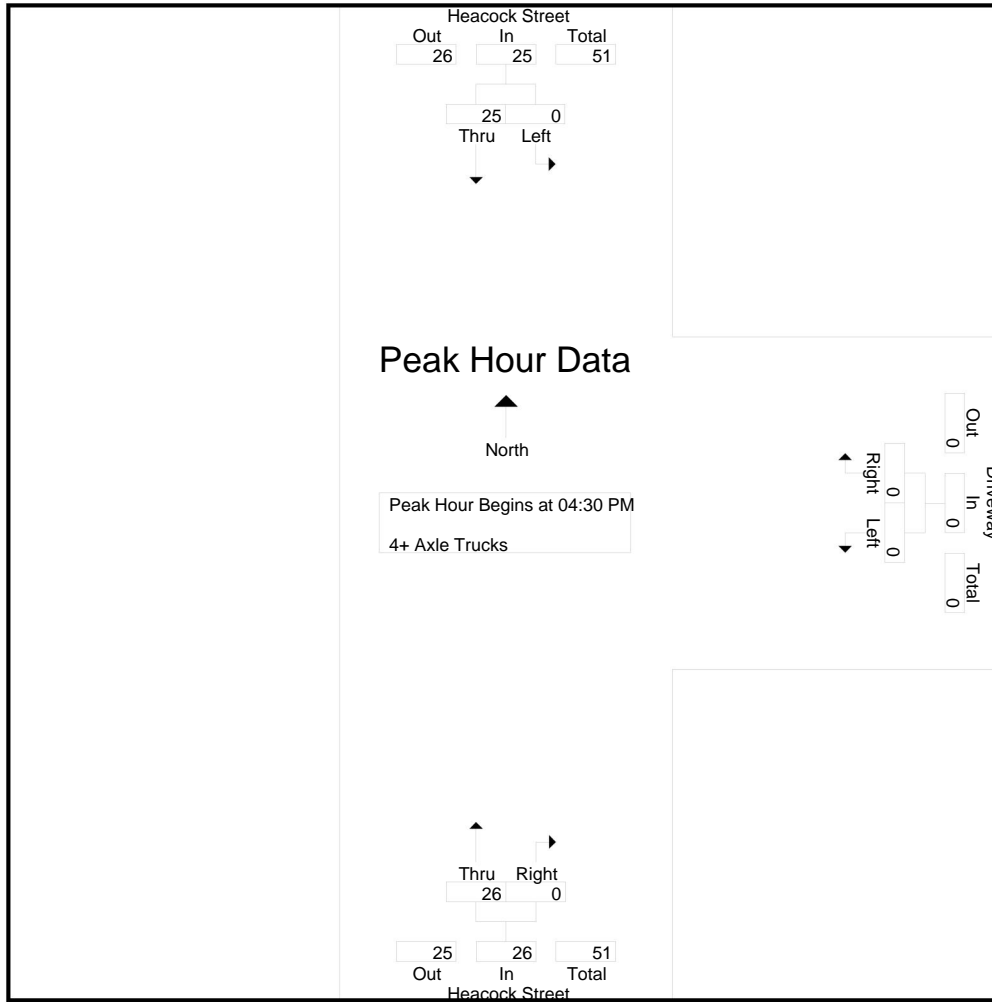
Groups Printed- 4+ Axle Trucks

Start Time	Heacock Street Southbound			Driveway Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	6	6	0	0	0	2	0	2	8
04:15 PM	0	4	4	0	0	0	5	0	5	9
04:30 PM	0	7	7	0	0	0	4	0	4	11
04:45 PM	0	9	9	0	0	0	9	0	9	18
Total	0	26	26	0	0	0	20	0	20	46
05:00 PM	0	5	5	0	0	0	5	0	5	10
05:15 PM	0	4	4	0	0	0	8	0	8	12
05:30 PM	0	6	6	0	0	0	11	0	11	17
05:45 PM	0	8	8	0	0	0	9	0	9	17
Total	0	23	23	0	0	0	33	0	33	56
Grand Total	0	49	49	0	0	0	53	0	53	102
Apprch %	0	100		0	0		100	0		
Total %	0	48	48	0	0	0	52	0	52	

Start Time	Heacock Street Southbound			Driveway Westbound			Heacock Street Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	0	7	7	0	0	0	4	0	4	11
04:45 PM	0	<b>9</b>	<b>9</b>	0	0	0	<b>9</b>	0	<b>9</b>	<b>18</b>
05:00 PM	0	5	5	0	0	0	5	0	5	10
05:15 PM	0	4	4	0	0	0	8	0	8	12
Total Volume	0	25	25	0	0	0	26	0	26	51
% App. Total	0	100		0	0		100	0		
PHF	.000	.694	.694	.000	.000	.000	.722	.000	.722	.708

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: Driveway  
 Weather: Clear

File Name : MRV\_Heacock\_DW PM  
 Site Code : 05120414  
 Start Date : 10/28/2020  
 Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:30 PM			04:30 PM			04:30 PM		
+0 mins.	0	7	7	0	0	0	4	0	4
+15 mins.	0	9	9	0	0	0	9	0	9
+30 mins.	0	5	5	0	0	0	5	0	5
+45 mins.	0	4	4	0	0	0	8	0	8
Total Volume	0	25	25	0	0	0	26	0	26
% App. Total	0	100		0	0		100	0	
PHF	.000	.694	.694	.000	.000	.000	.722	.000	.722

Location: Moreno Valley  
 N/S: Heacock Street  
 E/W: Driveway



Date: 10/29/2020  
 Day: Thursday

PEDESTRIANS

	North Leg Heacock Street	East Leg Driveway	South Leg Heacock Street	West Leg Dead End	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg Heacock Street	East Leg Driveway	South Leg Heacock Street	West Leg Dead End	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

Location: Moreno Valley  
 N/S: Heacock Street  
 E/W: Driveway



Date: 10/29/2020  
 Day: Thursday

BICYCLES

	Southbound Heacock Street			Westbound Driveway			Northbound Heacock Street			Eastbound Dead End			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound Heacock Street			Westbound Driveway			Northbound Heacock Street			Eastbound Dead End			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	1	0	0	0	0	1



City of Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road  
 Weather: Clear

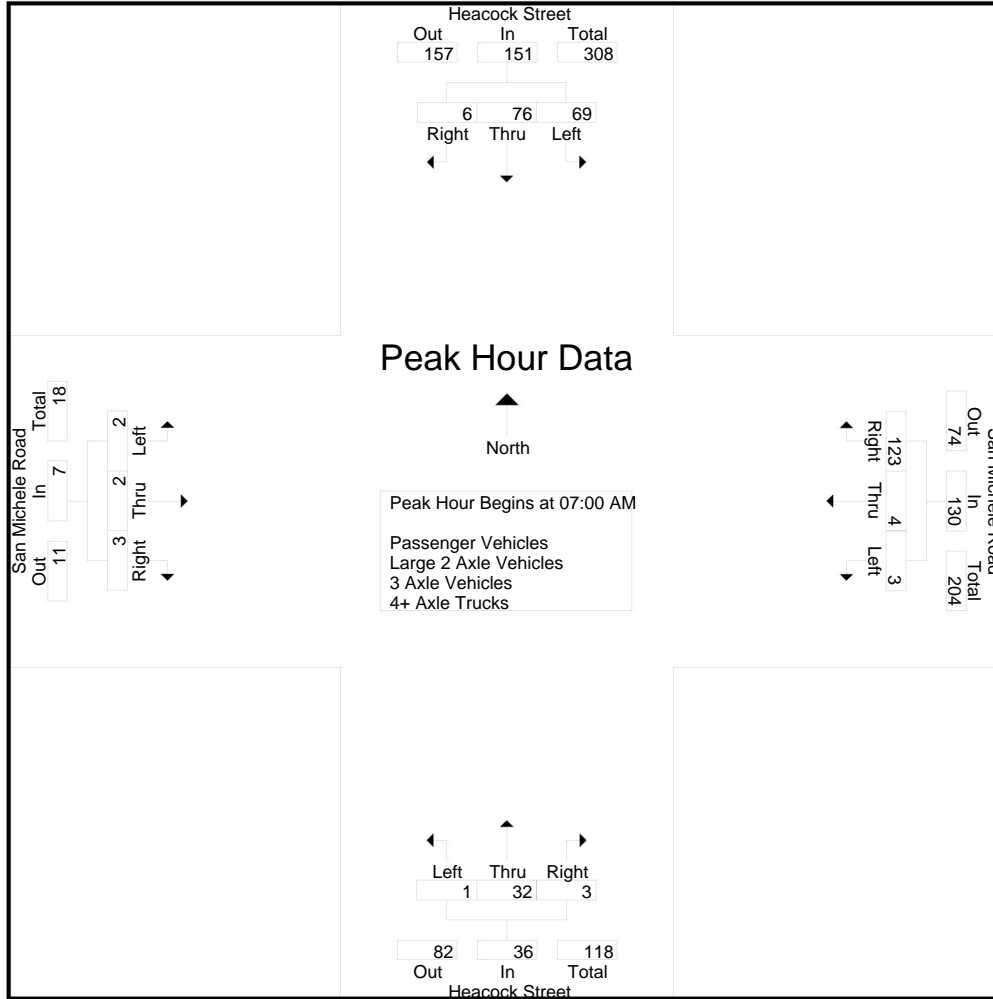
File Name : MRVHESMAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Heacock Street Southbound					San Michele Road Westbound					Heacock Street Northbound					San Michele Road Eastbound					Exclu. Total	Inclu. Total		
	Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR			App. Total	
	07:00 AM	7	17	2	0	26	1	2	20	6	23	1	8	2	0	11	0	2	1	1	3	7	63	
	07:15 AM	30	24	2	1	56	1	0	41	21	42	0	7	0	0	7	2	0	1	0	3	22	108	
	07:30 AM	14	17	2	0	33	1	1	31	11	33	0	6	0	0	6	0	0	1	1	1	12	73	
	07:45 AM	18	18	0	0	36	0	1	31	12	32	0	11	1	0	12	0	0	0	0	0	12	80	
	<b>Total</b>	<b>69</b>	<b>76</b>	<b>6</b>	<b>1</b>	<b>151</b>	<b>3</b>	<b>4</b>	<b>123</b>	<b>50</b>	<b>130</b>	<b>1</b>	<b>32</b>	<b>3</b>	<b>0</b>	<b>36</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>2</b>	<b>7</b>	<b>53</b>	<b>324</b>	
	08:00 AM	12	8	0	0	20	0	0	23	3	23	0	5	1	0	6	0	0	0	0	0	3	49	
	08:15 AM	9	9	1	1	19	1	1	16	7	18	0	6	0	0	6	0	0	1	0	1	8	44	
	08:30 AM	11	7	2	1	20	0	1	10	2	11	0	1	0	0	1	0	0	0	0	0	3	32	
	08:45 AM	6	10	1	0	17	1	1	11	5	13	0	4	1	0	5	0	0	1	0	1	5	36	
	<b>Total</b>	<b>38</b>	<b>34</b>	<b>4</b>	<b>2</b>	<b>76</b>	<b>2</b>	<b>3</b>	<b>60</b>	<b>17</b>	<b>65</b>	<b>0</b>	<b>16</b>	<b>2</b>	<b>0</b>	<b>18</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>19</b>	<b>161</b>	
	<b>Grand Total</b>	<b>107</b>	<b>110</b>	<b>10</b>	<b>3</b>	<b>227</b>	<b>5</b>	<b>7</b>	<b>183</b>	<b>67</b>	<b>195</b>	<b>1</b>	<b>48</b>	<b>5</b>	<b>0</b>	<b>54</b>	<b>2</b>	<b>2</b>	<b>5</b>	<b>2</b>	<b>9</b>	<b>72</b>	<b>485</b>	
	Apprch %	47.1	48.5	4.4			2.6	3.6	93.8			1.9	88.9	9.3			22.2	22.2	55.6					
	Total %	22.1	22.7	2.1		46.8	1	1.4	37.7		40.2	0.2	9.9	1		11.1	0.4	0.4	1		1.9	12.9	87.1	
3.1-505	Passenger Vehicles	96	93	8		200	2	5	170		237	1	39	3		43	2	0	4		8	0	0	
	% Passenger Vehicles	89.7	84.5	80	100	87	40	71.4	92.9	89.6	90.5	100	81.2	60	0	79.6	100	0	80	100	72.7	0	0	
	Large 2 Axle Vehicles	1	5	2		8	1	2	3		8	0	5	1		6	0	0	1		1	0	0	
	% Large 2 Axle Vehicles	0.9	4.5	20	0	3.5	20	28.6	1.6	3	3.1	0	10.4	20	0	11.1	0	0	20	0	9.1	0	0	
	3 Axle Vehicles	2	4	0		6	0	0	1		1	0	0	0		0	0	2	0		2	0	0	
	% 3 Axle Vehicles	1.9	3.6	0	0	2.6	0	0	0.5	0	0.4	0	0	0	0	0	0	0	100	0	0	18.2	0	0
	4+ Axle Trucks	8	8	0		16	2	0	9		16	0	4	1		5	0	0	0		0	0	0	
% 4+ Axle Trucks	7.5	7.3	0	0	7	40	0	4.9	7.5	6.1	0	8.3	20	0	9.3	0	0	0	0	0	0	0	0	

	Heacock Street Southbound				San Michele Road Westbound				Heacock Street Northbound				San Michele Road Eastbound				Int. Total	
	Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right		App. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 07:00 AM																		
	07:00 AM	7	17	2	26	1	2	20	23	1	8	2	11	0	2	1	3	63
	07:15 AM	30	24	2	56	1	0	41	42	0	7	0	7	2	0	1	3	108
	07:30 AM	14	17	2	33	1	1	31	33	0	6	0	6	0	0	1	1	73
	07:45 AM	18	18	0	36	0	1	31	32	0	11	1	12	0	0	0	0	80
	<b>Total Volume</b>	<b>69</b>	<b>76</b>	<b>6</b>	<b>151</b>	<b>3</b>	<b>4</b>	<b>123</b>	<b>130</b>	<b>1</b>	<b>32</b>	<b>3</b>	<b>36</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>7</b>	<b>324</b>
	% App. Total	45.7	50.3	4		2.3	3.1	94.6		2.8	88.9	8.3		28.6	28.6	42.9		
	PHF	.575	.792	.750	.674	.750	.500	.750	.774	.250	.727	.375	.750	.250	.250	.750	.583	.750

3.1-506



Counts Unlimited, Inc.  
 PO Box 1178  
 Corona, CA 92787  
 (951) 268-6268

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVHESMAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Heacock Street Southbound				San Michele Road Westbound				Heacock Street Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	7	17	2	26	1	2	20	23	1	8	2	11	0	2	1	3	
+15 mins.	30	24	2	56	1	0	41	42	0	7	0	7	2	0	1	3	
+30 mins.	14	17	2	33	1	1	31	33	0	6	0	6	0	0	1	1	
+45 mins.	18	18	0	36	0	1	31	32	0	11	1	12	0	0	0	0	
Total Volume	69	76	6	151	3	4	123	130	1	32	3	36	2	2	3	7	
% App. Total	45.7	50.3	4		2.3	3.1	94.6		2.8	88.9	8.3		28.6	28.6	42.9		
PHF	.575	.792	.750	.674	.750	.500	.750	.774	.250	.727	.375	.750	.250	.250	.750	.583	

3.1-507

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVHESMAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- Passenger Vehicles

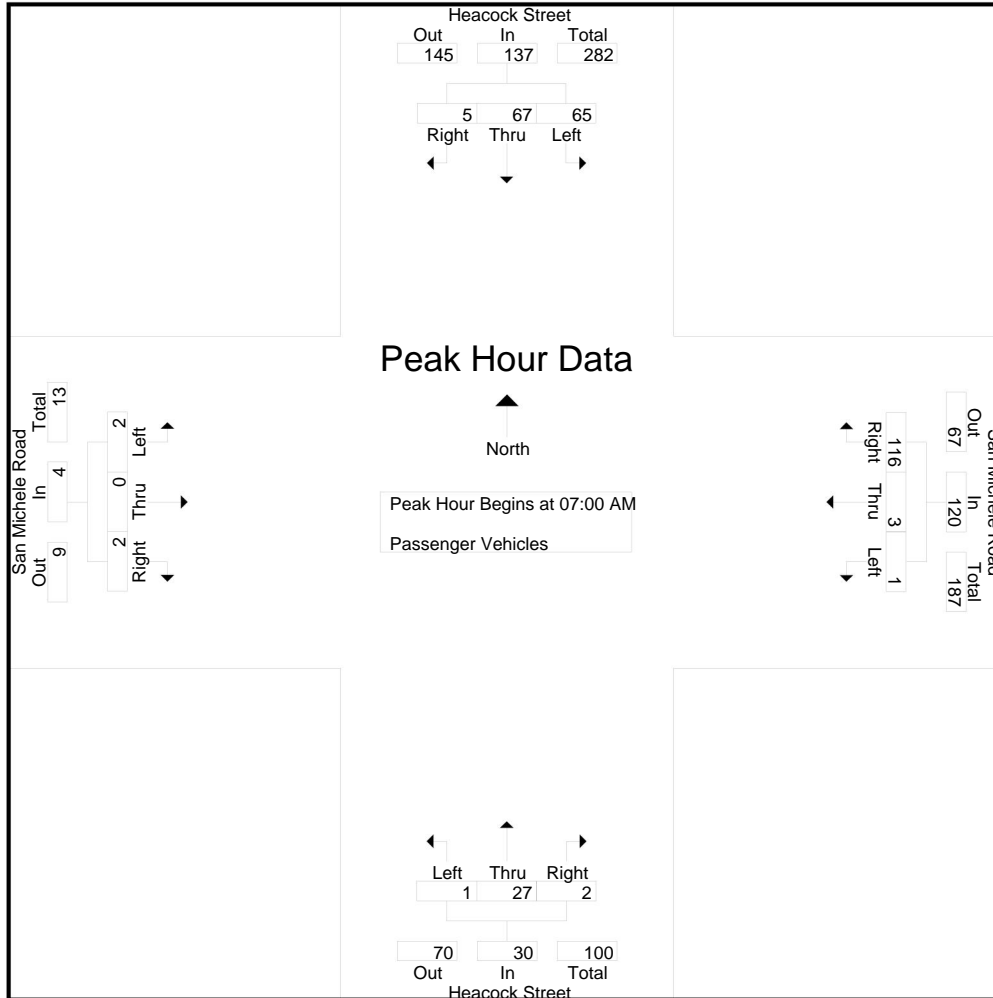
Start Time	Heacock Street Southbound					San Michele Road Westbound					Heacock Street Northbound					San Michele Road Eastbound					Exclu. Total	Inclu. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total		
07:00 AM	5	15	1	0	21	1	2	20	6	23	1	6	1	0	8	0	0	1	1	1	7	53
07:15 AM	30	23	2	1	55	0	0	38	20	38	0	6	0	0	6	2	0	0	0	2	21	101
07:30 AM	13	14	2	0	29	0	1	31	10	32	0	6	0	0	6	0	0	1	1	1	11	68
07:45 AM	17	15	0	0	32	0	0	27	9	27	0	9	1	0	10	0	0	0	0	0	9	69
Total	65	67	5	1	137	1	3	116	45	120	1	27	2	0	30	2	0	2	2	4	48	291
08:00 AM	10	7	0	0	17	0	0	22	3	22	0	3	1	0	4	0	0	0	0	0	3	43
08:15 AM	5	8	1	1	14	1	1	14	6	16	0	6	0	0	6	0	0	1	0	1	7	37
08:30 AM	11	4	1	1	16	0	0	8	2	8	0	1	0	0	1	0	0	0	0	0	3	25
08:45 AM	5	7	1	0	13	0	1	10	4	11	0	2	0	0	2	0	0	1	0	1	4	27
Total	31	26	3	2	60	1	2	54	15	57	0	12	1	0	13	0	0	2	0	2	17	132
Grand Total	96	93	8	3	197	2	5	170	60	177	1	39	3	0	43	2	0	4	2	6	65	423
Apprch %	48.7	47.2	4.1			1.1	2.8	96			2.3	90.7	7			33.3	0	66.7				
Total %	22.7	22	1.9		46.6	0.5	1.2	40.2		41.8	0.2	9.2	0.7		10.2	0.5	0	0.9		1.4	13.3	86.7

3.1-508

Start Time	Heacock Street Southbound				San Michele Road Westbound				Heacock Street Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	5	15	1	21	1	2	20	23	1	6	1	8	0	0	1	1	53
07:15 AM	30	23	2	55	0	0	38	38	0	6	0	6	2	0	0	2	101
07:30 AM	13	14	2	29	0	1	31	32	0	6	0	6	0	0	1	1	68
07:45 AM	17	15	0	32	0	0	27	27	0	9	1	10	0	0	0	0	69
Total Volume	65	67	5	137	1	3	116	120	1	27	2	30	2	0	2	4	291
% App. Total	47.4	48.9	3.6		0.8	2.5	96.7		3.3	90	6.7		50	0	50		
PHF	.542	.728	.625	.623	.250	.375	.763	.789	.250	.750	.500	.750	.250	.000	.500	.500	.720

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVHESMAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 2



3.1-509

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVHESMAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Heacock Street Southbound				San Michele Road Westbound				Heacock Street Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	5	15	1	21	1	2	20	23	1	6	1	8	0	0	1	1	
+15 mins.	30	23	2	55	0	0	38	38	0	6	0	6	2	0	0	2	
+30 mins.	13	14	2	29	0	1	31	32	0	6	0	6	0	0	1	1	
+45 mins.	17	15	0	32	0	0	27	27	0	9	1	10	0	0	0	0	
Total Volume	65	67	5	137	1	3	116	120	1	27	2	30	2	0	2	4	
% App. Total	47.4	48.9	3.6		0.8	2.5	96.7		3.3	90	6.7		50	0	50		
PHF	.542	.728	.625	.623	.250	.375	.763	.789	.250	.750	.500	.750	.250	.000	.500	.500	

3.1-510

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVHESMAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

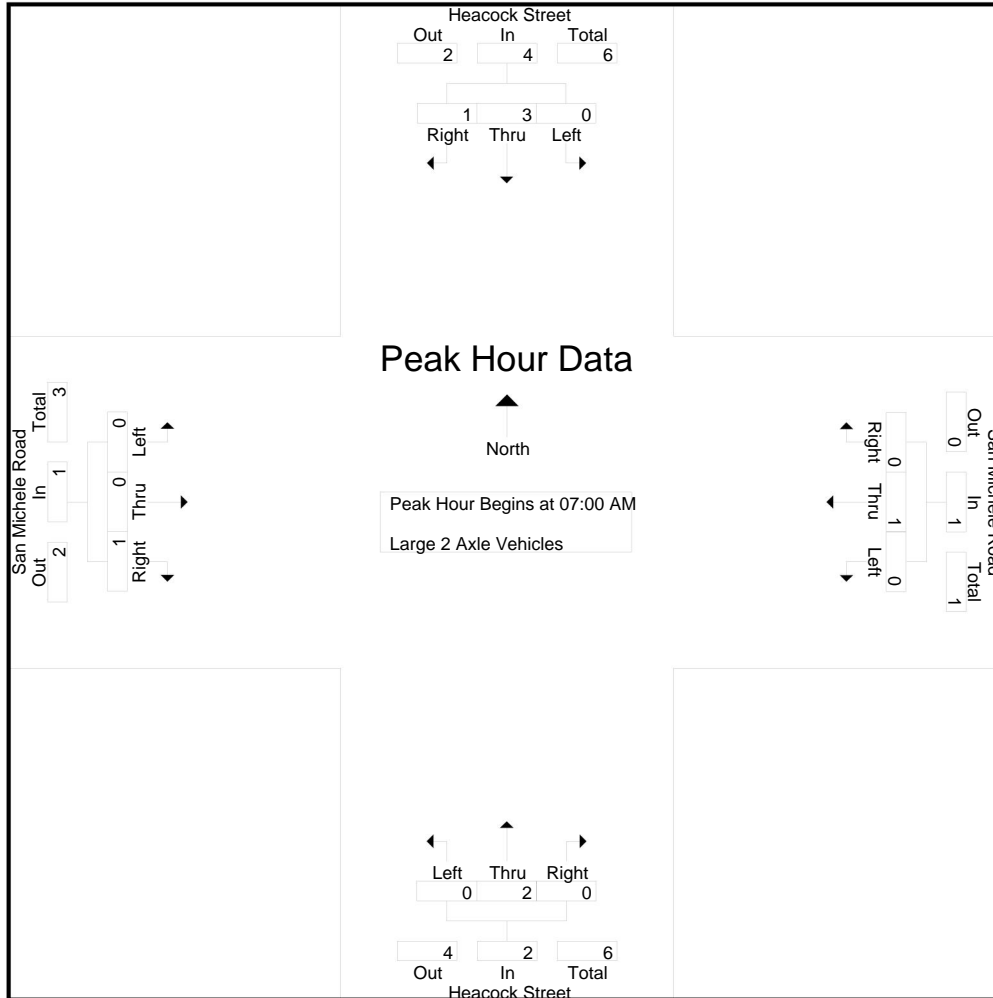
Start Time	Heacock Street Southbound					San Michele Road Westbound					Heacock Street Northbound					San Michele Road Eastbound					Exclu. Total	Inclu. Total					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total							
07:00 AM	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
07:45 AM	0	3	0	0	3	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	5
Total	0	3	1	0	4	0	1	0	1	1	0	2	0	0	2	0	0	1	0	1	0	0	0	0	0	1	8
08:00 AM	0	0	0	0	0	0	0	1	0	1	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	3
08:15 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:30 AM	0	2	1	0	3	0	1	2	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
08:45 AM	0	0	0	0	0	1	0	0	1	1	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	1	3
Total	1	2	1	0	4	1	1	3	1	5	0	3	1	0	4	0	0	0	0	0	0	0	0	0	0	1	13
Grand Total	1	5	2	0	8	1	2	3	2	6	0	5	1	0	6	0	0	1	0	1	0	0	0	0	0	2	21
Apprch %	12.5	62.5	25			16.7	33.3	50			0	83.3	16.7			0	0	100									
Total %	4.8	23.8	9.5		38.1	4.8	9.5	14.3		28.6	0	23.8	4.8		28.6	0	0	4.8		4.8						8.7	91.3

3.1-511

Start Time	Heacock Street Southbound				San Michele Road Westbound				Heacock Street Northbound				San Michele Road Eastbound				Int. Total				
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total					
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	0	0	1	1	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	2
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	3	0	3	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	5
Total Volume	0	3	1	4	0	1	0	1	0	2	0	2	0	0	1	1	0	0	0	0	8
% App. Total	0	75	25		0	100	0		0	100	0		0	0	100						
PHF	.000	.250	.250	.333	.000	.250	.000	.250	.000	.500	.000	.500	.000	.000	.250	.250					.400

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVHESMAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 2



3.1-512



City of Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVHESMAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Heacock Street Southbound				San Michele Road Westbound				Heacock Street Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	0	1	1	0	0	0	0	0	1	0	1	0	0	0	0	
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
+45 mins.	0	3	0	3	0	1	0	1	0	1	0	1	0	0	0	0	
Total Volume	0	3	1	4	0	1	0	1	0	2	0	2	0	0	1	1	
% App. Total	0	75	25		0	100	0		0	100	0		0	0	100		
PHF	.000	.250	.250	.333	.000	.250	.000	.250	.000	.500	.000	.500	.000	.000	.250	.250	

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVHESMAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- 3 Axle Vehicles

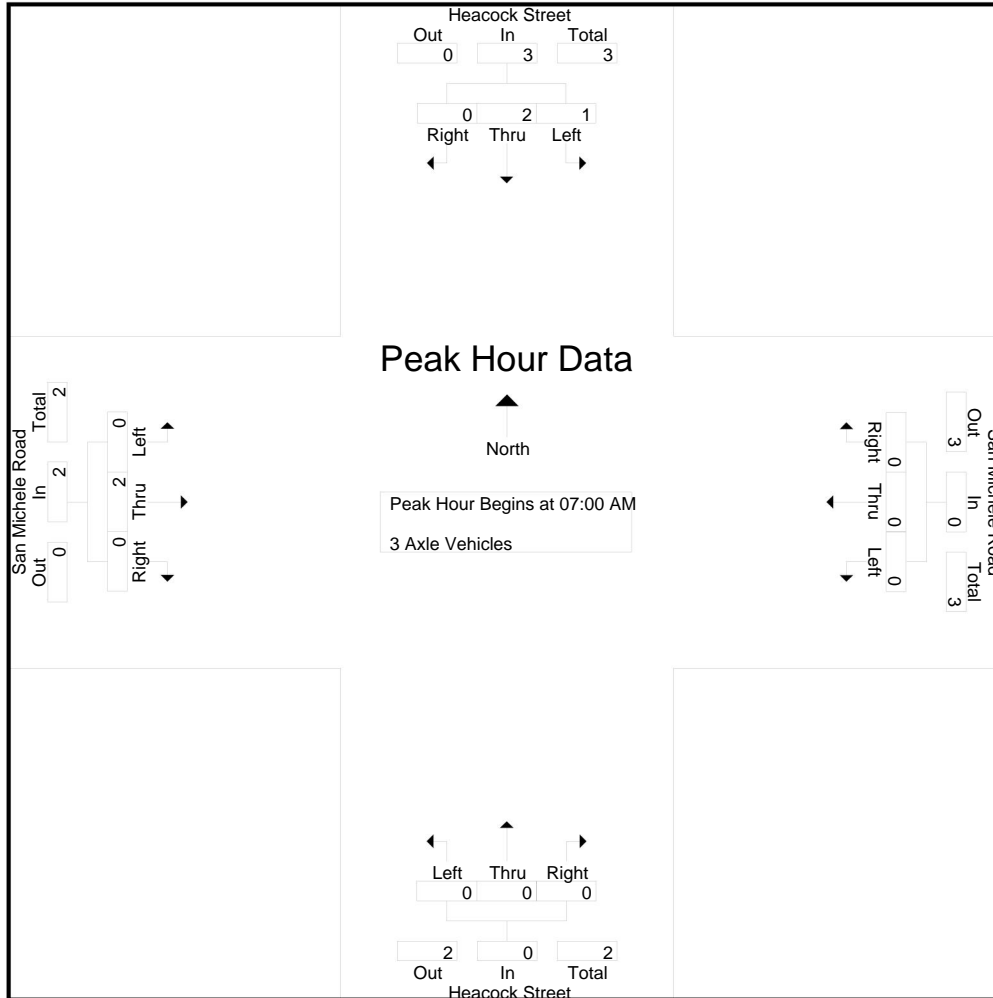
Start Time	Heacock Street Southbound					San Michele Road Westbound					Heacock Street Northbound					San Michele Road Eastbound					Exclu. Total	Inclu. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total		
07:00 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	3
07:15 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	2	0	0	3	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	5
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2
Total	1	2	0	0	3	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	4
Grand Total	2	4	0	0	6	0	0	1	0	1	0	0	0	0	0	0	2	0	0	2	0	9
Apprch %	33.3	66.7	0			0	0	100			0	0	0			0	100	0				
Total %	22.2	44.4	0		66.7	0	0	11.1		11.1	0	0	0		0	0	22.2	0		22.2	0	100

3.1-514

Start Time	Heacock Street Southbound				San Michele Road Westbound				Heacock Street Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	2	0	2	3
07:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	1	2	0	3	0	0	0	0	0	0	0	0	0	2	0	2	5
% App. Total	33.3	66.7	0		0	0	0		0	0	0		0	100	0		
PHF	.250	.500	.000	.750	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.417

City of Moreno Valley  
N/S: Heacock Street  
E/W: San Michele Road  
Weather: Clear

File Name : MRVHESMAM  
Site Code : 05115223  
Start Date : 4/28/2015  
Page No : 2



3.1-515

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVHESMAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Heacock Street Southbound				San Michele Road Westbound				Heacock Street Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	1	0	0	1	0	0	0	0	0	0	0	0	0	2	0	2	
+15 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	
+30 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Volume	1	2	0	3	0	0	0	0	0	0	0	0	0	2	0	2	
% App. Total	33.3	66.7	0		0	0	0		0	0	0		0	100	0		
PHF	.250	.500	.000	.750	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVHESMAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- 4+ Axle Trucks

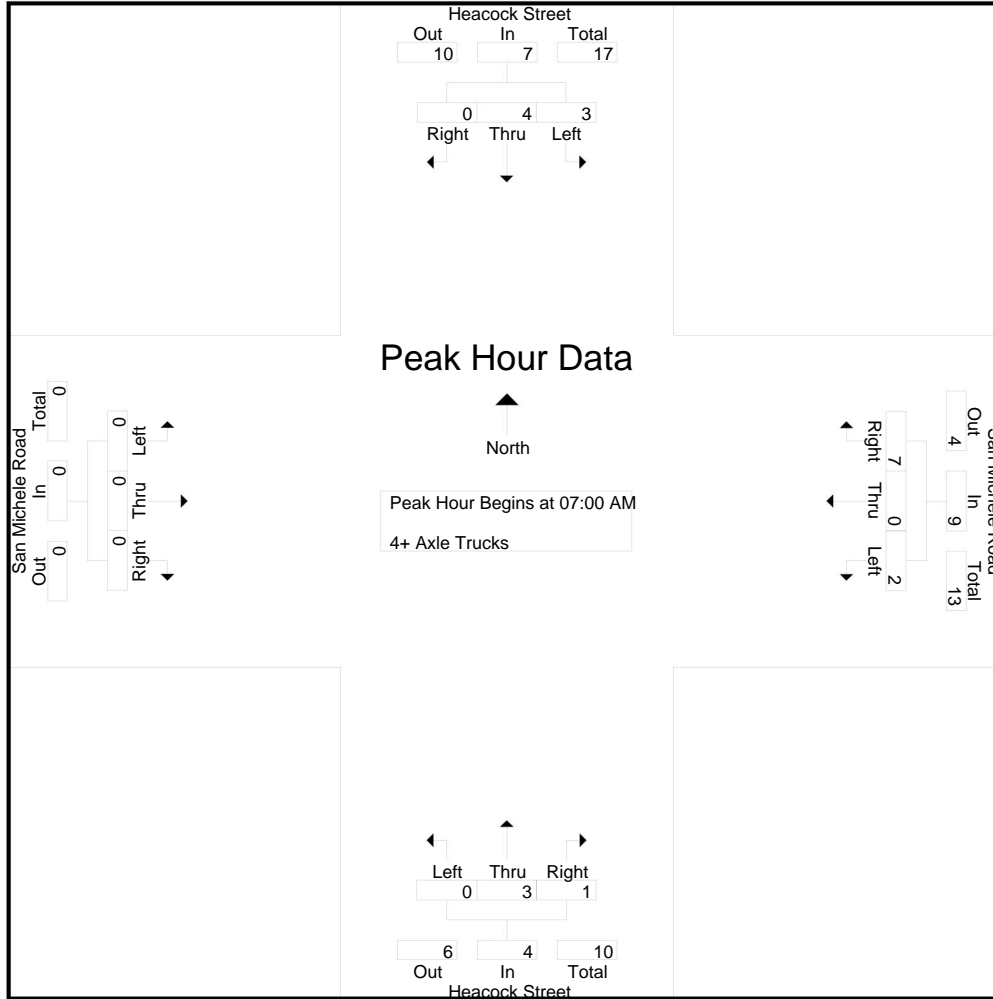
Start Time	Heacock Street Southbound					San Michele Road Westbound					Heacock Street Northbound					San Michele Road Eastbound					Exclu. Total	Inclu. Total	
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	1	2	0	0	3	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	0	5
07:15 AM	0	0	0	0	0	1	0	3	1	4	0	1	0	0	1	0	0	0	0	0	0	1	5
07:30 AM	1	2	0	0	3	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	4
07:45 AM	1	0	0	0	1	0	0	4	3	4	0	1	0	0	1	0	0	0	0	0	0	3	6
Total	3	4	0	0	7	2	0	7	4	9	0	3	1	0	4	0	0	0	0	0	0	4	20
08:00 AM	2	1	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
08:15 AM	2	0	0	0	2	0	0	2	1	2	0	0	0	0	0	0	0	0	0	0	0	1	4
08:30 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:45 AM	1	2	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	4
Total	5	4	0	0	9	0	0	2	1	2	0	1	0	0	1	0	0	0	0	0	0	1	12
Grand Total	8	8	0	0	16	2	0	9	5	11	0	4	1	0	5	0	0	0	0	0	0	5	32
Apprch %	50	50	0			18.2	0	81.8			0	80	20			0	0	0					
Total %	25	25	0		50	6.2	0	28.1		34.4	0	12.5	3.1		15.6	0	0	0			0	13.5	86.5

3.1-517

Start Time	Heacock Street Southbound				San Michele Road Westbound				Heacock Street Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	1	2	0	3	0	0	0	0	0	1	1	2	0	0	0	0	5
07:15 AM	0	0	0	0	1	0	3	4	0	1	0	1	0	0	0	0	5
07:30 AM	1	2	0	3	1	0	0	1	0	0	0	0	0	0	0	0	4
07:45 AM	1	0	0	1	0	0	4	4	0	1	0	1	0	0	0	0	6
Total Volume	3	4	0	7	2	0	7	9	0	3	1	4	0	0	0	0	20
% App. Total	42.9	57.1	0		22.2	0	77.8		0	75	25		0	0	0		
PHF	.750	.500	.000	.583	.500	.000	.438	.563	.000	.750	.250	.500	.000	.000	.000	.000	.833

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVHESMAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 2



3.1-518

Counts Unlimited, Inc.  
 PO Box 1178  
 Corona, CA 92787  
 (951) 268-6268

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVHESMAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Heacock Street Southbound				San Michele Road Westbound				Heacock Street Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	1	2	0	3	0	0	0	0	0	1	1	2	0	0	0	0	
+15 mins.	0	0	0	0	1	0	3	4	0	1	0	1	0	0	0	0	
+30 mins.	1	2	0	3	1	0	0	1	0	0	0	0	0	0	0	0	
+45 mins.	1	0	0	1	0	0	4	4	0	1	0	1	0	0	0	0	
Total Volume	3	4	0	7	2	0	7	9	0	3	1	4	0	0	0	0	
% App. Total	42.9	57.1	0		22.2	0	77.8		0	75	25		0	0	0		
PHF	.750	.500	.000	.583	.500	.000	.438	.563	.000	.750	.250	.500	.000	.000	.000	.000	

3.1-519

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVHESMPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Heacock Street Southbound					San Michele Road Westbound					Heacock Street Northbound					San Michele Road Eastbound					Exclu. Total	Inclu. Total
	Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR		
04:00 PM	19	24	0	0	43	1	0	24	0	25	0	3	2	0	5	1	2	1	0	4	0	77
04:15 PM	26	20	1	0	47	0	0	24	0	24	0	12	0	0	12	0	0	2	0	2	0	85
04:30 PM	50	45	1	0	96	7	0	81	0	88	0	33	1	2	34	9	2	2	0	13	2	231
04:45 PM	46	55	1	0	102	4	0	56	0	60	0	26	1	0	27	1	3	2	0	6	0	195
<b>Total</b>	<b>141</b>	<b>144</b>	<b>3</b>	<b>0</b>	<b>288</b>	<b>12</b>	<b>0</b>	<b>185</b>	<b>0</b>	<b>197</b>	<b>0</b>	<b>74</b>	<b>4</b>	<b>2</b>	<b>78</b>	<b>11</b>	<b>7</b>	<b>7</b>	<b>0</b>	<b>25</b>	<b>2</b>	<b>588</b>
05:00 PM	25	51	0	0	76	0	0	33	0	33	0	9	0	0	9	0	0	0	0	0	0	118
05:15 PM	29	43	0	0	72	0	0	24	0	24	0	2	1	1	3	1	1	1	0	3	1	102
05:30 PM	28	51	0	0	79	3	0	53	0	56	0	11	0	1	11	0	0	0	0	0	1	146
05:45 PM	28	39	0	0	67	0	0	31	2	31	0	8	0	0	8	0	0	1	0	1	2	107
<b>Total</b>	<b>110</b>	<b>184</b>	<b>0</b>	<b>0</b>	<b>294</b>	<b>3</b>	<b>0</b>	<b>141</b>	<b>2</b>	<b>144</b>	<b>0</b>	<b>30</b>	<b>1</b>	<b>2</b>	<b>31</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>4</b>	<b>4</b>	<b>473</b>
<b>Grand Total</b>	<b>251</b>	<b>328</b>	<b>3</b>	<b>0</b>	<b>582</b>	<b>15</b>	<b>0</b>	<b>326</b>	<b>2</b>	<b>341</b>	<b>0</b>	<b>104</b>	<b>5</b>	<b>4</b>	<b>109</b>	<b>12</b>	<b>8</b>	<b>9</b>	<b>0</b>	<b>29</b>	<b>6</b>	<b>1061</b>
Apprch %	43.1	56.4	0.5			4.4	0	95.6			0	95.4	4.6			41.4	27.6	31				
Total %	23.7	30.9	0.3		54.9	1.4	0	30.7		32.1	0	9.8	0.5		10.3	1.1	0.8	0.8		2.7	0.6	99.4
Passenger Vehicles	248	309	3		560	15	0	309		326	0	100	5		109	12	8	9		29	0	0
% Passenger Vehicles	98.8	94.2	100	0	96.2	100	0	94.8	100	95	0	96.2	100	100	96.5	100	100	100	0	100	0	0
Large 2 Axle Vehicles	1	5	0		6	0	0	6		6	0	3	0		3	0	0	0		0	0	0
% Large 2 Axle Vehicles	0.4	1.5	0	0	1	0	0	1.8	0	1.7	0	2.9	0	0	2.7	0	0	0	0	0	0	0
3 Axle Vehicles	0	6	0		6	0	0	7		7	0	1	0		1	0	0	0		0	0	0
% 3 Axle Vehicles	0	1.8	0	0	1	0	0	2.1	0	2	0	1	0	0	0.9	0	0	0	0	0	0	0
4+ Axle Trucks	2	8	0		10	0	0	4		4	0	0	0		0	0	0	0		0	0	0
% 4+ Axle Trucks	0.8	2.4	0	0	1.7	0	0	1.2	0	1.2	0	0	0	0	0	0	0	0	0	0	0	0

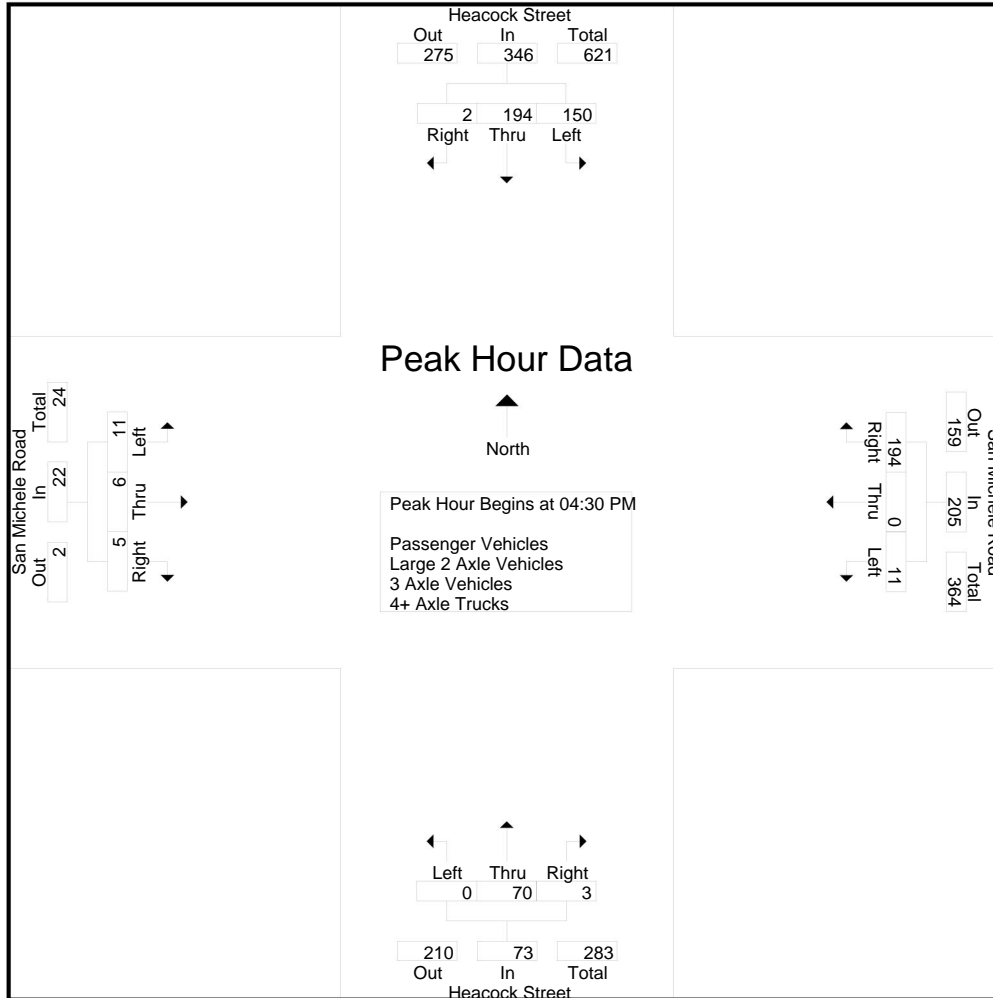
3.1-520

Start Time	Heacock Street Southbound				San Michele Road Westbound				Heacock Street Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	50	45	1	96	7	0	81	88	0	33	1	34	9	2	2	13	231
04:45 PM	46	55	1	102	4	0	56	60	0	26	1	27	1	3	2	6	195
05:00 PM	25	51	0	76	0	0	33	33	0	9	0	9	0	0	0	0	118
05:15 PM	29	43	0	72	0	0	24	24	0	2	1	3	1	1	1	102	
Total Volume	150	194	2	346	11	0	194	205	0	70	3	73	11	6	5	22	646
% App. Total	43.4	56.1	0.6		5.4	0	94.6		0	95.9	4.1		50	27.3	22.7		
PHF	.750	.882	.500	.848	.393	.000	.599	.582	.000	.530	.750	.537	.306	.500	.625	.423	.699



City of Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVHESMPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 2



3.1-521

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVHESMPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Heacock Street Southbound				San Michele Road Westbound				Heacock Street Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:15 PM				04:15 PM				04:00 PM				
+0 mins.	50	45	1	96	0	0	24	24	0	12	0	12	1	2	1	4	
+15 mins.	46	55	1	102	7	0	81	88	0	33	1	34	0	0	2	2	
+30 mins.	25	51	0	76	4	0	56	60	0	26	1	27	9	2	2	13	
+45 mins.	29	43	0	72	0	0	33	33	0	9	0	9	1	3	2	6	
Total Volume	150	194	2	346	11	0	194	205	0	80	2	82	11	7	7	25	
% App. Total	43.4	56.1	0.6		5.4	0	94.6		0	97.6	2.4		44	28	28		
PHF	.750	.882	.500	.848	.393	.000	.599	.582	.000	.606	.500	.603	.306	.583	.875	.481	

3.1-522

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVHESMPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- Passenger Vehicles

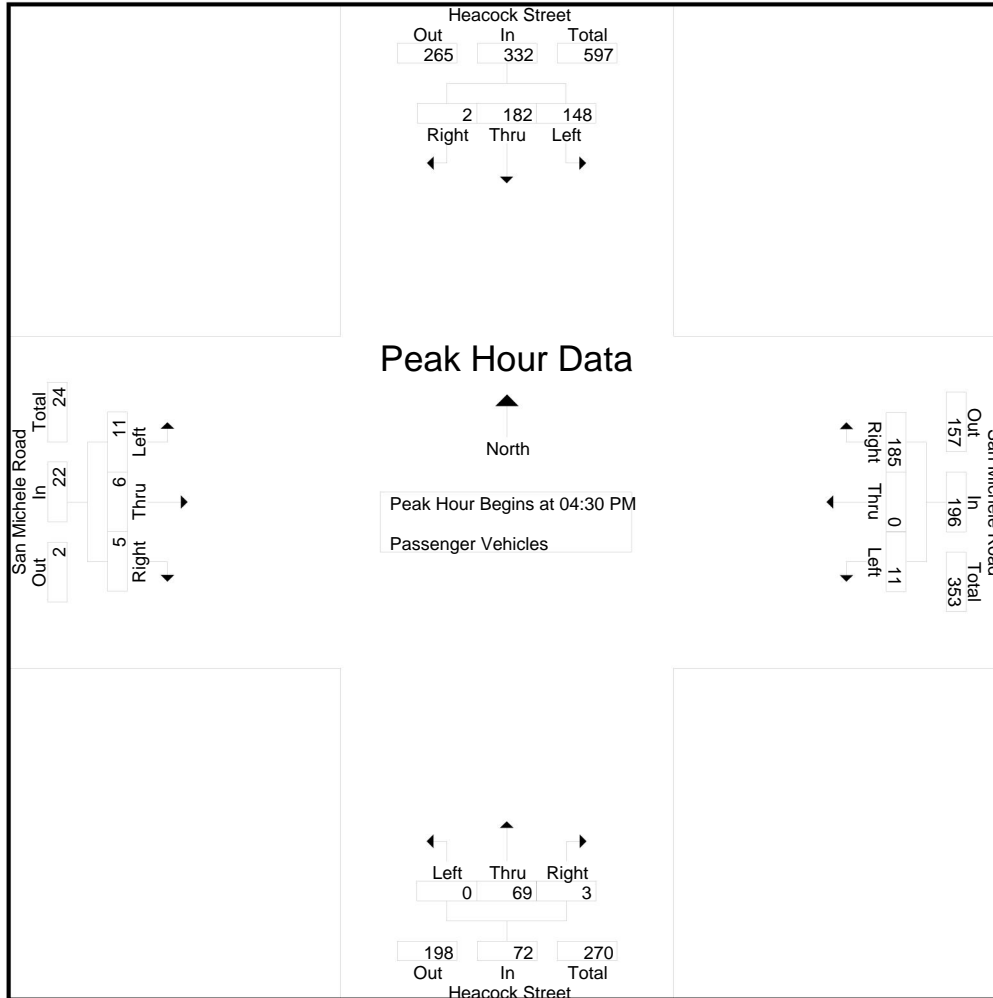
Start Time	Heacock Street Southbound					San Michele Road Westbound					Heacock Street Northbound					San Michele Road Eastbound					Exclu. Total	Inclu. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total		
04:00 PM	19	22	0	0	41	1	0	23	0	24	0	3	2	0	5	1	2	1	0	4	0	74
04:15 PM	25	20	1	0	46	0	0	23	0	23	0	12	0	0	12	0	0	2	0	2	0	83
04:30 PM	48	42	1	0	91	7	0	79	0	86	0	32	1	2	33	9	2	2	0	13	2	223
04:45 PM	46	53	1	0	100	4	0	53	0	57	0	26	1	0	27	1	3	2	0	6	0	190
Total	138	137	3	0	278	12	0	178	0	190	0	73	4	2	77	11	7	7	0	25	2	570
05:00 PM	25	49	0	0	74	0	0	31	0	31	0	9	0	0	9	0	0	0	0	0	0	114
05:15 PM	29	38	0	0	67	0	0	22	0	22	0	2	1	1	3	1	1	1	0	3	1	95
05:30 PM	28	48	0	0	76	3	0	51	0	54	0	10	0	1	10	0	0	0	0	0	1	140
05:45 PM	28	37	0	0	65	0	0	27	2	27	0	6	0	0	6	0	0	1	0	1	2	99
Total	110	172	0	0	282	3	0	131	2	134	0	27	1	2	28	1	1	2	0	4	4	448
Grand Total	248	309	3	0	560	15	0	309	2	324	0	100	5	4	105	12	8	9	0	29	6	1018
Apprch %	44.3	55.2	0.5			4.6	0	95.4			0	95.2	4.8			41.4	27.6	31				
Total %	24.4	30.4	0.3		55	1.5	0	30.4		31.8	0	9.8	0.5		10.3	1.2	0.8	0.9		2.8	0.6	99.4

3.1-523

Start Time	Heacock Street Southbound				San Michele Road Westbound				Heacock Street Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	48	42	1	91	7	0	79	86	0	32	1	33	9	2	2	13	223
04:45 PM	46	53	1	100	4	0	53	57	0	26	1	27	1	3	2	6	190
05:00 PM	25	49	0	74	0	0	31	31	0	9	0	9	0	0	0	0	114
05:15 PM	29	38	0	67	0	0	22	22	0	2	1	3	1	1	1	3	95
Total Volume	148	182	2	332	11	0	185	196	0	69	3	72	11	6	5	22	622
% App. Total	44.6	54.8	0.6		5.6	0	94.4		0	95.8	4.2		50	27.3	22.7		
PHF	.771	.858	.500	.830	.393	.000	.585	.570	.000	.539	.750	.545	.306	.500	.625	.423	.697

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVHESMPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 2



3.1-524

Counts Unlimited, Inc.  
 PO Box 1178  
 Corona, CA 92787  
 (951) 268-6268

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVHESMPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Heacock Street Southbound				San Michele Road Westbound				Heacock Street Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:30 PM				04:30 PM				04:30 PM				
+0 mins.	<b>48</b>	42	<b>1</b>	91	<b>7</b>	0	<b>79</b>	<b>86</b>	0	<b>32</b>	<b>1</b>	<b>33</b>	<b>9</b>	2	<b>2</b>	<b>13</b>	
+15 mins.	46	<b>53</b>	1	<b>100</b>	4	0	53	57	0	26	1	27	1	<b>3</b>	2	6	
+30 mins.	25	49	0	74	0	0	31	31	0	9	0	9	0	0	0	0	
+45 mins.	29	38	0	67	0	0	22	22	0	2	1	3	1	1	1	3	
Total Volume	148	182	2	332	11	0	185	196	0	69	3	72	11	6	5	22	
% App. Total	44.6	54.8	0.6		5.6	0	94.4		0	95.8	4.2		50	27.3	22.7		
PHF	.771	.858	.500	.830	.393	.000	.585	.570	.000	.539	.750	.545	.306	.500	.625	.423	

3.1-525

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVHESMPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

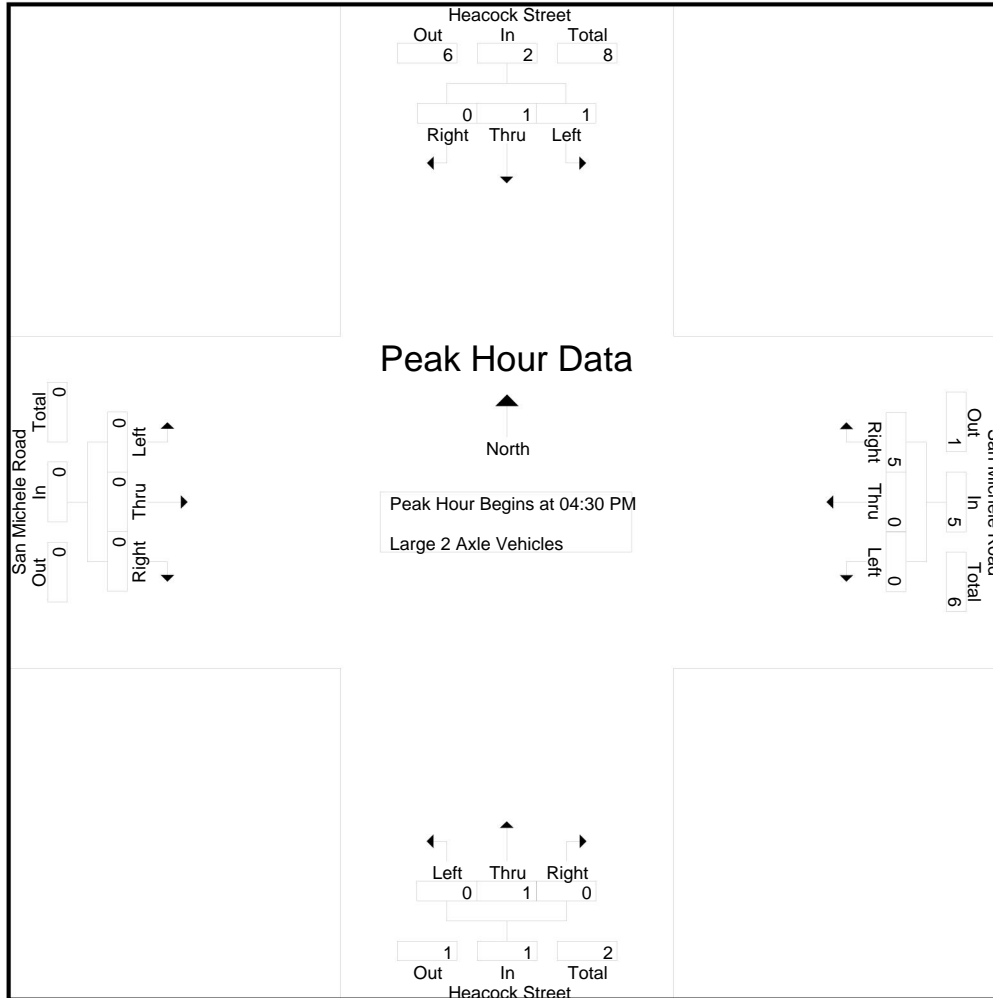
Start Time	Heacock Street Southbound					San Michele Road Westbound					Heacock Street Northbound					San Michele Road Eastbound					Exclu. Total	Inclu. Total	
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	1	1	0	0	2	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	2	0	0	3	0	0	3	0	3	0	1	0	0	1	0	0	0	0	0	0	0	7
05:00 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
05:30 PM	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	3
05:45 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	2
Total	0	3	0	0	3	0	0	3	0	3	0	2	0	0	2	0	0	0	0	0	0	0	8
Grand Total	1	5	0	0	6	0	0	6	0	6	0	3	0	0	3	0	0	0	0	0	0	0	15
Apprch %	16.7	83.3	0			0	0	100			0	100	0			0	0	0				0	
Total %	6.7	33.3	0		40	0	0	40		40	0	20	0		20	0	0	0		0		0	100

3.1-526

Start Time	Heacock Street Southbound				San Michele Road Westbound				Heacock Street Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	1	1	0	2	0	0	1	1	0	1	0	1	0	0	0	0	4
04:45 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	2
Total Volume	1	1	0	2	0	0	5	5	0	1	0	1	0	0	0	0	8
% App. Total	50	50	0		0	0	100		0	100	0		0	0	0		
PHF	.250	.250	.000	.250	.000	.000	.625	.625	.000	.250	.000	.250	.000	.000	.000	.000	.500

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVHESMPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 2



3.1-527

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVHESMPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Heacock Street Southbound				San Michele Road Westbound				Heacock Street Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:30 PM				04:30 PM				04:30 PM				
+0 mins.	1	1	0	2	0	0	1	1	0	1	0	1	0	0	0	0	
+15 mins.	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	
+30 mins.	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	
+45 mins.	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	
Total Volume	1	1	0	2	0	0	5	5	0	1	0	1	0	0	0	0	
% App. Total	50	50	0		0	0	100		0	100	0		0	0	0		
PHF	.250	.250	.000	.250	.000	.000	.625	.625	.000	.250	.000	.250	.000	.000	.000	.000	



City of Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVHESMPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- 3 Axle Vehicles

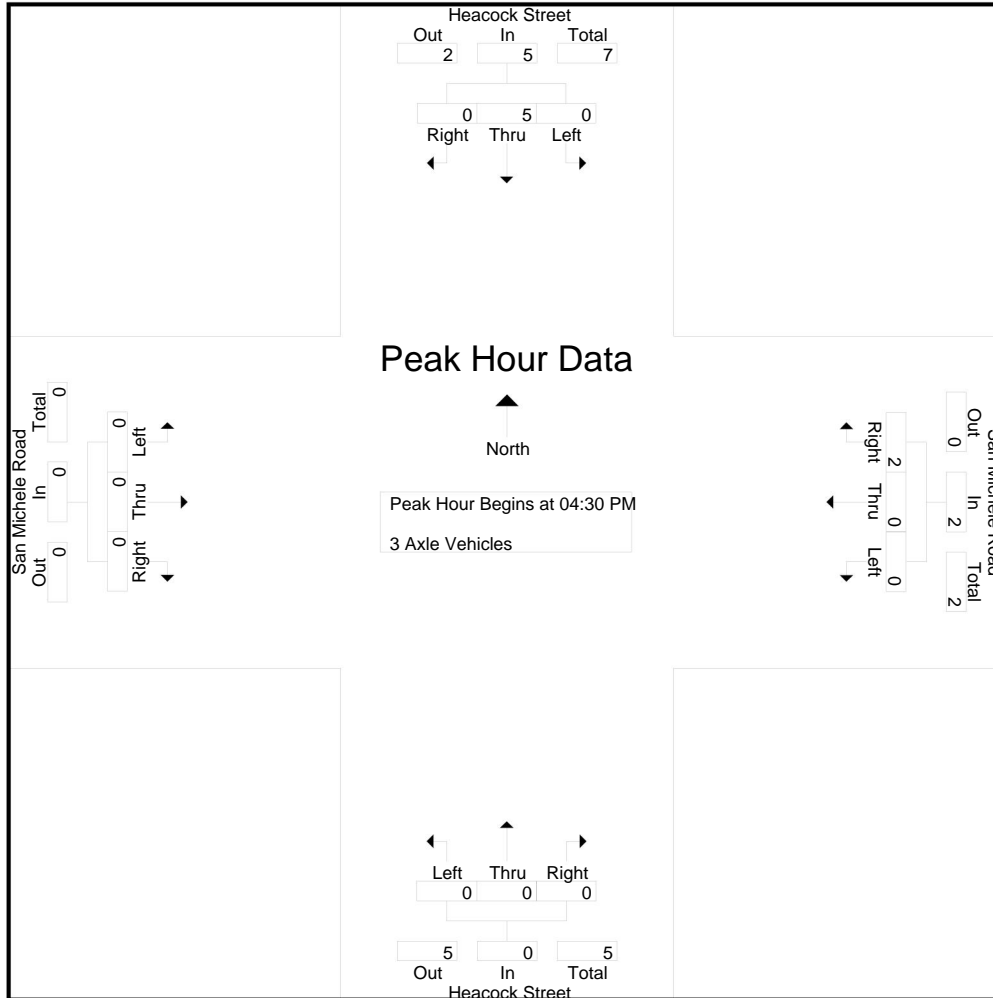
Start Time	Heacock Street Southbound					San Michele Road Westbound					Heacock Street Northbound					San Michele Road Eastbound					Exclu. Total	Inclu. Total			
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total					
04:00 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	2	0	0	2	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
05:00 PM	0	2	0	0	2	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
05:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:45 PM	0	1	0	0	1	0	0	3	0	3	0	1	0	0	1	0	0	0	0	0	0	0	0	0	5
Total	0	4	0	0	4	0	0	5	0	5	0	1	0	0	1	0	0	0	0	0	0	0	0	0	10
Grand Total	0	6	0	0	6	0	0	7	0	7	0	1	0	0	1	0	0	0	0	0	0	0	0	0	14
Apprch %	0	100	0			0	0	100			0	100	0			0	0	0			0	0	0	0	
Total %	0	42.9	0		42.9	0	0	50		50	0	7.1	0		7.1	0	0	0		0	0	0	0	0	100

3.1-529

Start Time	Heacock Street Southbound				San Michele Road Westbound				Heacock Street Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
04:45 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
05:00 PM	0	2	0	2	0	0	1	1	0	0	0	0	0	0	0	0	3
05:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	5	0	5	0	0	2	2	0	0	0	0	0	0	0	0	7
% App. Total	0	100	0		0	0	100		0	0	0		0	0	0		
PHF	.000	.625	.000	.625	.000	.000	.500	.500	.000	.000	.000	.000	.000	.000	.000	.000	.583

City of Moreno Valley  
N/S: Heacock Street  
E/W: San Michele Road  
Weather: Clear

File Name : MRVHESMPM  
Site Code : 05115223  
Start Date : 4/28/2015  
Page No : 2



3.1-530

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVHESMPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Heacock Street Southbound				San Michele Road Westbound				Heacock Street Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:30 PM				04:30 PM				04:30 PM				
+0 mins.	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	
+15 mins.	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	
+30 mins.	0	2	0	2	0	0	1	1	0	0	0	0	0	0	0	0	
+45 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	
Total Volume	0	5	0	5	0	0	2	2	0	0	0	0	0	0	0	0	
% App. Total	0	100	0		0	0	100		0	0	0		0	0	0		
PHF	.000	.625	.000	.625	.000	.000	.500	.500	.000	.000	.000	.000	.000	.000	.000	.000	

3.1-531

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVHESMPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- 4+ Axle Trucks

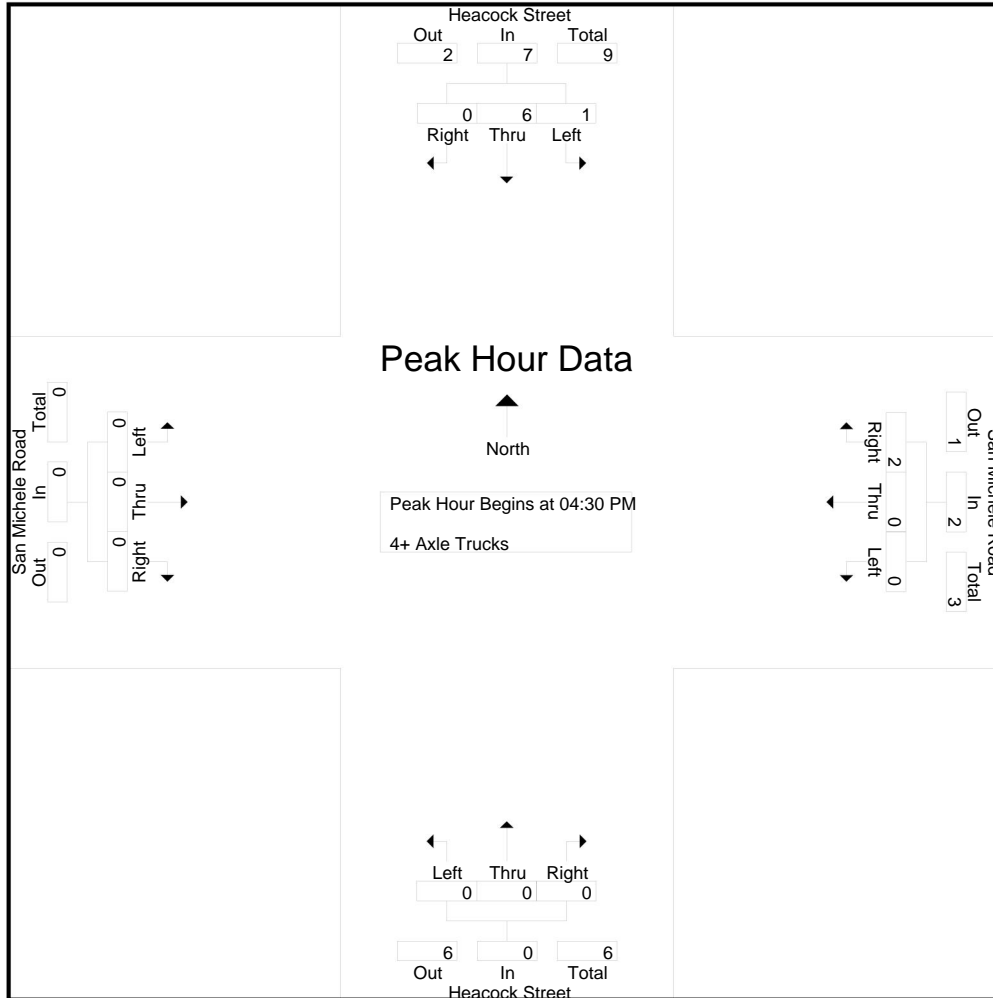
Start Time	Heacock Street Southbound					San Michele Road Westbound					Heacock Street Northbound					San Michele Road Eastbound					Exclu. Total	Inclu. Total					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total							
04:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:30 PM	1	2	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
04:45 PM	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	2	3	0	0	5	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
05:30 PM	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
05:45 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	5	0	0	5	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Grand Total	2	8	0	0	10	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14
Apprch %	20	80	0			0	0	100			0	0	0			0	0	0			0	0	0			0	
Total %	14.3	57.1	0		71.4	0	0	28.6		28.6	0	0	0		0	0	0	0		0	0	0	0		0	0	100

3.1-532

Start Time	Heacock Street Southbound				San Michele Road Westbound				Heacock Street Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	1	2	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
04:45 PM	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	2
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
Total Volume	1	6	0	7	0	0	2	2	0	0	0	0	0	0	0	0	9
% App. Total	14.3	85.7	0		0	0	100		0	0	0		0	0	0		
PHF	.250	.375	.000	.438	.000	.000	.250	.250	.000	.000	.000	.000	.000	.000	.000	.000	.563

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVHESMPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 2



3.1-533

City of Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVHESMPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Heacock Street Southbound				San Michele Road Westbound				Heacock Street Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:30 PM				04:30 PM				04:30 PM				
+0 mins.	1	2	0	3	0	0	0	0	0	0	0	0	0	0	0	0	
+15 mins.	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
+45 mins.	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	
Total Volume	1	6	0	7	0	0	2	2	0	0	0	0	0	0	0	0	
% App. Total	14.3	85.7	0		0	0	100		0	0	0		0	0	0		
PHF	.250	.375	.000	.438	.000	.000	.250	.250	.000	.000	.000	.000	.000	.000	.000	.000	

Location: Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road



Date: 4/28/2015  
 Weather: Clear

PEDESTRIANS

	North Leg Heacock Street	East Leg San Michele Road	South Leg Heacock Street	West Leg San Michele Road	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg Heacock Street	East Leg San Michele Road	South Leg Heacock Street	West Leg San Michele Road	TOTAL
4:00 PM	0	1	0	0	1
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	1	0	1
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	1	0	1
TOTAL VOLUMES:	0	1	2	0	3

3-1-535

Location: Moreno Valley  
 N/S: Heacock Street  
 E/W: San Michele Road



Date: 4/28/2015  
 Weather: Clear

**BICYCLES**

	North Leg Heacock Street	East Leg San Michele Road	South Leg Heacock Street	West Leg San Michele Road	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg Heacock Street	East Leg San Michele Road	South Leg Heacock Street	West Leg San Michele Road	TOTAL
4:00 PM	0	1	0	0	1
4:15 PM	0	0	0	0	0
4:30 PM	0	1	0	0	1
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	1	0	0	1
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	3	0	0	3

3-1-536



City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVINSMAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Indian Avenue Southbound					San Michele Road Westbound					Indian Avenue Northbound					San Michele Road Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR			
07:00 AM	1	0	0	0	1	12	40	0	0	52	88	1	17	3	106	0	10	11	0	21	3	180	183
07:15 AM	1	0	0	0	1	10	84	3	1	97	90	2	16	6	108	0	9	10	5	19	12	225	237
07:30 AM	1	0	1	1	2	12	18	2	1	32	48	2	24	5	74	1	17	6	3	24	10	132	142
07:45 AM	0	2	1	1	3	12	19	0	0	31	36	2	26	9	64	2	9	8	1	19	11	117	128
Total	3	2	2	2	7	46	161	5	2	212	262	7	83	23	352	3	45	35	9	83	36	654	690
08:00 AM	2	1	2	2	5	6	10	0	0	16	26	7	14	2	47	0	8	9	3	17	7	85	92
08:15 AM	5	2	1	1	8	9	9	3	0	21	15	2	15	5	32	0	6	4	2	10	8	71	79
08:30 AM	2	0	1	0	3	5	4	3	0	12	24	1	9	1	34	0	5	13	0	18	1	67	68
08:45 AM	1	0	0	0	1	4	7	2	0	13	9	1	15	1	25	0	4	7	2	11	3	50	53
Total	10	3	4	3	17	24	30	8	0	62	74	11	53	9	138	0	23	33	7	56	19	273	292
Grand Total	13	5	6	5	24	70	191	13	2	274	336	18	136	32	490	3	68	68	16	139	55	927	982
Apprch %	54.2	20.8	25			25.5	69.7	4.7			68.6	3.7	27.8			2.2	48.9	48.9					
Total %	1.4	0.5	0.6		2.6	7.6	20.6	1.4		29.6	36.2	1.9	14.7		52.9	0.3	7.3	7.3		15	5.6	94.4	
Passenger Vehicles	10	1	4		19	61	188	12		263	308	14	125		479	1	56	56		127	0	0	888
% Passenger Vehicles	76.9	20	66.7	80	65.5	87.1	98.4	92.3	100	95.3	91.7	77.8	91.9	100	91.8	33.3	82.4	82.4	87.5	81.9	0	0	90.4
Large 2 Axle Vehicles	0	1	1		2	4	0	0		4	19	1	7		27	1	0	10		13	0	0	46
% Large 2 Axle Vehicles	0	20	16.7	0	6.9	5.7	0	0	0	1.4	5.7	5.6	5.1	0	5.2	33.3	0	14.7	12.5	8.4	0	0	4.7
3 Axle Vehicles	0	2	0		2	0	0	0		0	1	1	0		2	0	3	0		3	0	0	7
% 3 Axle Vehicles	0	40	0	0	6.9	0	0	0	0	0	0.3	5.6	0	0	0.4	0	4.4	0	0	1.9	0	0	0.7
4+ Axle Trucks	3	1	1		6	5	3	1		9	8	2	4		14	1	9	2		12	0	0	41
% 4+ Axle Trucks	23.1	20	16.7	20	20.7	7.1	1.6	7.7	0	3.3	2.4	11.1	2.9	0	2.7	33.3	13.2	2.9	0	7.7	0	0	4.2

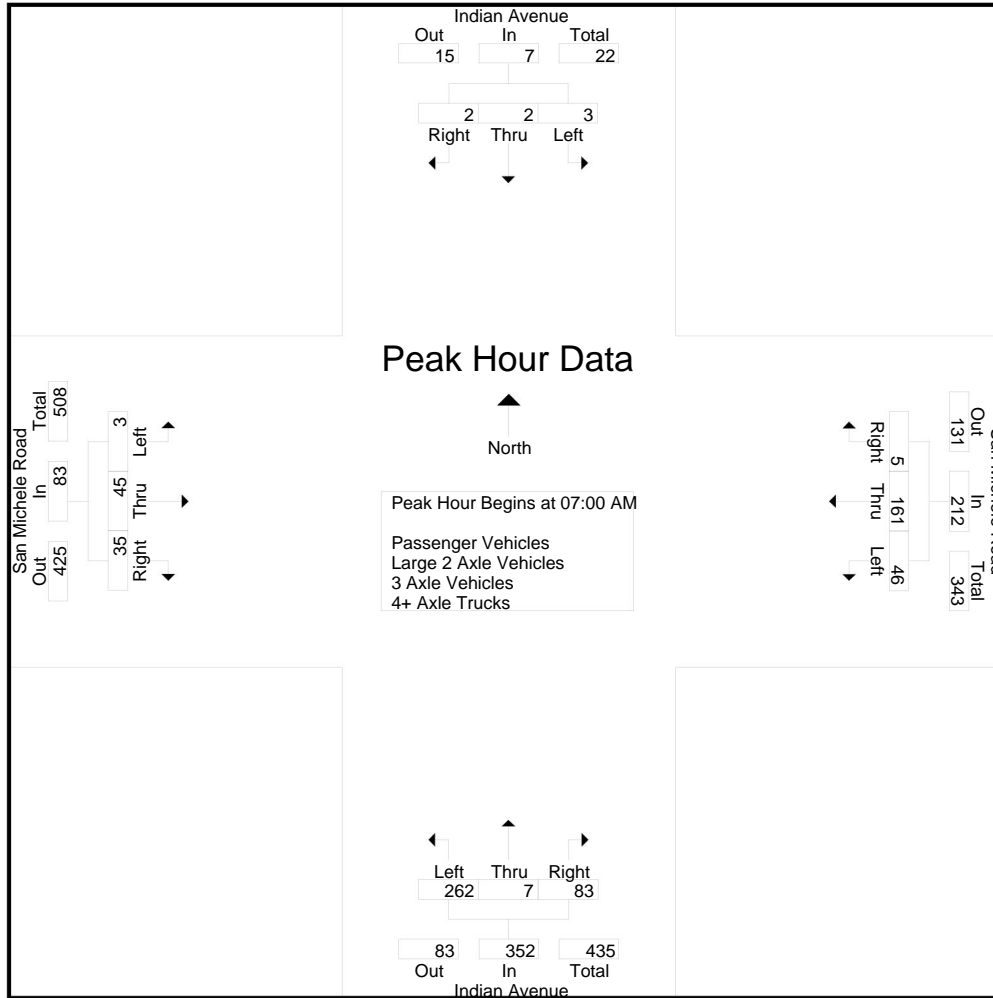
3.1.537

	Indian Avenue Southbound				San Michele Road Westbound				Indian Avenue Northbound				San Michele Road Eastbound				Int. Total	
	Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right		App. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 07:00 AM																		
07:00 AM	1	0	0		1	12	40	0	52	88	1	17	106	0	10	11	21	180
07:15 AM	1	0	0		1	10	84	3	97	90	2	16	108	0	9	10	19	225
07:30 AM	1	0	1		2	12	18	2	32	48	2	24	74	1	17	6	24	132
07:45 AM	0	2	1		3	12	19	0	31	36	2	26	64	2	9	8	19	117
Total Volume	3	2	2		7	46	161	5	212	262	7	83	352	3	45	35	83	654
% App. Total	42.9	28.6	28.6			21.7	75.9	2.4		74.4	2	23.6		3.6	54.2	42.2		
PHF	.750	.250	.500		.583	.958	.479	.417	.546	.728	.875	.798	.815	.375	.662	.795	.865	.727

Counts Unlimited, Inc.  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVINSMAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 2



3.1-538

Counts Unlimited, Inc.  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVINSMAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Indian Avenue Southbound				San Michele Road Westbound				Indian Avenue Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:45 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	2	1	3	12	40	0	52	88	1	17	106	0	10	11	21	
+15 mins.	2	1	2	5	10	84	3	97	90	2	16	108	0	9	10	19	
+30 mins.	5	2	1	8	12	18	2	32	48	2	24	74	1	17	6	24	
+45 mins.	2	0	1	3	12	19	0	31	36	2	26	64	2	9	8	19	
Total Volume	9	5	5	19	46	161	5	212	262	7	83	352	3	45	35	83	
% App. Total	47.4	26.3	26.3		21.7	75.9	2.4		74.4	2	23.6		3.6	54.2	42.2		
PHF	.450	.625	.625	.594	.958	.479	.417	.546	.728	.875	.798	.815	.375	.662	.795	.865	

3.1-539

City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: San Michele Road  
 Weather: Clear

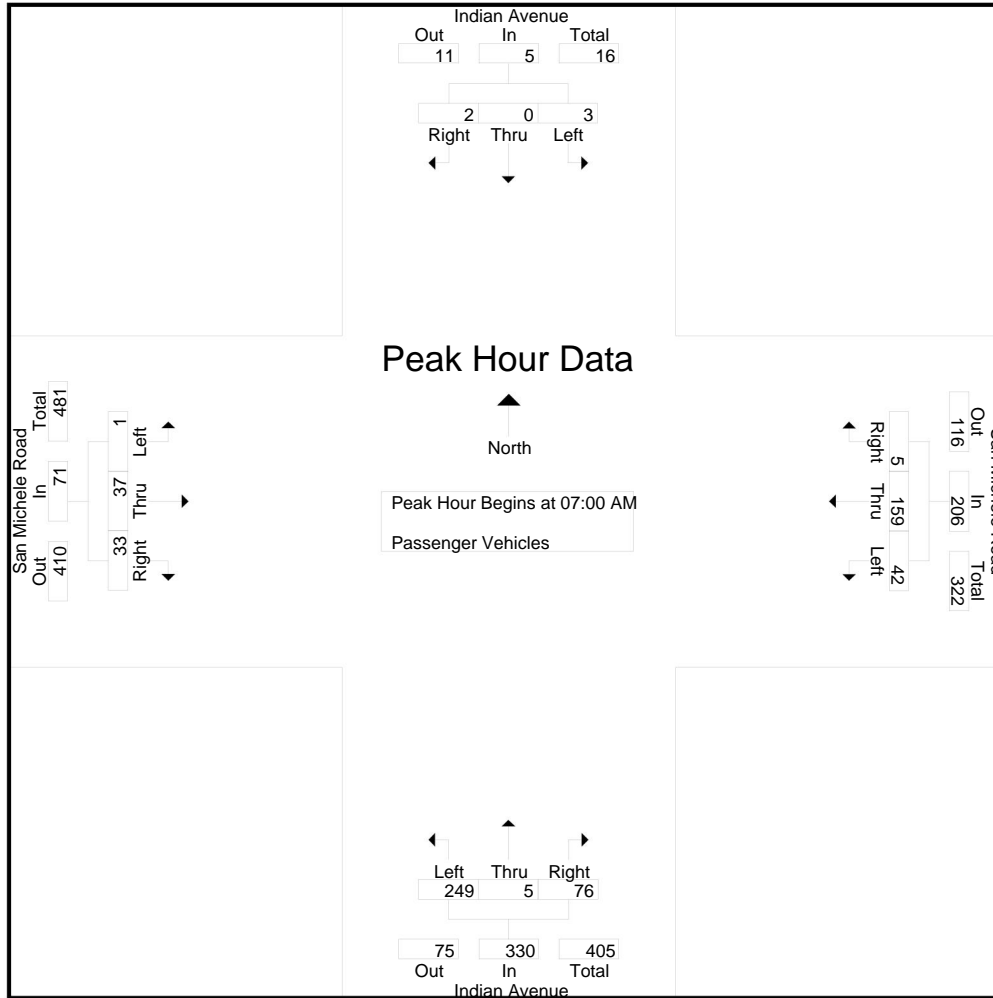
File Name : MRVINSMAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Indian Avenue Southbound					San Michele Road Westbound					Indian Avenue Northbound					San Michele Road Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	1	0	0	0	1	12	40	0	0	52	87	1	14	3	102	0	7	10	0	17	3	172	175
07:15 AM	1	0	0	0	1	9	83	3	1	95	85	0	16	6	101	0	8	10	5	18	12	215	227
07:30 AM	1	0	1	1	2	10	18	2	1	30	44	2	22	5	68	0	15	5	2	20	9	120	129
07:45 AM	0	0	1	1	1	11	18	0	0	29	33	2	24	9	59	1	7	8	1	16	11	105	116
Total	3	0	2	2	5	42	159	5	2	206	249	5	76	23	330	1	37	33	8	71	35	612	647
08:00 AM	2	1	2	2	5	5	10	0	0	15	21	5	12	2	38	0	7	4	2	11	6	69	75
08:15 AM	4	0	0	0	4	7	8	3	0	18	15	2	14	5	31	0	3	3	2	6	7	59	66
08:30 AM	1	0	0	0	1	5	4	3	0	12	16	1	8	1	25	0	5	10	0	15	1	53	54
08:45 AM	0	0	0	0	0	2	7	1	0	10	7	1	15	1	23	0	4	6	2	10	3	43	46
Total	7	1	2	2	10	19	29	7	0	55	59	9	49	9	117	0	19	23	6	42	17	224	241
Grand Total	10	1	4	4	15	61	188	12	2	261	308	14	125	32	447	1	56	56	14	113	52	836	888
Apprch %	66.7	6.7	26.7			23.4	72	4.6			68.9	3.1	28			0.9	49.6	49.6					
Total %	1.2	0.1	0.5		1.8	7.3	22.5	1.4		31.2	36.8	1.7	15		53.5	0.1	6.7	6.7		13.5	5.9	94.1	

3.1-540

Start Time	Indian Avenue Southbound				San Michele Road Westbound				Indian Avenue Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	1	0	0	1	12	40	0	52	87	1	14	102	0	7	10	17	172
07:15 AM	1	0	0	1	9	83	3	95	85	0	16	101	0	8	10	18	215
07:30 AM	1	0	1	2	10	18	2	30	44	2	22	68	0	15	5	20	120
07:45 AM	0	0	1	1	11	18	0	29	33	2	24	59	1	7	8	16	105
Total Volume	3	0	2	5	42	159	5	206	249	5	76	330	1	37	33	71	612
% App. Total	60	0	40		20.4	77.2	2.4		75.5	1.5	23		1.4	52.1	46.5		
PHF	.750	.000	.500	.625	.875	.479	.417	.542	.716	.625	.792	.809	.250	.617	.825	.888	.712



Counts Unlimited, Inc.  
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 Corona, CA 92878  
 (951) 268-6268

City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVINSMAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Indian Avenue Southbound				San Michele Road Westbound				Indian Avenue Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	1	0	0	1	12	40	0	52	87	1	14	102	0	7	10	17	
+15 mins.	1	0	0	1	9	83	3	95	85	0	16	101	0	8	10	18	
+30 mins.	1	0	1	2	10	18	2	30	44	2	22	68	0	15	5	20	
+45 mins.	0	0	1	1	11	18	0	29	33	2	24	59	1	7	8	16	
Total Volume	3	0	2	5	42	159	5	206	249	5	76	330	1	37	33	71	
% App. Total	60	0	40		20.4	77.2	2.4		75.5	1.5	23		1.4	52.1	46.5		
PHF	.750	.000	.500	.625	.875	.479	.417	.542	.716	.625	.792	.809	.250	.617	.825	.888	

3.1-542

City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVINSMAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

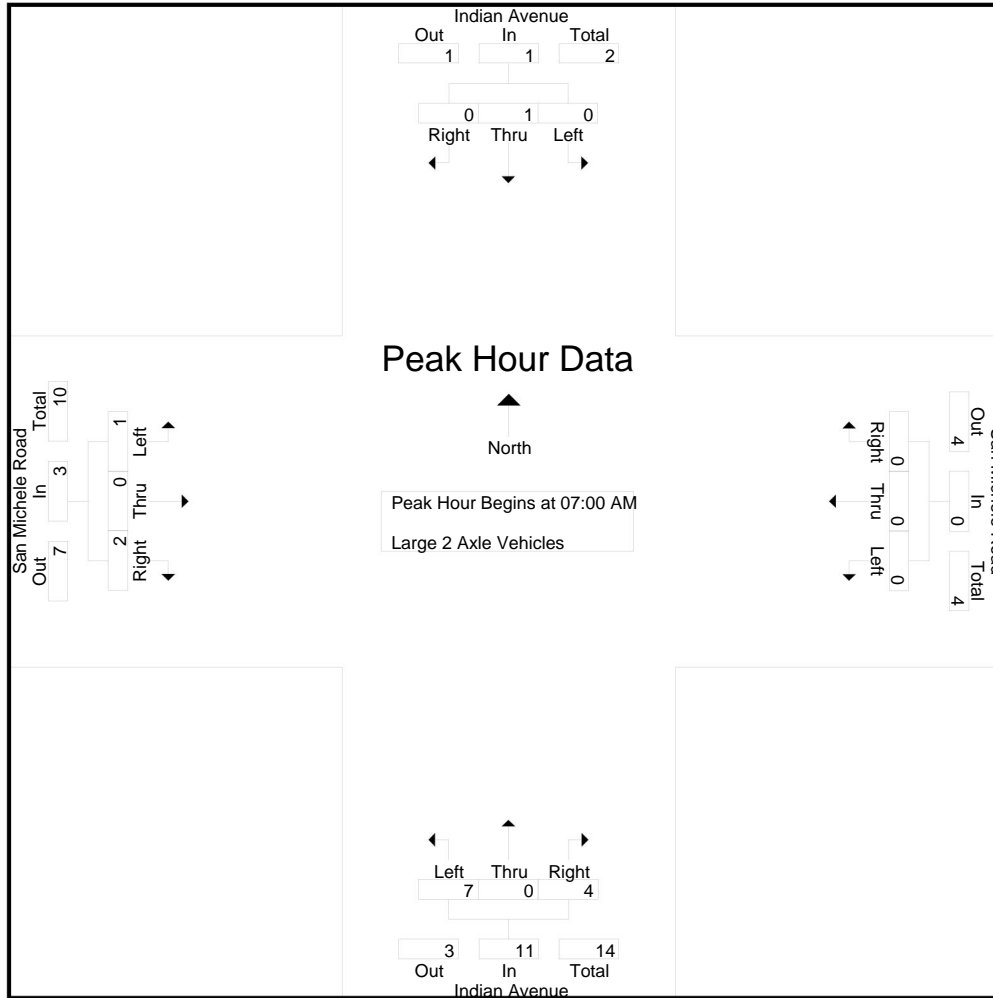
Start Time	Indian Avenue Southbound					San Michele Road Westbound					Indian Avenue Northbound					San Michele Road Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	0	1	0	2	2
07:15 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	2	2
07:30 AM	0	0	0	0	0	0	0	0	0	0	3	0	2	0	5	1	0	1	1	2	1	7	8
07:45 AM	0	1	0	0	1	0	0	0	0	0	2	0	1	0	3	0	0	0	0	0	0	4	4
Total	0	1	0	0	1	0	0	0	0	0	7	0	4	0	11	1	0	2	1	3	1	15	16
08:00 AM	0	0	0	0	0	1	0	0	0	1	4	1	1	0	6	0	0	3	1	3	1	10	11
08:15 AM	0	0	0	0	0	1	0	0	0	1	0	0	1	0	1	0	0	1	0	1	0	3	3
08:30 AM	0	0	1	0	1	0	0	0	0	0	7	0	1	0	8	0	0	3	0	3	0	12	12
08:45 AM	0	0	0	0	0	2	0	0	0	2	1	0	0	0	1	0	0	1	0	1	0	4	4
Total	0	0	1	0	1	4	0	0	0	4	12	1	3	0	16	0	0	8	1	8	1	29	30
Grand Total	0	1	1	0	2	4	0	0	0	4	19	1	7	0	27	1	0	10	2	11	2	44	46
Apprch %	0	50	50			100	0	0			70.4	3.7	25.9			9.1	0	90.9					
Total %	0	2.3	2.3		4.5	9.1	0	0		9.1	43.2	2.3	15.9		61.4	2.3	0	22.7		25	4.3	95.7	

3.1-543

Start Time	Indian Avenue Southbound				San Michele Road Westbound				Indian Avenue Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	1	2
07:15 AM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	2
07:30 AM	0	0	0	0	0	0	0	0	3	0	2	5	1	0	1	2	7
07:45 AM	0	1	0	1	0	0	0	0	2	0	1	3	0	0	0	0	4
Total Volume	0	1	0	1	0	0	0	0	7	0	4	11	1	0	2	3	15
% App. Total	0	100	0		0	0	0		63.6	0	36.4		33.3	0	66.7		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.583	.000	.500	.550	.250	.000	.500	.375	.536

City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVINSMAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 2



3.1-544



Counts Unlimited, Inc.  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVINSMAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Indian Avenue Southbound				San Michele Road Westbound				Indian Avenue Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	1	
+15 mins.	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	
+30 mins.	0	0	0	0	0	0	0	0	3	0	2	5	1	0	1	2	
+45 mins.	0	1	0	1	0	0	0	0	2	0	1	3	0	0	0	0	
Total Volume	0	1	0	1	0	0	0	0	7	0	4	11	1	0	2	3	
% App. Total	0	100	0		0	0	0		63.6	0	36.4		33.3	0	66.7		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.583	.000	.500	.550	.250	.000	.500	.375	

3.1-545

City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: San Michele Road  
 Weather: Clear

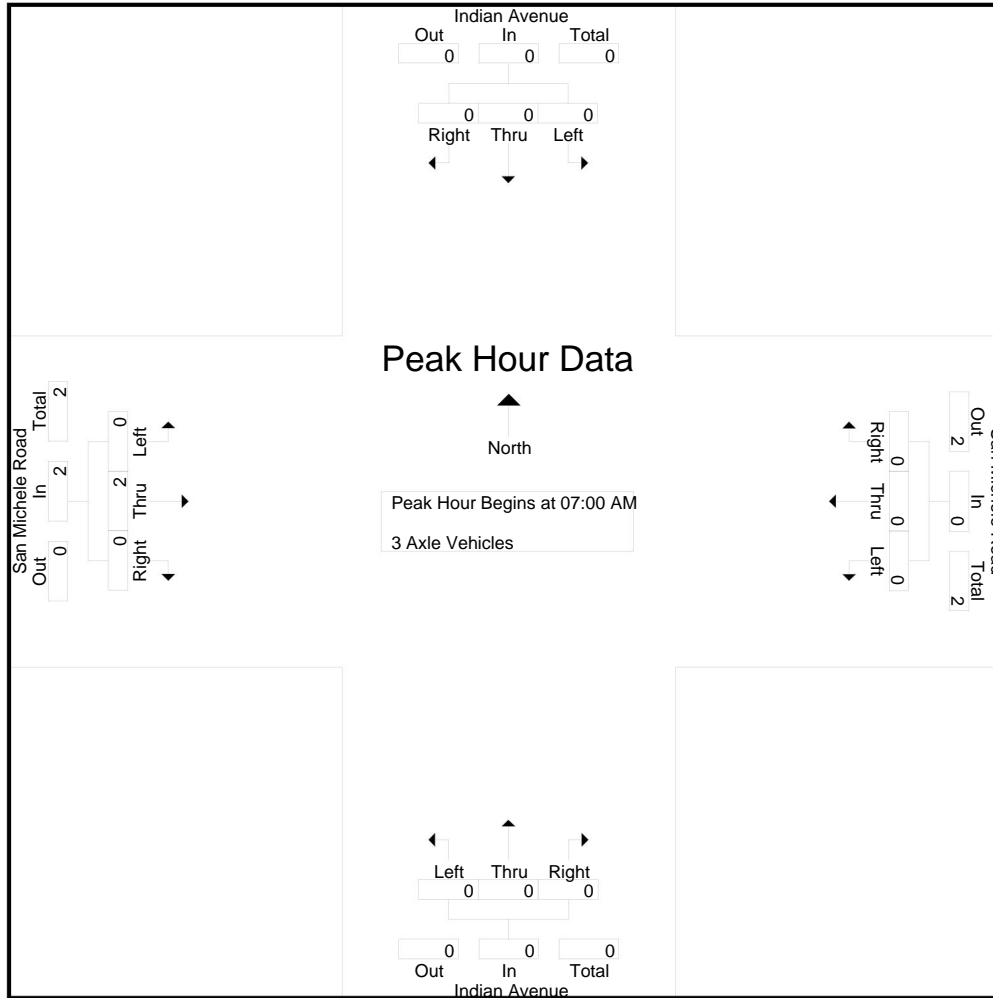
File Name : MRVINSMAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- 3 Axle Vehicles

Start Time	Indian Avenue Southbound					San Michele Road Westbound					Indian Avenue Northbound					San Michele Road Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	2	2
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	2	2
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	1
08:15 AM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	3	3
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1	1
Total	0	2	0	0	2	0	0	0	0	0	1	1	0	0	2	0	1	0	0	1	0	5	5
Grand Total	0	2	0	0	2	0	0	0	0	0	1	1	0	0	2	0	3	0	0	3	0	7	7
Apprch %	0	100	0			0	0	0			50	50	0			0	100	0			0		
Total %	0	28.6	0		28.6	0	0	0		0	14.3	14.3	0		28.6	0	42.9	0		42.9	0	100	

3.1-546

Start Time	Indian Avenue Southbound				San Michele Road Westbound				Indian Avenue Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
% App. Total	0	0	0		0	0	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.250



3.1-547

City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVINSMAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Indian Avenue Southbound				San Michele Road Westbound				Indian Avenue Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	

City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVINSMAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

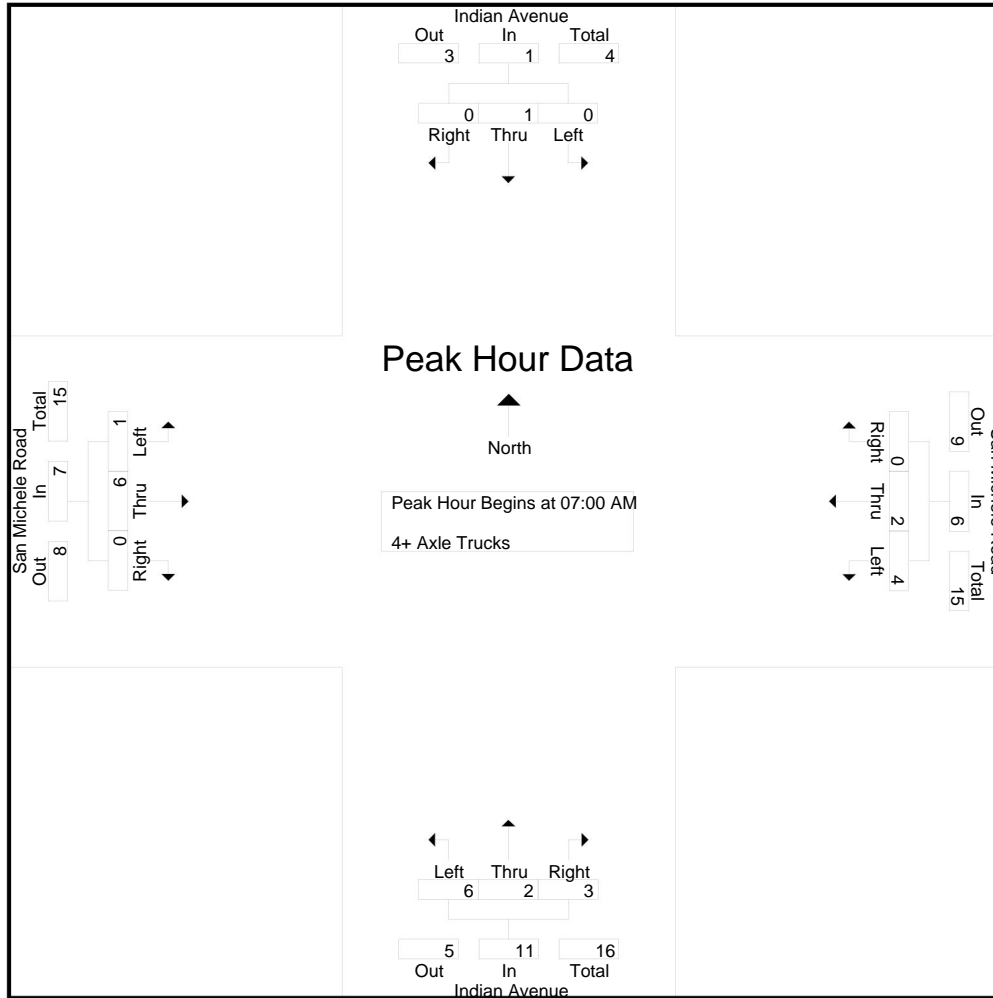
Groups Printed- 4+ Axle Trucks

Start Time	Indian Avenue Southbound					San Michele Road Westbound					Indian Avenue Northbound					San Michele Road Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	2	0	3	0	1	0	0	1	0	4	4
07:15 AM	0	0	0	0	0	1	1	0	0	2	3	2	0	0	5	0	1	0	0	1	0	8	8
07:30 AM	0	0	0	0	0	2	0	0	0	2	1	0	0	0	1	0	2	0	0	2	0	5	5
07:45 AM	0	1	0	0	1	1	1	0	0	2	1	0	1	0	2	1	2	0	0	3	0	8	8
Total	0	1	0	0	1	4	2	0	0	6	6	2	3	0	11	1	6	0	0	7	0	25	25
08:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	1	2	0	3	0	5	5
08:15 AM	1	0	1	1	2	1	1	0	0	2	0	0	0	0	0	0	2	0	0	2	1	6	7
08:30 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	2	2
08:45 AM	1	0	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2	2
Total	3	0	1	1	4	1	1	1	0	3	2	0	1	0	3	0	3	2	0	5	1	15	16
Grand Total	3	1	1	1	5	5	3	1	0	9	8	2	4	0	14	1	9	2	0	12	1	40	41
Apprch %	60	20	20			55.6	33.3	11.1			57.1	14.3	28.6			8.3	75	16.7					
Total %	7.5	2.5	2.5		12.5	12.5	7.5	2.5		22.5	20	5	10		35	2.5	22.5	5		30	2.4	97.6	

3.1-549

Start Time	Indian Avenue Southbound				San Michele Road Westbound				Indian Avenue Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	1	0	2	3	0	1	0	1	4
07:15 AM	0	0	0	0	1	1	0	2	3	2	0	5	0	1	0	1	8
07:30 AM	0	0	0	0	2	0	0	2	1	0	0	1	0	2	0	2	5
07:45 AM	0	1	0	1	1	1	0	2	1	0	1	2	1	2	0	3	8
Total Volume	0	1	0	1	4	2	0	6	6	2	3	11	1	6	0	7	25
% App. Total	0	100	0		66.7	33.3	0		54.5	18.2	27.3		14.3	85.7	0		
PHF	.000	.250	.000	.250	.500	.500	.000	.750	.500	.250	.375	.550	.250	.750	.000	.583	.781

3.1-550



City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVINSMAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Indian Avenue Southbound				San Michele Road Westbound				Indian Avenue Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	0	0	0	0	0	0	0	1	0	2	3	0	1	0	1	
+15 mins.	0	0	0	0	1	1	0	2	3	2	0	5	0	1	0	1	
+30 mins.	0	0	0	0	2	0	0	2	1	0	0	1	0	2	0	2	
+45 mins.	0	1	0	1	1	1	0	2	1	0	1	2	1	2	0	3	
Total Volume	0	1	0	1	4	2	0	6	6	2	3	11	1	6	0	7	
% App. Total	0	100	0		66.7	33.3	0		54.5	18.2	27.3		14.3	85.7	0		
PHF	.000	.250	.000	.250	.500	.500	.000	.750	.500	.250	.375	.550	.250	.750	.000	.583	

3.1-551

City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVINSMPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Indian Avenue Southbound					San Michele Road Westbound					Indian Avenue Northbound					San Michele Road Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR			
04:00 PM	5	7	1	1	13	8	21	1	1	30	40	1	25	6	66	0	14	30	14	44	22	153	175
04:15 PM	4	4	3	1	11	27	39	3	1	69	46	5	14	4	65	4	11	20	7	35	13	180	193
04:30 PM	51	55	8	3	114	51	90	15	8	156	84	15	40	30	139	1	52	51	2	104	43	513	556
04:45 PM	37	54	4	2	95	51	77	25	5	153	77	17	37	13	131	3	54	107	19	164	39	543	582
Total	97	120	16	7	233	137	227	44	15	408	247	38	116	53	401	8	131	208	42	347	117	1389	1506
05:00 PM	9	8	5	2	22	14	22	2	1	38	50	8	18	9	76	1	18	41	18	60	30	196	226
05:15 PM	1	6	2	0	9	9	23	1	0	33	29	6	14	5	49	0	10	28	15	38	20	129	149
05:30 PM	5	3	0	0	8	5	44	0	0	49	44	1	14	8	59	3	56	84	30	143	38	259	297
05:45 PM	4	9	0	0	13	9	67	7	2	83	55	2	20	11	77	0	32	38	10	70	23	243	266
Total	19	26	7	2	52	37	156	10	3	203	178	17	66	33	261	4	116	191	73	311	111	827	938
Grand Total	116	146	23	9	285	174	383	54	18	611	425	55	182	86	662	12	247	399	115	658	228	2216	2444
Apprch %	40.7	51.2	8.1			28.5	62.7	8.8			64.2	8.3	27.5			1.8	37.5	60.6					
Total %	5.2	6.6	1		12.9	7.9	17.3	2.4		27.6	19.2	2.5	8.2		29.9	0.5	11.1	18		29.7	9.3	90.7	
Passenger Vehicles	115	135	21		279	168	369	54		609	385	45	178		693	11	239	361		722	0	0	2303
% Passenger Vehicles	99.1	92.5	91.3	88.9	94.9	96.6	96.3	100		96.8	90.6	81.8	97.8	98.8	92.6	91.7	96.8	90.5	96.5	93.4	0	0	94.2
Large 2 Axle Vehicles	0	4	0		4	2	4	0		6	35	2	1		38	0	3	38		45	0	0	93
% Large 2 Axle Vehicles	0	2.7	0	0	1.4	1.1	1	0	0	1	8.2	3.6	0.5	0	5.1	0	1.2	9.5	3.5	5.8	0	0	3.8
3 Axle Vehicles	0	1	0		1	1	7	0		8	4	4	0		8	0	0	0		0	0	0	17
% 3 Axle Vehicles	0	0.7	0	0	0.3	0.6	1.8	0	0	1.3	0.9	7.3	0	0	1.1	0	0	0	0	0	0	0	0.7
4+ Axle Trucks	1	6	2		10	3	3	0		6	1	4	3		9	1	5	0		6	0	0	31
% 4+ Axle Trucks	0.9	4.1	8.7	11.1	3.4	1.7	0.8	0	0	1	0.2	7.3	1.6	1.2	1.2	8.3	2	0	0	0.8	0	0	1.3

3.1.552

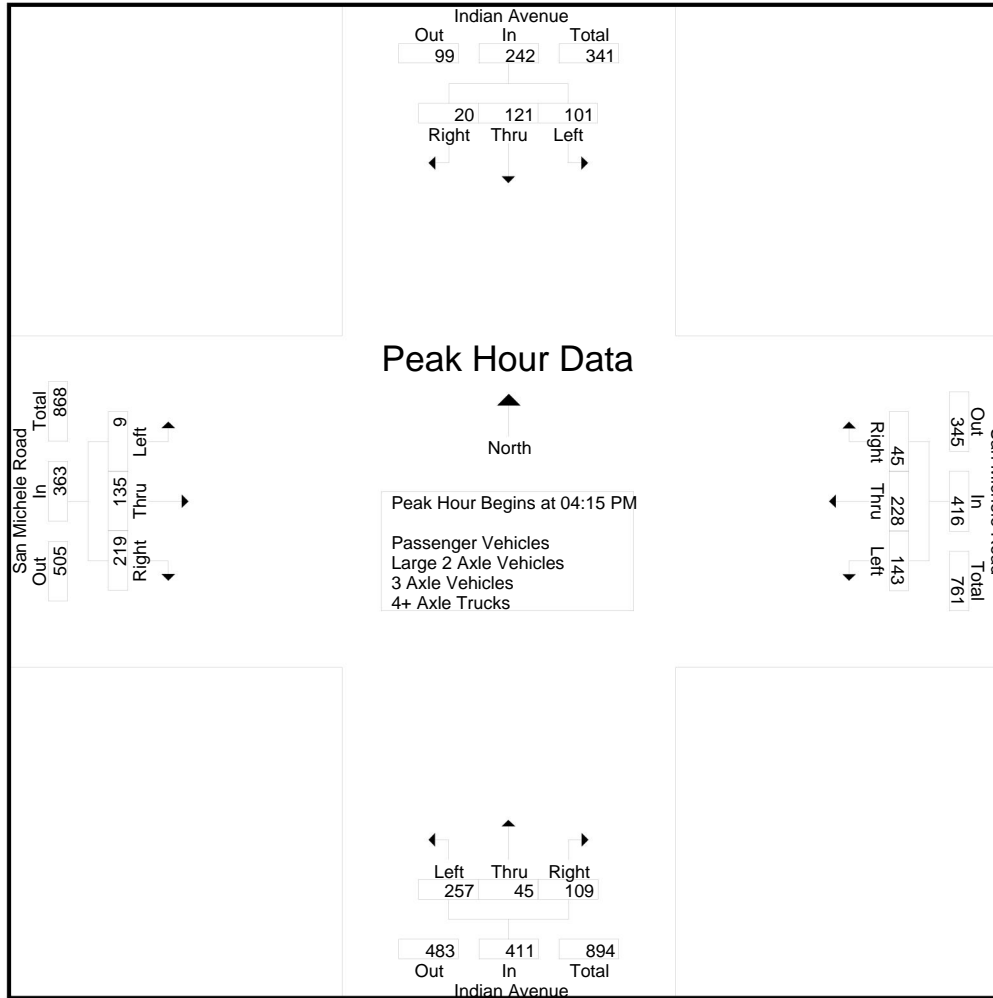
	Indian Avenue Southbound				San Michele Road Westbound				Indian Avenue Northbound				San Michele Road Eastbound				Int. Total							
	Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right		App. Total						
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																								
Peak Hour for Entire Intersection Begins at 04:15 PM																								
04:15 PM	4	4	3		11	27	39	3		69	46	5	14		65	4	11	20		35			180	
04:30 PM	51	55	8		114	51	90	15		156	84	15	40		139	1	52	51		104			513	
04:45 PM	37	54	4		95	51	77	25		153	77	17	37		131	3	54	107		164			543	
05:00 PM	9	8	5		22	14	22	2		38	50	8	18		76	1	18	41		60			196	
Total Volume	101	121	20		242	143	228	45		416	257	45	109		411	9	135	219		363			1432	
% App. Total	41.7	50	8.3			34.4	54.8	10.8			62.5	10.9	26.5			2.5	37.2	60.3						
PHF	.495	.550	.625		.531	.701	.633	.450		.667	.765	.662	.681		.739	.563	.625	.512		.553			.659	



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City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVINSMPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 2



3.1-553

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City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVINSMPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Indian Avenue Southbound				San Michele Road Westbound				Indian Avenue Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:15 PM				04:15 PM				04:15 PM				04:45 PM				
+0 mins.	4	4	3	11	27	39	3	69	46	5	14	65	3	54	107	164	
+15 mins.	51	55	8	114	51	90	15	156	84	15	40	139	1	18	41	60	
+30 mins.	37	54	4	95	51	77	25	153	77	17	37	131	0	10	28	38	
+45 mins.	9	8	5	22	14	22	2	38	50	8	18	76	3	56	84	143	
Total Volume	101	121	20	242	143	228	45	416	257	45	109	411	7	138	260	405	
% App. Total	41.7	50	8.3		34.4	54.8	10.8		62.5	10.9	26.5		1.7	34.1	64.2		
PHF	.495	.550	.625	.531	.701	.633	.450	.667	.765	.662	.681	.739	.583	.616	.607	.617	

3.1-554

City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: San Michele Road  
 Weather: Clear

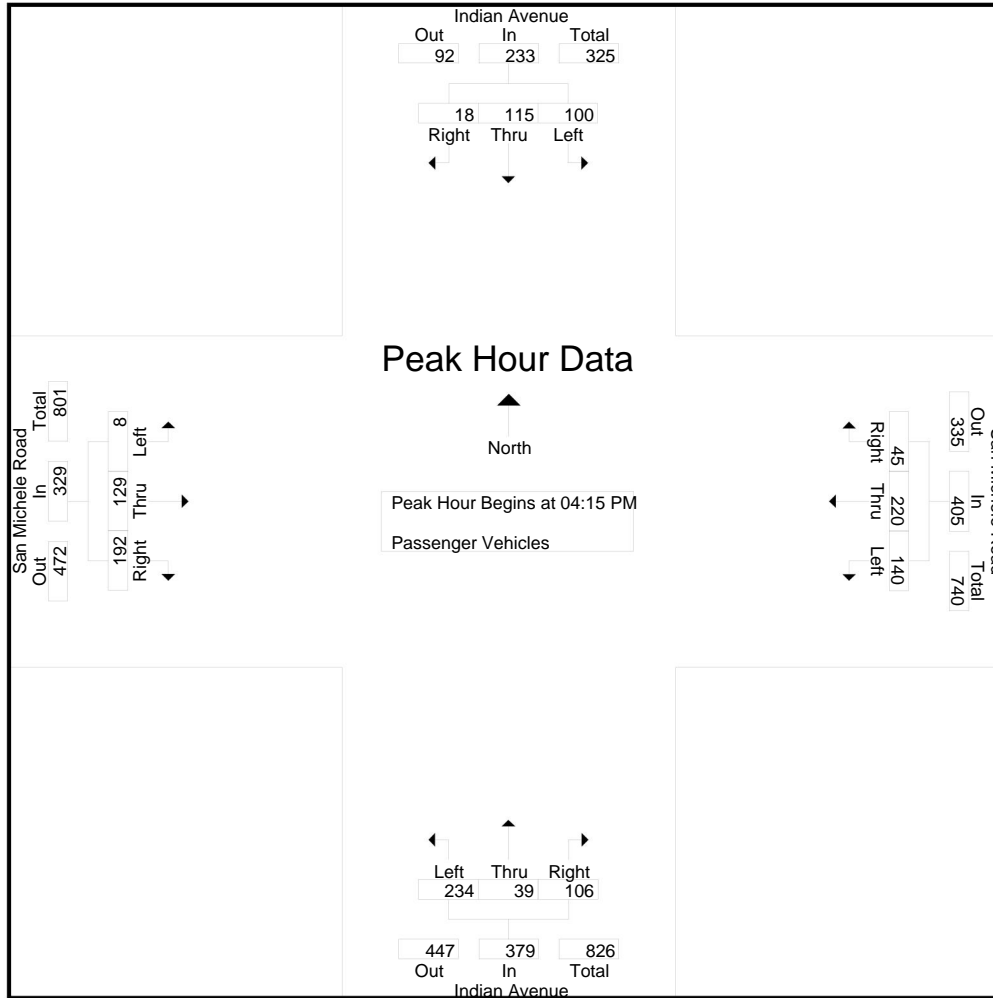
File Name : MRVINSMPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Indian Avenue Southbound					San Michele Road Westbound					Indian Avenue Northbound					San Michele Road Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	5	6	1	1	12	7	20	1	1	28	30	0	25	6	55	0	13	25	12	38	20	133	153
04:15 PM	4	3	2	1	9	26	37	3	1	66	42	4	12	4	58	3	11	13	6	27	12	160	172
04:30 PM	51	53	8	3	112	50	88	15	8	153	79	14	39	29	132	1	49	47	2	97	42	494	536
04:45 PM	37	52	3	1	92	50	76	25	5	151	71	15	37	13	123	3	52	95	18	150	37	516	553
Total	97	114	14	6	225	133	221	44	15	398	222	33	113	52	368	7	125	180	38	312	111	1303	1414
05:00 PM	8	7	5	2	20	14	19	2	1	35	42	6	18	9	66	1	17	37	18	55	30	176	206
05:15 PM	1	5	2	0	8	9	20	1	0	30	26	4	14	5	44	0	10	27	15	37	20	119	139
05:30 PM	5	3	0	0	8	4	42	0	0	46	43	1	13	8	57	3	55	82	30	140	38	251	289
05:45 PM	4	6	0	0	10	8	67	7	2	82	52	1	20	11	73	0	32	35	10	67	23	232	255
Total	18	21	7	2	46	35	148	10	3	193	163	12	65	33	240	4	114	181	73	299	111	778	889
Grand Total	115	135	21	8	271	168	369	54	18	591	385	45	178	85	608	11	239	361	111	611	222	2081	2303
Apprch %	42.4	49.8	7.7			28.4	62.4	9.1			63.3	7.4	29.3			1.8	39.1	59.1					
Total %	5.5	6.5	1		13	8.1	17.7	2.6		28.4	18.5	2.2	8.6		29.2	0.5	11.5	17.3		29.4	9.6	90.4	

3.1.555

Start Time	Indian Avenue Southbound				San Michele Road Westbound				Indian Avenue Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	4	3	2	9	26	37	3	66	42	4	12	58	3	11	13	27	160
04:30 PM	51	53	8	112	50	88	15	153	79	14	39	132	1	49	47	97	494
04:45 PM	37	52	3	92	50	76	25	151	71	15	37	123	3	52	95	150	516
05:00 PM	8	7	5	20	14	19	2	35	42	6	18	66	1	17	37	55	176
Total Volume	100	115	18	233	140	220	45	405	234	39	106	379	8	129	192	329	1346
% App. Total	42.9	49.4	7.7		34.6	54.3	11.1		61.7	10.3	28		2.4	39.2	58.4		
PHF	.490	.542	.563	.520	.700	.625	.450	.662	.741	.650	.679	.718	.667	.620	.505	.548	.652



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City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVINSMPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Indian Avenue Southbound				San Michele Road Westbound				Indian Avenue Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:15 PM				04:15 PM				04:15 PM				04:15 PM				
+0 mins.	4	3	2	9	26	37	3	66	42	4	12	58	3	11	13	27	
+15 mins.	51	53	8	112	50	88	15	153	79	14	39	132	1	49	47	97	
+30 mins.	37	52	3	92	50	76	25	151	71	15	37	123	3	52	95	150	
+45 mins.	8	7	5	20	14	19	2	35	42	6	18	66	1	17	37	55	
Total Volume	100	115	18	233	140	220	45	405	234	39	106	379	8	129	192	329	
% App. Total	42.9	49.4	7.7		34.6	54.3	11.1		61.7	10.3	28		2.4	39.2	58.4		
PHF	.490	.542	.563	.520	.700	.625	.450	.662	.741	.650	.679	.718	.667	.620	.505	.548	

3.1-557

City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVINSMPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

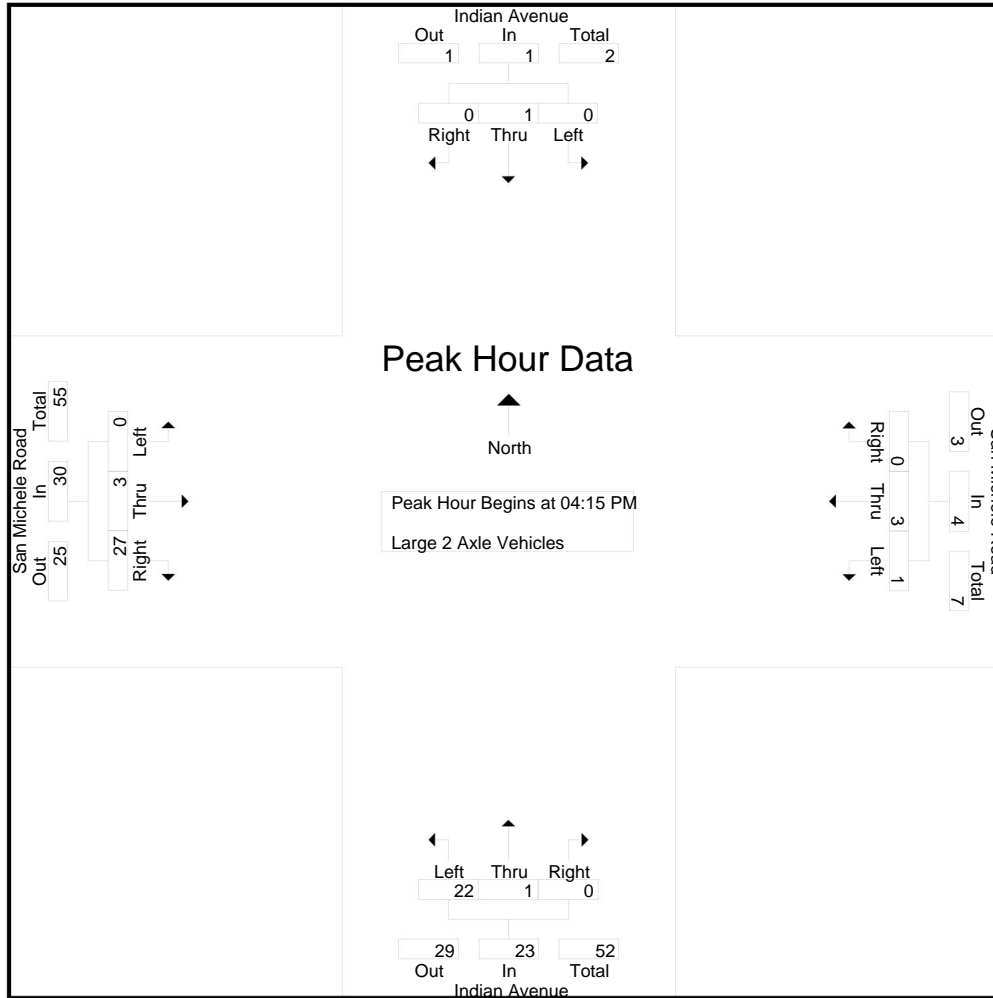
Groups Printed- Large 2 Axle Vehicles

Start Time	Indian Avenue Southbound					San Michele Road Westbound					Indian Avenue Northbound					San Michele Road Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	0	1	0	0	1	1	0	0	0	1	9	0	0	0	9	0	0	5	2	5	2	16	18
04:15 PM	0	1	0	0	1	1	2	0	0	3	4	0	0	0	4	0	0	7	1	7	1	15	16
04:30 PM	0	0	0	0	0	0	0	0	0	0	5	0	0	0	5	0	1	4	0	5	0	10	10
04:45 PM	0	0	0	0	0	0	1	0	0	1	5	0	0	0	5	0	1	12	1	13	1	19	20
Total	0	2	0	0	2	2	3	0	0	5	23	0	0	0	23	0	2	28	4	30	4	60	64
05:00 PM	0	0	0	0	0	0	0	0	0	0	8	1	0	0	9	0	1	4	0	5	0	14	14
05:15 PM	0	0	0	0	0	0	1	0	0	1	3	1	0	0	4	0	0	1	0	1	0	6	6
05:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	0	2	0	2	0	4	4
05:45 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	5	5
Total	0	2	0	0	2	0	1	0	0	1	12	2	1	0	15	0	1	10	0	11	0	29	29
Grand Total	0	4	0	0	4	2	4	0	0	6	35	2	1	0	38	0	3	38	4	41	4	89	93
Apprch %	0	100	0			33.3	66.7	0			92.1	5.3	2.6			0	7.3	92.7					
Total %	0	4.5	0		4.5	2.2	4.5	0		6.7	39.3	2.2	1.1		42.7	0	3.4	42.7		46.1	4.3	95.7	

3.1.558

Start Time	Indian Avenue Southbound				San Michele Road Westbound				Indian Avenue Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	1	0	1	1	2	0	3	4	0	0	4	0	0	7	7	15
04:30 PM	0	0	0	0	0	0	0	0	5	0	0	5	0	1	4	5	10
04:45 PM	0	0	0	0	0	1	0	1	5	0	0	5	0	1	12	13	19
05:00 PM	0	0	0	0	0	0	0	0	8	1	0	9	0	1	4	5	14
Total Volume	0	1	0	1	1	3	0	4	22	1	0	23	0	3	27	30	58
% App. Total	0	100	0		25	75	0		95.7	4.3	0		0	10	90		
PHF	.000	.250	.000	.250	.250	.375	.000	.333	.688	.250	.000	.639	.000	.750	.563	.577	.763

3.1-559



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City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVINSMPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Indian Avenue Southbound				San Michele Road Westbound				Indian Avenue Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:15 PM				04:15 PM				04:15 PM				04:15 PM				
+0 mins.	0	1	0	1	1	2	0	3	4	0	0	4	0	0	7	7	
+15 mins.	0	0	0	0	0	0	0	0	5	0	0	5	0	1	4	5	
+30 mins.	0	0	0	0	0	1	0	1	5	0	0	5	0	1	12	13	
+45 mins.	0	0	0	0	0	0	0	0	8	1	0	9	0	1	4	5	
Total Volume	0	1	0	1	1	3	0	4	22	1	0	23	0	3	27	30	
% App. Total	0	100	0		25	75	0		95.7	4.3	0		0	10	90		
PHF	.000	.250	.000	.250	.250	.375	.000	.333	.688	.250	.000	.639	.000	.750	.563	.577	

3.1-560



City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: San Michele Road  
 Weather: Clear

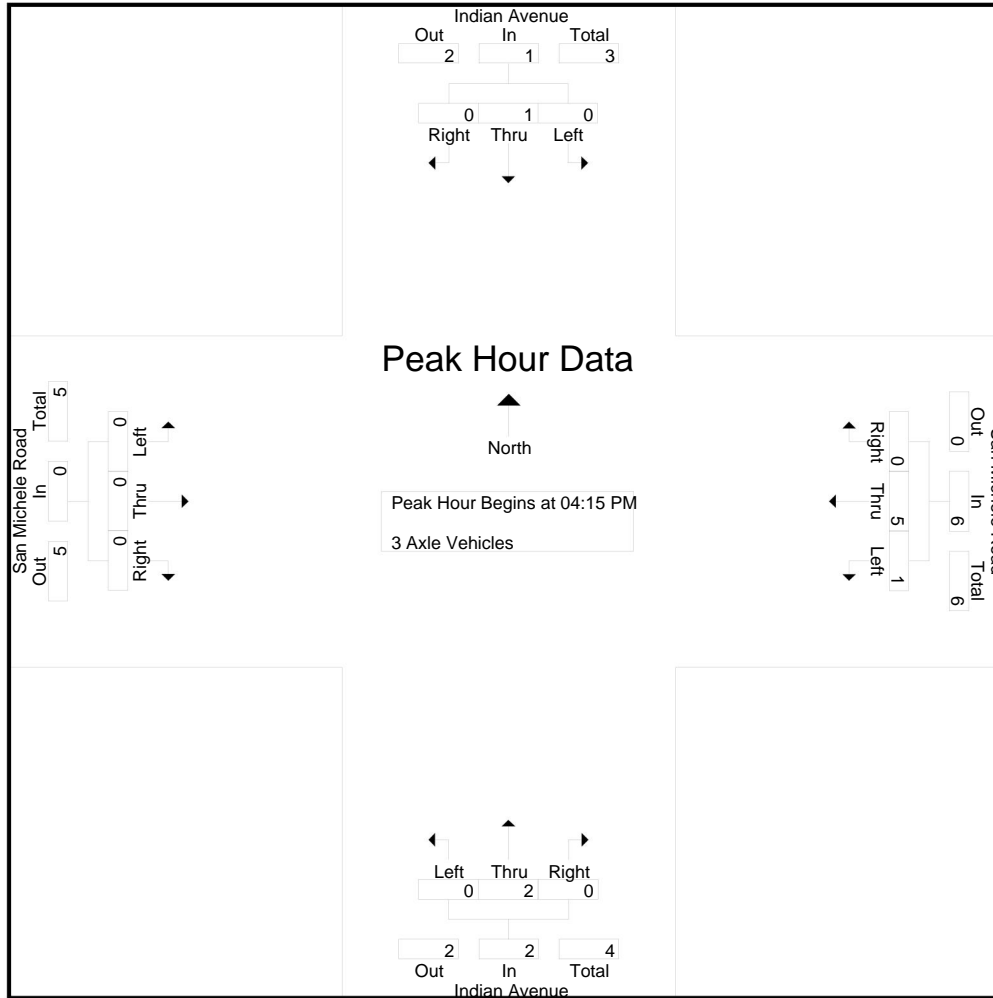
File Name : MRVINSMPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- 3 Axle Vehicles

Start Time	Indian Avenue Southbound					San Michele Road Westbound					Indian Avenue Northbound					San Michele Road Eastbound					Exclu. Total	Inclu. Total	Int. Total					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total								
04:00 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	2
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	1	0	0	1	0	2	0	0	2	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	4	4
04:45 PM	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	2
Total	0	1	0	0	1	1	2	0	0	3	1	3	0	0	4	0	0	0	0	0	0	0	0	0	0	0	8	8
05:00 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3
05:15 PM	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	2
05:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3	3
Total	0	0	0	0	0	0	5	0	0	5	3	1	0	0	4	0	0	0	0	0	0	0	0	0	0	0	9	9
Grand Total	0	1	0	0	1	1	7	0	0	8	4	4	0	0	8	0	0	0	0	0	0	0	0	0	0	0	17	17
Apprch %	0	100	0			12.5	87.5	0			50	50	0			0	0	0			0	0	0			0	100	
Total %	0	5.9	0		5.9	5.9	41.2	0		47.1	23.5	23.5	0		47.1	0	0	0		0	0	0	0			0	100	

3.1-561

Start Time	Indian Avenue Southbound				San Michele Road Westbound				Indian Avenue Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	1	0	1	0	2	0	2	0	1	0	1	0	0	0	0	4
04:45 PM	0	0	0	0	1	0	0	1	0	1	0	1	0	0	0	0	2
05:00 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	3
Total Volume	0	1	0	1	1	5	0	6	0	2	0	2	0	0	0	0	9
% App. Total	0	100	0		16.7	83.3	0		0	100	0		0	0	0		
PHF	.000	.250	.000	.250	.250	.417	.000	.500	.000	.500	.000	.500	.000	.000	.000	.000	.563



City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVINSMPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Indian Avenue Southbound				San Michele Road Westbound				Indian Avenue Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:15 PM				04:15 PM				04:15 PM				04:15 PM				
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
+15 mins.	0	1	0	1	0	2	0	2	0	1	0	1	0	0	0	0	
+30 mins.	0	0	0	0	1	0	0	1	0	1	0	1	0	0	0	0	
+45 mins.	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	
Total Volume	0	1	0	1	1	5	0	6	0	2	0	2	0	0	0	0	
% App. Total	0	100	0		16.7	83.3	0		0	100	0		0	0	0		
PHF	.000	.250	.000	.250	.250	.417	.000	.500	.000	.500	.000	.500	.000	.000	.000	.000	

City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVINSMPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	Indian Avenue Southbound					San Michele Road Westbound					Indian Avenue Northbound					San Michele Road Eastbound					Exclu. Total	Inclu. Total	Int. Total				
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total							
04:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	2	2	0	2	2
04:15 PM	0	0	1	0	1	0	0	0	0	0	0	1	2	0	3	1	0	0	0	1	0	0	0	0	0	5	5
04:30 PM	0	1	0	0	1	1	0	0	0	1	0	0	1	1	1	0	2	0	0	2	1	0	0	0	1	5	6
04:45 PM	0	2	1	1	3	0	0	0	0	0	1	1	0	0	2	0	1	0	0	1	1	0	0	0	1	6	7
Total	0	3	2	1	5	1	1	0	0	2	1	2	3	1	6	1	4	0	0	5	2	0	0	0	2	18	20
05:00 PM	1	1	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	3	3
05:15 PM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
05:30 PM	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3	3
05:45 PM	0	1	0	0	1	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	3	3
Total	1	3	0	0	4	2	2	0	0	4	0	2	0	0	2	0	1	0	0	1	0	0	0	0	0	11	11
Grand Total	1	6	2	1	9	3	3	0	0	6	1	4	3	1	8	1	5	0	0	6	2	0	0	0	2	29	31
Apprch %	11.1	66.7	22.2			50	50	0			12.5	50	37.5			16.7	83.3	0									
Total %	3.4	20.7	6.9		31	10.3	10.3	0		20.7	3.4	13.8	10.3		27.6	3.4	17.2	0		20.7	6.5				93.5		

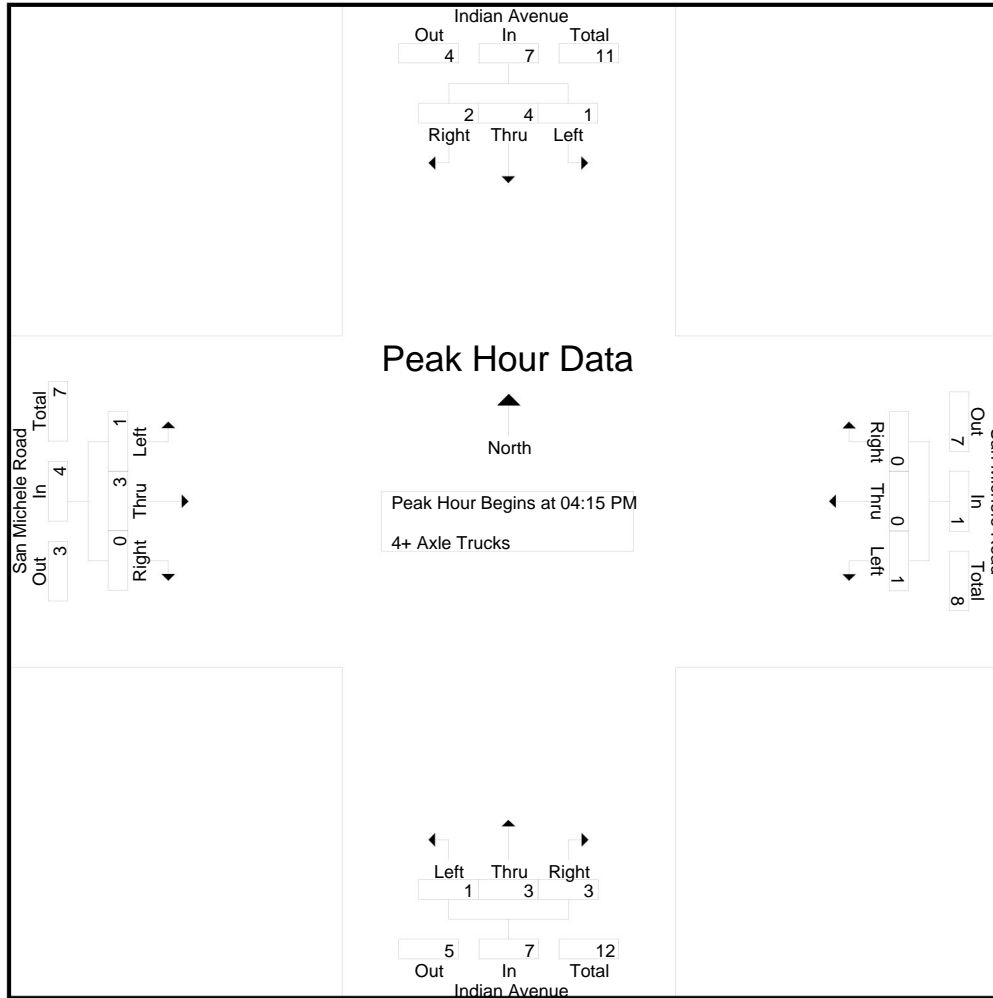
3.1.564

Start Time	Indian Avenue Southbound				San Michele Road Westbound				Indian Avenue Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	0	1	1	0	0	0	0	0	1	2	3	1	0	0	1	5
04:30 PM	0	1	0	1	1	0	0	1	0	0	1	1	0	2	0	2	5
04:45 PM	0	2	1	3	0	0	0	0	1	1	0	2	0	1	0	1	6
05:00 PM	1	1	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
Total Volume	1	4	2	7	1	0	0	1	1	3	3	7	1	3	0	4	19
% App. Total	14.3	57.1	28.6		100	0	0		14.3	42.9	42.9		25	75	0		
PHF	.250	.500	.500	.583	.250	.000	.000	.250	.250	.750	.375	.583	.250	.375	.000	.500	.792

City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVINSMPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 2

3.1-565



Counts Unlimited, Inc.  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: San Michele Road  
 Weather: Clear

File Name : MRVINSMPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Indian Avenue Southbound				San Michele Road Westbound				Indian Avenue Northbound				San Michele Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:15 PM				04:15 PM				04:15 PM				04:15 PM				
+0 mins.	0	0	1	1	0	0	0	0	0	1	2	3	1	0	0	1	
+15 mins.	0	1	0	1	1	0	0	1	0	0	1	1	0	2	0	2	
+30 mins.	0	2	1	3	0	0	0	0	1	1	0	2	0	1	0	1	
+45 mins.	1	1	0	2	0	0	0	0	0	1	0	1	0	0	0	0	
Total Volume	1	4	2	7	1	0	0	1	1	3	3	7	1	3	0	4	
% App. Total	14.3	57.1	28.6		100	0	0		14.3	42.9	42.9		25	75	0		
PHF	.250	.500	.500	.583	.250	.000	.000	.250	.250	.750	.375	.583	.250	.375	.000	.500	

3.1-566

Location: Moreno Valley  
 N/S: Indian Avenue  
 E/W: San Michele Road



Date: 4/28/2015  
 Weather: Clear

**PEDESTRIANS**

	North Leg Indian Avenue	East Leg San Michele Road	South Leg Indian Avenue	West Leg San Michele Road	TOTAL
7:00 AM	2	0	0	2	4
7:15 AM	7	0	0	3	10
7:30 AM	0	0	0	4	4
7:45 AM	0	0	0	21	21
8:00 AM	0	0	0	4	4
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	1	1
8:45 AM	0	0	0	0	0
<b>TOTAL VOLUMES:</b>	9	0	0	35	44

	North Leg Indian Avenue	East Leg San Michele Road	South Leg Indian Avenue	West Leg San Michele Road	TOTAL
4:00 PM	0	0	0	11	11
4:15 PM	0	0	3	15	18
4:30 PM	0	0	15	164	179
4:45 PM	3	0	2	123	128
5:00 PM	1	1	0	22	24
5:15 PM	2	0	1	7	10
5:30 PM	0	0	0	9	9
5:45 PM	4	2	3	9	18
<b>TOTAL VOLUMES:</b>	10	3	24	360	397

Location: Moreno Valley  
 N/S: Indian Avenue  
 E/W: San Michele Road



Date: 4/28/2015  
 Weather: Clear

**BICYCLES**

	North Leg Indian Avenue	East Leg San Michele Road	South Leg Indian Avenue	West Leg San Michele Road	TOTAL
7:00 AM	1	0	0	0	1
7:15 AM	1	0	0	0	1
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
<b>TOTAL VOLUMES:</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>

	North Leg Indian Avenue	East Leg San Michele Road	South Leg Indian Avenue	West Leg San Michele Road	TOTAL
4:00 PM	0	0	0	0	0
4:15 PM	0	0	1	1	2
4:30 PM	0	0	0	0	0
4:45 PM	0	0	2	0	2
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
<b>TOTAL VOLUMES:</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>4</b>



City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: Nandina Avenue  
 Weather: Clear

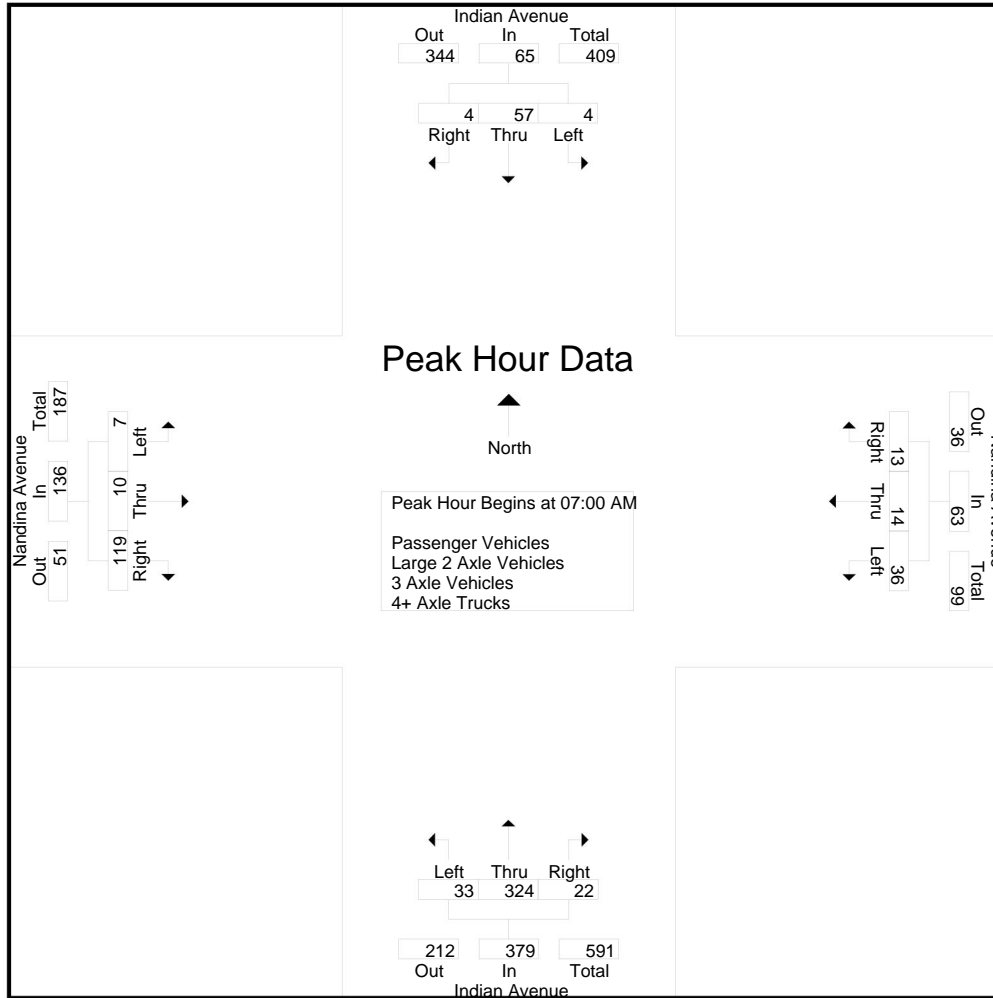
File Name : MRVINNAAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Indian Avenue Southbound					Nandina Avenue Westbound					Indian Avenue Northbound					Nandina Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR			
07:00 AM	1	18	1	1	20	8	6	3	0	17	5	87	8	0	100	1	1	26	10	28	11	165	176
07:15 AM	1	19	0	0	20	11	3	1	0	15	5	109	5	0	119	0	3	38	15	41	15	195	210
07:30 AM	2	10	1	1	13	8	1	7	1	16	8	70	2	0	80	2	4	25	12	31	14	140	154
07:45 AM	0	10	2	2	12	9	4	2	1	15	15	58	7	2	80	4	2	30	11	36	16	143	159
Total	4	57	4	4	65	36	14	13	2	63	33	324	22	2	379	7	10	119	48	136	56	643	699
08:00 AM	0	7	3	1	10	3	2	1	0	6	7	40	1	0	48	1	2	12	6	15	7	79	86
08:15 AM	0	15	1	0	16	6	4	5	2	15	4	31	2	0	37	0	3	18	7	21	9	89	98
08:30 AM	0	14	1	1	15	9	0	5	2	14	1	28	2	0	31	1	2	14	5	17	8	77	85
08:45 AM	0	10	0	0	10	8	3	0	0	11	6	29	3	0	38	0	5	13	5	18	5	77	82
Total	0	46	5	2	51	26	9	11	4	46	18	128	8	0	154	2	12	57	23	71	29	322	351
Grand Total	4	103	9	6	116	62	23	24	6	109	51	452	30	2	533	9	22	176	71	207	85	965	1050
Apprch %	3.4	88.8	7.8			56.9	21.1	22			9.6	84.8	5.6			4.3	10.6	85					
Total %	0.4	10.7	0.9		12	6.4	2.4	2.5		11.3	5.3	46.8	3.1		55.2	0.9	2.3	18.2		21.5	8.1	91.9	
Passenger Vehicles	3	87	2		92	56	15	15		90	35	424	21		481	4	15	144		224	0	0	887
% Passenger Vehicles	75	84.5	22.2	0	75.4	90.3	65.2	62.5	66.7	78.3	68.6	93.8	70	50	89.9	44.4	68.2	81.8	85.9	80.6	0	0	84.5
Large 2 Axle Vehicles	0	7	5		13	0	0	5		6	5	13	7		26	3	1	9		15	0	0	60
% Large 2 Axle Vehicles	0	6.8	55.6	16.7	10.7	0	0	20.8	16.7	5.2	9.8	2.9	23.3	50	4.9	33.3	4.5	5.1	2.8	5.4	0	0	5.7
3 Axle Vehicles	0	3	0		3	2	0	2		5	1	1	0		2	1	1	5		9	0	0	19
% 3 Axle Vehicles	0	2.9	0	0	2.5	3.2	0	8.3	16.7	4.3	2	0.2	0	0	0.4	11.1	4.5	2.8	2.8	3.2	0	0	1.8
4+ Axle Trucks	1	6	2		14	4	8	2		14	10	14	2		26	1	5	18		30	0	0	84
% 4+ Axle Trucks	25	5.8	22.2	83.3	11.5	6.5	34.8	8.3	0	12.2	19.6	3.1	6.7	0	4.9	11.1	22.7	10.2	8.5	10.8	0	0	8

3.1.569

	Indian Avenue Southbound				Nandina Avenue Westbound				Indian Avenue Northbound				Nandina Avenue Eastbound				Int. Total					
	Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right		App. Total				
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																						
Peak Hour for Entire Intersection Begins at 07:00 AM																						
07:00 AM	1	18	1		20	8	6	3	17	5	87	8	100	1	1	26	28	165				
07:15 AM	1	19	0		20	11	3	1	15	5	109	5	119	0	3	38	41	195				
07:30 AM	2	10	1		13	8	1	7	16	8	70	2	80	2	4	25	31	140				
07:45 AM	0	10	2		12	9	4	2	15	15	58	7	80	4	2	30	36	143				
Total Volume	4	57	4		65	36	14	13	63	33	324	22	379	7	10	119	136	643				
% App. Total	6.2	87.7	6.2			57.1	22.2	20.6			8.7	85.5	5.8			5.1	7.4	87.5				
PHF	.500	.750	.500		.813	.818	.583	.464	.926	.550	.743	.688	.796	.438	.625	.783	.829	.824				



3.1-570

City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: Nandina Avenue  
 Weather: Clear

File Name : MRVINNAAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Indian Avenue Southbound				Nandina Avenue Westbound				Indian Avenue Northbound				Nandina Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	1	18	1	20	8	6	3	17	5	87	8	100	1	1	26	28	
+15 mins.	1	19	0	20	11	3	1	15	5	109	5	119	0	3	38	41	
+30 mins.	2	10	1	13	8	1	7	16	8	70	2	80	2	4	25	31	
+45 mins.	0	10	2	12	9	4	2	15	15	58	7	80	4	2	30	36	
Total Volume	4	57	4	65	36	14	13	63	33	324	22	379	7	10	119	136	
% App. Total	6.2	87.7	6.2		57.1	22.2	20.6		8.7	85.5	5.8		5.1	7.4	87.5		
PHF	.500	.750	.500	.813	.818	.583	.464	.926	.550	.743	.688	.796	.438	.625	.783	.829	

3.1-571

City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: Nandina Avenue  
 Weather: Clear

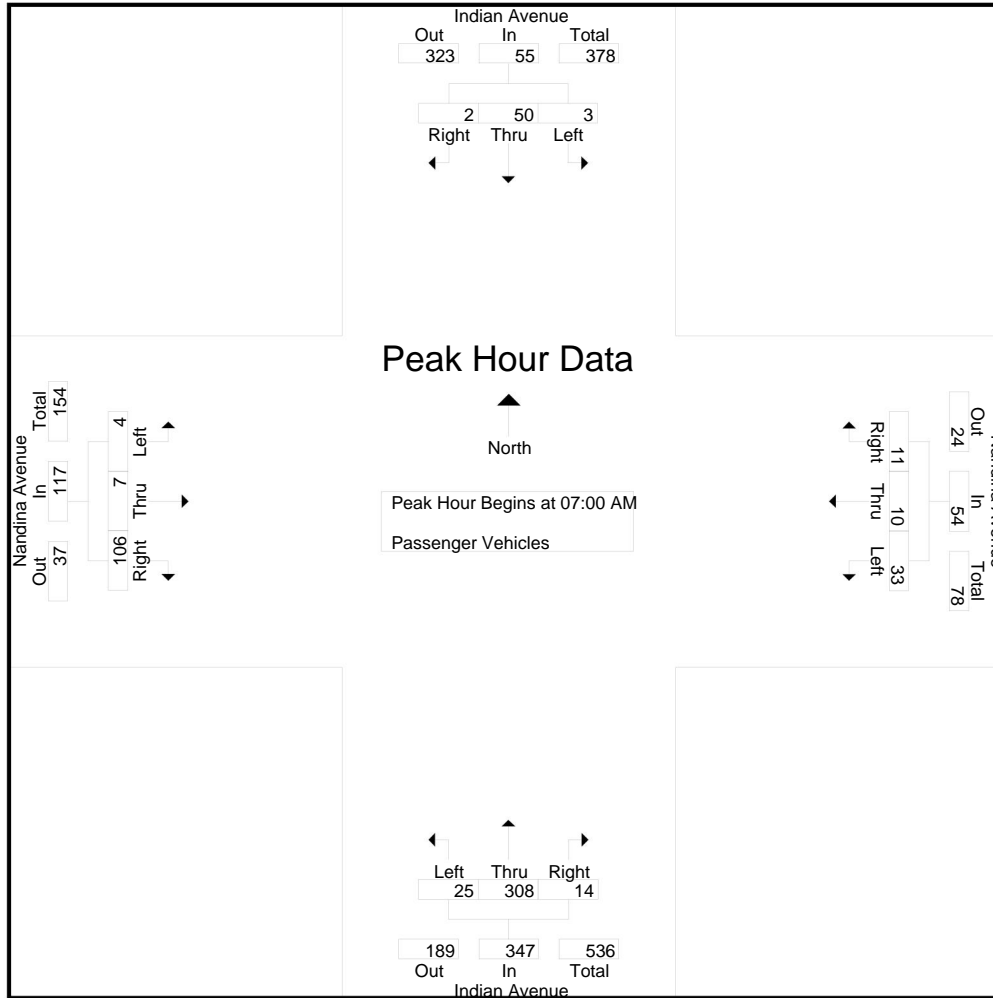
File Name : MRVINNAAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Indian Avenue Southbound					Nandina Avenue Westbound					Indian Avenue Northbound					Nandina Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	1	17	1	0	19	7	4	2	0	13	5	82	5	0	92	1	1	25	10	27	10	151	161
07:15 AM	1	18	0	0	19	11	2	0	0	13	4	105	4	0	113	0	2	32	13	34	13	179	192
07:30 AM	1	8	1	0	10	7	1	7	1	15	7	65	2	0	74	2	3	22	10	27	11	126	137
07:45 AM	0	7	0	0	7	8	3	2	1	13	9	56	3	1	68	1	1	27	11	29	13	117	130
Total	3	50	2	0	55	33	10	11	2	54	25	308	14	1	347	4	7	106	44	117	47	573	620
08:00 AM	0	6	0	0	6	3	1	0	0	4	2	35	1	0	38	0	1	12	6	13	6	61	67
08:15 AM	0	11	0	0	11	5	4	2	1	11	2	30	2	0	34	0	3	13	6	16	7	72	79
08:30 AM	0	13	0	0	13	8	0	2	1	10	1	24	2	0	27	0	0	7	3	7	4	57	61
08:45 AM	0	7	0	0	7	7	0	0	0	7	5	27	2	0	34	0	4	6	2	10	2	58	60
Total	0	37	0	0	37	23	5	4	2	32	10	116	7	0	133	0	8	38	17	46	19	248	267
Grand Total	3	87	2	0	92	56	15	15	4	86	35	424	21	1	480	4	15	144	61	163	66	821	887
Apprch %	3.3	94.6	2.2			65.1	17.4	17.4			7.3	88.3	4.4			2.5	9.2	88.3					
Total %	0.4	10.6	0.2		11.2	6.8	1.8	1.8		10.5	4.3	51.6	2.6		58.5	0.5	1.8	17.5		19.9	7.4	92.6	

3.1-572

Start Time	Indian Avenue Southbound				Nandina Avenue Westbound				Indian Avenue Northbound				Nandina Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	1	17	1	19	7	4	2	13	5	82	5	92	1	1	25	27	151
07:15 AM	1	18	0	19	11	2	0	13	4	105	4	113	0	2	32	34	179
07:30 AM	1	8	1	10	7	1	7	15	7	65	2	74	2	3	22	27	126
07:45 AM	0	7	0	7	8	3	2	13	9	56	3	68	1	1	27	29	117
Total Volume	3	50	2	55	33	10	11	54	25	308	14	347	4	7	106	117	573
% App. Total	5.5	90.9	3.6		61.1	18.5	20.4		7.2	88.8	4		3.4	6	90.6		
PHF	.750	.694	.500	.724	.750	.625	.393	.900	.694	.733	.700	.768	.500	.583	.828	.860	.800



3.1-573

Counts Unlimited, Inc.  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: Nandina Avenue  
 Weather: Clear

File Name : MRVINNAAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Indian Avenue Southbound				Nandina Avenue Westbound				Indian Avenue Northbound				Nandina Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	1	17	1	19	7	4	2	13	5	82	5	92	1	1	25	27	
+15 mins.	1	18	0	19	11	2	0	13	4	105	4	113	0	2	32	34	
+30 mins.	1	8	1	10	7	1	7	15	7	65	2	74	2	3	22	27	
+45 mins.	0	7	0	7	8	3	2	13	9	56	3	68	1	1	27	29	
Total Volume	3	50	2	55	33	10	11	54	25	308	14	347	4	7	106	117	
% App. Total	5.5	90.9	3.6		61.1	18.5	20.4		7.2	88.8	4		3.4	6	90.6		
PHF	.750	.694	.500	.724	.750	.625	.393	.900	.694	.733	.700	.768	.500	.583	.828	.860	

3.1-574

City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: Nandina Avenue  
 Weather: Clear

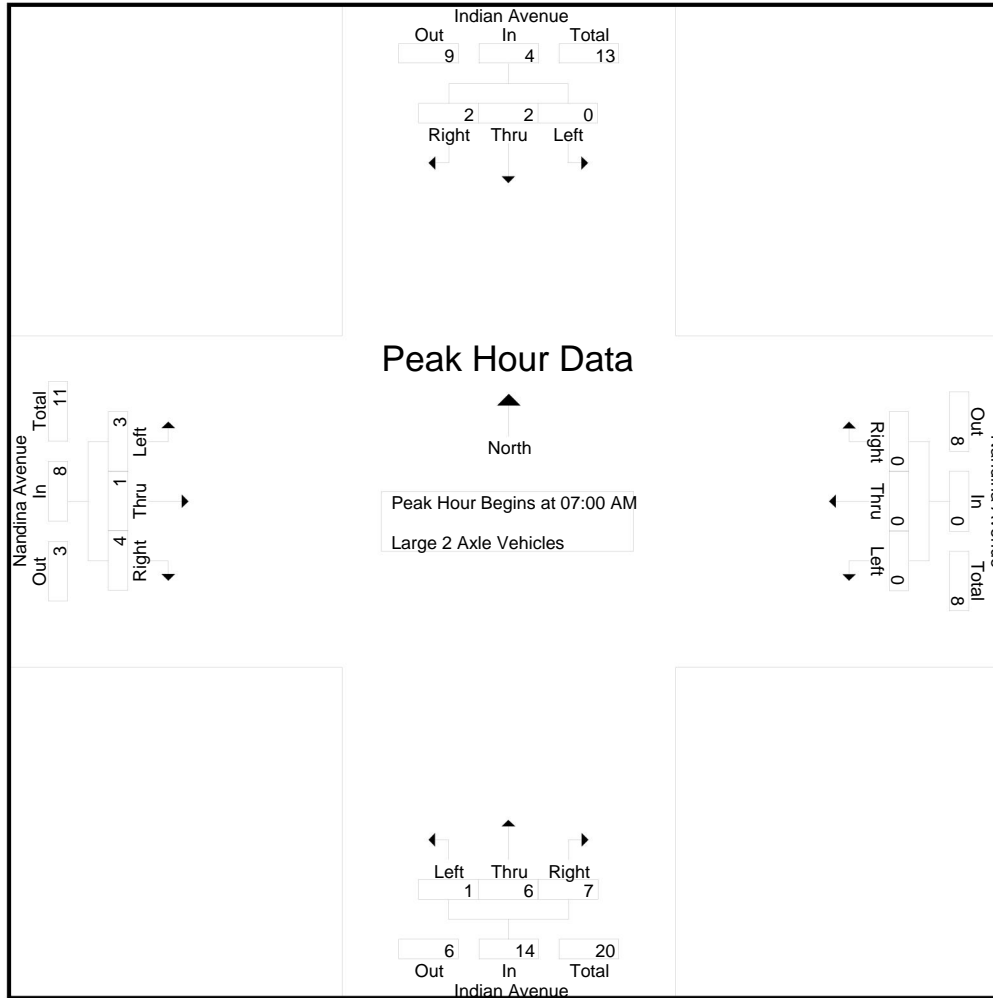
File Name : MRVINNAAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

Start Time	Indian Avenue Southbound					Nandina Avenue Westbound					Indian Avenue Northbound					Nandina Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total								
07:00 AM	0	1	0	0	1	0	0	0	0	0	0	3	2	0	5	0	0	0	0	0	0	0	0	0	0	0	6	6
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	2	0	2	0	0	0	0	0	0	3	3
07:30 AM	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	4	4
07:45 AM	0	0	2	1	2	0	0	0	0	0	1	0	4	1	5	3	1	2	0	6	2	13	15					
Total	0	2	2	1	4	0	0	0	0	0	1	6	7	1	14	3	1	4	0	8	2	26	28					
08:00 AM	0	1	1	0	2	0	0	1	0	1	2	2	0	0	4	0	0	0	0	0	0	7	7					
08:15 AM	0	1	1	0	2	0	0	3	1	3	1	1	0	0	2	0	0	2	1	2	2	9	11					
08:30 AM	0	1	1	0	2	0	0	1	0	1	0	3	0	0	3	0	0	3	1	3	1	9	10					
08:45 AM	0	2	0	0	2	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	4	4					
Total	0	5	3	0	8	0	0	5	1	5	4	7	0	0	11	0	0	5	2	5	3	29	32					
Grand Total	0	7	5	1	12	0	0	5	1	5	5	13	7	1	25	3	1	9	2	13	5	55	60					
Apprch %	0	58.3	41.7			0	0	100			20	52	28			23.1	7.7	69.2										
Total %	0	12.7	9.1		21.8	0	0	9.1		9.1	9.1	23.6	12.7		45.5	5.5	1.8	16.4		23.6	8.3	91.7						

3.1-575

Start Time	Indian Avenue Southbound				Nandina Avenue Westbound				Indian Avenue Northbound				Nandina Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	1	0	1	0	0	0	0	0	3	2	5	0	0	0	0	6
07:15 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	2	3
07:30 AM	0	1	0	1	0	0	0	0	0	3	0	3	0	0	0	0	4
07:45 AM	0	0	2	2	0	0	0	0	1	0	4	5	3	1	2	6	13
Total Volume	0	2	2	4	0	0	0	0	1	6	7	14	3	1	4	8	26
% App. Total	0	50	50		0	0	0		7.1	42.9	50		37.5	12.5	50		
PHF	.000	.500	.250	.500	.000	.000	.000	.000	.250	.500	.438	.700	.250	.250	.500	.333	.500





City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: Nandina Avenue  
 Weather: Clear

File Name : MRVINNAAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Indian Avenue Southbound				Nandina Avenue Westbound				Indian Avenue Northbound				Nandina Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	1	0	1	0	0	0	0	0	3	2	5	0	0	0	0	
+15 mins.	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	2	
+30 mins.	0	1	0	1	0	0	0	0	0	3	0	3	0	0	0	0	
+45 mins.	0	0	2	2	0	0	0	0	1	0	4	5	3	1	2	6	
Total Volume	0	2	2	4	0	0	0	0	1	6	7	14	3	1	4	8	
% App. Total	0	50	50		0	0	0		7.1	42.9	50		37.5	12.5	50		
PHF	.000	.500	.250	.500	.000	.000	.000	.000	.250	.500	.438	.700	.250	.250	.500	.333	

3.1-577

City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: Nandina Avenue  
 Weather: Clear

File Name : MRVINNAAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

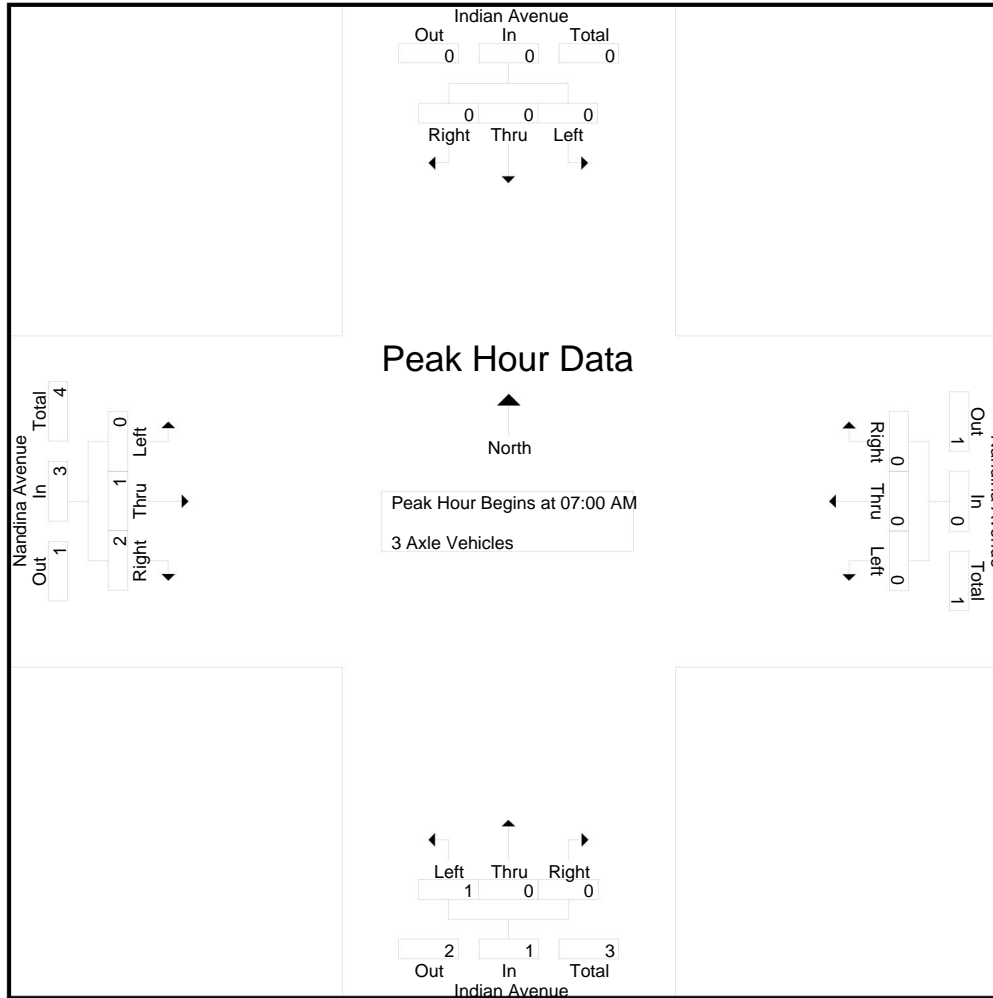
Groups Printed- 3 Axle Vehicles

Start Time	Indian Avenue Southbound					Nandina Avenue Westbound					Indian Avenue Northbound					Nandina Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total								
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	0	1	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	2	1	2	0	0	3	1	2	3
07:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	2	1	3	1	4	0	0	5	1	4	5
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	0	1	1
08:15 AM	0	2	0	0	2	1	0	0	0	1	0	0	0	0	0	0	0	1	0	1	0	4	0	0	4	0	4	4
08:30 AM	0	0	0	0	0	0	0	2	1	2	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3	1	2	3
08:45 AM	0	1	0	0	1	1	0	0	0	1	0	1	0	0	1	0	0	2	1	2	1	5	0	0	6	1	5	6
Total	0	3	0	0	3	2	0	2	1	4	0	1	0	0	1	1	0	3	1	4	2	12	0	0	14	2	12	14
Grand Total	0	3	0	0	3	2	0	2	1	4	1	1	0	0	2	1	1	5	2	7	3	16	0	0	19	3	16	19
Apprch %	0	100	0			50	0	50			50	50	0			14.3	14.3	71.4										
Total %	0	18.8	0		18.8	12.5	0	12.5		25	6.2	6.2	0		12.5	6.2	6.2	31.2		43.8	15.8	84.2				15.8	84.2	

3.1-578

Start Time	Indian Avenue Southbound				Nandina Avenue Westbound				Indian Avenue Northbound				Nandina Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2
07:45 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
Total Volume	0	0	0	0	0	0	0	0	1	0	0	1	0	1	2	3	4
% App. Total	0	0	0		0	0	0		100	0	0		0	33.3	66.7		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.000	.250	.000	.250	.250	.375	.500

3.1-579



Counts Unlimited, Inc.  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: Nandina Avenue  
 Weather: Clear

File Name : MRVINNAAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Indian Avenue Southbound				Nandina Avenue Westbound				Indian Avenue Northbound				Nandina Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	
+45 mins.	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	
Total Volume	0	0	0	0	0	0	0	0	1	0	0	1	0	1	2	3	
% App. Total	0	0	0	0	0	0	0	0	100	0	0	100	0	33.3	66.7		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.000	.250	.000	.250	.250	.375	

3.1-580

City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: Nandina Avenue  
 Weather: Clear

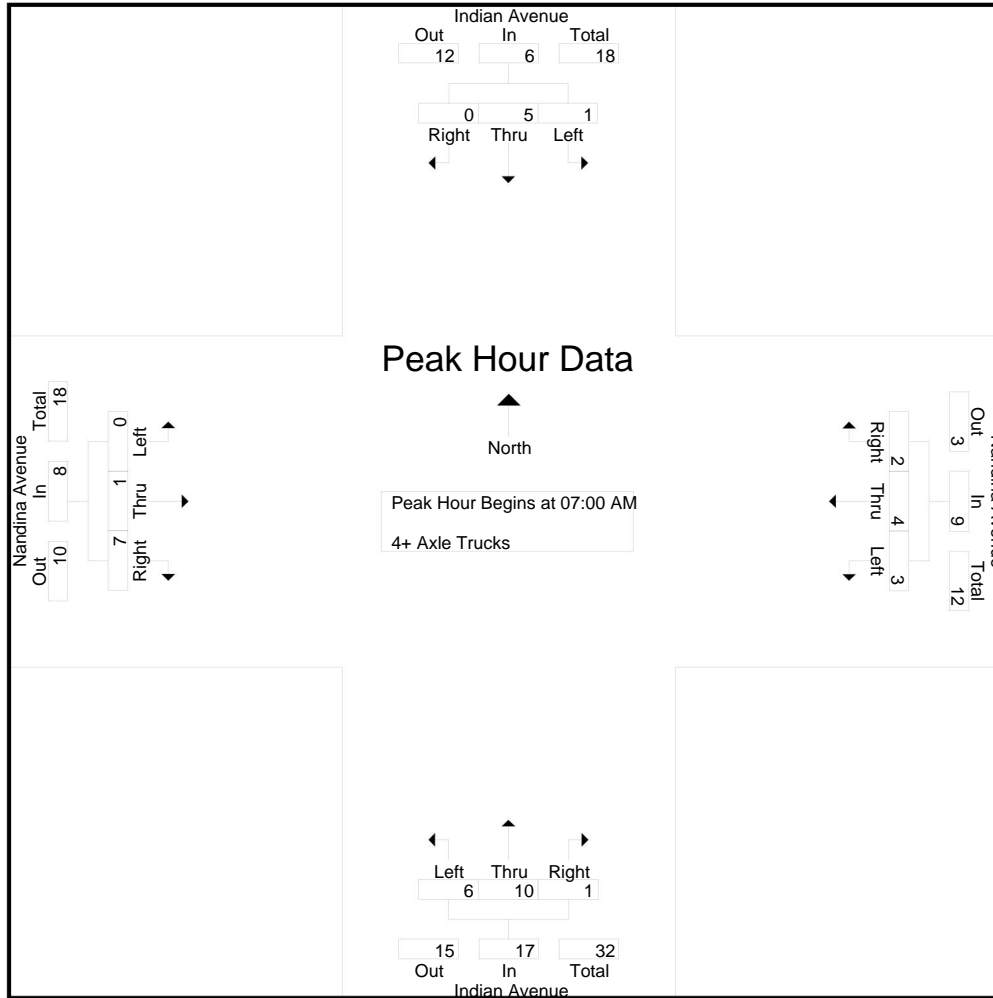
File Name : MRVINNAAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	Indian Avenue Southbound					Nandina Avenue Westbound					Indian Avenue Northbound					Nandina Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	0	0	0	1	0	1	2	1	0	4	0	2	1	0	3	0	0	1	0	1	1	8	9
07:15 AM	0	1	0	0	1	0	1	1	0	2	1	4	0	0	5	0	0	4	2	4	2	12	14
07:30 AM	1	1	0	1	2	1	0	0	0	1	1	2	0	0	3	0	1	1	1	2	2	8	10
07:45 AM	0	3	0	1	3	1	1	0	0	2	4	2	0	0	6	0	0	1	0	1	1	12	13
Total	1	5	0	3	6	3	4	2	0	9	6	10	1	0	17	0	1	7	3	8	6	40	46
08:00 AM	0	0	2	1	2	0	1	0	0	1	3	3	0	0	6	0	1	0	0	1	1	10	11
08:15 AM	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	0	0	2	0	2	0	4	4
08:30 AM	0	0	0	1	0	1	0	0	0	1	0	1	0	0	1	1	2	4	1	7	2	9	11
08:45 AM	0	0	0	0	0	0	3	0	0	3	0	0	1	0	1	0	1	5	2	6	2	10	12
Total	0	1	2	2	3	1	4	0	0	5	4	4	1	0	9	1	4	11	3	16	5	33	38
Grand Total	1	6	2	5	9	4	8	2	0	14	10	14	2	0	26	1	5	18	6	24	11	73	84
Apprch %	11.1	66.7	22.2			28.6	57.1	14.3			38.5	53.8	7.7			4.2	20.8	75					
Total %	1.4	8.2	2.7		12.3	5.5	11	2.7		19.2	13.7	19.2	2.7		35.6	1.4	6.8	24.7		32.9	13.1	86.9	

3.1-581

Start Time	Indian Avenue Southbound				Nandina Avenue Westbound				Indian Avenue Northbound				Nandina Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	1	2	1	4	0	2	1	3	0	0	1	1	8
07:15 AM	0	1	0	1	0	1	1	2	1	4	0	5	0	0	4	4	12
07:30 AM	1	1	0	2	1	0	0	1	1	2	0	3	0	1	1	2	8
07:45 AM	0	3	0	3	1	1	0	2	4	2	0	6	0	0	1	1	12
Total Volume	1	5	0	6	3	4	2	9	6	10	1	17	0	1	7	8	40
% App. Total	16.7	83.3	0		33.3	44.4	22.2		35.3	58.8	5.9		0	12.5	87.5		
PHF	.250	.417	.000	.500	.750	.500	.500	.563	.375	.625	.250	.708	.000	.250	.438	.500	.833



Counts Unlimited, Inc.  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: Nandina Avenue  
 Weather: Clear

File Name : MRVINNAAM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Indian Avenue Southbound				Nandina Avenue Westbound				Indian Avenue Northbound				Nandina Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	0	0	0	1	2	1	4	0	2	1	3	0	0	1	1	
+15 mins.	0	1	0	1	0	1	1	2	1	4	0	5	0	0	4	4	
+30 mins.	1	1	0	2	1	0	0	1	1	2	0	3	0	1	1	2	
+45 mins.	0	3	0	3	1	1	0	2	4	2	0	6	0	0	1	1	
Total Volume	1	5	0	6	3	4	2	9	6	10	1	17	0	1	7	8	
% App. Total	16.7	83.3	0		33.3	44.4	22.2		35.3	58.8	5.9		0	12.5	87.5		
PHF	.250	.417	.000	.500	.750	.500	.500	.563	.375	.625	.250	.708	.000	.250	.438	.500	

3.1-583

City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: Nandina Avenue  
 Weather: Clear

File Name : MRVINNAPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Indian Avenue Southbound					Nandina Avenue Westbound					Indian Avenue Northbound					Nandina Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR			
04:00 PM	0	31	0	0	31	10	2	2	2	14	1	53	3	1	57	2	7	15	11	24	14	126	140
04:15 PM	4	16	1	1	21	17	6	6	5	29	9	79	6	0	94	0	3	23	22	26	28	170	198
04:30 PM	14	133	18	1	165	7	1	3	3	11	22	117	8	1	147	2	9	46	20	57	25	380	405
04:45 PM	25	158	19	2	202	8	6	5	5	19	13	101	15	0	129	2	10	58	24	70	31	420	451
Total	43	338	38	4	419	42	15	16	15	73	45	350	32	2	427	6	29	142	77	177	98	1096	1194
05:00 PM	5	50	3	0	58	5	4	0	0	9	7	60	11	2	78	3	14	50	19	67	21	212	233
05:15 PM	2	41	1	0	44	7	1	1	1	9	5	43	5	0	53	2	14	42	17	58	18	164	182
05:30 PM	2	74	4	0	80	3	3	7	6	13	7	55	6	1	68	4	6	44	20	54	27	215	242
05:45 PM	1	55	2	1	58	14	4	3	3	21	11	77	7	0	95	1	11	37	11	49	15	223	238
Total	10	220	10	1	240	29	12	11	10	52	30	235	29	3	294	10	45	173	67	228	81	814	895
Grand Total	53	558	48	5	659	71	27	27	25	125	75	585	61	5	721	16	74	315	144	405	179	1910	2089
Apprch %	8	84.7	7.3			56.8	21.6	21.6			10.4	81.1	8.5			4	18.3	77.8					
Total %	2.8	29.2	2.5		34.5	3.7	1.4	1.4		6.5	3.9	30.6	3.2		37.7	0.8	3.9	16.5		21.2	8.6	91.4	
Passenger Vehicles	51	544	38		638	62	24	27		138	68	562	53		688	15	71	275		493	0	0	1957
% Passenger Vehicles	96.2	97.5	79.2	100	96.1	87.3	88.9	100	100	92	90.7	96.1	86.9	100	94.8	93.8	95.9	87.3	91.7	89.8	0	0	93.7
Large 2 Axle Vehicles	1	5	9		15	1	0	0		1	2	7	1		10	1	2	8		17	0	0	43
% Large 2 Axle Vehicles	1.9	0.9	18.8	0	2.3	1.4	0	0	0	0.7	2.7	1.2	1.6	0	1.4	6.2	2.7	2.5	4.2	3.1	0	0	2.1
3 Axle Vehicles	1	0	0		1	2	1	0		3	0	6	4		10	0	1	16		19	0	0	33
% 3 Axle Vehicles	1.9	0	0	0	0.2	2.8	3.7	0	0	2	0	1	6.6	0	1.4	0	1.4	5.1	1.4	3.5	0	0	1.6
4+ Axle Trucks	0	9	1		10	6	2	0		8	5	10	3		18	0	0	16		20	0	0	56
% 4+ Axle Trucks	0	1.6	2.1	0	1.5	8.5	7.4	0	0	5.3	6.7	1.7	4.9	0	2.5	0	0	5.1	2.8	3.6	0	0	2.7

3.1.584

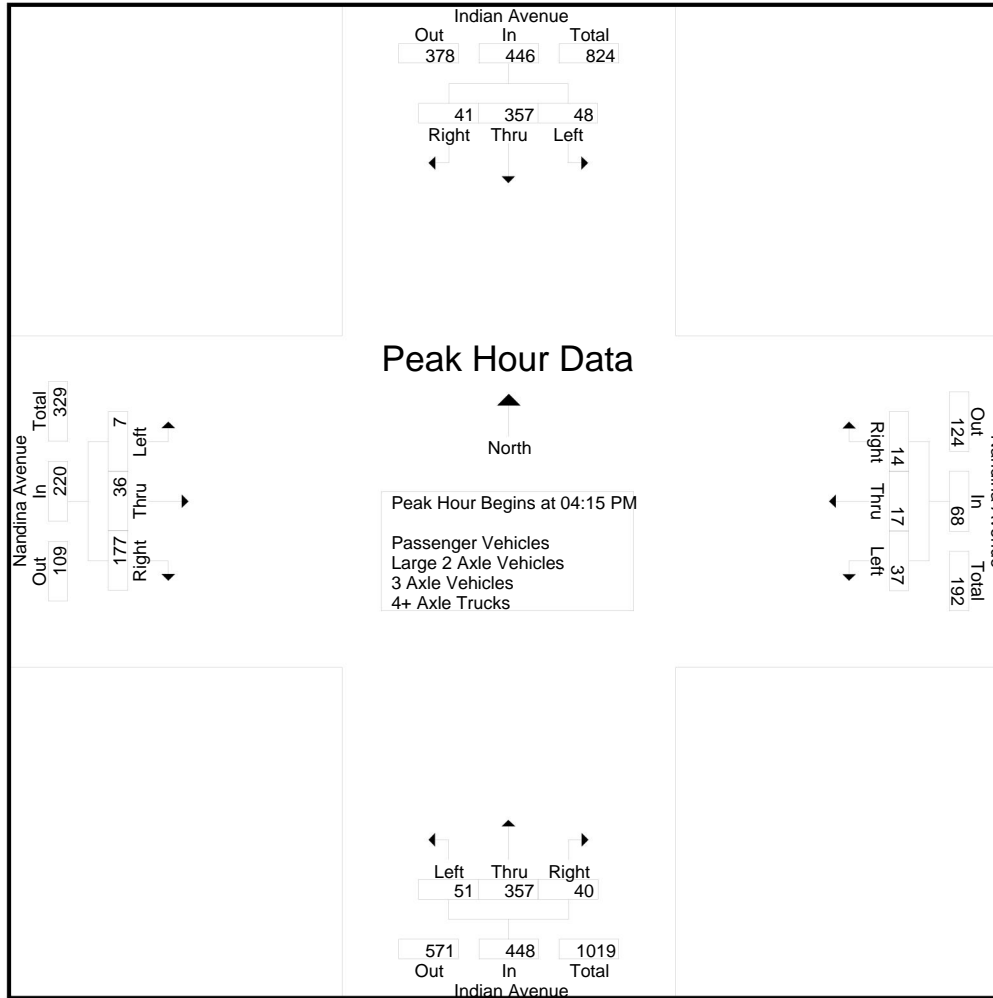
	Indian Avenue Southbound				Nandina Avenue Westbound				Indian Avenue Northbound				Nandina Avenue Eastbound				Int. Total					
	Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right		App. Total				
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																						
Peak Hour for Entire Intersection Begins at 04:15 PM																						
04:15 PM	4	16	1		21	17	6	6	29	9	79	6	94	0	3	23	26	170				
04:30 PM	14	133	18		165	7	1	3	11	22	117	8	147	2	9	46	57	380				
04:45 PM	25	158	19		202	8	6	5	19	13	101	15	129	2	10	58	70	420				
05:00 PM	5	50	3		58	5	4	0	9	7	60	11	78	3	14	50	67	212				
Total Volume	48	357	41		446	37	17	14	68	51	357	40	448	7	36	177	220	1182				
% App. Total	10.8	80	9.2			54.4	25	20.6			11.4	79.7	8.9		3.2	16.4	80.5					
PHF	.480	.565	.539		.552	.544	.708	.583	.586	.580	.763	.667	.762	.583	.643	.763	.786	.704				



Counts Unlimited, Inc.  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: Nandina Avenue  
 Weather: Clear

File Name : MRVINNAPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 2



3.1-585

Counts Unlimited, Inc.  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: Nandina Avenue  
 Weather: Clear

File Name : MRVINNAPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Indian Avenue Southbound				Nandina Avenue Westbound				Indian Avenue Northbound				Nandina Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:00 PM				04:15 PM				04:30 PM				
+0 mins.	14	133	18	165	10	2	2	14	9	79	6	94	2	9	46	57	
+15 mins.	25	158	19	202	17	6	6	29	22	117	8	147	2	10	58	70	
+30 mins.	5	50	3	58	7	1	3	11	13	101	15	129	3	14	50	67	
+45 mins.	2	41	1	44	8	6	5	19	7	60	11	78	2	14	42	58	
Total Volume	46	382	41	469	42	15	16	73	51	357	40	448	9	47	196	252	
% App. Total	9.8	81.4	8.7		57.5	20.5	21.9		11.4	79.7	8.9		3.6	18.7	77.8		
PHF	.460	.604	.539	.580	.618	.625	.667	.629	.580	.763	.667	.762	.750	.839	.845	.900	

3.1-586

City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: Nandina Avenue  
 Weather: Clear

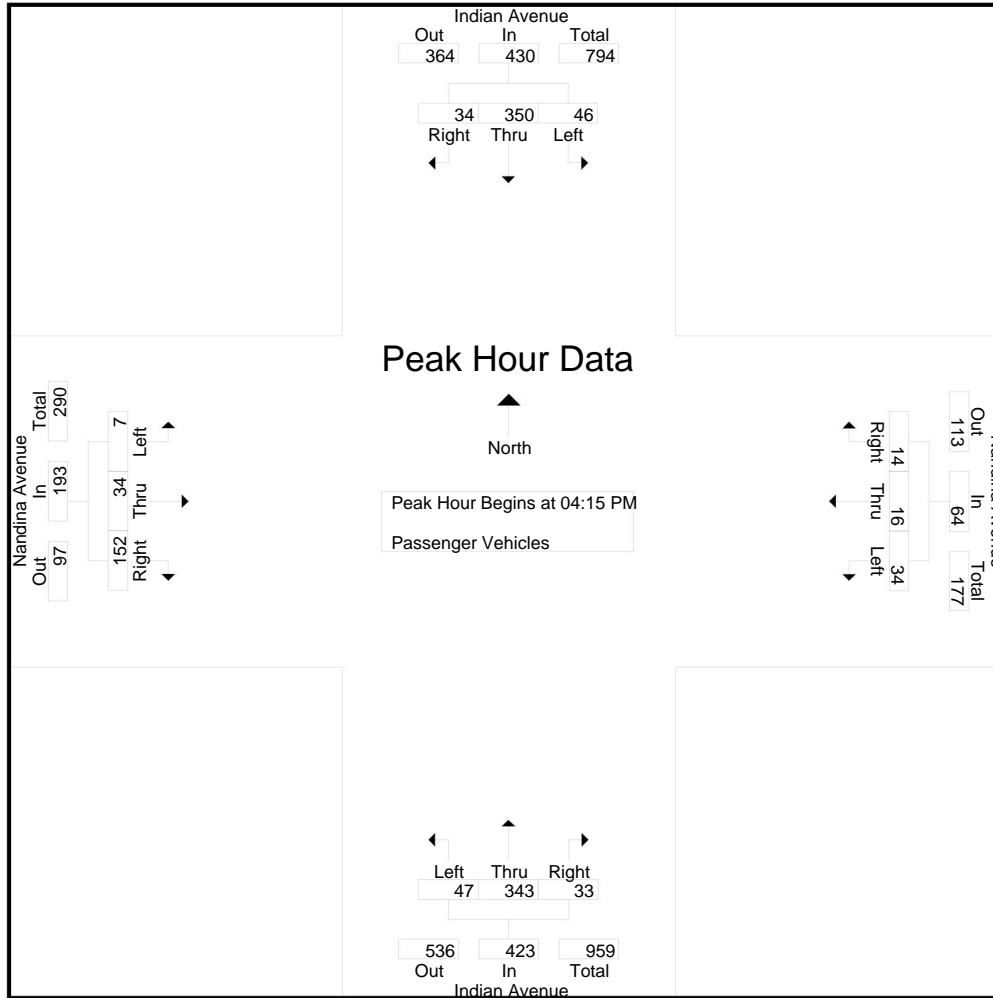
File Name : MRVINNAPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Indian Avenue Southbound					Nandina Avenue Westbound					Indian Avenue Northbound					Nandina Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	0	31	0	0	31	9	2	2	2	13	1	52	3	1	56	2	7	14	11	23	14	123	137
04:15 PM	3	15	1	1	19	15	6	6	5	27	8	74	5	0	87	0	2	22	21	24	27	157	184
04:30 PM	14	131	16	1	161	6	1	3	3	10	21	114	8	1	143	2	8	39	17	49	22	363	385
04:45 PM	24	155	15	2	194	8	6	5	5	19	11	97	11	0	119	2	10	51	22	63	29	395	424
Total	41	332	32	4	405	38	15	16	15	69	41	337	27	2	405	6	27	126	71	159	92	1038	1130
05:00 PM	5	49	2	0	56	5	3	0	0	8	7	58	9	2	74	3	14	40	16	57	18	195	213
05:15 PM	2	39	0	0	41	7	1	1	1	9	5	40	5	0	50	2	13	33	15	48	16	148	164
05:30 PM	2	73	2	0	77	3	3	7	6	13	6	55	5	1	66	3	6	41	19	50	26	206	232
05:45 PM	1	51	2	1	54	9	2	3	3	14	9	72	7	0	88	1	11	35	11	47	15	203	218
Total	10	212	6	1	228	24	9	11	10	44	27	225	26	3	278	9	44	149	61	202	75	752	827
Grand Total	51	544	38	5	633	62	24	27	25	113	68	562	53	5	683	15	71	275	132	361	167	1790	1957
Apprch %	8.1	85.9	6			54.9	21.2	23.9			10	82.3	7.8			4.2	19.7	76.2					
Total %	2.8	30.4	2.1		35.4	3.5	1.3	1.5		6.3	3.8	31.4	3		38.2	0.8	4	15.4		20.2	8.5	91.5	

3.1-587

Start Time	Indian Avenue Southbound				Nandina Avenue Westbound				Indian Avenue Northbound				Nandina Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	3	15	1	19	15	6	6	27	8	74	5	87	0	2	22	24	157
04:30 PM	14	131	16	161	6	1	3	10	21	114	8	143	2	8	39	49	363
04:45 PM	24	155	15	194	8	6	5	19	11	97	11	119	2	10	51	63	395
05:00 PM	5	49	2	56	5	3	0	8	7	58	9	74	3	14	40	57	195
Total Volume	46	350	34	430	34	16	14	64	47	343	33	423	7	34	152	193	1110
% App. Total	10.7	81.4	7.9		53.1	25	21.9		11.1	81.1	7.8		3.6	17.6	78.8		
PHF	.479	.565	.531	.554	.567	.667	.583	.593	.560	.752	.750	.740	.583	.607	.745	.766	.703



City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: Nandina Avenue  
 Weather: Clear

File Name : MRVINNAPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Indian Avenue Southbound				Nandina Avenue Westbound				Indian Avenue Northbound				Nandina Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:15 PM				04:15 PM				04:15 PM				04:15 PM				
+0 mins.	3	15	1	19	15	6	6	27	8	74	5	87	0	2	22	24	
+15 mins.	14	131	16	161	6	1	3	10	21	114	8	143	2	8	39	49	
+30 mins.	24	155	15	194	8	6	5	19	11	97	11	119	2	10	51	63	
+45 mins.	5	49	2	56	5	3	0	8	7	58	9	74	3	14	40	57	
Total Volume	46	350	34	430	34	16	14	64	47	343	33	423	7	34	152	193	
% App. Total	10.7	81.4	7.9		53.1	25	21.9		11.1	81.1	7.8		3.6	17.6	78.8		
PHF	.479	.565	.531	.554	.567	.667	.583	.593	.560	.752	.750	.740	.583	.607	.745	.766	

3.1-589

City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: Nandina Avenue  
 Weather: Clear

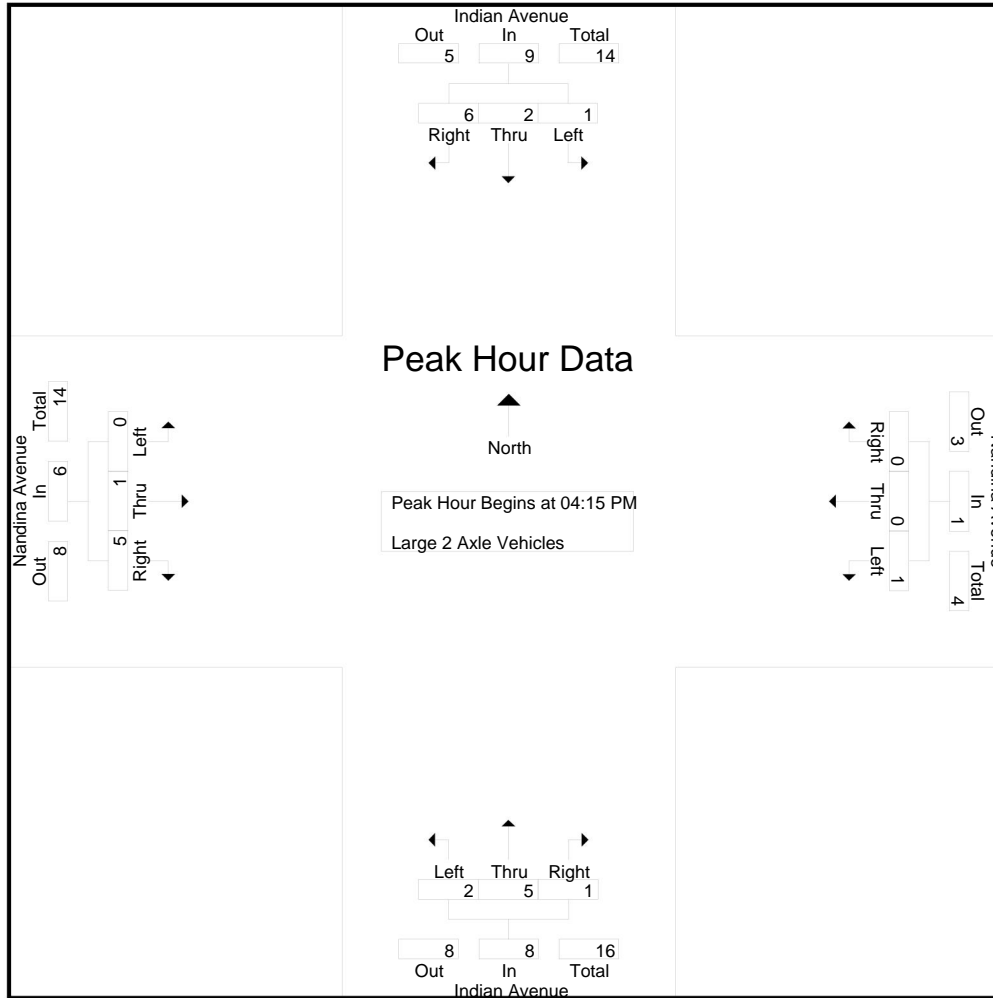
File Name : MRVINNAPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

Start Time	Indian Avenue Southbound					Nandina Avenue Westbound					Indian Avenue Northbound					Nandina Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total								
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	1	1	0	0	2	1	0	0	0	1	0	1	0	0	1	0	1	0	0	1	0	0	0	0	1	0	5	5
04:30 PM	0	1	2	0	3	0	0	0	0	0	1	1	0	0	2	0	0	2	2	2	0	0	0	0	2	2	7	9
04:45 PM	0	0	4	0	4	0	0	0	0	0	1	2	1	0	4	0	0	1	1	1	0	0	0	0	1	1	9	10
Total	1	2	6	0	9	1	0	0	0	1	2	4	1	0	7	0	1	3	3	4	0	0	0	0	4	3	21	24
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	2	2	2	0	0	0	0	2	2	3	5
05:15 PM	0	1	1	0	2	0	0	0	0	0	0	2	0	0	2	0	1	1	1	2	0	0	0	0	2	1	6	7
05:30 PM	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	0	0	0	2	0	4	4
05:45 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	0	3	3
Total	0	3	3	0	6	0	0	0	0	0	0	3	0	0	3	1	1	5	3	7	0	0	0	0	7	3	16	19
Grand Total	1	5	9	0	15	1	0	0	0	1	2	7	1	0	10	1	2	8	6	11	0	0	0	0	11	6	37	43
Apprch %	6.7	33.3	60			100	0	0			20	70	10			9.1	18.2	72.7										
Total %	2.7	13.5	24.3		40.5	2.7	0	0		2.7	5.4	18.9	2.7		27	2.7	5.4	21.6		29.7						14	86	

3.1-590

Start Time	Indian Avenue Southbound				Nandina Avenue Westbound				Indian Avenue Northbound				Nandina Avenue Eastbound				Int. Total				
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total					
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
04:15 PM	1	1	0	2	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	5
04:30 PM	0	1	2	3	0	0	0	0	1	1	0	2	0	0	2	2	0	0	2	2	7
04:45 PM	0	0	4	4	0	0	0	0	1	2	1	4	0	0	1	1	0	0	1	1	9
05:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	2	2	0	0	2	2	3
Total Volume	1	2	6	9	1	0	0	1	2	5	1	8	0	1	5	6	0	1	5	6	24
% App. Total	11.1	22.2	66.7		100	0	0		25	62.5	12.5		0	16.7	83.3						
PHF	.250	.500	.375	.563	.250	.000	.000	.250	.500	.625	.250	.500	.000	.250	.625	.750					.667



3.1-591

Counts Unlimited, Inc.  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: Nandina Avenue  
 Weather: Clear

File Name : MRVINNAPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Indian Avenue Southbound				Nandina Avenue Westbound				Indian Avenue Northbound				Nandina Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:15 PM				04:15 PM				04:15 PM				04:15 PM				
+0 mins.	1	1	0	2	1	0	0	1	0	1	0	1	0	1	0	1	
+15 mins.	0	1	2	3	0	0	0	0	1	1	0	2	0	0	2	2	
+30 mins.	0	0	4	4	0	0	0	0	1	2	1	4	0	0	1	1	
+45 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	0	2	2	
Total Volume	1	2	6	9	1	0	0	1	2	5	1	8	0	1	5	6	
% App. Total	11.1	22.2	66.7		100	0	0		25	62.5	12.5		0	16.7	83.3		
PHF	.250	.500	.375	.563	.250	.000	.000	.250	.500	.625	.250	.500	.000	.250	.625	.750	

3.1-592



City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: Nandina Avenue  
 Weather: Clear

File Name : MRVINNAPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

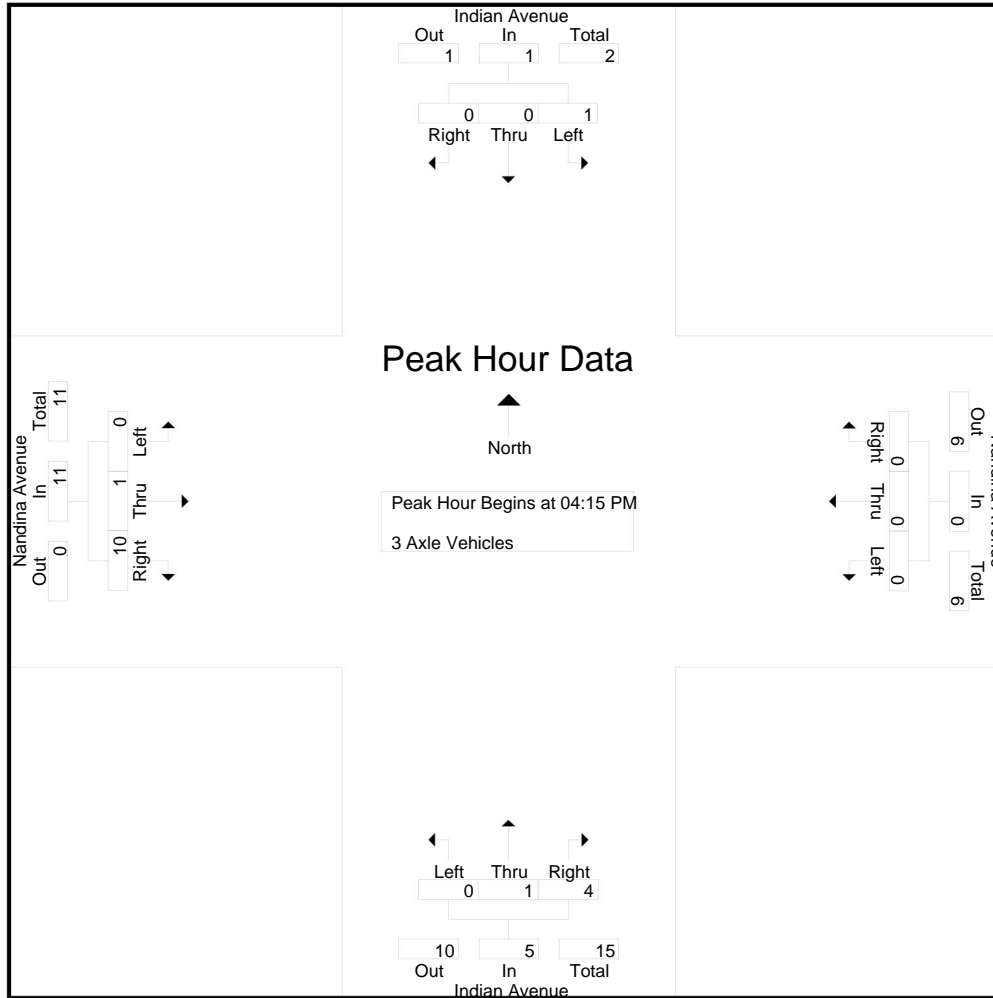
Groups Printed- 3 Axle Vehicles

Start Time	Indian Avenue Southbound					Nandina Avenue Westbound					Indian Avenue Northbound					Nandina Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total								
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	1	1	2	0	0	0	0	0	1	3	4
04:45 PM	1	0	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	4	1	4	0	0	0	0	0	1	6	7
Total	1	0	0	0	1	0	0	0	0	0	0	1	2	0	3	0	1	5	2	6	0	0	0	0	0	2	10	12
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	5	0	5	0	0	0	0	0	0	7	7
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	4	0	4	0	0	0	0	0	0	5	5
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	1
05:45 PM	0	0	0	0	0	2	1	0	0	3	0	4	0	0	4	0	0	1	0	1	0	0	0	0	0	0	8	8
Total	0	0	0	0	0	2	1	0	0	3	0	5	2	0	7	0	0	11	0	11	0	0	0	0	0	0	21	21
Grand Total	1	0	0	0	1	2	1	0	0	3	0	6	4	0	10	0	1	16	2	17	0	0	0	0	0	2	31	33
Apprch %	100	0	0			66.7	33.3	0			0	60	40			0	5.9	94.1										
Total %	3.2	0	0		3.2	6.5	3.2	0		9.7	0	19.4	12.9		32.3	0	3.2	51.6		54.8						6.1	93.9	

3.1-593

Start Time	Indian Avenue Southbound				Nandina Avenue Westbound				Indian Avenue Northbound				Nandina Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1	2	3
04:45 PM	1	0	0	1	0	0	0	0	0	0	1	1	0	0	4	4	6
05:00 PM	0	0	0	0	0	0	0	0	0	0	2	2	0	0	5	5	7
Total Volume	1	0	0	1	0	0	0	0	0	1	4	5	0	1	10	11	17
% App. Total	100	0	0		0	0	0		0	20	80		0	9.1	90.9		
PHF	.250	.000	.000	.250	.000	.000	.000	.000	.000	.250	.500	.625	.000	.250	.500	.550	.607

3.1-594



Counts Unlimited, Inc.  
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City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: Nandina Avenue  
 Weather: Clear

File Name : MRVINNAPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Indian Avenue Southbound				Nandina Avenue Westbound				Indian Avenue Northbound				Nandina Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:15 PM				04:15 PM				04:15 PM				04:15 PM				
+0 mins.	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	
+15 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1	2	
+30 mins.	1	0	0	1	0	0	0	0	0	0	1	1	0	0	4	4	
+45 mins.	0	0	0	0	0	0	0	0	0	0	2	2	0	0	5	5	
Total Volume	1	0	0	1	0	0	0	0	0	1	4	5	0	1	10	11	
% App. Total	100	0	0		0	0	0		0	20	80		0	9.1	90.9		
PHF	.250	.000	.000	.250	.000	.000	.000	.000	.000	.250	.500	.625	.000	.250	.500	.550	

3.1-595

City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: Nandina Avenue  
 Weather: Clear

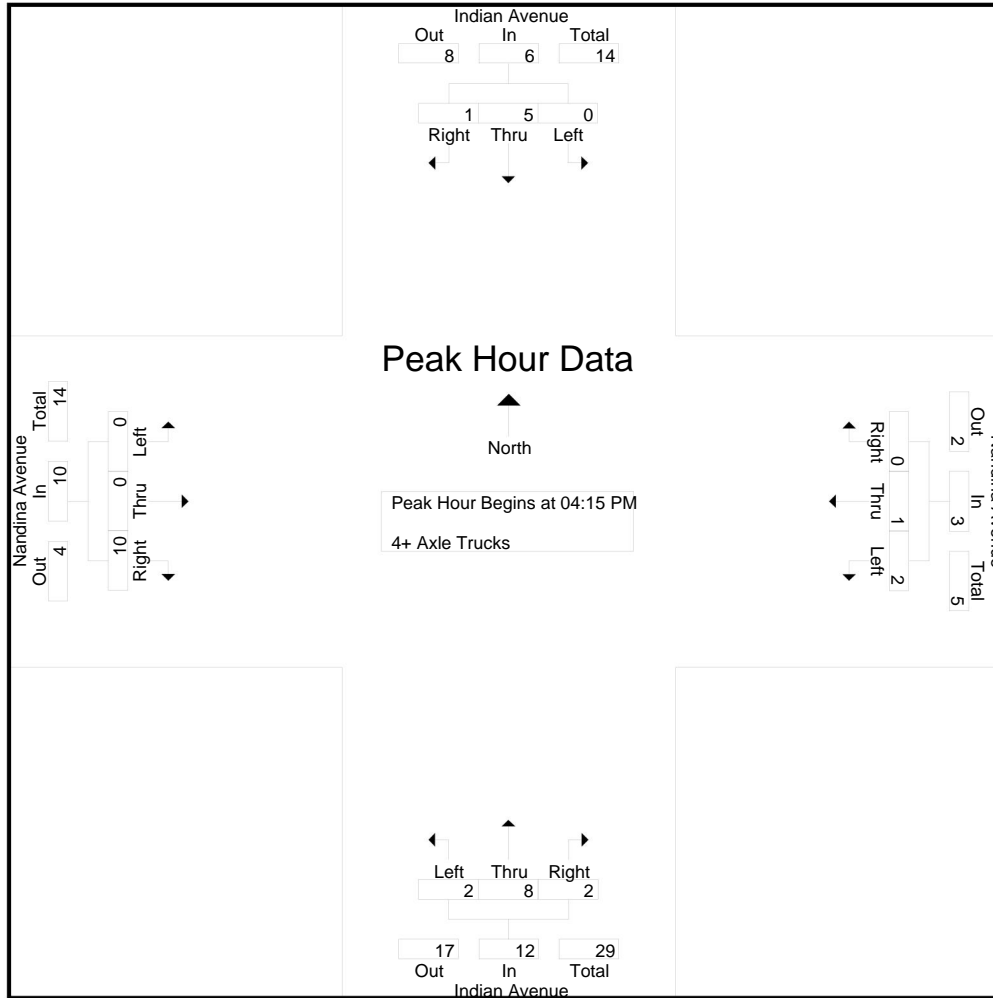
File Name : MRVINNAPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	Indian Avenue Southbound					Nandina Avenue Westbound					Indian Avenue Northbound					Nandina Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total								
04:00 PM	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	0	0	1	0	1	0	0	1	0	1	0	3	3
04:15 PM	0	0	0	0	0	1	0	0	0	1	1	4	0	0	5	0	0	1	1	1	1	1	1	1	1	1	7	8
04:30 PM	0	1	0	0	1	1	0	0	0	1	0	1	0	0	1	0	0	4	0	4	0	0	4	0	4	0	7	7
04:45 PM	0	3	0	0	3	0	0	0	0	0	1	2	2	0	5	0	0	2	0	2	0	0	2	0	2	0	10	10
Total	0	4	0	0	4	3	0	0	0	3	2	8	2	0	12	0	0	8	1	8	1	27	28					
05:00 PM	0	1	1	0	2	0	1	0	0	1	0	1	0	0	1	0	0	3	1	3	1	7	8					
05:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	4	1	4	1	5	6					
05:30 PM	0	1	0	0	1	0	0	0	0	0	1	0	1	0	2	0	0	1	1	1	1	4	5					
05:45 PM	0	2	0	0	2	3	1	0	0	4	2	1	0	0	3	0	0	0	0	0	0	9	9					
Total	0	5	1	0	6	3	2	0	0	5	3	2	1	0	6	0	0	8	3	8	3	25	28					
Grand Total	0	9	1	0	10	6	2	0	0	8	5	10	3	0	18	0	0	16	4	16	4	52	56					
Apprch %	0	90	10			75	25	0			27.8	55.6	16.7			0	0	100										
Total %	0	17.3	1.9		19.2	11.5	3.8	0		15.4	9.6	19.2	5.8		34.6	0	0	30.8		30.8	7.1	92.9						

3.1-596

Start Time	Indian Avenue Southbound				Nandina Avenue Westbound				Indian Avenue Northbound				Nandina Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	0	0	0	1	0	0	1	1	4	0	5	0	0	1	1	7
04:30 PM	0	1	0	1	1	0	0	1	0	1	0	1	0	0	4	4	7
04:45 PM	0	3	0	3	0	0	0	0	1	2	2	5	0	0	2	2	10
05:00 PM	0	1	1	2	0	1	0	1	0	1	0	1	0	0	3	3	7
Total Volume	0	5	1	6	2	1	0	3	2	8	2	12	0	0	10	10	31
% App. Total	0	83.3	16.7		66.7	33.3	0		16.7	66.7	16.7		0	0	100		
PHF	.000	.417	.250	.500	.500	.250	.000	.750	.500	.500	.250	.600	.000	.000	.625	.625	.775



3.1-597

Counts Unlimited, Inc.  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Moreno Valley  
 N/S: Indian Avenue  
 E/W: Nandina Avenue  
 Weather: Clear

File Name : MRVINNAPM  
 Site Code : 05115223  
 Start Date : 4/28/2015  
 Page No : 3

Start Time	Indian Avenue Southbound				Nandina Avenue Westbound				Indian Avenue Northbound				Nandina Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:15 PM				04:15 PM				04:15 PM				04:15 PM				
+0 mins.	0	0	0	0	1	0	0	1	1	4	0	5	0	0	1	1	
+15 mins.	0	1	0	1	1	0	0	1	0	1	0	1	0	0	4	4	
+30 mins.	0	3	0	3	0	0	0	0	1	2	2	5	0	0	2	2	
+45 mins.	0	1	1	2	0	1	0	1	0	1	0	1	0	0	3	3	
Total Volume	0	5	1	6	2	1	0	3	2	8	2	12	0	0	10	10	
% App. Total	0	83.3	16.7		66.7	33.3	0		16.7	66.7	16.7		0	0	100		
PHF	.000	.417	.250	.500	.500	.250	.000	.750	.500	.500	.250	.600	.000	.000	.625	.625	

3.1-598

Location: Moreno Valley  
 N/S: Indian Avenue  
 E/W: Nandina Avenue



Date: 4/28/2015  
 Weather: Clear

**PEDESTRIANS**

	North Leg Indian Avenue	East Leg Nandina Avenue	South Leg Indian Avenue	West Leg Nandina Avenue	TOTAL
7:00 AM	0	0	0	1	1
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
<b>TOTAL VOLUMES:</b>	0	0	0	1	1

	North Leg Indian Avenue	East Leg Nandina Avenue	South Leg Indian Avenue	West Leg Nandina Avenue	TOTAL
4:00 PM	0	0	0	0	0
4:15 PM	0	1	0	0	1
4:30 PM	0	1	0	0	1
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	2	0	0	2
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
<b>TOTAL VOLUMES:</b>	0	4	0	0	4

Location: Moreno Valley  
 N/S: Indian Avenue  
 E/W: Nandina Avenue



Date: 4/28/2015  
 Weather: Clear

**BICYCLES**

	North Leg Indian Avenue	East Leg Nandina Avenue	South Leg Indian Avenue	West Leg Nandina Avenue	TOTAL
7:00 AM	0	1	0	0	1
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
<b>TOTAL VOLUMES:</b>	0	1	0	0	1

	North Leg Indian Avenue	East Leg Nandina Avenue	South Leg Indian Avenue	West Leg Nandina Avenue	TOTAL
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
<b>TOTAL VOLUMES:</b>	0	0	0	0	0



**APPENDIX 3.2:**

**EXISTING (2020) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**

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Timings

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

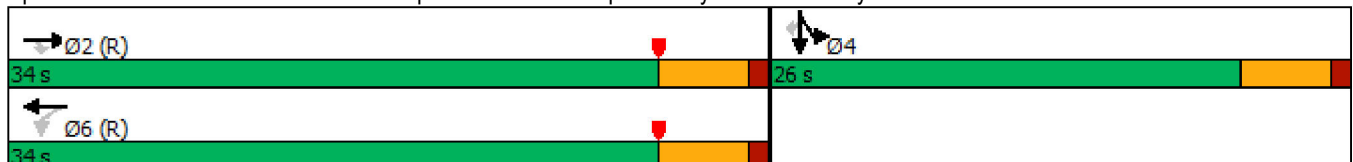


Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations	↑↑	↑	↘	↑↑	↘	↘
Traffic Volume (vph)	671	4	105	189	1	142
Future Volume (vph)	671	4	105	189	1	142
Turn Type	NA	Perm	Perm	NA	NA	Perm
Protected Phases	2			6	4	
Permitted Phases		2	6			4
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	25.0	25.0	10.0	10.0
Total Split (s)	34.0	34.0	34.0	34.0	26.0	26.0
Total Split (%)	56.7%	56.7%	56.7%	56.7%	43.3%	43.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	32.1	32.1	32.1	32.1	17.9	17.9
Actuated g/C Ratio	0.54	0.54	0.54	0.54	0.30	0.30
v/c Ratio	0.40	0.01	0.42	0.11	0.79	0.29
Control Delay	9.8	0.0	28.1	15.9	33.8	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.8	0.0	28.1	15.9	33.8	4.5
LOS	A	A	C	B	C	A
Approach Delay	9.8			20.2	24.4	
Approach LOS	A			C	C	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection  
 Natural Cycle: 50  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.79  
 Intersection Signal Delay: 16.5  
 Intersection LOS: B  
 Intersection Capacity Utilization 88.3%  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.















HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

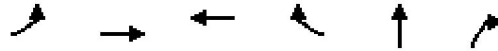
1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

11/05/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑						↑	↑
Traffic Volume (veh/h)	0	671	4	105	189	0	0	0	0	300	1	142
Future Volume (veh/h)	0	671	4	105	189	0	0	0	0	300	1	142
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1811	1530	1470	1826	0				1441	1900	1693
Adj Flow Rate, veh/h	0	729	4	114	205	0				326	1	94
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	6	25	29	5	0				31	0	14
Cap, veh/h	0	2087	786	405	2104	0				409	1	325
Arrive On Green	0.00	0.61	0.61	1.00	1.00	0.00				0.23	0.23	0.23
Sat Flow, veh/h	0	3532	1296	569	3561	0				1804	6	1434
Grp Volume(v), veh/h	0	729	4	114	205	0				327	0	94
Grp Sat Flow(s),veh/h/ln	0	1721	1296	569	1735	0				1810	0	1434
Q Serve(g_s), s	0.0	6.3	0.1	3.1	0.0	0.0				10.2	0.0	3.3
Cycle Q Clear(g_c), s	0.0	6.3	0.1	9.5	0.0	0.0				10.2	0.0	3.3
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2087	786	405	2104	0				410	0	325
V/C Ratio(X)	0.00	0.35	0.01	0.28	0.10	0.00				0.80	0.00	0.29
Avail Cap(c_a), veh/h	0	2087	786	405	2104	0				633	0	502
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.98	0.98	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	5.9	4.7	0.8	0.0	0.0				21.9	0.0	19.2
Incr Delay (d2), s/veh	0.0	0.5	0.0	1.7	0.1	0.0				4.0	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.5	0.0	0.2	0.0	0.0				4.2	0.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	6.4	4.7	2.5	0.1	0.0				25.9	0.0	19.7
LnGrp LOS	A	A	A	A	A	A				C	A	B
Approach Vol, veh/h		733			319						421	
Approach Delay, s/veh		6.3			1.0						24.5	
Approach LOS		A			A						C	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		41.4		18.6		41.4						
Change Period (Y+Rc), s		5.0		5.0		5.0						
Max Green Setting (Gmax), s		29.0		21.0		29.0						
Max Q Clear Time (g_c+I1), s		8.3		12.2		11.5						
Green Ext Time (p_c), s		2.9		1.4		1.5						
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				10.4								
HCM 6th LOS				B								

Timings

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.



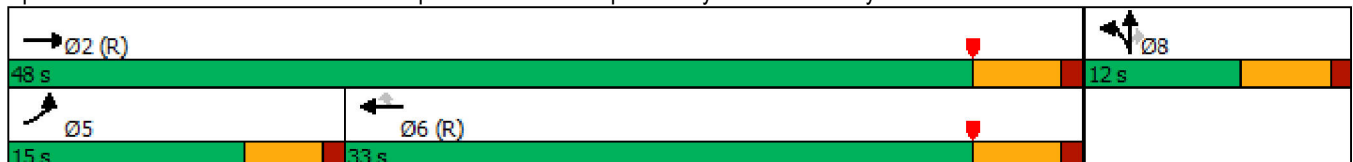
Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	393	578	289	811	3	33
Future Volume (vph)	393	578	289	811	3	33
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	26.0	24.0	24.0	10.0	10.0
Total Split (s)	15.0	48.0	33.0	33.0	12.0	12.0
Total Split (%)	25.0%	80.0%	55.0%	55.0%	20.0%	20.0%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max
Act Effct Green (s)	10.5	43.0	28.0	28.0	7.0	7.0
Actuated g/C Ratio	0.18	0.72	0.47	0.47	0.12	0.12
v/c Ratio	1.43	0.29	0.21	0.96	0.04	0.15
Control Delay	233.3	3.5	9.9	33.3	24.1	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	233.3	3.5	9.9	33.3	24.1	1.3
LOS	F	A	A	C	C	A
Approach Delay		96.5	27.1		5.4	
Approach LOS		F	C		A	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 29 (48%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.43  
 Intersection Signal Delay: 58.6  
 Intersection Capacity Utilization 88.3%  
 Analysis Period (min) 15

Intersection LOS: E  
 ICU Level of Service E

Splits and Phases: 2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

11/17/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗↗			↗↗	↘		↗	↘			
Traffic Volume (veh/h)	393	578	0	0	289	811	5	3	33	0	0	0
Future Volume (veh/h)	393	578	0	0	289	811	5	3	33	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1811	1618	0	0	1707	1752	1396	1900	1396			
Adj Flow Rate, veh/h	427	628	0	0	314	550	5	3	-29			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	6	19	0	0	13	10	34	0	34			
Cap, veh/h	302	2204	0	0	1514	692	134	81	138			
Arrive On Green	0.17	0.72	0.00	0.00	0.47	0.47	0.12	0.12	0.00			
Sat Flow, veh/h	1725	3156	0	0	3329	1484	1152	691	1183			
Grp Volume(v), veh/h	427	628	0	0	314	550	8	0	-29			
Grp Sat Flow(s),veh/h/ln	1725	1537	0	0	1622	1484	1842	0	1183			
Q Serve(g_s), s	10.5	4.4	0.0	0.0	3.4	18.9	0.2	0.0	0.0			
Cycle Q Clear(g_c), s	10.5	4.4	0.0	0.0	3.4	18.9	0.2	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.62		1.00			
Lane Grp Cap(c), veh/h	302	2204	0	0	1514	692	215	0	138			
V/C Ratio(X)	1.41	0.28	0.00	0.00	0.21	0.79	0.04	0.00	-0.21			
Avail Cap(c_a), veh/h	302	2204	0	0	1514	692	215	0	138			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.92	0.92	0.00	0.00	0.93	0.93	1.00	0.00	0.00			
Uniform Delay (d), s/veh	24.8	3.0	0.0	0.0	9.4	13.6	23.5	0.0	0.0			
Incr Delay (d2), s/veh	203.7	0.3	0.0	0.0	0.3	8.6	0.3	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	20.8	0.5	0.0	0.0	1.0	6.3	0.1	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	228.5	3.3	0.0	0.0	9.7	22.1	23.8	0.0	0.0			
LnGrp LOS	F	A	A	A	A	C	C	A	A			
Approach Vol, veh/h		1055			864			-21				
Approach Delay, s/veh		94.5			17.6			0.0				
Approach LOS		F			B			A				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		48.0			15.0	33.0		12.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		43.0			10.5	28.0		7.0				
Max Q Clear Time (g_c+1), s		6.4			12.5	20.9		2.2				
Green Ext Time (p_c), s		2.7			0.0	1.5		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					60.5							
HCM 6th LOS					E							

Timings  
3: Western Way & Harley Knox Bl.



Lane Group	EBL	EBT	WBT	SBL	SBT	Ø1	Ø8
Lane Configurations	↖	↑↑↑	↑↑↑	↖	↘		
Traffic Volume (vph)	66	558	1087	5	0		
Future Volume (vph)	66	558	1087	5	0		
Turn Type	Prot	NA	NA	Perm	NA		
Protected Phases	5	2	6		4	1	8
Permitted Phases				4			
Detector Phase	5	2	6	4	4		
Switch Phase							
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	21.8	21.8	32.6	32.6	9.6	32.6
Total Split (s)	22.0	75.4	63.0	35.0	35.0	9.6	35.0
Total Split (%)	18.3%	62.8%	52.5%	29.2%	29.2%	8%	29%
Yellow Time (s)	3.6	4.8	4.8	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.6	5.8	5.8	4.6	4.6		
Lead/Lag	Lead	Lag	Lag			Lead	
Lead-Lag Optimize?	Yes	Yes	Yes			Yes	
Recall Mode	None	None	None	None	None	None	None
Act Effct Green (s)	9.6	38.4	32.4	16.9	16.9		
Actuated g/C Ratio	0.19	0.78	0.65	0.34	0.34		
v/c Ratio	0.23	0.18	0.39	0.01	0.07		
Control Delay	29.7	4.7	11.9	22.2	0.3		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	29.7	4.7	11.9	22.2	0.3		
LOS	C	A	B	C	A		
Approach Delay		7.3	11.9		2.9		
Approach LOS		A	B		A		

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 49.5	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.39	
Intersection Signal Delay: 10.1	Intersection LOS: B
Intersection Capacity Utilization 47.2%	ICU Level of Service A
Analysis Period (min) 15	


























Splits and Phases: 3: Western Way & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 3: Western Way & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/05/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  							
Traffic Volume (veh/h)	66	558	0	0	1087	33	0	0	0	5	0	34
Future Volume (veh/h)	66	558	0	0	1087	33	0	0	0	5	0	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1693	1604	1900	1900	1752	1663	1900	1900	1900	1307	1900	1189
Adj Flow Rate, veh/h	71	600	0	0	1169	33	0	0	0	5	0	25
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	14	20	0	0	10	16	0	0	0	40	0	48
Cap, veh/h	111	2874	1057	5	2241	63	186	142	0	279	0	120
Arrive On Green	0.07	0.66	0.00	0.00	0.47	0.47	0.00	0.00	0.00	0.07	0.00	0.07
Sat Flow, veh/h	1612	4378	1610	1810	4781	135	1408	1900	0	1240	0	1610
Grp Volume(v), veh/h	71	600	0	0	779	423	0	0	0	5	0	25
Grp Sat Flow(s),veh/h/ln	1612	1459	1610	1810	1594	1728	1408	1900	0	1240	0	1610
Q Serve(g_s), s	1.7	2.1	0.0	0.0	6.7	6.7	0.0	0.0	0.0	0.1	0.0	0.6
Cycle Q Clear(g_c), s	1.7	2.1	0.0	0.0	6.7	6.7	0.0	0.0	0.0	0.1	0.0	0.6
Prop In Lane	1.00		1.00	1.00		0.08	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	111	2874	1057	5	1494	810	186	142	0	279	0	120
V/C Ratio(X)	0.64	0.21	0.00	0.00	0.52	0.52	0.00	0.00	0.00	0.02	0.00	0.21
Avail Cap(c_a), veh/h	725	7873	2896	234	4712	2553	1187	1492	0	1160	0	1265
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.5	2.6	0.0	0.0	7.2	7.2	0.0	0.0	0.0	16.6	0.0	16.8
Incr Delay (d2), s/veh	2.3	0.0	0.0	0.0	0.3	0.5	0.0	0.0	0.0	0.0	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.0	0.0	1.2	1.3	0.0	0.0	0.0	0.0	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.8	2.7	0.0	0.0	7.5	7.8	0.0	0.0	0.0	16.7	0.0	17.7
LnGrp LOS	B	A	A	A	A	A	A	A	A	B	A	B
Approach Vol, veh/h		671			1202			0				30
Approach Delay, s/veh		4.5			7.6			0.0				17.5
Approach LOS		A			A							B
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	31.2		7.5	7.3	23.9		7.5				
Change Period (Y+Rc), s	4.6	5.8		4.6	4.6	5.8		4.6				
Max Green Setting (Gmax), s	5.0	69.6		30.4	17.4	57.2		30.4				
Max Q Clear Time (g_c+I1), s	0.0	4.1		2.6	3.7	8.7		0.0				
Green Ext Time (p_c), s	0.0	4.3		0.1	0.1	9.5		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					6.7							
HCM 6th LOS					A							



Timings  
4: Patterson Av. & Harley Knox Bl.

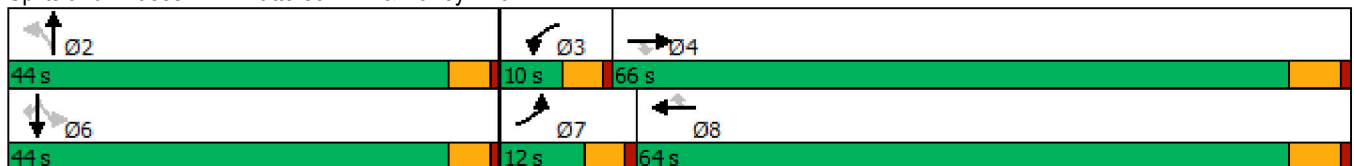


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑	↗	↖	↑↑	↗		↕		↕	↗
Traffic Volume (vph)	20	504	11	9	1051	14	53	6	11	3	17
Future Volume (vph)	20	504	11	9	1051	14	53	6	11	3	17
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	7	4		3	8			2		6	
Permitted Phases			4			8	2		6		6
Detector Phase	7	4	4	3	8	8	2	2	6	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	9.6	31.8	31.8	33.7	33.7	40.7	40.7	40.7
Total Split (s)	12.0	66.0	66.0	10.0	64.0	64.0	44.0	44.0	44.0	44.0	44.0
Total Split (%)	10.0%	55.0%	55.0%	8.3%	53.3%	53.3%	36.7%	36.7%	36.7%	36.7%	36.7%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8		4.7		4.7	4.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	6.7	41.7	41.7	6.1	39.4	39.4		15.1		15.1	15.1
Actuated g/C Ratio	0.11	0.67	0.67	0.10	0.63	0.63		0.24		0.24	0.24
v/c Ratio	0.15	0.18	0.01	0.10	0.55	0.02		0.26		0.07	0.06
Control Delay	39.4	7.6	0.0	41.7	13.0	0.1		25.1		24.7	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	39.4	7.6	0.0	41.7	13.0	0.1		25.1		24.7	0.4
LOS	D	A	A	D	B	A		C		C	A
Approach Delay		8.6			13.1			25.1		11.4	
Approach LOS		A			B			C		B	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 62.4  
 Natural Cycle: 85  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.55  
 Intersection Signal Delay: 12.1  
 Intersection LOS: B  
 Intersection Capacity Utilization 58.4%  
 ICU Level of Service B  
 Analysis Period (min) 15




























Splits and Phases: 4: Patterson Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
4: Patterson Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/06/2020

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		  			 			 				 	 
Traffic Volume (veh/h)	20	504	11	9	1051	14	53	6	6	11	3	17	
Future Volume (veh/h)	20	504	11	9	1051	14	53	6	6	11	3	17	
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No			No			No			No		
Adj Sat Flow, veh/h/ln	1426	1678	1767	744	1767	981	1411	1411	1411	907	907	1248	
Adj Flow Rate, veh/h	22	548	5	10	1142	7	58	7	5	12	3	2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Percent Heavy Veh, %	32	15	9	78	9	62	33	33	33	67	67	44	
Cap, veh/h	36	2383	779	9	1701	421	259	26	11	221	30	153	
Arrive On Green	0.03	0.52	0.52	0.01	0.51	0.51	0.14	0.14	0.14	0.14	0.14	0.14	
Sat Flow, veh/h	1358	4580	1497	709	3357	831	820	178	77	575	210	1058	
Grp Volume(v), veh/h	22	548	5	10	1142	7	70	0	0	15	0	2	
Grp Sat Flow(s),veh/h/ln	1358	1527	1497	709	1678	831	1074	0	0	785	0	1058	
Q Serve(g_s), s	0.8	3.1	0.1	0.6	11.9	0.2	2.2	0.0	0.0	0.0	0.0	0.1	
Cycle Q Clear(g_c), s	0.8	3.1	0.1	0.6	11.9	0.2	2.9	0.0	0.0	0.7	0.0	0.1	
Prop In Lane	1.00		1.00	1.00		1.00	0.83		0.07	0.80		1.00	
Lane Grp Cap(c), veh/h	36	2383	779	9	1701	421	296	0	0	252	0	153	
V/C Ratio(X)	0.61	0.23	0.01	1.08	0.67	0.02	0.24	0.00	0.00	0.06	0.00	0.01	
Avail Cap(c_a), veh/h	214	5882	1923	82	4167	1032	1059	0	0	748	0	887	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	
Uniform Delay (d), s/veh	22.6	6.1	5.4	23.1	8.6	5.8	18.4	0.0	0.0	17.4	0.0	17.2	
Incr Delay (d2), s/veh	6.0	0.0	0.0	108.2	0.5	0.0	0.4	0.0	0.0	0.1	0.0	0.0	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.3	0.6	0.0	0.4	2.6	0.0	0.7	0.0	0.0	0.1	0.0	0.0	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	28.6	6.2	5.4	131.3	9.1	5.8	18.8	0.0	0.0	17.5	0.0	17.2	
LnGrp LOS	C	A	A	F	A	A	B	A	A	B	A	B	
Approach Vol, veh/h		575			1159			70				17	
Approach Delay, s/veh		7.0			10.1			18.8				17.5	
Approach LOS		A			B			B				B	
Timer - Assigned Phs		2	3	4		6	7	8					
Phs Duration (G+Y+Rc), s		11.5	5.2	30.2		11.5	5.8	29.6					
Change Period (Y+Rc), s		* 4.7	4.6	5.8		* 4.7	4.6	5.8					
Max Green Setting (Gmax), s		* 39	5.4	60.2		* 39	7.4	58.2					
Max Q Clear Time (g_c+I1), s		4.9	2.6	5.1		2.7	2.8	13.9					
Green Ext Time (p_c), s		0.4	0.0	3.9		0.1	0.0	9.8					
<b>Intersection Summary</b>													
HCM 6th Ctrl Delay			9.6										
HCM 6th LOS			A										
<b>Notes</b>													
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.													

Timings  
5: Heacock Street & Cactus Avenue

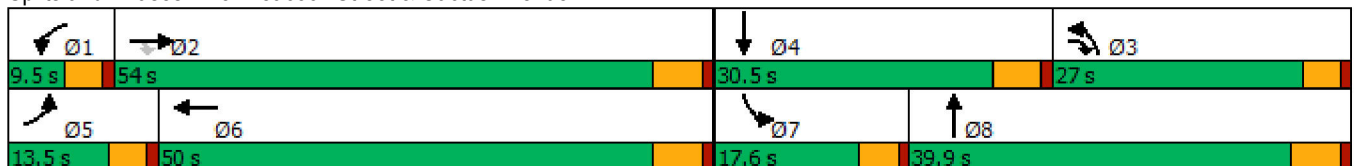


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↗	↘	↖	↗	↖	↗	↖	↗
Traffic Volume (vph)	111	507	399	13	1131	593	429	99	197
Future Volume (vph)	111	507	399	13	1131	593	429	99	197
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	3	1	6	3	8	7	4
Permitted Phases			2						
Detector Phase	5	2	3	1	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.5	30.5	9.5	9.5	30.5	9.5	30.5	9.5	30.5
Total Split (s)	13.5	54.0	27.0	9.5	50.0	27.0	39.9	17.6	30.5
Total Split (%)	11.2%	44.6%	22.3%	7.9%	41.3%	22.3%	33.0%	14.5%	25.2%
Yellow Time (s)	3.5	4.5	3.5	3.5	4.5	3.5	4.5	3.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	4.5	4.5	5.5	4.5	5.5	4.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None
Act Effct Green (s)	8.8	50.2	75.6	5.1	40.3	21.5	25.2	9.8	13.6
Actuated g/C Ratio	0.08	0.48	0.72	0.05	0.39	0.21	0.24	0.09	0.13
v/c Ratio	0.74	0.30	0.32	0.15	0.88	0.84	0.52	0.59	0.55
Control Delay	76.5	18.6	1.4	56.5	38.4	52.4	37.5	61.5	40.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	76.5	18.6	1.4	56.5	38.4	52.4	37.5	61.5	40.3
LOS	E	B	A	E	D	D	D	E	D
Approach Delay		18.2			38.6		46.1		45.9
Approach LOS		B			D		D		D

Intersection Summary

Cycle Length: 121  
 Actuated Cycle Length: 104.4  
 Natural Cycle: 110  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.88  
 Intersection Signal Delay: 35.8  
 Intersection LOS: D  
 Intersection Capacity Utilization 82.5%  
 ICU Level of Service E  
 Analysis Period (min) 15






















Splits and Phases: 5: Heacock Street & Cactus Avenue



HCM 6th Signalized Intersection Summary  
5: Heacock Street & Cactus Avenue

Gateway Aviation TA (JN:13445)

11/05/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	111	507	399	13	1131	98	593	429	9	99	197	75
Future Volume (veh/h)	111	507	399	13	1131	98	593	429	9	99	197	75
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1856	1693	1900	1885	1841	1811	1826	1737	1870	1811	1885
Adj Flow Rate, veh/h	116	528	416	14	1178	102	618	447	9	103	205	78
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	3	14	0	1	4	6	5	11	2	6	1
Cap, veh/h	145	1676	937	29	1323	114	694	889	18	130	280	103
Arrive On Green	0.08	0.45	0.45	0.02	0.39	0.39	0.20	0.25	0.25	0.07	0.11	0.11
Sat Flow, veh/h	1781	3711	1434	1810	3421	296	3450	3567	72	1781	2526	929
Grp Volume(v), veh/h	116	528	416	14	648	632	618	229	227	103	145	138
Grp Sat Flow(s),veh/h/ln	1781	1856	1434	1810	1885	1832	1725	1826	1813	1781	1811	1644
Q Serve(g_s), s	6.1	8.7	2.5	0.7	30.7	30.8	16.6	10.3	10.3	5.4	7.4	7.8
Cycle Q Clear(g_c), s	6.1	8.7	2.5	0.7	30.7	30.8	16.6	10.3	10.3	5.4	7.4	7.8
Prop In Lane	1.00		1.00	1.00		0.16	1.00		0.04	1.00		0.57
Lane Grp Cap(c), veh/h	145	1676	937	29	729	709	694	455	452	130	200	182
V/C Ratio(X)	0.80	0.31	0.44	0.48	0.89	0.89	0.89	0.50	0.50	0.79	0.72	0.76
Avail Cap(c_a), veh/h	168	1886	1018	95	879	854	813	658	654	245	475	431
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.1	16.7	2.2	46.5	27.3	27.4	37.1	30.7	30.8	43.5	41.0	41.2
Incr Delay (d2), s/veh	18.1	0.0	0.1	4.4	8.7	9.1	9.8	0.3	0.3	4.0	1.9	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	3.3	0.6	0.4	14.3	14.0	7.6	4.3	4.3	2.4	3.3	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.2	16.8	2.3	50.9	36.0	36.5	46.9	31.1	31.1	47.5	42.9	43.6
LnGrp LOS	E	B	A	D	D	D	D	C	C	D	D	D
Approach Vol, veh/h		1060			1294			1074			386	
Approach Delay, s/veh		15.9			36.4			40.2			44.4	
Approach LOS		B			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.1	48.6	24.7	16.1	12.2	42.4	11.5	29.3				
Change Period (Y+Rc), s	4.5	5.5	5.5	* 5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	5.0	48.5	22.5	* 25	9.0	44.5	13.1	34.4				
Max Q Clear Time (g_c+I1), s	2.7	10.7	18.6	9.8	8.1	32.8	7.4	12.3				
Green Ext Time (p_c), s	0.0	2.8	0.6	0.8	0.0	4.1	0.0	1.4				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			32.6									
HCM 6th LOS			C									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

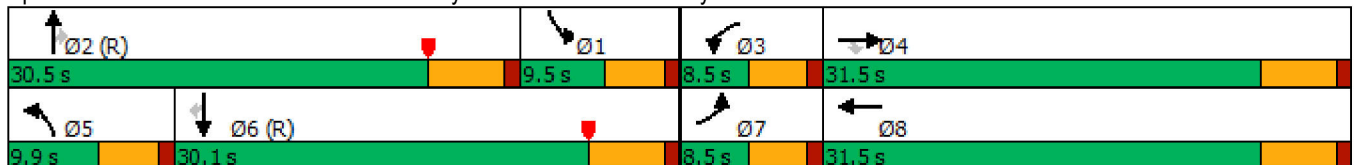
Timings  
6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	35	32	87	12	193	24	760	42	89	470	17	
Future Volume (vph)	35	32	87	12	193	24	760	42	89	470	17	
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	7	4		3	8	5	2		1	6		
Permitted Phases			4					2			6	
Detector Phase	7	4	4	3	8	5	2	2	1	6	6	
Switch Phase												
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	
Minimum Split (s)	8.5	23.5	23.5	8.5	31.5	8.5	30.5	30.5	8.5	23.5	23.5	
Total Split (s)	8.5	31.5	31.5	8.5	31.5	9.9	30.5	30.5	9.5	30.1	30.1	
Total Split (%)	10.6%	39.4%	39.4%	10.6%	39.4%	12.4%	38.1%	38.1%	11.9%	37.6%	37.6%	
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5	4.5	4.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	5.5	4.5	5.5	5.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max	
Act Effct Green (s)	4.0	15.0	15.0	4.0	11.6	5.3	42.8	42.8	5.0	48.1	48.1	
Actuated g/C Ratio	0.05	0.19	0.19	0.05	0.14	0.07	0.54	0.54	0.06	0.60	0.60	
v/c Ratio	0.45	0.10	0.17	0.16	0.55	0.21	0.42	0.05	0.81	0.24	0.02	
Control Delay	55.6	23.2	0.7	41.1	18.4	39.6	14.6	0.1	84.6	11.7	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	55.6	23.2	0.7	41.1	18.4	39.6	14.6	0.1	84.6	11.7	0.1	
LOS	E	C	A	D	B	D	B	A	F	B	A	
Approach Delay		17.7			19.1		14.6			22.6		
Approach LOS		B			B		B			C		

Intersection Summary

Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 80  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.81  
 Intersection Signal Delay: 18.1  
 Intersection LOS: B  
 Intersection Capacity Utilization 58.6%  
 ICU Level of Service B  
 Analysis Period (min) 15
























Splits and Phases: 6: Heacock Street & Meyer Drive/John F. Kennedy Drive



HCM 6th Signalized Intersection Summary  
 6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

11/06/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	32	87	12	193	170	24	760	42	89	470	17
Future Volume (veh/h)	35	32	87	12	193	170	24	760	42	89	470	17
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.95	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1633	1752	1826	1648	1841	1841	1781	1796	1752	1856	1722	1633
Adj Flow Rate, veh/h	36	33	55	12	201	141	25	792	34	93	490	8
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	18	10	5	17	4	4	8	7	10	3	12	18
Cap, veh/h	43	285	251	18	301	200	36	1123	439	443	1910	758
Arrive On Green	0.03	0.16	0.16	0.01	0.15	0.15	0.02	0.31	0.31	0.25	0.55	0.55
Sat Flow, veh/h	1555	1752	1547	1570	2055	1364	1697	3593	1405	1767	3444	1366
Grp Volume(v), veh/h	36	33	55	12	179	163	25	792	34	93	490	8
Grp Sat Flow(s),veh/h/ln	1555	1752	1547	1570	1841	1579	1697	1796	1405	1767	1722	1366
Q Serve(g_s), s	1.8	1.3	2.5	0.6	7.3	7.9	1.2	15.6	1.1	3.3	5.9	0.2
Cycle Q Clear(g_c), s	1.8	1.3	2.5	0.6	7.3	7.9	1.2	15.6	1.1	3.3	5.9	0.2
Prop In Lane	1.00		1.00	1.00		0.86	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	43	285	251	18	270	231	36	1123	439	443	1910	758
V/C Ratio(X)	0.84	0.12	0.22	0.65	0.66	0.71	0.69	0.71	0.08	0.21	0.26	0.01
Avail Cap(c_a), veh/h	78	569	503	78	598	513	115	1123	439	443	1910	758
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.92	0.92	0.92
Uniform Delay (d), s/veh	38.7	28.6	29.1	39.4	32.3	32.5	38.9	24.3	12.4	23.7	9.3	8.0
Incr Delay (d2), s/veh	14.7	0.1	0.2	13.6	1.0	1.5	8.0	3.6	0.3	0.1	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.5	0.9	0.3	3.1	2.9	0.5	6.4	0.4	1.3	1.8	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.5	28.7	29.3	53.0	33.3	34.0	46.9	27.8	12.8	23.8	9.6	8.0
LnGrp LOS	D	C	C	D	C	C	D	C	B	C	A	A
Approach Vol, veh/h		124			354			851			591	
Approach Delay, s/veh		36.1			34.3			27.8			11.8	
Approach LOS		D			C			C			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	25.6	30.5	5.4	18.5	6.2	49.9	6.7	17.2				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	5.0	* 25	4.0	26.0	5.4	24.6	4.0	26.0				
Max Q Clear Time (g_c+I1), s	5.3	17.6	2.6	4.5	3.2	7.9	3.8	9.9				
Green Ext Time (p_c), s	0.0	2.1	0.0	0.2	0.0	1.7	0.0	1.0				













Intersection Summary

HCM 6th Ctrl Delay	24.6
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
7: Heacock Street & Gentian Avenue

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	12	13	668	8	81	496
Future Volume (vph)	12	13	668	8	81	496
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	27.6	27.6	27.2	27.2	9.6	16.2
Total Split (s)	28.0	28.0	65.0	65.0	27.0	92.0
Total Split (%)	23.3%	23.3%	54.2%	54.2%	22.5%	76.7%
Yellow Time (s)	3.6	3.6	5.2	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	6.2	6.2	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	12.5	12.5	27.0	27.0	7.4	39.3
Actuated g/C Ratio	0.26	0.26	0.57	0.57	0.16	0.83
v/c Ratio	0.03	0.03	0.34	0.01	0.29	0.17
Control Delay	16.6	9.5	11.5	10.4	24.6	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.6	9.5	11.5	10.4	24.6	4.2
LOS	B	A	B	B	C	A
Approach Delay	12.9		11.5			7.0
Approach LOS	B		B			A

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 47.5	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.34	
Intersection Signal Delay: 9.5	Intersection LOS: A
Intersection Capacity Utilization 44.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 7: Heacock Street & Gentian Avenue

















HCM 6th Signalized Intersection Summary  
 7: Heacock Street & Gentian Avenue

















Gateway Aviation TA (JN:13445)

11/05/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	12	13	668	8	81	496
Future Volume (veh/h)	12	13	668	8	81	496
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	13	14	703	8	85	522
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	121	107	1325	591	150	2146
Arrive On Green	0.07	0.07	0.37	0.37	0.08	0.59
Sat Flow, veh/h	1810	1610	3705	1610	1810	3705
Grp Volume(v), veh/h	13	14	703	8	85	522
Grp Sat Flow(s),veh/h/ln	1810	1610	1805	1610	1810	1805
Q Serve(g_s), s	0.2	0.3	4.9	0.1	1.4	2.2
Cycle Q Clear(g_c), s	0.2	0.3	4.9	0.1	1.4	2.2
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	121	107	1325	591	150	2146
V/C Ratio(X)	0.11	0.13	0.53	0.01	0.57	0.24
Avail Cap(c_a), veh/h	1329	1182	6661	2971	1272	9719
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.0	14.0	7.9	6.4	14.1	3.1
Incr Delay (d2), s/veh	0.1	0.2	0.3	0.0	1.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.1	0.8	0.0	0.4	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	14.1	14.2	8.3	6.4	15.3	3.1
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	27		711			607
Approach Delay, s/veh	14.2		8.2			4.8
Approach LOS	B		A			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	7.2	17.9			25.1	6.7
Change Period (Y+Rc), s	4.6	6.2			6.2	4.6
Max Green Setting (Gmax), s	22.4	58.8			85.8	23.4
Max Q Clear Time (g_c+I1), s	3.4	6.9			4.2	2.3
Green Ext Time (p_c), s	0.1	4.8			3.4	0.0
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			6.8			
HCM 6th LOS			A			



Timings  
8: Heacock Street & Iris Avenue

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 		 		 	 
Traffic Volume (vph)	53	367	305	47	234	282
Future Volume (vph)	53	367	305	47	234	282
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	15.8	15.8	33.2	33.2	9.6	16.2
Total Split (s)	48.0	48.0	46.0	46.0	26.0	72.0
Total Split (%)	40.0%	40.0%	38.3%	38.3%	21.7%	60.0%
Yellow Time (s)	4.8	4.8	5.2	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	6.2	6.2	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	10.6	10.6	13.4	13.4	8.5	26.6
Actuated g/C Ratio	0.21	0.21	0.27	0.27	0.17	0.54
v/c Ratio	0.08	0.58	0.42	0.12	0.44	0.20
Control Delay	18.6	6.4	16.4	5.2	22.1	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.6	6.4	16.4	5.2	22.1	6.0
LOS	B	A	B	A	C	A
Approach Delay	8.0		14.9			13.3
Approach LOS	A		B			B

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 49.6	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.58	
Intersection Signal Delay: 12.0	Intersection LOS: B
Intersection Capacity Utilization 41.2%	ICU Level of Service A
Analysis Period (min) 15	

















Splits and Phases: 8: Heacock Street & Iris Avenue



HCM 6th Signalized Intersection Summary  
8: Heacock Street & Iris Avenue

Gateway Aviation TA (JN:13445)

11/05/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 		 		 	 
Traffic Volume (veh/h)	53	367	305	47	234	282
Future Volume (veh/h)	53	367	305	47	234	282
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1841	1885	1678	1870	1870	1633
Adj Flow Rate, veh/h	62	432	359	55	275	332
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	4	1	15	2	2	18
Cap, veh/h	1110	522	660	328	424	1319
Arrive On Green	0.33	0.33	0.21	0.21	0.12	0.43
Sat Flow, veh/h	3401	1598	3272	1585	3456	3185
Grp Volume(v), veh/h	62	432	359	55	275	332
Grp Sat Flow(s),veh/h/ln	1700	1598	1594	1585	1728	1552
Q Serve(g_s), s	0.6	12.1	4.9	1.4	3.7	3.3
Cycle Q Clear(g_c), s	0.6	12.1	4.9	1.4	3.7	3.3
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	1110	522	660	328	424	1319
V/C Ratio(X)	0.06	0.83	0.54	0.17	0.65	0.25
Avail Cap(c_a), veh/h	2972	1396	2628	1307	1532	4229
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.2	15.0	17.1	15.7	20.2	8.9
Incr Delay (d2), s/veh	0.0	3.4	0.7	0.2	0.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	3.7	1.4	0.4	1.2	0.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.2	18.5	17.8	16.0	20.8	9.0
LnGrp LOS	B	B	B	B	C	A
Approach Vol, veh/h	494		414			607
Approach Delay, s/veh	17.5		17.6			14.4
Approach LOS	B		B			B
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	10.5	16.2			26.7	21.6
Change Period (Y+Rc), s	4.6	6.2			6.2	5.8
Max Green Setting (Gmax), s	21.4	39.8			65.8	42.2
Max Q Clear Time (g_c+1), s	5.7	6.9			5.3	14.1
Green Ext Time (p_c), s	0.4	2.3			2.1	1.7
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			16.3			
HCM 6th LOS			B			

Timings  
9: Heacock Street & Krameria Avenue-North



Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations	↶	↷	↕	↶	↕
Traffic Volume (vph)	7	52	208	18	237
Future Volume (vph)	7	52	208	18	237
Turn Type	Prot	Perm	NA	Prot	NA
Protected Phases	8		2	1	6
Permitted Phases		8			
Detector Phase	8	8	2	1	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	29.1	29.1	29.2	9.6	16.2
Total Split (s)	39.0	39.0	56.0	25.0	81.0
Total Split (%)	32.5%	32.5%	46.7%	20.8%	67.5%
Yellow Time (s)	4.1	4.1	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	6.2	4.6	6.2
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	Min	Max	Min
Act Effct Green (s)	12.6	12.6	12.4	21.8	42.6
Actuated g/C Ratio	0.23	0.23	0.22	0.39	0.76
v/c Ratio	0.03	0.14	0.35	0.04	0.12
Control Delay	20.7	7.3	21.5	18.4	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	20.7	7.3	21.5	18.4	4.9
LOS	C	A	C	B	A
Approach Delay	9.0		21.5		5.9
Approach LOS	A		C		A

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 55.7  
 Natural Cycle: 70  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.35  
 Intersection Signal Delay: 12.5  
 Intersection LOS: B  
 Intersection Capacity Utilization 32.7%  
 ICU Level of Service A  
 Analysis Period (min) 15












Splits and Phases: 9: Heacock Street & Krameria Avenue-North



HCM 6th Signalized Intersection Summary  
 9: Heacock Street & Krameria Avenue-North

Gateway Aviation TA (JN:13445)

11/05/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	7	52	208	6	18	237
Future Volume (veh/h)	7	52	208	6	18	237
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1411	1841	1796	1604	1159	1752
Adj Flow Rate, veh/h	9	64	257	7	22	293
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	33	4	7	20	50	10
Cap, veh/h	167	194	642	17	426	2203
Arrive On Green	0.12	0.12	0.19	0.19	0.39	0.66
Sat Flow, veh/h	1344	1560	3484	92	1104	3416
Grp Volume(v), veh/h	9	64	129	135	22	293
Grp Sat Flow(s),veh/h/ln	1344	1560	1706	1780	1104	1664
Q Serve(g_s), s	0.3	2.0	3.5	3.5	0.7	1.7
Cycle Q Clear(g_c), s	0.3	2.0	3.5	3.5	0.7	1.7
Prop In Lane	1.00	1.00		0.05	1.00	
Lane Grp Cap(c), veh/h	167	194	323	337	426	2203
V/C Ratio(X)	0.05	0.33	0.40	0.40	0.05	0.13
Avail Cap(c_a), veh/h	861	1000	1607	1676	426	4708
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.4	21.1	18.8	18.8	10.2	3.3
Incr Delay (d2), s/veh	0.0	0.4	0.3	0.3	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.7	1.2	1.2	0.1	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	20.5	21.5	19.1	19.1	10.4	3.3
LnGrp LOS	C	C	B	B	B	A
Approach Vol, veh/h	73		264			315
Approach Delay, s/veh	21.4		19.1			3.8
Approach LOS	C		B			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	25.0	16.2			41.2	11.7
Change Period (Y+Rc), s	4.6	6.2			6.2	5.1
Max Green Setting (Gmax), s	20.4	49.8			74.8	33.9
Max Q Clear Time (g_c+1), s	2.7	5.5			3.7	4.0
Green Ext Time (p_c), s	0.0	0.8			1.1	0.1
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			12.0			
HCM 6th LOS			B			

Intersection												
Int Delay, s/veh	0											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕			↑↑		↙	↑↑	
Traffic Vol, veh/h	0	0	0	0	0	0	0	193	0	0	221	0
Future Vol, veh/h	0	0	0	0	0	0	0	193	0	0	221	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	8	0	0	11	0
Mvmt Flow	0	0	0	0	0	0	0	210	0	0	240	0

Major/Minor	Minor1		Major1			Major2			
Conflicting Flow All	330	450	105	-	0	0	210	0	0
Stage 1	210	210	-	-	-	-	-	-	-
Stage 2	120	240	-	-	-	-	-	-	-
Critical Hdwy	6.8	6.5	6.9	-	-	-	4.1	-	-
Critical Hdwy Stg 1	5.8	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.8	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	-	-	-	2.2	-	-
Pot Cap-1 Maneuver	645	508	936	0	-	-	1373	-	0
Stage 1	811	732	-	0	-	-	-	-	0
Stage 2	898	711	-	0	-	-	-	-	0
Platoon blocked, %									
Mov Cap-1 Maneuver	645	0	936	-	-	-	1373	-	-
Mov Cap-2 Maneuver	680	0	-	-	-	-	-	-	-
Stage 1	811	0	-	-	-	-	-	-	-
Stage 2	898	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1373
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	0	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↕	↗	↘	↕
Traffic Vol, veh/h	1	3	414	8	4	424
Future Vol, veh/h	1	3	414	8	4	424
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	0	140	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	100	100	14	13	75	21
Mvmt Flow	1	3	470	9	5	482

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	721	235	0	0	479
Stage 1	470	-	-	-	-
Stage 2	251	-	-	-	-
Critical Hdwy	8.8	8.9	-	-	5.6
Critical Hdwy Stg 1	7.8	-	-	-	-
Critical Hdwy Stg 2	7.8	-	-	-	-
Follow-up Hdwy	4.5	4.3	-	-	2.95
Pot Cap-1 Maneuver	208	537	-	-	700
Stage 1	382	-	-	-	-
Stage 2	541	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	207	537	-	-	700
Mov Cap-2 Maneuver	293	-	-	-	-
Stage 1	382	-	-	-	-
Stage 2	537	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.1	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	293	537	700	-
HCM Lane V/C Ratio	-	-	0.004	0.006	0.006	-
HCM Control Delay (s)	-	-	17.3	11.7	10.2	-
HCM Lane LOS	-	-	C	B	B	-
HCM 95th %tile Q(veh)	-	-	0	0	0	-

Timings  
12: Heacock Street & San Michele Road

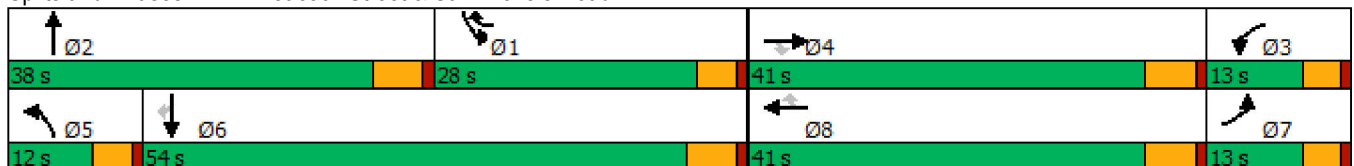


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	2	2	3	3	4	136	1	35	76	84	7
Future Volume (vph)	2	2	3	3	4	136	1	35	76	84	7
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	1	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	4.0	5.0	4.0	5.0	5.0
Minimum Split (s)	9.5	30.5	30.5	8.5	30.5	8.5	8.5	34.5	8.5	34.5	34.5
Total Split (s)	13.0	41.0	41.0	13.0	41.0	28.0	12.0	38.0	28.0	54.0	54.0
Total Split (%)	10.8%	34.2%	34.2%	10.8%	34.2%	23.3%	10.0%	31.7%	23.3%	45.0%	45.0%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	3.5	4.5	3.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	4.5	5.5	4.5	5.5	5.5
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	None	Max	Max
Act Effct Green (s)	5.1	7.9	7.9	5.2	7.9	17.3	4.9	36.7	13.5	58.9	58.9
Actuated g/C Ratio	0.08	0.12	0.12	0.08	0.12	0.26	0.07	0.56	0.20	0.89	0.89
v/c Ratio	0.02	0.03	0.01	0.05	0.03	0.30	0.01	0.03	0.28	0.07	0.01
Control Delay	36.0	27.5	0.0	36.3	27.0	4.1	38.0	12.4	26.8	6.1	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.0	27.5	0.0	36.3	27.0	4.1	38.0	12.4	26.8	6.1	0.0
LOS	D	C	A	D	C	A	D	B	C	A	A
Approach Delay		19.1			5.4			12.9		15.3	
Approach LOS		B			A			B		B	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 66  
 Natural Cycle: 85  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.30  
 Intersection Signal Delay: 11.1  
 Intersection LOS: B  
 Intersection Capacity Utilization 28.0%  
 ICU Level of Service A  
 Analysis Period (min) 15

























Splits and Phases: 12: Heacock Street & San Michele Road



HCM 6th Signalized Intersection Summary  
 12: Heacock Street & San Michele Road

Gateway Aviation TA (JN:13445)

04/19/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	2	3	3	4	136	1	35	3	76	84	7
Future Volume (veh/h)	2	2	3	3	4	136	1	35	3	76	84	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	418	1411	907	1530	1811	1900	1663	1411	1811	1722	1648
Adj Flow Rate, veh/h	3	3	4	4	5	181	1	47	4	101	112	9
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh, %	0	100	33	67	25	6	0	16	33	6	12	17
Cap, veh/h	8	28	80	4	102	416	2	1299	109	352	1132	918
Arrive On Green	0.00	0.07	0.07	0.00	0.07	0.07	0.00	0.44	0.44	0.20	0.66	0.66
Sat Flow, veh/h	1810	418	1196	864	1530	1535	1810	2950	248	1725	1722	1397
Grp Volume(v), veh/h	3	3	4	4	5	181	1	25	26	101	112	9
Grp Sat Flow(s),veh/h/ln	1810	418	1196	864	1530	1535	1810	1580	1618	1725	1722	1397
Q Serve(g_s), s	0.1	0.5	0.2	0.3	0.2	0.0	0.0	0.7	0.7	3.7	1.8	0.1
Cycle Q Clear(g_c), s	0.1	0.5	0.2	0.3	0.2	0.0	0.0	0.7	0.7	3.7	1.8	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.15	1.00		1.00
Lane Grp Cap(c), veh/h	8	28	80	4	102	416	2	696	713	352	1132	918
V/C Ratio(X)	0.39	0.11	0.05	1.09	0.05	0.44	0.41	0.04	0.04	0.29	0.10	0.01
Avail Cap(c_a), veh/h	208	201	575	99	736	1052	184	696	713	549	1132	918
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.7	32.4	23.5	36.7	32.3	22.2	36.8	11.7	11.7	24.8	4.6	1.5
Incr Delay (d2), s/veh	11.6	0.6	0.1	158.8	0.1	0.3	35.8	0.1	0.1	0.2	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.1	0.1	0.2	0.1	2.4	0.0	0.2	0.2	1.4	0.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.2	33.0	23.6	195.5	32.3	22.5	72.6	11.8	11.8	25.0	4.8	1.6
LnGrp LOS	D	C	C	F	C	C	E	B	B	C	A	A
Approach Vol, veh/h		10			190			52			222	
Approach Delay, s/veh		33.8			26.4			13.0			13.9	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.6	38.0	4.8	10.4	4.6	54.0	4.8	10.4				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	23.5	* 33	8.5	35.5	7.5	48.5	8.5	35.5				
Max Q Clear Time (g_c+I1), s	5.7	2.7	2.3	2.5	2.0	3.8	2.1	2.2				
Green Ext Time (p_c), s	0.1	0.1	0.0	0.0	0.0	0.3	0.0	0.3				

Intersection Summary

HCM 6th Ctrl Delay	19.2
HCM 6th LOS	B

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Intersection					
Intersection Delay, s/veh 7.8					
Intersection LOS A					
Approach	EB	WB	NB		
Entry Lanes	3	2	2		
Conflicting Circle Lanes	2	2	2		
Adj Approach Flow, veh/h	0	1184	15		
Demand Flow Rate, veh/h	0	1301	20		
Vehicles Circulating, veh/h	10	8	652		
Vehicles Exiting, veh/h	1299	664	25		
Ped Vol Crossing Leg, #/h	0	0	0		
Ped Cap Adj	1.000	1.000	1.000		
Approach Delay, s/veh	0.0	7.8	6.3		
Approach LOS	-	A	A		
Lane	Left		Right		
Designated Moves	LT	TR	L	LTR	
Assumed Moves	LT	TR	L	TR	
RT Channelized					
Lane Util	0.470	0.530	0.400	0.600	
Follow-Up Headway, s	2.667	2.535	2.667	2.535	
Critical Headway, s	4.645	4.328	4.645	4.328	
Entry Flow, veh/h	611	690	8	12	
Cap Entry Lane, veh/h	1340	1410	741	816	
Entry HV Adj Factor	0.910	0.909	0.625	0.833	
Flow Entry, veh/h	556	627	5	10	
Cap Entry, veh/h	1220	1282	463	680	
V/C Ratio	0.456	0.489	0.011	0.015	
Control Delay, s/veh	7.7	7.9	7.9	5.4	
LOS	A	A	A	A	
95th %tile Queue, veh	2	3	0	0	

Timings  
14: Indian Street & San Michele Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↖	↗	↖	↗	↖	↗	↗	↖	↗
Traffic Volume (vph)	3	50	51	178	289	8	92	3	2
Future Volume (vph)	3	50	51	178	289	8	92	3	2
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8	5	2		1	6
Permitted Phases							2		
Detector Phase	7	4	3	8	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	31.8	9.6	31.8	9.6	32.8	32.8	9.6	32.8
Total Split (s)	12.0	33.0	19.0	40.0	32.0	57.0	57.0	11.0	36.0
Total Split (%)	10.0%	27.5%	15.8%	33.3%	26.7%	47.5%	47.5%	9.2%	30.0%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	6.2	13.7	7.8	19.7	14.5	15.2	15.2	6.1	13.8
Actuated g/C Ratio	0.12	0.27	0.15	0.39	0.28	0.30	0.30	0.12	0.27
v/c Ratio	0.03	0.14	0.26	0.18	0.39	0.03	0.20	0.02	0.01
Control Delay	33.3	13.3	29.4	13.5	21.0	16.5	3.4	33.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.3	13.3	29.4	13.5	21.0	16.5	3.4	33.0	0.0
LOS	C	B	C	B	C	B	A	C	A
Approach Delay		14.0		16.9		16.7			13.2
Approach LOS		B		B		B			B

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 51  
 Natural Cycle: 85  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.39  
 Intersection Signal Delay: 16.4  
 Intersection LOS: B  
 Intersection Capacity Utilization 39.6%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 14: Indian Street & San Michele Road





















HCM 6th Signalized Intersection Summary  
 14: Indian Street & San Michele Road

Gateway Aviation TA (JN:13445)

11/05/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	50	39	51	178	6	289	8	92	3	2	2
Future Volume (veh/h)	3	50	39	51	178	6	289	8	92	3	2	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.99	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	907	1707	1811	1767	1870	1900	1826	1470	1781	1900	418	1900
Adj Flow Rate, veh/h	4	68	53	70	244	8	396	11	126	4	3	3
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Percent Heavy Veh, %	67	13	6	9	2	0	5	29	8	0	100	0
Cap, veh/h	5	345	244	98	874	29	535	575	583	10	93	76
Arrive On Green	0.01	0.19	0.19	0.06	0.24	0.24	0.15	0.39	0.39	0.01	0.22	0.22
Sat Flow, veh/h	864	1815	1283	1682	3599	118	3478	1470	1490	1810	418	340
Grp Volume(v), veh/h	4	60	61	70	126	126	396	11	126	4	3	3
Grp Sat Flow(s),veh/h/ln	864	1622	1476	1682	1870	1847	1739	1470	1490	1810	418	340
Q Serve(g_s), s	0.3	1.8	2.0	2.4	3.2	3.2	6.4	0.3	3.3	0.1	0.3	0.4
Cycle Q Clear(g_c), s	0.3	1.8	2.0	2.4	3.2	3.2	6.4	0.3	3.3	0.1	0.3	0.4
Prop In Lane	1.00		0.87	1.00		0.06	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	5	309	281	98	454	449	535	575	583	10	93	76
V/C Ratio(X)	0.86	0.19	0.22	0.72	0.28	0.28	0.74	0.02	0.22	0.41	0.03	0.04
Avail Cap(c_a), veh/h	109	753	685	413	1092	1078	1626	1285	1302	198	215	175
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.1	19.9	20.0	27.1	18.0	18.0	23.7	10.9	11.9	29.0	17.8	17.9
Incr Delay (d2), s/veh	82.8	0.1	0.1	3.6	0.1	0.1	0.8	0.0	0.1	10.0	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.6	0.6	1.0	1.2	1.2	2.3	0.1	0.9	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	111.9	20.1	20.2	30.8	18.1	18.1	24.4	10.9	11.9	39.0	17.9	18.0
LnGrp LOS	F	C	C	C	B	B	C	B	B	D	B	B
Approach Vol, veh/h		125			322			533				10
Approach Delay, s/veh		23.1			20.9			21.2				26.4
Approach LOS		C			C			C				C
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.9	28.7	8.0	17.0	14.8	18.8	4.9	20.0				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	5.8	* 5.8	4.6	5.8				
Max Green Setting (Gmax), s	6.4	51.2	14.4	27.2	27.4	* 30	7.4	34.2				
Max Q Clear Time (g_c+I1), s	2.1	5.3	4.4	4.0	8.4	2.4	2.3	5.2				
Green Ext Time (p_c), s	0.0	0.2	0.0	0.3	0.7	0.0	0.0	0.8				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				21.4								
HCM 6th LOS				C								
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings  
15: Indian Street & Nandina Avenue

										
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	
Lane Configurations										
Traffic Volume (vph)	3	24	77	10	32	108	303	6	42	
Future Volume (vph)	3	24	77	10	32	108	303	6	42	
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA	
Protected Phases	7	4	5	3	8	5	2	1	6	
Permitted Phases	4									
Detector Phase	7	4	5	3	8	5	2	1	6	
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0	
Minimum Split (s)	9.6	29.8	9.6	9.6	29.8	9.6	26.8	9.6	26.8	
Total Split (s)	13.0	35.0	36.0	15.0	37.0	36.0	56.0	14.0	34.0	
Total Split (%)	10.8%	29.2%	30.0%	12.5%	30.8%	30.0%	46.7%	11.7%	28.3%	
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	3.6	4.8	3.6	4.8	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	4.6	5.8	4.6	5.8	
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	Min	None	Min	
Act Effct Green (s)	6.1	13.5	15.4	6.3	13.7	9.4	33.8	6.2	19.1	
Actuated g/C Ratio	0.14	0.31	0.35	0.14	0.31	0.21	0.77	0.14	0.44	
v/c Ratio	0.01	0.07	0.16	0.06	0.12	0.36	0.13	0.04	0.04	
Control Delay	29.0	17.8	3.1	27.7	13.2	23.4	8.3	28.3	16.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	29.0	17.8	3.1	27.7	13.2	23.4	8.3	28.3	16.4	
LOS	C	B	A	C	B	C	A	C	B	
Approach Delay	7.2		15.7				12.1		17.8	
Approach LOS	A		B				B		B	

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 43.8	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.36	
Intersection Signal Delay: 12.1	Intersection LOS: B
Intersection Capacity Utilization 30.8%	ICU Level of Service A
Analysis Period (min) 15	























Splits and Phases: 15: Indian Street & Nandina Avenue



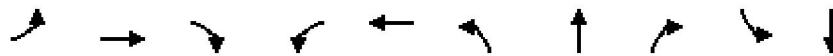
HCM 6th Signalized Intersection Summary  
 15: Indian Street & Nandina Avenue

Gateway Aviation TA (JN:13445)

11/05/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	24	77	10	32	17	108	303	14	6	42	4
Future Volume (veh/h)	3	24	77	10	32	17	108	303	14	6	42	4
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1218	1381	1011	1426	1470	1589	1796	1159	1159	1500	1900
Adj Flow Rate, veh/h	3	27	86	11	36	19	120	337	16	7	47	4
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	46	35	60	32	29	21	7	50	50	27	0
Cap, veh/h	7	240	345	14	182	96	147	1065	50	10	615	52
Arrive On Green	0.00	0.20	0.20	0.01	0.21	0.21	0.10	0.31	0.31	0.01	0.23	0.23
Sat Flow, veh/h	1810	1218	1171	963	879	464	1513	3398	161	1104	2729	229
Grp Volume(v), veh/h	3	27	86	11	0	55	120	177	176	7	26	25
Grp Sat Flow(s),veh/h/ln	1810	1218	1171	963	0	1342	1513	1796	1763	1104	1500	1459
Q Serve(g_s), s	0.1	0.8	2.5	0.5	0.0	1.5	3.5	3.4	3.4	0.3	0.6	0.6
Cycle Q Clear(g_c), s	0.1	0.8	2.5	0.5	0.0	1.5	3.5	3.4	3.4	0.3	0.6	0.6
Prop In Lane	1.00		1.00	1.00		0.35	1.00		0.09	1.00		0.16
Lane Grp Cap(c), veh/h	7	240	345	14	0	278	147	563	553	10	338	329
V/C Ratio(X)	0.41	0.11	0.25	0.80	0.00	0.20	0.82	0.32	0.32	0.68	0.08	0.08
Avail Cap(c_a), veh/h	340	797	879	224	0	938	1064	2019	1982	232	947	921
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.2	14.7	12.0	21.9	0.0	14.6	19.8	11.7	11.7	22.1	13.6	13.6
Incr Delay (d2), s/veh	12.7	0.2	0.4	31.2	0.0	0.3	4.1	0.3	0.3	25.5	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.2	0.5	0.2	0.0	0.4	1.1	1.0	1.0	0.1	0.2	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.9	14.9	12.4	53.2	0.0	15.0	23.9	12.0	12.0	47.5	13.7	13.7
LnGrp LOS	C	B	B	D	A	B	C	B	B	D	B	B
Approach Vol, veh/h		116			66			473				58
Approach Delay, s/veh		13.5			21.3			15.0				17.8
Approach LOS		B			C			B				B
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.0	19.8	5.2	14.6	8.9	15.9	4.8	15.1				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	9.4	50.2	10.4	29.2	31.4	28.2	8.4	31.2				
Max Q Clear Time (g_c+I1), s	2.3	5.4	2.5	4.5	5.5	2.6	2.1	3.5				
Green Ext Time (p_c), s	0.0	1.9	0.0	0.4	0.1	0.2	0.0	0.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			15.6									
HCM 6th LOS			B									

Timings  
16: Indian Av. & Harley Knox Bl.

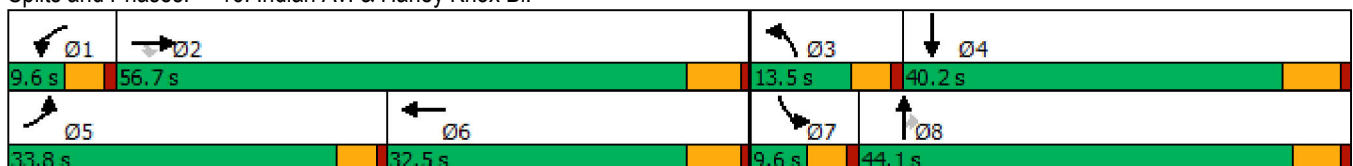


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↘	↑↑↑	↗	↘	↑↑↑	↘	↑↑	↗	↘	↑↑
Traffic Volume (vph)	202	262	32	12	629	98	239	17	10	60
Future Volume (vph)	202	262	32	12	629	98	239	17	10	60
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	5	2		1	6	3	8		7	4
Permitted Phases			2					8		
Detector Phase	5	2	2	1	6	3	8	8	7	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	35.8	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2
Total Split (s)	33.8	56.7	56.7	9.6	32.5	13.5	44.1	44.1	9.6	40.2
Total Split (%)	28.2%	47.3%	47.3%	8.0%	27.1%	11.3%	36.8%	36.8%	8.0%	33.5%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.4	4.4	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	5.4	5.4	4.6	6.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	17.0	39.3	39.3	5.5	18.5	7.5	23.0	23.0	5.5	14.0
Actuated g/C Ratio	0.22	0.51	0.51	0.07	0.24	0.10	0.30	0.30	0.07	0.18
v/c Ratio	0.68	0.12	0.05	0.12	0.62	0.36	0.26	0.04	0.09	0.32
Control Delay	42.1	12.3	0.2	47.4	30.6	42.8	23.0	0.2	46.8	15.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.1	12.3	0.2	47.4	30.6	42.8	23.0	0.2	46.8	15.7
LOS	D	B	A	D	C	D	C	A	D	B
Approach Delay		23.7			30.9		27.4			17.6
Approach LOS		C			C		C			B

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 77  
 Natural Cycle: 100  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.68  
 Intersection Signal Delay: 26.8  
 Intersection LOS: C  
 Intersection Capacity Utilization 54.5%  
 ICU Level of Service A  
 Analysis Period (min) 15































Splits and Phases: 16: Indian Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 16: Indian Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/05/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 			 	
Traffic Volume (veh/h)	202	262	32	12	629	43	98	239	17	10	60	91
Future Volume (veh/h)	202	262	32	12	629	43	98	239	17	10	60	91
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1574	1752	1426	1648	1841	1870	1707	1781	1530	1752	1693	1189
Adj Flow Rate, veh/h	222	288	26	13	691	27	108	263	12	11	66	51
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	22	10	32	17	4	2	13	8	25	10	14	48
Cap, veh/h	265	1846	466	26	1119	44	222	762	292	23	305	214
Arrive On Green	0.18	0.39	0.39	0.02	0.23	0.23	0.07	0.23	0.23	0.01	0.17	0.17
Sat Flow, veh/h	1499	4782	1208	1570	4963	193	3155	3385	1296	1668	1806	1266
Grp Volume(v), veh/h	222	288	26	13	466	252	108	263	12	11	58	59
Grp Sat Flow(s),veh/h/ln	1499	1594	1208	1570	1675	1806	1577	1692	1296	1668	1608	1465
Q Serve(g_s), s	8.5	2.3	0.8	0.5	7.4	7.4	1.9	3.9	0.4	0.4	1.8	2.1
Cycle Q Clear(g_c), s	8.5	2.3	0.8	0.5	7.4	7.4	1.9	3.9	0.4	0.4	1.8	2.1
Prop In Lane	1.00		1.00	1.00		0.11	1.00		1.00	1.00		0.86
Lane Grp Cap(c), veh/h	265	1846	466	26	755	407	222	762	292	23	272	247
V/C Ratio(X)	0.84	0.16	0.06	0.51	0.62	0.62	0.49	0.35	0.04	0.47	0.21	0.24
Avail Cap(c_a), veh/h	740	4118	1040	133	1513	816	475	2216	849	141	925	842
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.5	11.9	11.4	28.8	20.6	20.6	26.5	19.2	17.9	28.9	21.2	21.3
Incr Delay (d2), s/veh	2.7	0.0	0.0	5.7	0.8	1.5	0.6	0.3	0.1	5.4	0.4	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	0.6	0.2	0.2	2.6	2.9	0.7	1.3	0.1	0.2	0.6	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.2	11.9	11.4	34.6	21.4	22.2	27.1	19.5	18.0	34.3	21.6	21.8
LnGrp LOS	C	B	B	C	C	C	C	B	B	C	C	C
Approach Vol, veh/h		536			731			383			128	
Approach Delay, s/veh		17.8			21.9			21.6			22.8	
Approach LOS		B			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.6	28.6	8.8	16.2	15.0	19.1	5.4	19.5				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	5.0	50.9	8.9	34.0	29.2	26.7	5.0	* 39				
Max Q Clear Time (g_c+I1), s	2.5	4.3	3.9	4.1	10.5	9.4	2.4	5.9				
Green Ext Time (p_c), s	0.0	1.9	0.1	0.6	0.3	3.9	0.0	1.6				

Intersection Summary

HCM 6th Ctrl Delay	20.7
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

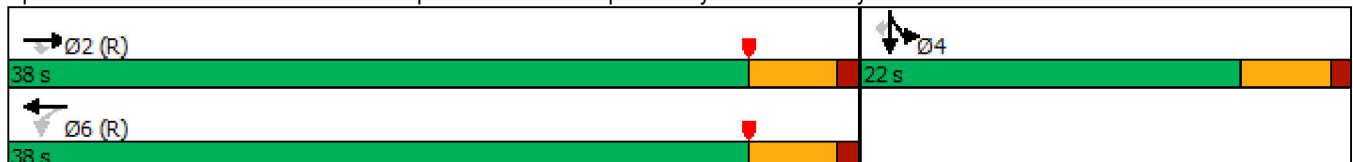


Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations	↑↑	↑	↘	↑↑	↙	↗
Traffic Volume (vph)	354	30	306	187	0	124
Future Volume (vph)	354	30	306	187	0	124
Turn Type	NA	Perm	Perm	NA	NA	Perm
Protected Phases	2			6	4	
Permitted Phases		2	6			4
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	25.0	25.0	10.0	10.0
Total Split (s)	38.0	38.0	38.0	38.0	22.0	22.0
Total Split (%)	63.3%	63.3%	63.3%	63.3%	36.7%	36.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	35.3	35.3	35.3	35.3	14.7	14.7
Actuated g/C Ratio	0.59	0.59	0.59	0.59	0.24	0.24
v/c Ratio	0.21	0.04	0.64	0.11	0.75	0.31
Control Delay	6.6	2.6	24.7	9.7	34.3	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.6	2.6	24.7	9.7	34.3	5.7
LOS	A	A	C	A	C	A
Approach Delay	6.3			19.0	24.5	
Approach LOS	A			B	C	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection  
 Natural Cycle: 55  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.75  
 Intersection Signal Delay: 16.7  
 Intersection LOS: B  
 Intersection Capacity Utilization 59.4%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.





HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

11/05/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↖	↑↑						↖	↗
Traffic Volume (veh/h)	0	354	30	306	187	0	0	0	0	239	0	124
Future Volume (veh/h)	0	354	30	306	187	0	0	0	0	239	0	124
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1752	1856	1826	1796	0				1589	1900	1693
Adj Flow Rate, veh/h	0	402	34	348	212	0				272	0	79
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88				0.88	0.88	0.88
Percent Heavy Veh, %	0	10	3	5	7	0				21	0	14
Cap, veh/h	0	2138	1010	672	2193	0				345	0	274
Arrive On Green	0.00	0.64	0.64	1.00	1.00	0.00				0.19	0.00	0.19
Sat Flow, veh/h	0	3416	1572	930	3503	0				1810	0	1434
Grp Volume(v), veh/h	0	402	34	348	212	0				272	0	79
Grp Sat Flow(s),veh/h/ln	0	1664	1572	930	1706	0				1810	0	1434
Q Serve(g_s), s	0.0	2.9	0.5	4.1	0.0	0.0				8.6	0.0	2.8
Cycle Q Clear(g_c), s	0.0	2.9	0.5	7.1	0.0	0.0				8.6	0.0	2.8
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2138	1010	672	2193	0				345	0	274
V/C Ratio(X)	0.00	0.19	0.03	0.52	0.10	0.00				0.79	0.00	0.29
Avail Cap(c_a), veh/h	0	2138	1010	672	2193	0				513	0	406
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.93	0.93	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	4.4	3.9	0.3	0.0	0.0				23.1	0.0	20.8
Incr Delay (d2), s/veh	0.0	0.2	0.1	2.6	0.1	0.0				4.8	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.6	0.1	0.5	0.0	0.0				3.6	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	4.6	4.0	2.9	0.1	0.0				28.0	0.0	21.4
LnGrp LOS	A	A	A	A	A	A				C	A	C
Approach Vol, veh/h		436			560							351
Approach Delay, s/veh		4.5			1.8							26.5
Approach LOS		A			A							C
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		43.5		16.5		43.5						
Change Period (Y+Rc), s		5.0		5.0		5.0						
Max Green Setting (Gmax), s		33.0		17.0		33.0						
Max Q Clear Time (g_c+I1), s		4.9		10.6		9.1						
Green Ext Time (p_c), s		1.6		0.9		2.0						
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				9.1								
HCM 6th LOS				A								

Timings

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

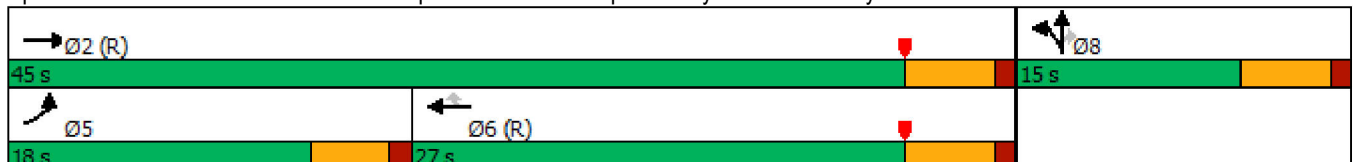


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	205	388	475	463	3	219
Future Volume (vph)	205	388	475	463	3	219
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	26.0	24.0	24.0	10.0	10.0
Total Split (s)	18.0	45.0	27.0	27.0	15.0	15.0
Total Split (%)	30.0%	75.0%	45.0%	45.0%	25.0%	25.0%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max
Act Effct Green (s)	11.3	40.0	24.2	24.2	10.0	10.0
Actuated g/C Ratio	0.19	0.67	0.40	0.40	0.17	0.17
v/c Ratio	0.71	0.21	0.38	0.58	0.08	0.56
Control Delay	28.4	4.0	14.2	4.7	22.1	9.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.4	4.0	14.2	4.7	22.1	9.5
LOS	C	A	B	A	C	A
Approach Delay		12.4	9.5		10.5	
Approach LOS		B	A		B	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 29 (48%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 50  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.71  
 Intersection Signal Delay: 10.6  
 Intersection LOS: B  
 Intersection Capacity Utilization 59.4%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

11/05/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷			↷	↶		↶	↷			
Traffic Volume (veh/h)	205	388	0	0	475	463	17	3	219	0	0	0
Future Volume (veh/h)	205	388	0	0	475	463	17	3	219	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1796	1633	0	0	1811	1678	1633	1900	1633			
Adj Flow Rate, veh/h	223	422	0	0	516	439	18	3	173			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	7	18	0	0	6	15	18	0	18			
Cap, veh/h	274	2069	0	0	1485	613	260	43	231			
Arrive On Green	0.05	0.22	0.00	0.00	0.43	0.43	0.17	0.17	0.17			
Sat Flow, veh/h	1711	3185	0	0	3532	1422	1562	260	1384			
Grp Volume(v), veh/h	223	422	0	0	516	439	21	0	173			
Grp Sat Flow(s),veh/h/ln	1711	1552	0	0	1721	1422	1822	0	1384			
Q Serve(g_s), s	7.7	6.7	0.0	0.0	6.0	15.2	0.6	0.0	7.1			
Cycle Q Clear(g_c), s	7.7	6.7	0.0	0.0	6.0	15.2	0.6	0.0	7.1			
Prop In Lane	1.00		0.00	0.00		1.00	0.86		1.00			
Lane Grp Cap(c), veh/h	274	2069	0	0	1485	613	304	0	231			
V/C Ratio(X)	0.81	0.20	0.00	0.00	0.35	0.72	0.07	0.00	0.75			
Avail Cap(c_a), veh/h	385	2069	0	0	1485	613	304	0	231			
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.99	0.99	0.00	0.00	0.92	0.92	1.00	0.00	1.00			
Uniform Delay (d), s/veh	27.5	10.4	0.0	0.0	11.4	14.0	21.1	0.0	23.8			
Incr Delay (d2), s/veh	6.0	0.2	0.0	0.0	0.6	6.5	0.4	0.0	19.9			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	3.5	1.5	0.0	0.0	1.9	4.9	0.3	0.0	3.3			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.5	10.6	0.0	0.0	12.0	20.5	21.5	0.0	43.7			
LnGrp LOS	C	B	A	A	B	C	C	A	D			
Approach Vol, veh/h		645			955			194				
Approach Delay, s/veh		18.5			15.9			41.3				
Approach LOS		B			B			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		45.0			14.1	30.9		15.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		40.0			13.5	22.0		10.0				
Max Q Clear Time (g_c+11), s		8.7			9.7	17.2		9.1				
Green Ext Time (p_c), s		1.7			0.1	1.5		0.1				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					19.6							
HCM 6th LOS					B							

Timings  
3: Western Way & Harley Knox Bl.



Lane Group	EBL	EBT	WBT	SBL	SBT	Ø1	Ø8
Lane Configurations	↖	↑↑↑	↑↑↑	↖	↗		
Traffic Volume (vph)	18	601	867	9	0		
Future Volume (vph)	18	601	867	9	0		
Turn Type	Prot	NA	NA	Perm	NA		
Protected Phases	5	2	6		4	1	8
Permitted Phases				4			
Detector Phase	5	2	6	4	4		
Switch Phase							
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	21.8	21.8	32.6	32.6	9.6	32.6
Total Split (s)	18.0	71.4	63.0	39.0	39.0	9.6	39.0
Total Split (%)	15.0%	59.5%	52.5%	32.5%	32.5%	8%	33%
Yellow Time (s)	3.6	4.8	4.8	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.6	5.8	5.8	4.6	4.6		
Lead/Lag	Lead	Lag	Lag			Lead	
Lead-Lag Optimize?	Yes	Yes	Yes			Yes	
Recall Mode	None	None	None	None	None	None	None
Act Effct Green (s)	6.9	24.3	23.0	14.4	14.4		
Actuated g/C Ratio	0.16	0.57	0.54	0.34	0.34		
v/c Ratio	0.11	0.28	0.41	0.02	0.17		
Control Delay	25.6	7.5	10.6	15.0	0.7		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	25.6	7.5	10.6	15.0	0.7		
LOS	C	A	B	B	A		
Approach Delay		8.0	10.6		2.0		
Approach LOS		A	B		A		

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 42.3  
 Natural Cycle: 65  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.41  
 Intersection Signal Delay: 9.1  
 Intersection Capacity Utilization 33.9%  
 Analysis Period (min) 15  
 Intersection LOS: A  
 ICU Level of Service A


























Splits and Phases: 3: Western Way & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 3: Western Way & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/05/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  							
Traffic Volume (veh/h)	18	601	0	0	867	7	0	0	0	9	0	91
Future Volume (veh/h)	18	601	0	0	867	7	0	0	0	9	0	91
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1203	1648	1900	1900	1752	1470	1900	1900	1900	1737	1900	1796
Adj Flow Rate, veh/h	22	724	0	0	1045	6	0	0	0	11	0	97
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	47	17	0	0	10	29	0	0	0	11	0	7
Cap, veh/h	31	2501	895	5	2015	12	185	336	0	478	0	285
Arrive On Green	0.03	0.56	0.00	0.00	0.41	0.41	0.00	0.00	0.00	0.18	0.00	0.18
Sat Flow, veh/h	1146	4499	1610	1810	4907	28	1319	1900	0	1654	0	1610
Grp Volume(v), veh/h	22	724	0	0	679	372	0	0	0	11	0	97
Grp Sat Flow(s),veh/h/ln	1146	1500	1610	1810	1594	1747	1319	1900	0	1654	0	1610
Q Serve(g_s), s	0.7	3.3	0.0	0.0	6.2	6.2	0.0	0.0	0.0	0.2	0.0	2.1
Cycle Q Clear(g_c), s	0.7	3.3	0.0	0.0	6.2	6.2	0.0	0.0	0.0	0.2	0.0	2.1
Prop In Lane	1.00		1.00	1.00		0.02	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	31	2501	895	5	1309	717	185	336	0	478	0	285
V/C Ratio(X)	0.71	0.29	0.00	0.00	0.52	0.52	0.00	0.00	0.00	0.02	0.00	0.34
Avail Cap(c_a), veh/h	394	7580	2713	232	4684	2566	1117	1679	0	1646	0	1423
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.8	4.6	0.0	0.0	8.6	8.6	0.0	0.0	0.0	13.3	0.0	14.0
Incr Delay (d2), s/veh	10.3	0.1	0.0	0.0	0.3	0.6	0.0	0.0	0.0	0.0	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.4	0.0	0.0	1.3	1.4	0.0	0.0	0.0	0.1	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.1	4.6	0.0	0.0	8.9	9.2	0.0	0.0	0.0	13.3	0.0	14.7
LnGrp LOS	C	A	A	A	A	A	A	A	A	B	A	B
Approach Vol, veh/h		746			1051			0				108
Approach Delay, s/veh		5.4			9.0			0.0				14.6
Approach LOS		A			A							B
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	27.4		11.5	5.7	21.8		11.5				
Change Period (Y+Rc), s	4.6	5.8		4.6	4.6	5.8		4.6				
Max Green Setting (Gmax), s	5.0	65.6		34.4	13.4	57.2		34.4				
Max Q Clear Time (g_c+I1), s	0.0	5.3		4.1	2.7	8.2		0.0				
Green Ext Time (p_c), s	0.0	5.4		0.6	0.0	7.8		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					7.9							
HCM 6th LOS					A							

Timings

4: Patterson Av. & Harley Knox Bl.

11/05/2020

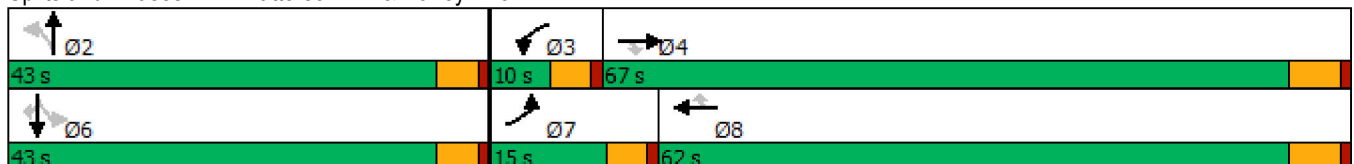


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑	↗	↖	↑↑	↗		↕		↖	↗
Traffic Volume (vph)	20	551	19	2	814	7	35	2	19	3	25
Future Volume (vph)	20	551	19	2	814	7	35	2	19	3	25
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	7	4		3	8			2		6	
Permitted Phases			4			8	2		6		6
Detector Phase	7	4	4	3	8	8	2	2	6	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	9.6	31.8	31.8	33.7	33.7	40.7	40.7	40.7
Total Split (s)	15.0	67.0	67.0	10.0	62.0	62.0	43.0	43.0	43.0	43.0	43.0
Total Split (%)	12.5%	55.8%	55.8%	8.3%	51.7%	51.7%	35.8%	35.8%	35.8%	35.8%	35.8%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8		4.7		4.7	4.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	7.1	42.0	42.0	6.1	39.3	39.3		14.8		14.8	14.8
Actuated g/C Ratio	0.13	0.74	0.74	0.11	0.69	0.69		0.26		0.26	0.26
v/c Ratio	0.17	0.20	0.02	0.01	0.44	0.01		0.16		0.09	0.07
Control Delay	36.5	7.1	0.2	38.0	12.0	0.0		21.3		22.7	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	36.5	7.1	0.2	38.0	12.0	0.0		21.3		22.7	0.3
LOS	D	A	A	D	B	A		C		C	A
Approach Delay		7.8			11.9			21.3		10.9	
Approach LOS		A			B			C		B	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 56.7  
 Natural Cycle: 85  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.44  
 Intersection Signal Delay: 10.5  
 Intersection LOS: B  
 Intersection Capacity Utilization 51.8%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 4: Patterson Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
4: Patterson Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/05/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	551	19	2	814	7	35	2	4	19	3	25
Future Volume (veh/h)	20	551	19	2	814	7	35	2	4	19	3	25
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1040	1693	1811	1900	1752	1263	1722	1900	1159	1648	1411	1589
Adj Flow Rate, veh/h	24	672	23	2	993	9	43	2	5	23	4	30
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	58	14	6	0	10	43	12	0	50	17	33	21
Cap, veh/h	29	2243	745	5	1528	481	337	21	23	308	38	224
Arrive On Green	0.03	0.49	0.49	0.00	0.46	0.46	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	991	4621	1535	1810	3328	1048	1107	127	137	932	230	1346
Grp Volume(v), veh/h	24	672	23	2	993	9	50	0	0	27	0	30
Grp Sat Flow(s),veh/h/ln	991	1540	1535	1810	1664	1048	1371	0	0	1162	0	1346
Q Serve(g_s), s	1.1	3.8	0.3	0.0	10.0	0.2	0.9	0.0	0.0	0.0	0.0	0.8
Cycle Q Clear(g_c), s	1.1	3.8	0.3	0.0	10.0	0.2	1.6	0.0	0.0	0.7	0.0	0.8
Prop In Lane	1.00		1.00	1.00		1.00	0.86		0.10	0.85		1.00
Lane Grp Cap(c), veh/h	29	2243	745	5	1528	481	381	0	0	346	0	224
V/C Ratio(X)	0.84	0.30	0.03	0.40	0.65	0.02	0.13	0.00	0.00	0.08	0.00	0.13
Avail Cap(c_a), veh/h	236	6470	2149	224	4280	1347	1397	0	0	1129	0	1180
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.1	6.8	5.9	21.8	9.1	6.4	15.9	0.0	0.0	15.5	0.0	15.5
Incr Delay (d2), s/veh	20.3	0.1	0.0	18.4	0.5	0.0	0.2	0.0	0.0	0.1	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.7	0.1	0.0	2.2	0.0	0.4	0.0	0.0	0.2	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.5	6.8	5.9	40.1	9.6	6.5	16.1	0.0	0.0	15.6	0.0	15.8
LnGrp LOS	D	A	A	D	A	A	B	A	A	B	A	B
Approach Vol, veh/h		719			1004			50				57
Approach Delay, s/veh		8.0			9.6			16.1				15.7
Approach LOS		A			A			B				B
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		12.0	4.7	27.0		12.0	5.9	25.9				
Change Period (Y+Rc), s		* 4.7	4.6	5.8		* 4.7	4.6	5.8				
Max Green Setting (Gmax), s		* 38	5.4	61.2		* 38	10.4	56.2				
Max Q Clear Time (g_c+I1), s		3.6	2.0	5.8		2.8	3.1	12.0				
Green Ext Time (p_c), s		0.2	0.0	5.0		0.2	0.0	8.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			9.3									
HCM 6th LOS			A									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												



Timings  
5: Heacock Street & Cactus Avenue

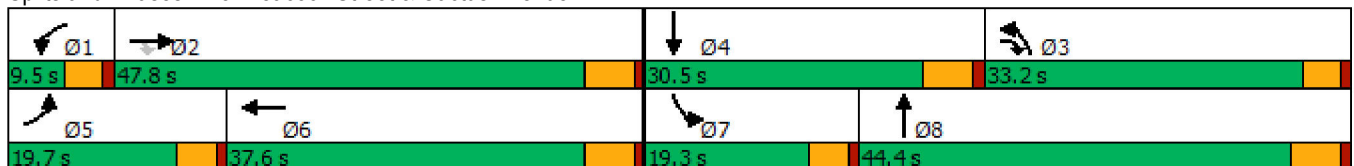


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	173	1109	856	9	568	400	395	117	446
Future Volume (vph)	173	1109	856	9	568	400	395	117	446
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	3	1	6	3	8	7	4
Permitted Phases			2						
Detector Phase	5	2	3	1	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.5	30.5	9.5	9.5	30.5	9.5	30.5	9.5	30.5
Total Split (s)	19.7	47.8	33.2	9.5	37.6	33.2	44.4	19.3	30.5
Total Split (%)	16.3%	39.5%	27.4%	7.9%	31.1%	27.4%	36.7%	16.0%	25.2%
Yellow Time (s)	3.5	4.5	3.5	3.5	4.5	3.5	4.5	3.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	4.5	4.5	5.5	4.5	5.5	4.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None
Act Effct Green (s)	12.9	38.1	62.6	5.2	22.0	23.5	30.5	10.6	17.6
Actuated g/C Ratio	0.13	0.39	0.65	0.05	0.23	0.24	0.31	0.11	0.18
v/c Ratio	0.71	0.78	0.74	0.10	0.79	0.49	0.36	0.59	0.75
Control Delay	60.5	31.8	11.6	55.4	43.0	35.5	27.6	57.6	46.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.5	31.8	11.6	55.4	43.0	35.5	27.6	57.6	46.2
LOS	E	C	B	E	D	D	C	E	D
Approach Delay		26.0			43.2		31.6		48.4
Approach LOS		C			D		C		D

Intersection Summary

Cycle Length: 121  
 Actuated Cycle Length: 96.9  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.79  
 Intersection Signal Delay: 33.0  
 Intersection LOS: C  
 Intersection Capacity Utilization 83.6%  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 5: Heacock Street & Cactus Avenue



























HCM 6th Signalized Intersection Summary  
5: Heacock Street & Cactus Avenue

Gateway Aviation TA (JN:13445)

11/05/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	173	1109	856	9	568	77	400	395	10	117	446	37
Future Volume (veh/h)	173	1109	856	9	568	77	400	395	10	117	446	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1796	1737	1870	1856	1767	1870	1752	1900	1856	1900
Adj Flow Rate, veh/h	180	1155	892	9	592	80	417	411	10	122	465	39
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	1	7	11	2	3	9	2	10	0	3	0
Cap, veh/h	219	1456	821	19	892	120	517	962	23	156	622	52
Arrive On Green	0.12	0.39	0.39	0.01	0.28	0.28	0.15	0.26	0.26	0.09	0.18	0.18
Sat Flow, veh/h	1810	3770	1519	1654	3227	435	3365	3634	88	1810	3377	282
Grp Volume(v), veh/h	180	1155	892	9	343	329	417	211	210	122	255	249
Grp Sat Flow(s),veh/h/ln	1810	1885	1519	1654	1870	1792	1682	1870	1852	1810	1856	1804
Q Serve(g_s), s	7.7	21.5	17.7	0.4	12.9	12.9	9.5	7.4	7.5	5.2	10.3	10.4
Cycle Q Clear(g_c), s	7.7	21.5	17.7	0.4	12.9	12.9	9.5	7.4	7.5	5.2	10.3	10.4
Prop In Lane	1.00		1.00	1.00		0.24	1.00		0.05	1.00		0.16
Lane Grp Cap(c), veh/h	219	1456	821	19	517	495	517	495	490	156	342	332
V/C Ratio(X)	0.82	0.79	1.09	0.48	0.66	0.67	0.81	0.43	0.43	0.78	0.75	0.75
Avail Cap(c_a), veh/h	346	2008	1043	104	756	724	1216	916	907	337	584	568
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.1	21.6	7.4	39.0	25.5	25.5	32.5	24.2	24.2	35.6	30.6	30.7
Incr Delay (d2), s/veh	4.2	1.0	53.7	6.9	0.5	0.6	1.1	0.2	0.2	3.3	1.2	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	8.3	15.9	0.2	5.3	5.1	3.7	3.0	3.0	2.3	4.4	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.2	22.6	61.1	45.9	26.0	26.1	33.6	24.4	24.4	38.8	31.9	32.0
LnGrp LOS	D	C	F	D	C	C	C	C	C	D	C	C
Approach Vol, veh/h		2227			681			838			626	
Approach Delay, s/veh		39.3			26.3			29.0			33.3	
Approach LOS		D			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.4	36.2	17.7	20.1	14.1	27.5	11.3	26.5				
Change Period (Y+Rc), s	4.5	5.5	5.5	* 5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	5.0	42.3	28.7	* 25	15.2	32.1	14.8	38.9				
Max Q Clear Time (g_c+I1), s	2.4	23.5	11.5	12.4	9.7	14.9	7.2	9.5				
Green Ext Time (p_c), s	0.0	7.2	0.7	1.4	0.1	2.2	0.1	1.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			34.4									
HCM 6th LOS			C									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

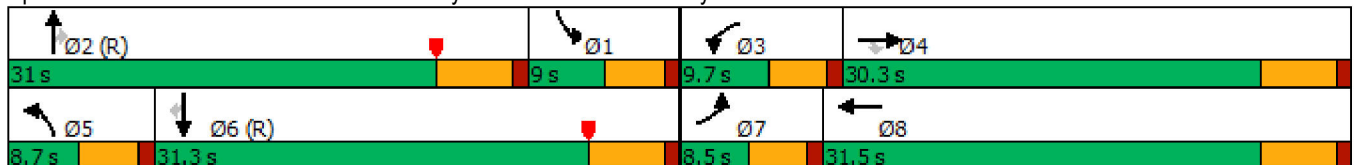
Timings  
6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	27	172	287	24	67	65	635	55	261	907	15	
Future Volume (vph)	27	172	287	24	67	65	635	55	261	907	15	
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	7	4		3	8	5	2		1	6		
Permitted Phases			4					2			6	
Detector Phase	7	4	4	3	8	5	2	2	1	6	6	
Switch Phase												
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	
Minimum Split (s)	8.5	23.5	23.5	8.5	31.5	8.5	30.5	30.5	8.5	23.5	23.5	
Total Split (s)	8.5	30.3	30.3	9.7	31.5	8.7	31.0	31.0	9.0	31.3	31.3	
Total Split (%)	10.6%	37.9%	37.9%	12.1%	39.4%	10.9%	38.8%	38.8%	11.3%	39.1%	39.1%	
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5	4.5	4.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	5.5	4.5	5.5	5.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max	
Act Effct Green (s)	4.0	14.4	14.4	5.0	14.8	6.8	41.8	41.8	4.5	41.4	41.4	
Actuated g/C Ratio	0.05	0.18	0.18	0.06	0.18	0.08	0.52	0.52	0.06	0.52	0.52	
v/c Ratio	0.33	0.59	0.60	0.24	0.28	0.46	0.40	0.06	2.94	0.57	0.02	
Control Delay	46.1	35.9	11.5	40.7	9.8	47.4	14.9	0.1	917.3	18.9	0.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	46.1	35.9	11.5	40.7	9.8	47.4	14.9	0.1	917.3	18.9	0.0	
LOS	D	D	B	D	A	D	B	A	F	B	A	
Approach Delay		22.1			13.1		16.6			216.8		
Approach LOS		C			B		B			F		

Intersection Summary

Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 2.94  
 Intersection Signal Delay: 106.8  
 Intersection Capacity Utilization 61.1%  
 Analysis Period (min) 15  
 Intersection LOS: F  
 ICU Level of Service B

Splits and Phases: 6: Heacock Street & Meyer Drive/John F. Kennedy Drive



HCM 6th Signalized Intersection Summary  
 6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

11/05/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↕		↖	↕	↗	↖	↕	↗
Traffic Volume (veh/h)	27	172	287	24	67	133	65	635	55	261	907	15
Future Volume (veh/h)	27	172	287	24	67	133	65	635	55	261	907	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1900	1900	1870	1885	1900	1781	1900	1841	1796	1900
Adj Flow Rate, veh/h	31	198	330	28	77	153	75	730	63	300	1043	17
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	1	0	0	2	1	0	8	0	4	7	0
Cap, veh/h	45	440	375	42	433	367	95	1136	513	285	1585	710
Arrive On Green	0.02	0.23	0.23	0.02	0.23	0.23	0.05	0.32	0.32	0.16	0.44	0.44
Sat Flow, veh/h	1810	1885	1610	1810	1870	1585	1810	3563	1610	1753	3593	1610
Grp Volume(v), veh/h	31	198	330	28	77	153	75	730	63	300	1043	17
Grp Sat Flow(s),veh/h/ln	1810	1885	1610	1810	1870	1585	1810	1781	1610	1753	1796	1610
Q Serve(g_s), s	1.4	7.2	15.8	1.2	2.6	6.6	3.3	14.0	1.7	13.0	18.3	0.5
Cycle Q Clear(g_c), s	1.4	7.2	15.8	1.2	2.6	6.6	3.3	14.0	1.7	13.0	18.3	0.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	45	440	375	42	433	367	95	1136	513	285	1585	710
V/C Ratio(X)	0.69	0.45	0.88	0.67	0.18	0.42	0.79	0.64	0.12	1.05	0.66	0.02
Avail Cap(c_a), veh/h	90	584	499	118	608	515	95	1136	513	285	1585	710
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.90	0.90	0.90	0.60	0.60	0.60
Uniform Delay (d), s/veh	38.7	26.3	29.6	38.8	24.6	26.2	37.5	23.3	11.8	33.5	17.6	12.6
Incr Delay (d2), s/veh	6.8	0.3	10.9	6.6	0.1	0.3	29.8	2.5	0.4	56.2	1.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	3.1	6.7	0.6	1.1	2.3	2.1	5.6	0.8	9.5	6.6	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.4	26.6	40.5	45.4	24.7	26.4	67.3	25.9	12.3	89.7	18.9	12.7
LnGrp LOS	D	C	D	D	C	C	E	C	B	F	B	B
Approach Vol, veh/h		559			258			868			1360	
Approach Delay, s/veh		35.8			28.0			28.5			34.4	
Approach LOS		D			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.5	31.0	6.4	24.2	8.7	40.8	6.5	24.0				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	4.5	* 26	5.2	24.8	4.2	25.8	4.0	26.0				
Max Q Clear Time (g_c+I1), s	15.0	16.0	3.2	17.8	5.3	20.3	3.4	8.6				
Green Ext Time (p_c), s	0.0	2.2	0.0	0.8	0.0	2.3	0.0	0.7				













Intersection Summary

HCM 6th Ctrl Delay	32.4
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
7: Heacock Street & Gentian Avenue

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	6	88	665	11	96	1047
Future Volume (vph)	6	88	665	11	96	1047
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	27.6	27.6	27.2	27.2	9.6	16.2
Total Split (s)	31.0	31.0	62.0	62.0	27.0	89.0
Total Split (%)	25.8%	25.8%	51.7%	51.7%	22.5%	74.2%
Yellow Time (s)	3.6	3.6	5.2	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	6.2	6.2	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	12.4	12.4	26.6	26.6	8.4	37.0
Actuated g/C Ratio	0.23	0.23	0.48	0.48	0.15	0.67
v/c Ratio	0.02	0.20	0.46	0.01	0.39	0.51
Control Delay	20.0	6.5	15.7	10.6	28.9	7.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.0	6.5	15.7	10.6	28.9	7.9
LOS	B	A	B	B	C	A
Approach Delay	7.4		15.6			9.6
Approach LOS	A		B			A

Intersection Summary













Cycle Length: 120	
Actuated Cycle Length: 54.9	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.51	
Intersection Signal Delay: 11.6	Intersection LOS: B
Intersection Capacity Utilization 46.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 7: Heacock Street & Gentian Avenue



















HCM 6th Signalized Intersection Summary  
7: Heacock Street & Gentian Avenue

Gateway Aviation TA (JN:13445)  
11/05/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	6	88	665	11	96	1047
Future Volume (veh/h)	6	88	665	11	96	1047
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1796	1900	1826	1826
Adj Flow Rate, veh/h	7	100	756	12	109	1190
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	7	0	5	5
Cap, veh/h	312	278	1235	582	151	1949
Arrive On Green	0.17	0.17	0.36	0.36	0.09	0.56
Sat Flow, veh/h	1810	1610	3503	1610	1739	3561
Grp Volume(v), veh/h	7	100	756	12	109	1190
Grp Sat Flow(s),veh/h/ln	1810	1610	1706	1610	1739	1735
Q Serve(g_s), s	0.1	2.2	7.4	0.2	2.5	9.3
Cycle Q Clear(g_c), s	0.1	2.2	7.4	0.2	2.5	9.3
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	312	278	1235	582	151	1949
V/C Ratio(X)	0.02	0.36	0.61	0.02	0.72	0.61
Avail Cap(c_a), veh/h	1175	1045	4683	2209	958	7064
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.0	14.8	10.6	8.3	18.1	5.9
Incr Delay (d2), s/veh	0.0	0.3	0.5	0.0	2.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.7	1.7	0.0	0.9	1.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	14.0	15.1	11.1	8.4	20.5	6.3
LnGrp LOS	B	B	B	A	C	A
Approach Vol, veh/h	107		768			1299
Approach Delay, s/veh	15.1		11.1			7.4
Approach LOS	B		B			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	8.1	20.9			29.1	11.6
Change Period (Y+Rc), s	4.6	6.2			6.2	4.6
Max Green Setting (Gmax), s	22.4	55.8			82.8	26.4
Max Q Clear Time (g_c+1), s	4.5	9.4			11.3	4.2
Green Ext Time (p_c), s	0.1	5.3			10.3	0.1
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			9.1			
HCM 6th LOS			A			

Timings  
8: Heacock Street & Iris Avenue

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 		 		 	 
Traffic Volume (vph)	29	248	430	43	416	647
Future Volume (vph)	29	248	430	43	416	647
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	15.8	15.8	33.2	33.2	9.6	16.2
Total Split (s)	35.0	35.0	47.0	47.0	38.0	85.0
Total Split (%)	29.2%	29.2%	39.2%	39.2%	31.7%	70.8%
Yellow Time (s)	4.8	4.8	5.2	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	6.2	6.2	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	10.4	10.4	15.5	15.5	12.2	32.4
Actuated g/C Ratio	0.19	0.19	0.28	0.28	0.22	0.59
v/c Ratio	0.05	0.48	0.54	0.10	0.59	0.38
Control Delay	22.2	7.0	19.0	5.6	23.4	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.2	7.0	19.0	5.6	23.4	6.3
LOS	C	A	B	A	C	A
Approach Delay	8.6		17.8			13.0
Approach LOS	A		B			B

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 55.1	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.59	
Intersection Signal Delay: 13.6	Intersection LOS: B
Intersection Capacity Utilization 45.9%	ICU Level of Service A
Analysis Period (min) 15	

















Splits and Phases: 8: Heacock Street & Iris Avenue



HCM 6th Signalized Intersection Summary  
8: Heacock Street & Iris Avenue

Gateway Aviation TA (JN:13445)

11/05/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 		 		 	 
Traffic Volume (veh/h)	29	248	430	43	416	647
Future Volume (veh/h)	29	248	430	43	416	647
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1737	1900	1885	1781
Adj Flow Rate, veh/h	33	285	494	49	478	744
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	0	11	0	1	8
Cap, veh/h	790	362	800	390	653	1779
Arrive On Green	0.23	0.23	0.24	0.24	0.19	0.53
Sat Flow, veh/h	3510	1610	3387	1610	3483	3474
Grp Volume(v), veh/h	33	285	494	49	478	744
Grp Sat Flow(s),veh/h/ln	1755	1610	1650	1610	1742	1692
Q Serve(g_s), s	0.4	8.0	6.4	1.1	6.2	6.4
Cycle Q Clear(g_c), s	0.4	8.0	6.4	1.1	6.2	6.4
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	790	362	800	390	653	1779
V/C Ratio(X)	0.04	0.79	0.62	0.13	0.73	0.42
Avail Cap(c_a), veh/h	2131	977	2799	1366	2418	5544
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.6	17.6	16.2	14.2	18.4	6.9
Incr Delay (d2), s/veh	0.0	3.8	0.8	0.1	0.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	2.7	1.9	0.3	2.0	1.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	14.6	21.4	17.0	14.4	19.0	7.1
LnGrp LOS	B	C	B	B	B	A
Approach Vol, veh/h	318		543			1222
Approach Delay, s/veh	20.7		16.8			11.8
Approach LOS	C		B			B
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	13.6	17.9			31.5	16.6
Change Period (Y+Rc), s	4.6	6.2			6.2	5.8
Max Green Setting (Gmax), s	33.4	40.8			78.8	29.2
Max Q Clear Time (g_c+I1), s	8.2	8.4			8.4	10.0
Green Ext Time (p_c), s	0.8	3.2			5.2	1.0
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			14.4			
HCM 6th LOS			B			

Timings  
9: Heacock Street & Krameria Avenue-North



Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations	↙	↗	↕	↙	↕
Traffic Volume (vph)	3	22	348	33	401
Future Volume (vph)	3	22	348	33	401
Turn Type	Prot	Perm	NA	Prot	NA
Protected Phases	8		2	1	6
Permitted Phases		8			
Detector Phase	8	8	2	1	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	29.1	29.1	29.2	9.6	16.2
Total Split (s)	35.0	35.0	61.0	24.0	85.0
Total Split (%)	29.2%	29.2%	50.8%	20.0%	70.8%
Yellow Time (s)	4.1	4.1	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	6.2	4.6	6.2
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	Min	Max	Min
Act Effct Green (s)	12.6	12.6	13.4	21.0	44.1
Actuated g/C Ratio	0.24	0.24	0.26	0.40	0.84
v/c Ratio	0.01	0.08	0.51	0.06	0.17
Control Delay	20.0	9.7	20.5	17.3	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	20.0	9.7	20.5	17.3	4.0
LOS	B	A	C	B	A
Approach Delay	11.0		20.5		5.0
Approach LOS	B		C		A

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 52.5  
 Natural Cycle: 70  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.51  
 Intersection Signal Delay: 12.1  
 Intersection LOS: B  
 Intersection Capacity Utilization 36.1%  
 ICU Level of Service A  
 Analysis Period (min) 15














Splits and Phases: 9: Heacock Street & Krameria Avenue-North





HCM 6th Signalized Intersection Summary  
 9: Heacock Street & Krameria Avenue-North

Gateway Aviation TA (JN:13445)  
 11/05/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			 			 
Traffic Volume (veh/h)	3	22	348	15	33	401
Future Volume (veh/h)	3	22	348	15	33	401
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	907	1307	1826	1900	1648	1796
Adj Flow Rate, veh/h	4	27	430	19	41	495
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	67	40	5	0	17	7
Cap, veh/h	61	78	699	31	624	2383
Arrive On Green	0.07	0.07	0.21	0.21	0.40	0.70
Sat Flow, veh/h	864	1108	3475	149	1570	3503
Grp Volume(v), veh/h	4	27	220	229	41	495
Grp Sat Flow(s),veh/h/ln	864	1108	1735	1799	1570	1706
Q Serve(g_s), s	0.2	1.1	5.6	5.7	0.8	2.5
Cycle Q Clear(g_c), s	0.2	1.1	5.6	5.7	0.8	2.5
Prop In Lane	1.00	1.00		0.08	1.00	
Lane Grp Cap(c), veh/h	61	78	358	372	624	2383
V/C Ratio(X)	0.07	0.35	0.61	0.62	0.07	0.21
Avail Cap(c_a), veh/h	529	678	1947	2019	624	5509
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.2	21.6	17.6	17.6	9.1	2.6
Incr Delay (d2), s/veh	0.2	1.0	0.6	0.6	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.3	1.8	1.9	0.2	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	21.4	22.6	18.2	18.2	9.3	2.6
LnGrp LOS	C	C	B	B	A	A
Approach Vol, veh/h	31		449			536
Approach Delay, s/veh	22.4		18.2			3.1
Approach LOS	C		B			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	24.0	16.3			40.3	8.5
Change Period (Y+Rc), s	4.6	6.2			6.2	5.1
Max Green Setting (Gmax), s	19.4	54.8			78.8	29.9
Max Q Clear Time (g_c+I1), s	2.8	7.7			4.5	3.1
Green Ext Time (p_c), s	0.0	1.4			1.9	0.0
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			10.4			
HCM 6th LOS			B			

Intersection												
Int Delay, s/veh	0											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕			↕		↕	↕	
Traffic Vol, veh/h	0	0	0	0	0	0	0	329	0	0	366	0
Future Vol, veh/h	0	0	0	0	0	0	0	329	0	0	366	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	5	0	0	7	0
Mvmt Flow	0	0	0	0	0	0	0	358	0	0	398	0

Major/Minor	Minor1		Major1			Major2			
Conflicting Flow All	557	756	179	-	0	0	358	0	0
Stage 1	358	358	-	-	-	-	-	-	-
Stage 2	199	398	-	-	-	-	-	-	-
Critical Hdwy	6.8	6.5	6.9	-	-	-	4.1	-	-
Critical Hdwy Stg 1	5.8	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.8	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	-	-	-	2.2	-	-
Pot Cap-1 Maneuver	465	340	839	0	-	-	1212	-	0
Stage 1	684	631	-	0	-	-	-	-	0
Stage 2	821	606	-	0	-	-	-	-	0
Platoon blocked, %									
Mov Cap-1 Maneuver	465	0	839	-	-	-	1212	-	-
Mov Cap-2 Maneuver	548	0	-	-	-	-	-	-	-
Stage 1	684	0	-	-	-	-	-	-	-
Stage 2	821	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1212
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	0	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0

Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↕	↗	↘	↕
Traffic Vol, veh/h	4	5	498	6	6	725
Future Vol, veh/h	4	5	498	6	6	725
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	0	140	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	25	80	9	33	17	13
Mvmt Flow	5	6	638	8	8	929

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1119	319	0	0	646
Stage 1	638	-	-	-	-
Stage 2	481	-	-	-	-
Critical Hdwy	7.3	8.5	-	-	4.44
Critical Hdwy Stg 1	6.3	-	-	-	-
Critical Hdwy Stg 2	6.3	-	-	-	-
Follow-up Hdwy	3.75	4.1	-	-	2.37
Pot Cap-1 Maneuver	168	493	-	-	841
Stage 1	430	-	-	-	-
Stage 2	526	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	166	493	-	-	841
Mov Cap-2 Maneuver	290	-	-	-	-
Stage 1	430	-	-	-	-
Stage 2	521	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.7	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	290	493	841	-
HCM Lane V/C Ratio	-	-	0.018	0.013	0.009	-
HCM Control Delay (s)	-	-	17.6	12.4	9.3	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	0	-

Timings  
12: Heacock Street & San Michele Road



Lane Group	EBL	EBT	EBR	WBL	WBR	NBT	SBL	SBT	SBR	Ø5	Ø8
Lane Configurations	↖	↑	↗	↖	↗	↕	↖	↑	↗		
Traffic Volume (vph)	12	7	6	12	214	77	166	214	2		
Future Volume (vph)	12	7	6	12	214	77	166	214	2		
Turn Type	Prot	NA	Perm	Prot	pm+ov	NA	Prot	NA	Perm		
Protected Phases	7	4		3	1	2	1	6		5	8
Permitted Phases			4		8				6		
Detector Phase	7	4	4	3	1	2	1	6	6		
Switch Phase											
Minimum Initial (s)	4.0	5.0	5.0	4.0	4.0	5.0	4.0	5.0	5.0	4.0	5.0
Minimum Split (s)	9.5	30.5	30.5	8.5	8.5	34.5	8.5	34.5	34.5	8.5	30.5
Total Split (s)	12.0	37.4	37.4	9.6	36.0	37.0	36.0	64.5	64.5	8.5	35.0
Total Split (%)	10.0%	31.2%	31.2%	8.0%	30.0%	30.8%	30.0%	53.8%	53.8%	7%	29%
Yellow Time (s)	3.5	4.5	4.5	3.5	3.5	4.5	3.5	4.5	4.5	3.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.5	5.5	5.5	4.5	4.5	5.5	4.5	5.5	5.5		
Lead/Lag	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	None	Max	Max	None	None
Act Effct Green (s)	5.4	8.1	8.1	5.3	30.5	32.7	24.0	65.3	65.3		
Actuated g/C Ratio	0.07	0.11	0.11	0.07	0.41	0.43	0.32	0.87	0.87		
v/c Ratio	0.12	0.05	0.03	0.13	0.27	0.07	0.40	0.20	0.00		
Control Delay	41.2	32.1	0.2	41.4	0.6	16.6	26.2	4.9	0.0		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay	41.2	32.1	0.2	41.4	0.6	16.6	26.2	4.9	0.0		
LOS	D	C	A	D	A	B	C	A	A		
Approach Delay		28.4				16.6		14.1			
Approach LOS		C				B		B			

Intersection Summary

























Cycle Length: 120  
 Actuated Cycle Length: 75.2  
 Natural Cycle: 85  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.40  
 Intersection Signal Delay: 11.3  
 Intersection LOS: B  
 Intersection Capacity Utilization 32.8%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 12: Heacock Street & San Michele Road



HCM 6th Signalized Intersection Summary  
 12: Heacock Street & San Michele Road

Gateway Aviation TA (JN:13445)  
 04/19/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	7	6	12	0	214	0	77	3	166	214	2
Future Volume (veh/h)	12	7	6	12	0	214	0	77	3	166	214	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1826	1900	1885	1900	1885	1811	1900
Adj Flow Rate, veh/h	17	10	9	17	0	306	0	110	4	237	306	3
Peak Hour Factor	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Percent Heavy Veh, %	0	0	0	0	0	5	0	1	0	1	6	0
Cap, veh/h	28	123	100	28	123	520	2	1371	50	488	1319	1173
Arrive On Green	0.02	0.06	0.06	0.02	0.00	0.06	0.00	0.39	0.39	0.27	0.73	0.73
Sat Flow, veh/h	1810	1900	1547	1810	1900	1547	1810	3526	128	1795	1811	1610
Grp Volume(v), veh/h	17	10	9	17	0	306	0	56	58	237	306	3
Grp Sat Flow(s),veh/h/ln	1810	1900	1547	1810	1900	1547	1810	1791	1862	1795	1811	1610
Q Serve(g_s), s	0.8	0.4	0.4	0.8	0.0	0.0	0.0	1.6	1.6	9.0	4.5	0.0
Cycle Q Clear(g_c), s	0.8	0.4	0.4	0.8	0.0	0.0	0.0	1.6	1.6	9.0	4.5	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.07	1.00		1.00
Lane Grp Cap(c), veh/h	28	123	100	28	123	520	2	696	724	488	1319	1173
V/C Ratio(X)	0.60	0.08	0.09	0.60	0.00	0.59	0.00	0.08	0.08	0.49	0.23	0.00
Avail Cap(c_a), veh/h	168	748	609	114	692	984	89	696	724	698	1319	1173
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.6	35.6	30.7	39.6	0.0	22.2	0.0	15.6	15.6	24.8	3.6	0.7
Incr Delay (d2), s/veh	7.3	0.1	0.1	7.3	0.0	0.4	0.0	0.2	0.2	0.3	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.2	0.2	0.4	0.0	4.4	0.0	0.6	0.6	3.5	1.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.9	35.7	30.8	46.9	0.0	22.6	0.0	15.8	15.8	25.0	4.0	0.7
LnGrp LOS	D	D	C	D	A	C	A	B	B	C	A	A
Approach Vol, veh/h		36			323			114			546	
Approach Delay, s/veh		39.8			23.9			15.8			13.1	
Approach LOS		D			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	27.5	37.0	5.8	10.7	0.0	64.5	5.8	10.7				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	31.5	* 32	5.1	31.9	4.0	59.0	7.5	29.5				
Max Q Clear Time (g_c+I1), s	11.0	3.6	2.8	2.4	0.0	6.5	2.8	2.0				
Green Ext Time (p_c), s	0.3	0.3	0.0	0.0	0.0	1.0	0.0	0.5				

Intersection Summary

HCM 6th Ctrl Delay	17.8
HCM 6th LOS	B

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection					
Intersection Delay, s/veh 7.2					
Intersection LOS A					
Approach	EB	WB	NB		
Entry Lanes	3	2	2		
Conflicting Circle Lanes	2	2	2		
Adj Approach Flow, veh/h	0	1031	42		
Demand Flow Rate, veh/h	0	1134	49		
Vehicles Circulating, veh/h	9	39	805		
Vehicles Exiting, veh/h	1164	815	42		
Ped Vol Crossing Leg, #/h	0	0	0		
Ped Cap Adj	1.000	1.000	1.000		
Approach Delay, s/veh	0.0	7.2	6.6		
Approach LOS	-	A	A		
Lane	Left	Right	Left	Right	
Designated Moves	LT	TR	L	LTR	
Assumed Moves	LT	TR	L	LTR	
RT Channelized					
Lane Util	0.470	0.530	0.531	0.469	
Follow-Up Headway, s	2.667	2.535	2.667	2.535	
Critical Headway, s	4.645	4.328	4.645	4.328	
Entry Flow, veh/h	533	601	26	23	
Cap Entry Lane, veh/h	1302	1374	644	716	
Entry HV Adj Factor	0.909	0.909	0.856	0.858	
Flow Entry, veh/h	484	546	22	20	
Cap Entry, veh/h	1184	1249	551	615	
V/C Ratio	0.409	0.437	0.040	0.032	
Control Delay, s/veh	7.2	7.3	7.0	6.2	
LOS	A	A	A	A	
95th %tile Queue, veh	2	2	0	0	

Timings  
14: Indian Street & San Michele Road

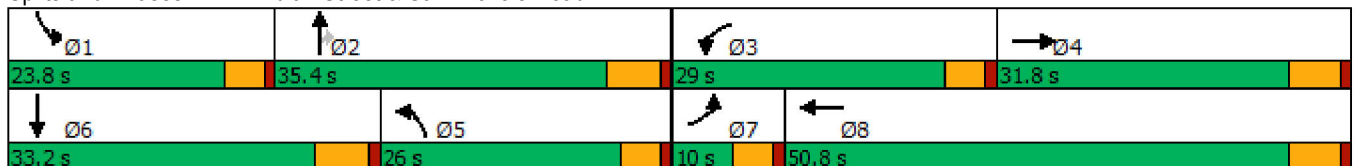


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↖	↕	↖	↕	↖	↕	↗	↖	↕
Traffic Volume (vph)	10	149	158	252	284	50	120	112	134
Future Volume (vph)	10	149	158	252	284	50	120	112	134
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8	5	2		1	6
Permitted Phases							2		
Detector Phase	7	4	3	8	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	31.8	9.6	31.8	9.6	32.8	32.8	9.6	32.8
Total Split (s)	10.0	31.8	29.0	50.8	26.0	35.4	35.4	23.8	33.2
Total Split (%)	8.3%	26.5%	24.2%	42.3%	21.7%	29.5%	29.5%	19.8%	27.7%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	5.5	14.8	15.2	33.5	14.7	15.8	15.8	12.2	13.2
Actuated g/C Ratio	0.07	0.18	0.19	0.42	0.18	0.20	0.20	0.15	0.16
v/c Ratio	0.13	0.75	0.68	0.30	0.67	0.23	0.36	0.60	0.41
Control Delay	47.8	21.8	42.9	16.7	38.4	32.8	7.6	44.3	32.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.8	21.8	42.9	16.7	38.4	32.8	7.6	44.3	32.3
LOS	D	C	D	B	D	C	A	D	C
Approach Delay		22.4		25.7		29.7			37.3
Approach LOS		C		C		C			D

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 80  
 Natural Cycle: 95  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.75  
 Intersection Signal Delay: 28.0  
 Intersection LOS: C  
 Intersection Capacity Utilization 74.0%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 14: Indian Street & San Michele Road



HCM 6th Signalized Intersection Summary  
 14: Indian Street & San Michele Road

Gateway Aviation TA (JN:13445)

11/05/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	149	242	158	252	50	284	50	120	112	134	22
Future Volume (veh/h)	10	149	242	158	252	50	284	50	120	112	134	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		1.00	1.00		0.68
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1737	1841	1722	1870	1841	1900	1767	1707	1856	1885	1826	1752
Adj Flow Rate, veh/h	15	226	367	239	382	76	430	76	182	170	203	33
Peak Hour Factor	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66
Percent Heavy Veh, %	11	4	12	2	4	0	9	13	3	1	5	10
Cap, veh/h	28	425	370	271	1125	221	498	510	469	201	725	110
Arrive On Green	0.02	0.24	0.24	0.15	0.38	0.38	0.15	0.30	0.30	0.11	0.25	0.25
Sat Flow, veh/h	1654	1749	1521	1781	2973	585	3365	1707	1571	1795	2886	439
Grp Volume(v), veh/h	15	226	367	239	235	223	430	76	182	170	123	113
Grp Sat Flow(s),veh/h/ln	1654	1749	1521	1781	1841	1717	1682	1707	1571	1795	1826	1499
Q Serve(g_s), s	1.0	12.0	25.7	14.1	9.7	9.9	13.4	3.5	9.8	9.9	5.8	6.5
Cycle Q Clear(g_c), s	1.0	12.0	25.7	14.1	9.7	9.9	13.4	3.5	9.8	9.9	5.8	6.5
Prop In Lane	1.00		1.00	1.00		0.34	1.00		1.00	1.00		0.29
Lane Grp Cap(c), veh/h	28	425	370	271	696	649	498	510	469	201	459	377
V/C Ratio(X)	0.54	0.53	0.99	0.88	0.34	0.34	0.86	0.15	0.39	0.85	0.27	0.30
Avail Cap(c_a), veh/h	84	425	370	406	774	722	673	510	469	322	468	384
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.2	35.2	40.4	44.4	23.7	23.8	44.5	27.5	29.8	46.6	32.1	32.4
Incr Delay (d2), s/veh	5.9	0.7	44.6	10.2	0.1	0.1	6.9	0.0	0.2	5.9	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	5.0	13.7	6.7	4.0	3.8	5.8	1.4	3.6	4.6	2.5	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.1	35.8	84.9	54.6	23.8	23.9	51.4	27.6	30.0	52.5	32.3	32.6
LnGrp LOS	E	D	F	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		608			697			688			406	
Approach Delay, s/veh		66.0			34.4			43.1			40.8	
Approach LOS		E			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.6	37.7	20.8	31.8	21.6	32.7	6.4	46.3				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	5.8	* 5.8	4.6	5.8				
Max Green Setting (Gmax), s	19.2	29.6	24.4	26.0	21.4	* 27	5.4	45.0				
Max Q Clear Time (g_c+I1), s	11.9	11.8	16.1	27.7	15.4	8.5	3.0	11.9				
Green Ext Time (p_c), s	0.1	0.4	0.2	0.0	0.5	0.7	0.0	1.5				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			46.0									
HCM 6th LOS			D									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												



Timings  
15: Indian Street & Nandina Avenue

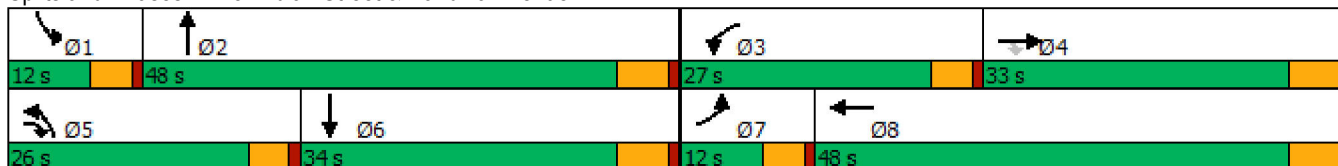


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	22	84	291	84	27	86	193	17	139
Future Volume (vph)	22	84	291	84	27	86	193	17	139
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	5	3	8	5	2	1	6
Permitted Phases	4								
Detector Phase	7	4	5	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	29.8	9.6	9.6	29.8	9.6	26.8	9.6	26.8
Total Split (s)	12.0	33.0	26.0	27.0	48.0	26.0	48.0	12.0	34.0
Total Split (%)	10.0%	27.5%	21.7%	22.5%	40.0%	21.7%	40.0%	10.0%	28.3%
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	6.7	14.1	24.2	10.8	22.1	10.5	28.9	6.6	13.6
Actuated g/C Ratio	0.11	0.23	0.39	0.18	0.36	0.17	0.47	0.11	0.22
v/c Ratio	0.15	0.30	0.43	0.45	0.18	0.44	0.18	0.12	0.29
Control Delay	36.1	28.5	3.2	35.1	10.1	34.7	17.6	36.4	24.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.1	28.5	3.2	35.1	10.1	34.7	17.6	36.4	24.9
LOS	D	C	A	D	B	C	B	D	C
Approach Delay	10.4		23.3			22.3		26.0	
Approach LOS	B		C			C		C	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 61.7  
 Natural Cycle: 80  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.45  
 Intersection Signal Delay: 18.6  
 Intersection LOS: B  
 Intersection Capacity Utilization 43.8%  
 ICU Level of Service A  
 Analysis Period (min) 15
























Splits and Phases: 15: Indian Street & Nandina Avenue



HCM 6th Signalized Intersection Summary  
 15: Indian Street & Nandina Avenue

Gateway Aviation TA (JN:13445)

11/05/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	84	291	84	27	48	86	193	29	17	139	26
Future Volume (veh/h)	22	84	291	84	27	48	86	193	29	17	139	26
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1722	1796	1470	1381	1870	1633	1826	1796	1811	1796	1841
Adj Flow Rate, veh/h	31	117	404	117	38	67	119	268	40	24	193	36
Peak Hour Factor	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72
Percent Heavy Veh, %	0	12	7	29	35	2	18	5	7	6	7	4
Cap, veh/h	61	491	578	141	158	278	148	738	109	47	501	92
Arrive On Green	0.03	0.28	0.28	0.10	0.35	0.35	0.10	0.24	0.24	0.03	0.17	0.17
Sat Flow, veh/h	1810	1722	1522	1400	448	791	1555	3111	459	1725	2953	540
Grp Volume(v), veh/h	31	117	404	117	0	105	119	156	152	24	116	113
Grp Sat Flow(s),veh/h/ln	1810	1722	1522	1400	0	1239	1555	1826	1743	1725	1796	1697
Q Serve(g_s), s	1.0	3.1	13.3	4.9	0.0	3.6	4.5	4.2	4.3	0.8	3.4	3.5
Cycle Q Clear(g_c), s	1.0	3.1	13.3	4.9	0.0	3.6	4.5	4.2	4.3	0.8	3.4	3.5
Prop In Lane	1.00		1.00	1.00		0.64	1.00		0.26	1.00		0.32
Lane Grp Cap(c), veh/h	61	491	578	141	0	436	148	433	413	47	305	288
V/C Ratio(X)	0.51	0.24	0.70	0.83	0.00	0.24	0.81	0.36	0.37	0.51	0.38	0.39
Avail Cap(c_a), veh/h	225	788	841	527	0	879	560	1296	1237	215	852	805
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.3	16.3	15.6	26.2	0.0	13.6	26.4	18.9	19.0	28.5	21.9	22.0
Incr Delay (d2), s/veh	2.4	0.2	1.5	4.7	0.0	0.3	3.9	0.5	0.5	3.1	0.8	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.1	3.9	1.6	0.0	0.9	1.6	1.6	1.5	0.3	1.3	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.7	16.6	17.1	31.0	0.0	13.9	30.2	19.4	19.5	31.6	22.7	22.8
LnGrp LOS	C	B	B	C	A	B	C	B	B	C	C	C
Approach Vol, veh/h		552			222			427			253	
Approach Delay, s/veh		17.7			22.9			22.5			23.6	
Approach LOS		B			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.2	19.9	10.6	22.8	10.3	15.9	6.6	26.7				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	7.4	42.2	22.4	27.2	21.4	28.2	7.4	42.2				
Max Q Clear Time (g_c+I1), s	2.8	6.3	6.9	15.3	6.5	5.5	3.0	5.6				
Green Ext Time (p_c), s	0.0	1.6	0.1	1.6	0.1	1.1	0.0	0.6				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			20.9									
HCM 6th LOS			C									



Lane Group	EBL	EBT	EBR	WBL	WBT	WBL	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	196	342	31	11	289	41	177	21	45	224	224
Future Volume (vph)	196	342	31	11	289	41	177	21	45	224	224
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	NA
Protected Phases	5	2		1	6	3	8		7		4
Permitted Phases		2					8				
Detector Phase	5	2		1	6	3	8		8		4
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	35.8	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2	40.2
Total Split (s)	36.3	59.2	59.2	9.6	32.5	10.8	37.4	37.4	13.8	40.4	40.4
Total Split (%)	30.3%	49.3%	49.3%	8.0%	27.1%	9.0%	31.2%	31.2%	11.5%	33.7%	33.7%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.4	4.4	3.6	5.2	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	5.4	5.4	4.6	6.2	6.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effort Green (s)	17.8	36.0	36.0	5.6	14.2	6.2	17.8	17.8	7.3	17.9	17.9
Actuated g/C Ratio	0.24	0.49	0.49	0.08	0.19	0.08	0.24	0.24	0.10	0.24	0.24
v/c Ratio	0.69	0.18	0.06	0.12	0.42	0.22	0.30	0.06	0.31	0.65	0.65
Control Delay	39.7	13.1	0.2	47.5	30.8	43.9	27.6	0.2	44.8	19.7	19.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.7	13.1	0.2	47.5	30.8	43.9	27.6	0.2	44.8	19.7	19.7
LOS	D	B	A	D	C	D	C	A	D	B	B
Approach Delay	21.5			31.4			28.0			21.8	
Approach LOS	C			C			C			C	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 74  
 Natural Cycle: 100  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.69  
 Intersection Signal Delay: 24.4  
 Intersection LOS: C  
 Intersection Capacity Utilization 55.6%  
 ICU Level of Service B  
 Analysis Period (min) 15






























Splits and Phases: 16: Indian Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 16: Indian Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

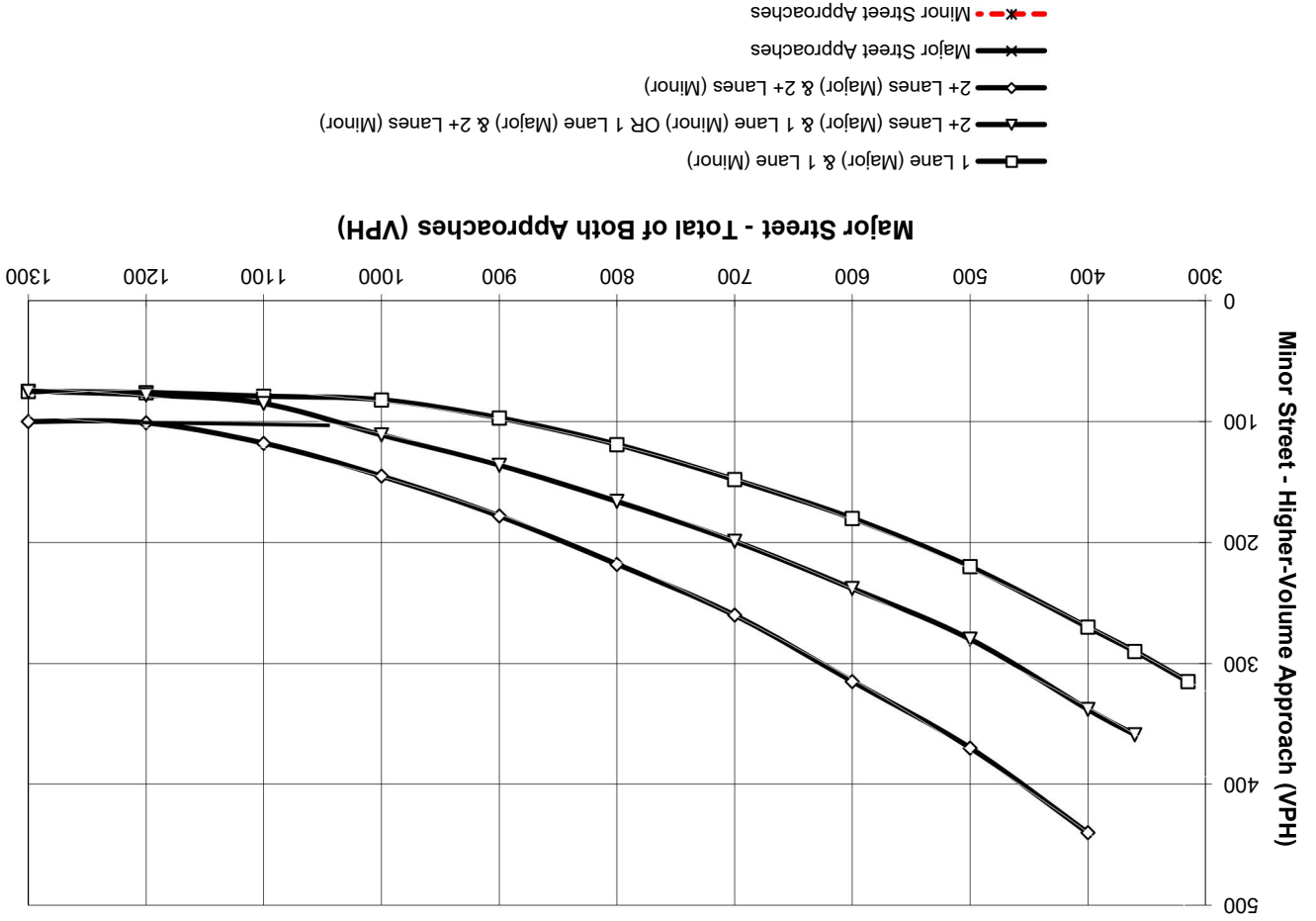
11/05/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  			 			 	
Traffic Volume (veh/h)	196	342	31	11	289	10	41	177	21	45	224	262
Future Volume (veh/h)	196	342	31	11	289	10	41	177	21	45	224	262
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1574	1811	1411	1633	1722	1752	1485	1633	1678	1900	1826	1752
Adj Flow Rate, veh/h	245	428	29	14	361	-10	51	221	19	56	280	272
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	22	6	33	18	12	10	28	18	15	0	5	10
Cap, veh/h	289	1681	407	27	775	0	130	754	341	91	426	380
Arrive On Green	0.19	0.34	0.34	0.02	0.16	0.00	0.05	0.24	0.24	0.05	0.25	0.25
Sat Flow, veh/h	1499	4944	1196	1555	4856	0	2744	3103	1403	1810	1735	1547
Grp Volume(v), veh/h	245	428	29	14	351	0	51	221	19	56	280	272
Grp Sat Flow(s),veh/h/ln	1499	1648	1196	1555	1567	0	1372	1552	1403	1810	1735	1547
Q Serve(g_s), s	9.6	3.8	1.0	0.5	4.1	0.0	1.1	3.5	0.6	1.8	8.8	9.8
Cycle Q Clear(g_c), s	9.6	3.8	1.0	0.5	4.1	0.0	1.1	3.5	0.6	1.8	8.8	9.8
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	289	1681	407	27	775	0	130	754	341	91	426	380
V/C Ratio(X)	0.85	0.25	0.07	0.52	0.45	0.00	0.39	0.29	0.06	0.61	0.66	0.72
Avail Cap(c_a), veh/h	783	4351	1052	128	2069	0	280	1636	740	274	978	872
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.6	14.5	13.5	29.6	22.9	0.0	28.0	18.7	17.6	28.2	20.6	20.9
Incr Delay (d2), s/veh	2.7	0.1	0.1	5.7	0.4	0.0	0.7	0.2	0.1	2.5	1.7	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	1.2	0.2	0.2	1.4	0.0	0.3	1.1	0.2	0.8	3.3	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.3	14.5	13.6	35.2	23.3	0.0	28.8	18.9	17.7	30.7	22.3	23.5
LnGrp LOS	C	B	B	D	C	A	C	B	B	C	C	C
Approach Vol, veh/h		702			365			291			608	
Approach Delay, s/veh		18.6			23.7			20.6			23.6	
Approach LOS		B			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.7	26.4	7.5	21.1	16.3	15.8	7.7	20.9				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	5.0	53.4	6.2	34.2	31.7	26.7	9.2	* 32				
Max Q Clear Time (g_c+I1), s	2.5	5.8	3.1	11.8	11.6	6.1	3.8	5.5				
Green Ext Time (p_c), s	0.0	2.9	0.0	3.1	0.3	2.0	0.0	1.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			21.4									
HCM 6th LOS			C									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

**APPENDIX 3.3:**  
**EXISTING (2020) CONDITIONS FREEWAY OFF-RAMP QUEUING ANALYSIS**  
**WORKSHEETS**

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\*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane



**SIGNAL WARRANT NOT SATISFIED**

Traffic Conditions = **Existing Conditions - PM Peak Hour**  
 Major Street Name = **Heacock St.** Total of Both Approaches (VPH) = **230** Number of Approach Lanes Major Street = **1**  
 Minor Street Name = **Nandina Av.** High Volume Approach (VPH) = **79** Number of Approach Lanes Minor Street = **1**

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

**Figure 4C-4. Warrant 3, Peak Hour (70% Factor)**

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**APPENDIX 3.4:**  
**EXISTING (2020) CONDITIONS FREEWAY OFF-RAMP QUEUING ANALYSIS**  
**WORKSHEETS**

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Queues

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



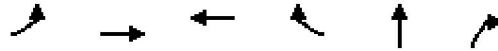
Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	729	4	114	205	327	154
v/c Ratio	0.40	0.01	0.42	0.11	0.79	0.29
Control Delay	9.8	0.0	28.1	15.9	33.8	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.8	0.0	28.1	15.9	33.8	4.5
Queue Length 50th (ft)	79	0	47	38	103	0
Queue Length 95th (ft)	123	0	94	70	#190	32
Internal Link Dist (ft)	844			286	1350	
Turn Bay Length (ft)		200	60			265
Base Capacity (vph)	1820	707	271	1837	484	596
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.01	0.42	0.11	0.68	0.26

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Queues

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox Bl./Harley Knox Bl.



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	427	628	314	882	8	36
v/c Ratio	1.43	0.29	0.21	0.96	0.04	0.15
Control Delay	233.3	3.5	9.9	33.3	24.1	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	233.3	3.5	9.9	33.3	24.1	1.3
Queue Length 50th (ft)	~219	43	33	154	3	0
Queue Length 95th (ft)	#372	55	54	#434	13	0
Internal Link Dist (ft)		286	620		929	
Turn Bay Length (ft)	60					270
Base Capacity (vph)	298	2174	1491	914	191	244
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.43	0.29	0.21	0.96	0.04	0.15

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Queues

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	402	34	348	213	272	141
v/c Ratio	0.21	0.04	0.64	0.11	0.75	0.31
Control Delay	6.6	2.6	24.7	9.7	34.3	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.6	2.6	24.7	9.7	34.3	5.7
Queue Length 50th (ft)	33	0	142	35	88	0
Queue Length 95th (ft)	53	9	#216	62	#153	33
Internal Link Dist (ft)	844			286	1350	
Turn Bay Length (ft)		200	60			265
Base Capacity (vph)	1933	926	548	1987	422	502
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.04	0.64	0.11	0.64	0.28

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Queues

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	223	422	516	503	21	238
v/c Ratio	0.71	0.21	0.38	0.58	0.08	0.56
Control Delay	28.4	4.0	14.2	4.7	22.1	9.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.4	4.0	14.2	4.7	22.1	9.5
Queue Length 50th (ft)	75	24	68	0	7	0
Queue Length 95th (ft)	134	36	107	54	23	53
Internal Link Dist (ft)		286	620		929	
Turn Bay Length (ft)	60					270
Base Capacity (vph)	379	2039	1375	866	263	426
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.21	0.38	0.58	0.08	0.56

Intersection Summary

**APPENDIX 4.1:**  
**POST-PROCESS WORKSHEETS**

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Project: Gateway Aviation  
 Scenario: Horizon Year (2040)

Job #: 13455  
 Analyst: CP  
 Date: 11/5/20

LOCATION: I-215 SB Ramps & Harley Knox Bl.  
 FORECAST YEAR: 2040

INDIVIDUAL TURN VOLUME GROWTH REVIEW									
APPROACH	TURNING MOVEMENT	AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
		EXISTING COUNT	FUTURE VOLUME	DIFFERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFFERENCE	% CHANGE
NORTH BOUND	Left	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Through	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Right	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	<b>NB Total</b>	0	0	0	#DIV/0!	0	0	0	#DIV/0!
SOUTH BOUND	Left	300	333	33	11%	239	107	-132	-55%
	Through	1	1	0	-2%	0	0	0	#DIV/0!
	Right	142	278	136	96%	124	255	131	105%
	<b>SB Total</b>	443	612	169	38%	363	362	-1	0%
EAST BOUND	Left	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Through	671	1,157	486	72%	354	727	373	105%
	Right	4	7	3	72%	30	153	123	417%
	<b>EB Total</b>	675	1,164	489	72%	384	880	496	129%
WEST BOUND	Left	105	202	97	92%	306	359	53	17%
	Through	189	662	473	251%	187	400	213	114%
	Right	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	<b>WB Total</b>	294	864	570	194%	493	759	266	54%
<b>TOTAL ENTERING VOLUME</b>		1,412	2,640	1228.32	87%	1,239	2,001	762	61%

FORECAST PEAK HOUR TO ADT COMPARISON						
		VOLUMES		PERCENT OF ADT		ADT
		AM	PM	AM	PM	
North Leg	Inbound	612	362			
North Leg	Outbound	0	0			
<b>North Leg</b>	<b>TOTAL</b>	<b>612</b>	<b>362</b>	<b>8%</b>	<b>5%</b>	<b>7,835</b>
South Leg	Inbound	0	0			
South Leg	Outbound	210	512			
<b>South Leg</b>	<b>TOTAL</b>	<b>210</b>	<b>512</b>	<b>10%</b>	<b>25%</b>	<b>2,012</b>
East Leg	Inbound	864	759			
East Leg	Outbound	1,490	834			
<b>East Leg</b>	<b>TOTAL</b>	<b>2,354</b>	<b>1,593</b>	<b>15%</b>	<b>10%</b>	<b>15,912</b>
West Leg	Inbound	1,164	880			
West Leg	Outbound	940	655			
<b>West Leg</b>	<b>TOTAL</b>	<b>2,104</b>	<b>1,535</b>	<b>11%</b>	<b>8%</b>	<b>19,508</b>
<b>OVERALL TOTAL</b>		<b>5,280</b>	<b>4,002</b>	<b>12%</b>	<b>9%</b>	<b>45,267</b>

Z:\Shared\UcJobs\\_13100-13500\\_13400\13445\02\_LOS\Post Processing\[01\_I-215 SB Ramps & Harley Knox.xls]Output (3)

Project: Gateway Aviation  
 Scenario: Horizon Year (2040)

Job #: 13455  
 Analyst: CP  
 Date: 11/5/20

LOCATION: I-215 NB Ramps & Harley Knox Bl.  
 FORECAST YEAR: 2040

INDIVIDUAL TURN VOLUME GROWTH REVIEW									
APPROACH	TURNING MOVEMENT	AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
		EXISTING COUNT	FUTURE VOLUME	DIFFERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFFERENCE	% CHANGE
NORTH BOUND	Left	5	40	35	684%	17	59	42	240%
	Through	3	7	4	129%	3	8	5	161%
	Right	33	48	15	47%	219	336	117	53%
	<b>NB Total</b>	<b>41</b>	<b>95</b>	<b>54</b>	<b>133%</b>	<b>240</b>	<b>403</b>	<b>163</b>	<b>68%</b>
SOUTH BOUND	Left	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Through	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Right	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	<b>SB Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>#DIV/0!</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>#DIV/0!</b>
EAST BOUND	Left	393	808	415	106%	205	363	158	77%
	Through	578	752	174	30%	388	394	6	2%
	Right	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	<b>EB Total</b>	<b>971</b>	<b>1,560</b>	<b>589</b>	<b>61%</b>	<b>593</b>	<b>757</b>	<b>164</b>	<b>28%</b>
WEST BOUND	Left	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Through	289	810	521	181%	475	691	216	45%
	Right	811	674	-137	-17%	463	529	66	14%
	<b>WB Total</b>	<b>1,100</b>	<b>1,484</b>	<b>384</b>	<b>35%</b>	<b>938</b>	<b>1,220</b>	<b>282</b>	<b>30%</b>
<b>TOTAL ENTERING VOLUME</b>		<b>2,111</b>	<b>3,139</b>	<b>1027.6</b>	<b>49%</b>	<b>1,771</b>	<b>2,380</b>	<b>609</b>	<b>34%</b>

FORECAST PEAK HOUR TO ADT COMPARISON						
		VOLUMES		PERCENT OF ADT		ADT
		AM	PM	AM	PM	
North Leg	Inbound	0	0			
North Leg	Outbound	1,489	900			
<b>North Leg</b>	<b>TOTAL</b>	<b>1,489</b>	<b>900</b>	<b>20%</b>	<b>12%</b>	<b>7,272</b>
South Leg	Inbound	95	403			
South Leg	Outbound	0	0			
<b>South Leg</b>	<b>TOTAL</b>	<b>95</b>	<b>403</b>	<b>3%</b>	<b>13%</b>	<b>3,102</b>
East Leg	Inbound	1,484	1,220			
East Leg	Outbound	800	730			
<b>East Leg</b>	<b>TOTAL</b>	<b>2,284</b>	<b>1,950</b>	<b>17%</b>	<b>15%</b>	<b>13,187</b>
West Leg	Inbound	1,560	757			
West Leg	Outbound	850	750			
<b>West Leg</b>	<b>TOTAL</b>	<b>2,410</b>	<b>1,507</b>	<b>15%</b>	<b>9%</b>	<b>15,912</b>
<b>OVERALL TOTAL</b>		<b>6,278</b>	<b>4,760</b>	<b>16%</b>	<b>12%</b>	<b>39,473</b>

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Project: Gateway Aviation  
 Scenario: Horizon Year (2040)

Job #: 13455  
 Analyst: CP  
 Date: 11/5/20

LOCATION: Patterson & Harley Knox Bl.  
 FORECAST YEAR: 2040

INDIVIDUAL TURN VOLUME GROWTH REVIEW									
APPROACH	TURNING MOVEMENT	AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
		EXISTING COUNT	FUTURE VOLUME	DIFFERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFFERENCE	% CHANGE
NORTH BOUND	Left	53	66	13	24%	35	38	3	7%
	Through	6	8	2	28%	2	4	2	92%
	Right	6	15	9	140%	4	46	42	1005%
	<b>NB Total</b>	<b>66</b>	<b>89</b>	<b>23</b>	<b>36%</b>	<b>42</b>	<b>88</b>	<b>46</b>	<b>111%</b>
SOUTH BOUND	Left	11	16	5	40%	19	52	33	178%
	Through	3	3	0	-4%	3	3	0	-4%
	Right	17	12	-5	-28%	25	7	-18	-72%
	<b>SB Total</b>	<b>31</b>	<b>31</b>	<b>0</b>	<b>-1%</b>	<b>47</b>	<b>62</b>	<b>15</b>	<b>32%</b>
EAST BOUND	Left	20	15	-5	-24%	20	6	-14	-70%
	Through	504	729	225	45%	551	882	331	60%
	Right	11	11	0	-4%	19	9	-10	-52%
	<b>EB Total</b>	<b>535</b>	<b>755</b>	<b>220</b>	<b>41%</b>	<b>590</b>	<b>897</b>	<b>307</b>	<b>52%</b>
WEST BOUND	Left	9	16	7	71%	2	9	7	333%
	Through	1,051	1,371	320	30%	814	1,085	271	33%
	Right	14	18	4	33%	7	19	12	161%
	<b>WB Total</b>	<b>1,074</b>	<b>1,405</b>	<b>331</b>	<b>31%</b>	<b>823</b>	<b>1,113</b>	<b>290</b>	<b>35%</b>
<b>TOTAL ENTERING VOLUME</b>		<b>1,705</b>	<b>2,280</b>	<b>574.7844</b>	<b>34%</b>	<b>1,501</b>	<b>2,160</b>	<b>659</b>	<b>44%</b>

FORECAST PEAK HOUR TO ADT COMPARISON						
		VOLUMES		PERCENT OF ADT		ADT
		AM	PM	AM	PM	
North Leg	Inbound	31	62			
North Leg	Outbound	41	29			
<b>North Leg</b>	<b>TOTAL</b>	<b>72</b>	<b>91</b>	<b>#DIV/0!</b>	<b>#DIV/0!</b>	<b>-</b>
South Leg	Inbound	89	88			
South Leg	Outbound	30	21			
<b>South Leg</b>	<b>TOTAL</b>	<b>119</b>	<b>109</b>	<b>4%</b>	<b>4%</b>	<b>2,867</b>
East Leg	Inbound	1,405	1,113			
East Leg	Outbound	760	980			
<b>East Leg</b>	<b>TOTAL</b>	<b>2,165</b>	<b>2,093</b>	<b>17%</b>	<b>16%</b>	<b>12,988</b>
West Leg	Inbound	755	897			
West Leg	Outbound	1,449	1,130			
<b>West Leg</b>	<b>TOTAL</b>	<b>2,204</b>	<b>2,027</b>	<b>17%</b>	<b>15%</b>	<b>13,187</b>
<b>OVERALL TOTAL</b>		<b>4,560</b>	<b>4,320</b>	<b>16%</b>	<b>15%</b>	<b>29,042</b>

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Project: Gateway Aviation  
 Scenario: Horizon Year (2040)

Job #: 13455  
 Analyst: CP  
 Date: 11/5/20

LOCATION: Heacock St. & Cactus Av.  
 FORECAST YEAR: 2040

INDIVIDUAL TURN VOLUME GROWTH REVIEW									
APPROACH	TURNING MOVEMENT	AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
		EXISTING COUNT	FUTURE VOLUME	DIFFERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFFERENCE	% CHANGE
NORTH BOUND	Left	593	642	49	8%	400	437	37	9%
	Through	429	423	-6	-1%	395	364	-31	-8%
	Right	9	10	1	9%	10	8	-2	-22%
	<b>NB Total</b>	<b>1,031</b>	<b>1,075</b>	<b>44</b>	<b>4%</b>	<b>805</b>	<b>809</b>	<b>4</b>	<b>1%</b>
SOUTH BOUND	Left	99	107	8	8%	117	116	-1	-1%
	Through	197	194	-3	-1%	446	431	-15	-3%
	Right	75	84	9	11%	37	50	13	36%
	<b>SB Total</b>	<b>371</b>	<b>385</b>	<b>14</b>	<b>4%</b>	<b>600</b>	<b>597</b>	<b>-3</b>	<b>0%</b>
EAST BOUND	Left	111	116	5	4%	173	220	47	27%
	Through	507	563	56	11%	1,109	1,205	96	9%
	Right	399	403	4	1%	856	911	55	6%
	<b>EB Total</b>	<b>1,017</b>	<b>1,082</b>	<b>65</b>	<b>6%</b>	<b>2,138</b>	<b>2,336</b>	<b>198</b>	<b>9%</b>
WEST BOUND	Left	13	13	0	-2%	9	8	-1	-13%
	Through	1,131	1,284	153	14%	568	667	99	17%
	Right	98	101	3	3%	77	76	-1	-1%
	<b>WB Total</b>	<b>1,242</b>	<b>1,398</b>	<b>156</b>	<b>13%</b>	<b>654</b>	<b>751</b>	<b>97</b>	<b>15%</b>
<b>TOTAL ENTERING VOLUME</b>		<b>3,662</b>	<b>3,940</b>	<b>278.2</b>	<b>8%</b>	<b>4,196</b>	<b>4,493</b>	<b>297</b>	<b>7%</b>

FORECAST PEAK HOUR TO ADT COMPARISON						
		VOLUMES		PERCENT OF ADT		ADT
		AM	PM	AM	PM	
North Leg	Inbound	385	597			
North Leg	Outbound	640	660			
<b>North Leg</b>	<b>TOTAL</b>	<b>1,025</b>	<b>1,257</b>	<b>8%</b>	<b>9%</b>	<b>13,338</b>
South Leg	Inbound	1,075	809			
South Leg	Outbound	610	1,350			
<b>South Leg</b>	<b>TOTAL</b>	<b>1,685</b>	<b>2,159</b>	<b>11%</b>	<b>14%</b>	<b>15,055</b>
East Leg	Inbound	1,398	751			
East Leg	Outbound	680	1,329			
<b>East Leg</b>	<b>TOTAL</b>	<b>2,078</b>	<b>2,080</b>	<b>20%</b>	<b>20%</b>	<b>10,149</b>
West Leg	Inbound	1,082	2,336			
West Leg	Outbound	2,010	1,154			
<b>West Leg</b>	<b>TOTAL</b>	<b>3,092</b>	<b>3,490</b>	<b>25%</b>	<b>28%</b>	<b>12,290</b>
<b>OVERALL TOTAL</b>		<b>7,880</b>	<b>8,986</b>	<b>16%</b>	<b>18%</b>	<b>50,832</b>

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Project: Gateway Aviation  
 Scenario: Horizon Year (2040)

Job #: 13445  
 Analyst: CP  
 Date: 11/5/20

LOCATION: Heacock St. & John F. Kennedy Dr.  
 FORECAST YEAR: 2040

INDIVIDUAL TURN VOLUME GROWTH REVIEW									
APPROACH	TURNING MOVEMENT	AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
		EXISTING COUNT	FUTURE VOLUME	DIFFERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFFERENCE	% CHANGE
NORTH BOUND	Left	24	29	5	18%	65	135	70	107%
	Through	760	796	36	5%	635	691	56	9%
	Right	42	62	20	48%	55	134	79	143%
	<b>NB Total</b>	<b>826</b>	<b>887</b>	<b>61</b>	<b>7%</b>	<b>756</b>	<b>960</b>	<b>204</b>	<b>27%</b>
SOUTH BOUND	Left	89	67	-22	-24%	261	218	-43	-17%
	Through	470	518	48	10%	907	988	81	9%
	Right	17	10	-7	-42%	15	11	-4	-28%
	<b>SB Total</b>	<b>576</b>	<b>595</b>	<b>19</b>	<b>3%</b>	<b>1,183</b>	<b>1,217</b>	<b>34</b>	<b>3%</b>
EAST BOUND	Left	35	30	-5	-13%	27	12	-15	-55%
	Through	32	39	7	23%	172	178	6	3%
	Right	87	155	68	79%	287	386	99	35%
	<b>EB Total</b>	<b>153</b>	<b>224</b>	<b>71</b>	<b>46%</b>	<b>486</b>	<b>576</b>	<b>90</b>	<b>19%</b>
WEST BOUND	Left	12	26	14	112%	24	47	23	92%
	Through	193	222	29	15%	67	84	17	25%
	Right	170	176	6	3%	133	87	-46	-34%
	<b>WB Total</b>	<b>375</b>	<b>424</b>	<b>49</b>	<b>13%</b>	<b>224</b>	<b>218</b>	<b>-6</b>	<b>-3%</b>
<b>TOTAL ENTERING VOLUME</b>		<b>1,931</b>	<b>2,130</b>	<b>199.14</b>	<b>10%</b>	<b>2,649</b>	<b>2,971</b>	<b>322</b>	<b>12%</b>

FORECAST PEAK HOUR TO ADT COMPARISON						
		VOLUMES		PERCENT OF ADT		ADT
		AM	PM	AM	PM	
North Leg	Inbound	595	1,217			
North Leg	Outbound	1,002	790			
<b>North Leg</b>	<b>TOTAL</b>	<b>1,597</b>	<b>2,007</b>	<b>10%</b>	<b>12%</b>	<b>16,209</b>
South Leg	Inbound	887	960			
South Leg	Outbound	699	1,421			
<b>South Leg</b>	<b>TOTAL</b>	<b>1,586</b>	<b>2,381</b>	<b>8%</b>	<b>12%</b>	<b>19,069</b>
East Leg	Inbound	424	218			
East Leg	Outbound	168	530			
<b>East Leg</b>	<b>TOTAL</b>	<b>592</b>	<b>748</b>	<b>7%</b>	<b>8%</b>	<b>8,838</b>
West Leg	Inbound	224	576			
West Leg	Outbound	261	230			
<b>West Leg</b>	<b>TOTAL</b>	<b>485</b>	<b>806</b>	<b>4%</b>	<b>7%</b>	<b>11,540</b>
<b>OVERALL TOTAL</b>		<b>4,260</b>	<b>5,942</b>	<b>8%</b>	<b>11%</b>	<b>55,656</b>

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Project: Gateway Aviation  
 Scenario: Horizon Year (2040)

Job #: 13445  
 Analyst: CP  
 Date: 11/5/20

LOCATION: Heacock St. & Gentian Dr.  
 FORECAST YEAR: 2040

INDIVIDUAL TURN VOLUME GROWTH REVIEW									
APPROACH	TURNING MOVEMENT	AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
		EXISTING COUNT	FUTURE VOLUME	DIFFERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFFERENCE	% CHANGE
NORTH BOUND	Left	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Through	668	847	179	27%	665	900	235	35%
	Right	8	8	0	-2%	11	54	43	381%
	<b>NB Total</b>	<b>676</b>	<b>855</b>	<b>179</b>	<b>26%</b>	<b>676</b>	<b>954</b>	<b>278</b>	<b>41%</b>
SOUTH BOUND	Left	81	172	91	113%	96	250	154	161%
	Through	496	607	111	22%	1,047	1,311	264	25%
	Right	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	<b>SB Total</b>	<b>576</b>	<b>779</b>	<b>203</b>	<b>35%</b>	<b>1,142</b>	<b>1,561</b>	<b>419</b>	<b>37%</b>
EAST BOUND	Left	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Through	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Right	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	<b>EB Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>#DIV/0!</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>#DIV/0!</b>
WEST BOUND	Left	12	33	21	170%	6	19	13	210%
	Through	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Right	13	83	70	526%	88	156	68	78%
	<b>WB Total</b>	<b>26</b>	<b>116</b>	<b>91</b>	<b>355%</b>	<b>94</b>	<b>175</b>	<b>81</b>	<b>86%</b>
<b>TOTAL ENTERING VOLUME</b>		<b>1,278</b>	<b>1,750</b>	<b>471.94</b>	<b>37%</b>	<b>1,913</b>	<b>2,690</b>	<b>778</b>	<b>41%</b>

FORECAST PEAK HOUR TO ADT COMPARISON						
		VOLUMES		PERCENT OF ADT		ADT
		AM	PM	AM	PM	
North Leg	Inbound	779	1,561			
North Leg	Outbound	930	1,056			
<b>North Leg</b>	<b>TOTAL</b>	<b>1,709</b>	<b>2,617</b>	<b>9%</b>	<b>14%</b>	<b>19,069</b>
South Leg	Inbound	855	954			
South Leg	Outbound	640	1,330			
<b>South Leg</b>	<b>TOTAL</b>	<b>1,495</b>	<b>2,284</b>	<b>10%</b>	<b>16%</b>	<b>14,378</b>
East Leg	Inbound	116	175			
East Leg	Outbound	180	304			
<b>East Leg</b>	<b>TOTAL</b>	<b>296</b>	<b>479</b>	<b>4%</b>	<b>6%</b>	<b>8,448</b>
West Leg	Inbound	0	0			
West Leg	Outbound	0	0			
<b>West Leg</b>	<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>#DIV/0!</b>	<b>#DIV/0!</b>	<b>-</b>
<b>OVERALL TOTAL</b>		<b>3,500</b>	<b>5,380</b>	<b>8%</b>	<b>13%</b>	<b>41,895</b>

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Project: Gateway Aviation  
 Scenario: Horizon Year (2040)

Job #: 13445  
 Analyst: CP  
 Date: 11/5/20

LOCATION: Heacock St. & Iris Av.  
 FORECAST YEAR: 2040

INDIVIDUAL TURN VOLUME GROWTH REVIEW									
APPROACH	TURNING MOVEMENT	AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
		EXISTING COUNT	FUTURE VOLUME	DIFFERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFFERENCE	% CHANGE
NORTH BOUND	Left	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Through	305	461	156	51%	430	729	299	69%
	Right	47	167	120	256%	43	264	221	516%
	<b>NB Total</b>	<b>352</b>	<b>628</b>	<b>276</b>	<b>78%</b>	<b>473</b>	<b>993</b>	<b>520</b>	<b>110%</b>
SOUTH BOUND	Left	234	210	-24	-10%	416	436	20	5%
	Through	282	443	161	57%	647	1,076	429	66%
	Right	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	<b>SB Total</b>	<b>515</b>	<b>653</b>	<b>138</b>	<b>27%</b>	<b>1,063</b>	<b>1,512</b>	<b>449</b>	<b>42%</b>
EAST BOUND	Left	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Through	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Right	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	<b>EB Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>#DIV/0!</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>#DIV/0!</b>
WEST BOUND	Left	53	209	156	294%	29	174	145	509%
	Through	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Right	367	351	-16	-4%	248	261	13	5%
	<b>WB Total</b>	<b>420</b>	<b>560</b>	<b>140</b>	<b>33%</b>	<b>276</b>	<b>435</b>	<b>159</b>	<b>57%</b>
<b>TOTAL ENTERING VOLUME</b>		<b>1,287</b>	<b>1,841</b>	<b>553.76</b>	<b>43%</b>	<b>1,813</b>	<b>2,940</b>	<b>1127</b>	<b>62%</b>

FORECAST PEAK HOUR TO ADT COMPARISON						
		VOLUMES		PERCENT OF ADT		ADT
		AM	PM	AM	PM	
North Leg	Inbound	653	1,512			
North Leg	Outbound	812	990			
<b>North Leg</b>	<b>TOTAL</b>	<b>1,465</b>	<b>2,502</b>	<b>10%</b>	<b>17%</b>	<b>14,378</b>
South Leg	Inbound	628	993			
South Leg	Outbound	652	1,250			
<b>South Leg</b>	<b>TOTAL</b>	<b>1,280</b>	<b>2,243</b>	<b>5%</b>	<b>9%</b>	<b>24,426</b>
East Leg	Inbound	560	435			
East Leg	Outbound	377	700			
<b>East Leg</b>	<b>TOTAL</b>	<b>937</b>	<b>1,135</b>	<b>7%</b>	<b>8%</b>	<b>13,754</b>
West Leg	Inbound	0	0			
West Leg	Outbound	0	0			
<b>West Leg</b>	<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>#DIV/0!</b>	<b>#DIV/0!</b>	<b>-</b>
<b>OVERALL TOTAL</b>		<b>3,682</b>	<b>5,880</b>	<b>7%</b>	<b>11%</b>	<b>52,558</b>

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Project: Gateway Aviation  
 Scenario: Horizon Year

Job #: 13445  
 Analyst: CP  
 Date: 44140

LOCATION: Heacock St./Webster Av. & Harley Knox Bl.  
 FORECAST YEAR: 2035

INDIVIDUAL TURN VOLUME GROWTH REVIEW									
APPROACH	TURNING MOVEMENT	AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
		EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE
NORTH BOUND	Left	1	143	142	14200%	1	121	120	12000%
	Through	2	447	445	22250%	2	391	389	19450%
	Right	1	110	109	10900%	1	138	137	13700%
	<b>NB Total</b>	<b>4</b>	<b>700</b>	<b>696</b>	<b>17400%</b>	<b>4</b>	<b>650</b>	<b>646</b>	<b>16150%</b>
SOUTH BOUND	Left	1	86	85	8500%	1	173	172	17200%
	Through	2	272	270	13500%	2	615	613	30650%
	Right	1	112	111	11100%	1	152	151	15100%
	<b>SB Total</b>	<b>4</b>	<b>470</b>	<b>466</b>	<b>11650%</b>	<b>4</b>	<b>940</b>	<b>936</b>	<b>23400%</b>
EAST BOUND	Left	1	110	109	10900%	1	138	137	13700%
	Through	2	244	242	12100%	2	439	437	21850%
	Right	1	86	85	8500%	1	173	172	17200%
	<b>EB Total</b>	<b>4</b>	<b>440</b>	<b>436</b>	<b>10900%</b>	<b>4</b>	<b>750</b>	<b>746</b>	<b>18650%</b>
WEST BOUND	Left	1	112	111	11100%	1	152	151	15100%
	Through	2	415	413	20650%	2	337	335	16750%
	Right	1	143	142	14200%	1	121	120	12000%
	<b>WB Total</b>	<b>4</b>	<b>670</b>	<b>666</b>	<b>16650%</b>	<b>4</b>	<b>610</b>	<b>606</b>	<b>15150%</b>
<b>TOTAL ENTERING VOLUME</b>		<b>16</b>	<b>2,280</b>	<b>2264</b>	<b>14150%</b>	<b>16</b>	<b>2,950</b>	<b>2934</b>	<b>18338%</b>

FORECAST PEAK HOUR TO ADT COMPARISON						
		VOLUMES		PERCENT OF ADT		ADT
		AM	PM	AM	PM	
North Leg	Inbound	470	940			
North Leg	Outbound	700	650			
<b>North Leg</b>	<b>TOTAL</b>	<b>1,170</b>	<b>1,590</b>	<b>8%</b>	<b>11%</b>	<b>14,626</b>
South Leg	Inbound	700	650			
South Leg	Outbound	470	940			
<b>South Leg</b>	<b>TOTAL</b>	<b>1,170</b>	<b>1,590</b>	<b>8%</b>	<b>11%</b>	<b>14,626</b>
East Leg	Inbound	670	610			
East Leg	Outbound	440	750			
<b>East Leg</b>	<b>TOTAL</b>	<b>1,110</b>	<b>1,360</b>	<b>9%</b>	<b>10%</b>	<b>12,988</b>
West Leg	Inbound	440	750			
West Leg	Outbound	670	610			
<b>West Leg</b>	<b>TOTAL</b>	<b>1,110</b>	<b>1,360</b>	<b>9%</b>	<b>10%</b>	<b>12,988</b>
<b>OVERALL TOTAL</b>		<b>4,560</b>	<b>5,900</b>	<b>8%</b>	<b>11%</b>	<b>55,228</b>

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Project: Gateway Aviation  
 Scenario: Horizon Year (2040)

Job #: 13445  
 Analyst: CP  
 Date: 11/5/20

LOCATION: Indian Av. & San Michele Rd.  
 FORECAST YEAR: 2040

INDIVIDUAL TURN VOLUME GROWTH REVIEW									
APPROACH	TURNING MOVEMENT	AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
		EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE
NORTH BOUND	Left	289	576	287	99%	284	447	163	58%
	Through	8	28	20	262%	50	122	72	146%
	Right	92	106	14	16%	120	121	1	1%
	<b>NB Total</b>	<b>389</b>	<b>710</b>	<b>321</b>	<b>83%</b>	<b>454</b>	<b>690</b>	<b>236</b>	<b>52%</b>
SOUTH BOUND	Left	3	5	2	51%	112	88	-24	-21%
	Through	2	21	19	851%	134	194	60	45%
	Right	2	5	3	126%	22	27	5	22%
	<b>SB Total</b>	<b>8</b>	<b>31</b>	<b>23</b>	<b>301%</b>	<b>267</b>	<b>309</b>	<b>42</b>	<b>16%</b>
EAST BOUND	Left	3	6	3	81%	10	28	18	182%
	Through	50	29	-21	-42%	149	171	22	15%
	Right	39	150	111	288%	242	511	269	111%
	<b>EB Total</b>	<b>92</b>	<b>185</b>	<b>93</b>	<b>102%</b>	<b>401</b>	<b>710</b>	<b>309</b>	<b>77%</b>
WEST BOUND	Left	51	120	69	136%	158	165	7	5%
	Through	178	109	-69	-39%	252	225	-27	-11%
	Right	6	6	0	9%	50	70	20	41%
	<b>WB Total</b>	<b>234</b>	<b>235</b>	<b>1</b>	<b>0%</b>	<b>459</b>	<b>460</b>	<b>1</b>	<b>0%</b>
<b>TOTAL ENTERING VOLUME</b>		<b>722</b>	<b>1,161</b>	<b>438.931155</b>	<b>61%</b>	<b>1,581</b>	<b>2,169</b>	<b>588</b>	<b>37%</b>

FORECAST PEAK HOUR TO ADT COMPARISON						
		VOLUMES		PERCENT OF ADT		ADT
		AM	PM	AM	PM	
North Leg	Inbound	31	309			
North Leg	Outbound	40	220			
<b>North Leg</b>	<b>TOTAL</b>	<b>71</b>	<b>529</b>	<b>1%</b>	<b>9%</b>	<b>5,787</b>
South Leg	Inbound	710	690			
South Leg	Outbound	291	870			
<b>South Leg</b>	<b>TOTAL</b>	<b>1,001</b>	<b>1,560</b>	<b>10%</b>	<b>16%</b>	<b>10,055</b>
East Leg	Inbound	235	460			
East Leg	Outbound	140	380			
<b>East Leg</b>	<b>TOTAL</b>	<b>375</b>	<b>840</b>	<b>62%</b>	<b>139%</b>	<b>605</b>
West Leg	Inbound	185	710			
West Leg	Outbound	690	699			
<b>West Leg</b>	<b>TOTAL</b>	<b>875</b>	<b>1,409</b>	<b>18%</b>	<b>28%</b>	<b>4,946</b>
<b>OVERALL TOTAL</b>		<b>2,322</b>	<b>4,338</b>	<b>11%</b>	<b>20%</b>	<b>21,393</b>

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Project: Gateway Aviation  
 Scenario: Horizon Year

Job #: 13445  
 Analyst: CP  
 Date: 44140

LOCATION: Indian Av. & Nandina Av.  
 FORECAST YEAR: 2040

INDIVIDUAL TURN VOLUME GROWTH REVIEW									
APPROACH	TURNING MOVEMENT	AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
		EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE
NORTH BOUND	Left	1	5	4	400%	1	9	8	800%
	Through	2	510	508	25400%	2	486	484	24200%
	Right	1	0	-1	-100%	1	0	-1	-100%
	<b>NB Total</b>	<b>4</b>	<b>515</b>	<b>511</b>	<b>12775%</b>	<b>4</b>	<b>495</b>	<b>491</b>	<b>12275%</b>
SOUTH BOUND	Left	1	0	-1	-100%	1	0	-1	-100%
	Through	2	340	338	16900%	2	764	762	38100%
	Right	1	5	4	400%	1	11	10	1000%
	<b>SB Total</b>	<b>4</b>	<b>345</b>	<b>341</b>	<b>8525%</b>	<b>4</b>	<b>775</b>	<b>771</b>	<b>19275%</b>
EAST BOUND	Left	1	0	-1	-100%	1	4	3	300%
	Through	2	0	-2	-100%	2	0	-2	-100%
	Right	1	0	-1	-100%	1	6	5	500%
	<b>EB Total</b>	<b>4</b>	<b>0</b>	<b>-4</b>	<b>-100%</b>	<b>4</b>	<b>10</b>	<b>6</b>	<b>150%</b>
WEST BOUND	Left	1	0	-1	-100%	1	0	-1	-100%
	Through	2	0	-2	-100%	2	0	-2	-100%
	Right	1	0	-1	-100%	1	0	-1	-100%
	<b>WB Total</b>	<b>4</b>	<b>0</b>	<b>-4</b>	<b>-100%</b>	<b>4</b>	<b>0</b>	<b>-4</b>	<b>-100%</b>
<b>TOTAL ENTERING VOLUME</b>		<b>16</b>	<b>860</b>	<b>844</b>	<b>5275%</b>	<b>16</b>	<b>1,280</b>	<b>1264</b>	<b>7900%</b>

FORECAST PEAK HOUR TO ADT COMPARISON						
		VOLUMES		PERCENT OF ADT		ADT
		AM	PM	AM	PM	
North Leg	Inbound	345	775			
North Leg	Outbound	510	490			
<b>North Leg</b>	<b>TOTAL</b>	<b>855</b>	<b>1,265</b>	<b>9%</b>	<b>13%</b>	<b>10,055</b>
South Leg	Inbound	515	495			
South Leg	Outbound	340	770			
<b>South Leg</b>	<b>TOTAL</b>	<b>855</b>	<b>1,265</b>	<b>8%</b>	<b>13%</b>	<b>10,073</b>
East Leg	Inbound	0	0			
East Leg	Outbound	0	0			
<b>East Leg</b>	<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>0%</b>	<b>0%</b>	<b>16</b>
West Leg	Inbound	0	10			
West Leg	Outbound	10	20			
<b>West Leg</b>	<b>TOTAL</b>	<b>10</b>	<b>30</b>	<b>8%</b>	<b>23%</b>	<b>133</b>
<b>OVERALL TOTAL</b>		<b>1,720</b>	<b>2,560</b>	<b>8%</b>	<b>13%</b>	<b>20,277</b>

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Project: Gateway Aviation  
 Scenario: Horizon Year

Job #: 13445  
 Analyst: CP  
 Date: 44140

LOCATION: Indian Av. & Harley Knox Bl.  
 FORECAST YEAR: 2040

INDIVIDUAL TURN VOLUME GROWTH REVIEW									
APPROACH	TURNING MOVEMENT	AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
		EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE
NORTH BOUND	Left	1	58	57	5700%	1	81	80	8000%
	Through	2	290	288	14400%	2	295	293	14650%
	Right	1	82	81	8100%	1	246	245	24500%
	<b>NB Total</b>	<b>4</b>	<b>430</b>	<b>426</b>	<b>10650%</b>	<b>4</b>	<b>622</b>	<b>618</b>	<b>15450%</b>
SOUTH BOUND	Left	1	102	101	10100%	1	326	325	32500%
	Through	2	187	185	9250%	2	559	557	27850%
	Right	1	71	70	7000%	1	108	107	10700%
	<b>SB Total</b>	<b>4</b>	<b>360</b>	<b>356</b>	<b>8900%</b>	<b>4</b>	<b>993</b>	<b>989</b>	<b>24725%</b>
EAST BOUND	Left	1	108	107	10700%	1	76	75	7500%
	Through	2	276	274	13700%	2	568	566	28300%
	Right	1	56	55	5500%	1	108	107	10700%
	<b>EB Total</b>	<b>4</b>	<b>440</b>	<b>436</b>	<b>10900%</b>	<b>4</b>	<b>752</b>	<b>748</b>	<b>18700%</b>
WEST BOUND	Left	1	157	156	15600%	1	242	241	24100%
	Through	2	541	539	26950%	2	421	419	20950%
	Right	1	302	301	30100%	1	169	168	16800%
	<b>WB Total</b>	<b>4</b>	<b>1,000</b>	<b>996</b>	<b>24900%</b>	<b>4</b>	<b>832</b>	<b>828</b>	<b>20700%</b>
<b>TOTAL ENTERING VOLUME</b>		<b>16</b>	<b>2,230</b>	<b>2214</b>	<b>13838%</b>	<b>16</b>	<b>3,199</b>	<b>3183</b>	<b>19894%</b>

FORECAST PEAK HOUR TO ADT COMPARISON						
		VOLUMES		PERCENT OF ADT		ADT
		AM	PM	AM	PM	
North Leg	Inbound	360	993			
North Leg	Outbound	700	540			
<b>North Leg</b>	<b>TOTAL</b>	<b>1,060</b>	<b>1,533</b>	<b>8%</b>	<b>12%</b>	<b>12,810</b>
South Leg	Inbound	430	622			
South Leg	Outbound	400	909			
<b>South Leg</b>	<b>TOTAL</b>	<b>830</b>	<b>1,531</b>	<b>8%</b>	<b>14%</b>	<b>10,689</b>
East Leg	Inbound	1,000	832			
East Leg	Outbound	460	1,140			
<b>East Leg</b>	<b>TOTAL</b>	<b>1,460</b>	<b>1,972</b>	<b>9%</b>	<b>12%</b>	<b>16,647</b>
West Leg	Inbound	440	752			
West Leg	Outbound	670	610			
<b>West Leg</b>	<b>TOTAL</b>	<b>1,110</b>	<b>1,362</b>	<b>9%</b>	<b>10%</b>	<b>12,988</b>
<b>OVERALL TOTAL</b>		<b>4,460</b>	<b>6,398</b>	<b>8%</b>	<b>12%</b>	<b>53,134</b>

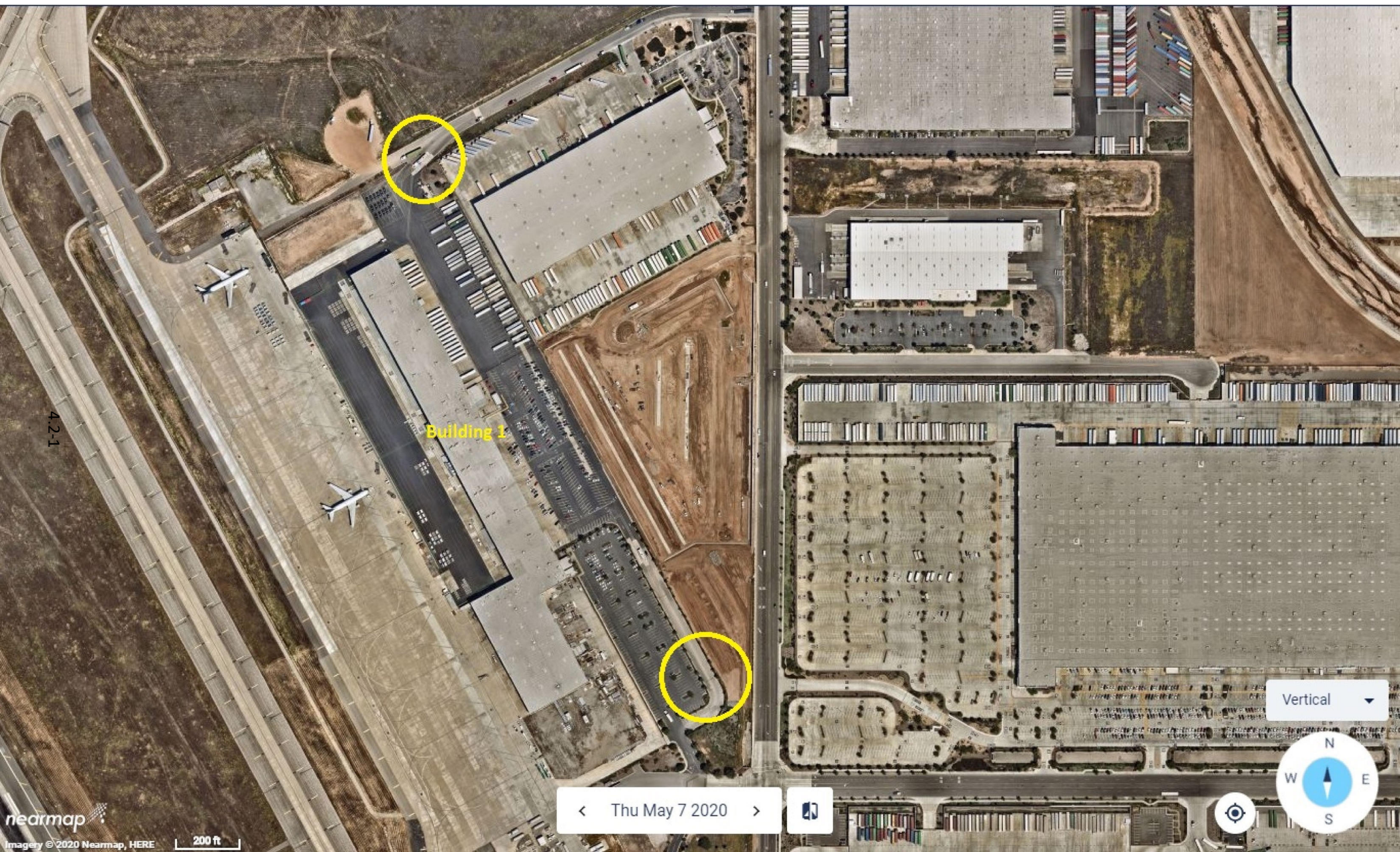
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**APPENDIX 4.2:**  
**SIMILAR USE DRIVEWAY COUNTS**

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4-2-1

Building 1

< Thu May 7 2020 >

Vertical





**Table A**  
 Page 1 of 1  
 Summary of Driveway Counts

Land Use	Driveway 1 Frontage						Driveway 3 Heacock							
	AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour			Daily	
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total		
Day 1: May 12, 2020	0	0	0	1	2	3	9							667
Passenger Cars:														
Truck Trips:														
2-axle:	0	0	0	1	2	3	22							4
3-axle:	1	3	4	4	2	6	61							2
4+-axle:	3	4	7	8	9	17	113							2
- Truck Trips	4	7	11	13	13	26	196							8
<b>TOTAL TRIPS (Actual Vehicles)<sup>2</sup></b>	<b>4</b>	<b>7</b>	<b>11</b>	<b>14</b>	<b>15</b>	<b>29</b>	<b>205</b>							<b>675</b>
Day 2: May 13, 2020														
Passenger Cars:	0	0	0	0	0	0	7							733
Truck Trips:														
2-axle:	0	0	0	2	2	4	8							13
3-axle:	2	4	6	2	1	3	56							0
4+-axle:	5	2	7	5	11	16	102							0
- Truck Trips	7	6	13	9	14	23	166							13
<b>TOTAL TRIPS (Actual Vehicles)<sup>2</sup></b>	<b>7</b>	<b>6</b>	<b>13</b>	<b>9</b>	<b>14</b>	<b>23</b>	<b>173</b>							<b>746</b>
Day 3: May 14, 2020														
Passenger Cars:	2	1	3	0	0	0	8							716
Truck Trips:														
2-axle:	0	0	0	2	1	3	8							4
3-axle:	2	3	5	10	2	12	80							2
4+-axle:	4	1	5	5	16	21	114							0
- Truck Trips	6	4	10	17	19	36	202							6
<b>TOTAL TRIPS (Actual Vehicles)<sup>2</sup></b>	<b>8</b>	<b>5</b>	<b>13</b>	<b>17</b>	<b>19</b>	<b>36</b>	<b>210</b>							<b>722</b>

<sup>1</sup> TSF = thousand square feet

<sup>2</sup> TOTAL TRIPS = Passenger Cars + Truck Trips.





City: Moreno Valley  
 Location: Driveway 1 - Frontage Road  
 Date: 5/12/2020  
 Count Type: Driveway Classification Counts

	Entering				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
0:00	0	0	0	0	0
0:15	0	0	0	1	1
0:30	0	0	0	0	0
0:45	0	0	0	2	2
1:00	0	0	0	1	1
1:15	0	0	1	0	1
1:30	0	0	0	0	0
1:45	0	0	0	1	1
2:00	0	0	0	1	1
2:15	0	0	0	0	0
2:30	0	0	0	1	1
2:45	0	0	0	0	0
3:00	0	0	0	1	1
3:15	0	0	0	1	1
3:30	0	0	0	0	0
3:45	0	0	0	2	2
4:00	0	0	0	0	0
4:15	0	0	0	0	0
4:30	0	0	0	1	1
4:45	0	0	0	1	1
5:00	0	0	0	1	1
5:15	0	0	0	0	0
5:30	0	0	0	1	1
5:45	0	0	0	1	1
6:00	0	0	0	1	1
6:15	0	0	0	2	2
6:30	0	0	0	0	0
6:45	0	0	0	0	0
7:00	0	0	1	1	2
7:15	0	0	0	1	1
7:30	0	0	0	0	0
7:45	1	0	0	1	2
8:00	0	0	0	0	0
8:15	1	0	0	0	1
8:30	0	0	0	1	1
8:45	0	0	0	0	0
9:00	0	0	1	2	3
9:15	0	1	3	0	4
9:30	0	0	0	0	0
9:45	0	0	0	0	0
10:00	0	3	0	0	3
10:15	1	1	1	0	3
10:30	0	0	0	0	0
10:45	0	1	1	0	2
11:00	0	0	0	2	2
11:15	0	0	1	0	1
11:30	0	1	2	0	3
11:45	0	0	2	0	2

	Exiting				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
0:00	0	0	0	0	0
0:15	0	0	0	0	0
0:30	0	0	0	1	1
0:45	0	0	0	0	0
1:00	0	0	1	1	2
1:15	0	0	0	0	0
1:30	0	0	0	1	1
1:45	0	0	0	0	0
2:00	0	0	0	1	1
2:15	0	0	0	0	0
2:30	0	0	0	1	1
2:45	0	0	0	1	1
3:00	0	0	0	0	0
3:15	0	0	0	2	2
3:30	0	0	0	0	0
3:45	0	0	0	0	0
4:00	0	0	1	1	2
4:15	0	0	0	0	0
4:30	0	0	0	0	0
4:45	0	0	0	1	1
5:00	0	0	0	1	1
5:15	0	0	1	0	1
5:30	0	0	1	0	1
5:45	0	0	0	1	1
6:00	0	0	0	0	0
6:15	0	0	0	3	3
6:30	0	0	0	1	1
6:45	0	0	0	0	0
7:00	0	0	3	0	3
7:15	0	0	0	0	0
7:30	0	0	0	0	0
7:45	0	0	0	1	1
8:00	0	0	0	0	0
8:15	1	0	0	0	1
8:30	1	0	1	1	3
8:45	0	0	0	0	0
9:00	0	0	0	1	1
9:15	0	0	2	1	3
9:30	0	0	0	2	2
9:45	0	0	0	0	0
10:00	0	1	0	0	1
10:15	1	1	0	0	2
10:30	0	0	1	0	1
10:45	0	0	1	1	2
11:00	0	0	1	0	1
11:15	0	0	1	0	1
11:30	0	0	0	0	0
11:45	0	1	1	1	3



City: Moreno Valley  
 Location: Driveway 1 - Frontage Road  
 Date: 5/12/2020  
 Count Type: Driveway Classification Counts

	Entering				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
12:00	0	0	1	0	1
12:15	0	0	0	0	0
12:30	0	0	0	0	0
12:45	0	0	0	0	0
13:00	0	0	0	0	0
13:15	0	1	3	0	4
13:30	0	0	0	1	1
13:45	0	0	1	0	1
14:00	0	0	0	2	2
14:15	0	1	0	1	2
14:30	0	1	0	0	1
14:45	0	0	0	1	1
15:00	0	0	0	1	1
15:15	0	1	2	2	5
15:30	1	0	0	1	2
15:45	0	0	0	3	3
16:00	0	0	2	2	4
16:15	0	0	0	0	0
16:30	0	0	1	1	2
16:45	0	0	0	0	0
17:00	0	0	0	0	0
17:15	0	0	0	0	0
17:30	0	0	0	1	1
17:45	0	0	1	0	1
18:00	0	0	1	1	2
18:15	0	0	1	0	1
18:30	0	0	0	1	1
18:45	0	0	0	0	0
19:00	0	1	0	1	2
19:15	0	0	0	0	0
19:30	0	0	0	0	0
19:45	0	0	0	1	1
20:00	0	0	1	2	3
20:15	0	0	0	0	0
20:30	0	0	0	1	1
20:45	0	0	2	1	3
21:00	0	0	1	0	1
21:15	0	0	0	3	3
21:30	0	0	0	0	0
21:45	0	0	0	0	0
22:00	0	0	0	0	0
22:15	0	0	0	0	0
22:30	0	0	0	0	0
22:45	0	0	0	0	0
23:00	0	0	0	2	2
23:15	0	0	0	0	0
23:30	0	0	1	2	3
23:45	0	0	0	0	0
<b>TOTAL</b>	<b>4</b>	<b>12</b>	<b>31</b>	<b>58</b>	<b>105</b>

	Exiting				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
12:00	0	0	0	0	0
12:15	0	0	0	0	0
12:30	0	0	0	0	0
12:45	0	2	0	0	2
13:00	0	0	0	0	0
13:15	0	0	0	1	1
13:30	0	1	0	1	2
13:45	0	0	0	2	2
14:00	0	0	0	0	0
14:15	0	1	0	1	2
14:30	0	0	0	1	1
14:45	0	0	0	2	2
15:00	0	0	1	0	1
15:15	1	0	0	1	2
15:30	1	1	1	2	5
15:45	0	0	0	3	3
16:00	0	1	1	3	5
16:15	0	0	0	2	2
16:30	0	0	0	2	2
16:45	0	0	0	2	2
17:00	0	0	0	0	0
17:15	0	0	0	0	0
17:30	0	0	0	0	0
17:45	0	0	1	0	1
18:00	0	0	1	0	1
18:15	0	0	0	1	1
18:30	0	0	0	1	1
18:45	0	0	1	0	1
19:00	0	0	1	0	1
19:15	0	0	1	0	1
19:30	0	1	0	0	1
19:45	0	0	0	0	0
20:00	0	0	1	3	4
20:15	0	0	0	0	0
20:30	0	0	0	0	0
20:45	0	0	1	0	1
21:00	0	0	0	0	0
21:15	0	0	0	0	0
21:30	0	0	3	1	4
21:45	0	0	0	0	0
22:00	0	0	0	0	0
22:15	0	0	0	0	0
22:30	0	0	0	0	0
22:45	0	0	0	0	0
23:00	0	0	1	0	1
23:15	0	0	0	0	0
23:30	0	0	0	1	1
23:45	0	0	1	1	2
<b>TOTAL</b>	<b>5</b>	<b>10</b>	<b>30</b>	<b>55</b>	<b>100</b>



City: Moreno Valley  
 Location: Driveway 1 - Frontage Road  
 Date: 5/13/2020  
 Count Type: Driveway Classification Counts

	Entering				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
0:00	0	0	2	1	3
0:15	0	0	0	2	2
0:30	0	0	0	1	1
0:45	0	0	0	0	0
1:00	0	0	0	1	1
1:15	0	0	2	0	2
1:30	0	0	0	1	1
1:45	0	0	0	3	3
2:00	0	0	0	2	2
2:15	0	0	0	3	3
2:30	0	0	0	0	0
2:45	0	0	0	0	0
3:00	0	0	0	0	0
3:15	0	0	0	1	1
3:30	0	0	0	0	0
3:45	0	0	0	3	3
4:00	0	0	0	0	0
4:15	0	0	0	2	2
4:30	0	0	0	0	0
4:45	0	0	0	1	1
5:00	0	0	0	0	0
5:15	0	0	0	0	0
5:30	0	0	0	0	0
5:45	0	0	0	1	1
6:00	0	0	0	2	2
6:15	0	0	0	0	0
6:30	0	0	2	1	3
6:45	0	0	0	2	2
7:00	0	0	0	0	0
7:15	0	0	0	0	0
7:30	0	0	0	0	0
7:45	0	0	0	0	0
8:00	0	0	0	0	0
8:15	0	0	0	0	0
8:30	0	0	0	0	0
8:45	0	0	0	0	0
9:00	0	0	0	0	0
9:15	0	0	1	0	1
9:30	0	0	1	0	1
9:45	1	0	0	0	1
10:00	0	0	0	1	1
10:15	0	1	0	1	2
10:30	0	0	0	0	0
10:45	0	0	0	2	2
11:00	0	0	0	0	0
11:15	0	0	1	0	1
11:30	0	0	0	0	0
11:45	0	0	0	2	2

	Exiting				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
0:00	0	0	0	3	3
0:15	0	0	2	0	2
0:30	0	0	0	1	1
0:45	0	0	1	0	1
1:00	0	0	0	0	0
1:15	0	0	1	0	1
1:30	0	0	0	2	2
1:45	0	0	1	1	2
2:00	0	0	3	1	4
2:15	0	0	0	0	0
2:30	0	0	1	2	3
2:45	0	0	0	1	1
3:00	0	0	1	0	1
3:15	0	0	1	0	1
3:30	0	0	0	0	0
3:45	0	0	0	0	0
4:00	0	0	3	0	3
4:15	0	0	0	0	0
4:30	0	0	1	1	2
4:45	0	0	0	0	0
5:00	0	0	0	0	0
5:15	0	0	0	0	0
5:30	0	0	0	0	0
5:45	0	0	0	1	1
6:00	0	0	1	0	1
6:15	0	0	1	1	2
6:30	0	0	1	1	2
6:45	0	0	1	0	1
7:00	0	0	0	1	1
7:15	0	0	0	0	0
7:30	0	0	0	0	0
7:45	0	0	0	0	0
8:00	0	0	0	0	0
8:15	0	0	0	0	0
8:30	0	0	0	0	0
8:45	0	0	0	0	0
9:00	0	0	0	0	0
9:15	0	0	0	1	1
9:30	0	0	0	0	0
9:45	1	0	0	0	1
10:00	0	0	0	0	0
10:15	0	1	0	0	1
10:30	0	0	0	0	0
10:45	0	0	0	3	3
11:00	0	0	1	0	1
11:15	0	0	0	2	2
11:30	0	0	0	0	0
11:45	0	0	0	0	0



City: Moreno Valley  
 Location: Driveway 1 - Frontage Road  
 Date: 5/13/2020  
 Count Type: Driveway Classification Counts

	Entering				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
12:00	0	0	0	2	2
12:15	0	0	0	0	0
12:30	0	0	1	1	2
12:45	2	0	1	0	3
13:00	0	0	0	0	0
13:15	0	0	0	0	0
13:30	0	0	1	0	1
13:45	0	0	2	0	2
14:00	0	0	0	1	1
14:15	0	0	1	0	1
14:30	0	0	0	1	1
14:45	0	0	0	0	0
15:00	0	0	2	1	3
15:15	0	0	0	2	2
15:30	0	2	1	2	5
15:45	0	0	1	1	2
16:00	0	0	0	0	0
16:15	0	0	1	0	1
16:30	0	0	0	1	1
16:45	0	0	0	0	0
17:00	0	0	0	0	0
17:15	0	0	0	0	0
17:30	0	0	0	0	0
17:45	0	0	0	0	0
18:00	0	0	1	1	2
18:15	0	0	1	1	2
18:30	0	0	0	0	0
18:45	0	0	1	0	1
19:00	0	0	0	0	0
19:15	0	0	0	1	1
19:30	0	0	0	0	0
19:45	0	0	0	0	0
20:00	0	0	1	0	1
20:15	0	0	0	1	1
20:30	0	0	0	0	0
20:45	0	1	0	0	1
21:00	0	0	0	1	1
21:15	0	0	0	0	0
21:30	0	0	0	0	0
21:45	0	0	1	0	1
22:00	0	0	0	1	1
22:15	0	0	0	0	0
22:30	0	0	0	0	0
22:45	0	0	1	0	1
23:00	0	0	0	0	0
23:15	0	0	0	0	0
23:30	0	0	0	0	0
23:45	0	0	0	1	1
<b>TOTAL</b>	<b>3</b>	<b>4</b>	<b>26</b>	<b>52</b>	<b>85</b>

	Exiting				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
12:00	1	0	0	2	3
12:15	0	0	0	1	1
12:30	0	0	0	0	0
12:45	0	0	0	0	0
13:00	0	0	0	2	2
13:15	0	0	0	0	0
13:30	0	0	0	1	1
13:45	0	0	1	1	2
14:00	0	0	0	1	1
14:15	0	0	0	0	0
14:30	2	0	0	0	2
14:45	0	0	0	1	1
15:00	0	0	0	1	1
15:15	0	0	0	1	1
15:30	0	0	1	2	3
15:45	0	1	0	5	6
16:00	0	1	0	3	4
16:15	0	0	0	1	1
16:30	0	0	0	0	0
16:45	0	0	0	0	0
17:00	0	0	0	1	1
17:15	0	0	0	0	0
17:30	0	0	0	0	0
17:45	0	0	0	0	0
18:00	0	0	1	0	1
18:15	0	0	0	1	1
18:30	0	0	0	1	1
18:45	0	0	1	0	1
19:00	0	1	1	0	2
19:15	0	0	0	0	0
19:30	0	0	0	0	0
19:45	0	0	0	0	0
20:00	0	0	1	1	2
20:15	0	0	0	0	0
20:30	0	0	0	0	0
20:45	0	0	1	0	1
21:00	0	0	0	0	0
21:15	0	0	0	0	0
21:30	0	0	1	1	2
21:45	0	0	0	0	0
22:00	0	0	0	0	0
22:15	0	0	1	0	1
22:30	0	0	0	0	0
22:45	0	0	0	0	0
23:00	0	0	0	0	0
23:15	0	0	0	0	0
23:30	0	0	0	1	1
23:45	0	0	1	0	1
<b>TOTAL</b>	<b>4</b>	<b>4</b>	<b>30</b>	<b>50</b>	<b>88</b>



City: Moreno Valley  
 Location: Driveway 1 - Frontage Road  
 Date: 5/14/2020  
 Count Type: Driveway Classification Counts

	Entering				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
0:00	0	0	0	0	0
0:15	0	0	0	0	0
0:30	0	0	0	0	0
0:45	0	0	0	0	0
1:00	0	0	0	0	0
1:15	0	0	0	2	2
1:30	0	0	0	1	1
1:45	0	0	0	0	0
2:00	0	0	0	2	2
2:15	0	0	0	0	0
2:30	0	0	0	1	1
2:45	0	0	0	0	0
3:00	0	0	0	0	0
3:15	0	0	0	2	2
3:30	0	0	0	0	0
3:45	0	0	1	2	3
4:00	0	0	0	0	0
4:15	0	0	0	0	0
4:30	0	0	0	0	0
4:45	0	0	0	1	1
5:00	0	0	1	1	2
5:15	0	0	0	1	1
5:30	0	0	0	1	1
5:45	0	0	0	5	5
6:00	0	0	0	0	0
6:15	0	0	0	2	2
6:30	0	0	0	0	0
6:45	0	0	0	0	0
7:00	0	0	0	1	1
7:15	0	0	0	0	0
7:30	0	0	0	0	0
7:45	0	0	0	1	1
8:00	0	0	0	2	2
8:15	0	0	1	1	2
8:30	1	0	1	0	2
8:45	1	0	0	1	2
9:00	0	0	1	1	2
9:15	0	0	0	2	2
9:30	0	0	0	1	1
9:45	0	0	0	0	0
10:00	1	0	0	2	3
10:15	0	0	1	1	2
10:30	0	0	0	0	0
10:45	0	0	0	0	0
11:00	0	0	0	0	0
11:15	0	0	0	3	3
11:30	0	1	1	0	2
11:45	0	0	0	0	0

	Exiting				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
0:00	0	0	0	1	1
0:15	0	0	0	0	0
0:30	0	0	1	0	1
0:45	0	0	0	0	0
1:00	0	0	0	0	0
1:15	0	0	0	0	0
1:30	0	0	1	0	1
1:45	0	0	0	0	0
2:00	0	0	1	1	2
2:15	0	0	2	0	2
2:30	0	0	2	1	3
2:45	0	0	0	0	0
3:00	0	0	0	0	0
3:15	0	0	1	0	1
3:30	0	0	1	0	1
3:45	0	0	0	0	0
4:00	0	0	2	0	2
4:15	0	0	0	0	0
4:30	0	0	0	1	1
4:45	0	0	1	0	1
5:00	0	0	1	1	2
5:15	0	0	1	0	1
5:30	0	0	0	0	0
5:45	0	0	1	0	1
6:00	0	0	4	0	4
6:15	0	0	2	0	2
6:30	0	0	1	1	2
6:45	0	0	0	0	0
7:00	0	0	0	0	0
7:15	0	0	0	0	0
7:30	0	0	1	0	1
7:45	0	0	1	0	1
8:00	0	0	1	0	1
8:15	0	0	1	0	1
8:30	1	0	0	0	1
8:45	0	0	1	1	2
9:00	0	0	0	1	1
9:15	0	0	1	0	1
9:30	1	0	2	2	5
9:45	0	0	0	0	0
10:00	1	0	1	0	2
10:15	0	0	0	0	0
10:30	0	0	2	0	2
10:45	0	0	0	0	0
11:00	0	0	0	0	0
11:15	0	0	0	2	2
11:30	0	1	1	1	3
11:45	0	0	0	1	1



City: Moreno Valley  
 Location: Driveway 1 - Frontage Road  
 Date: 5/14/2020  
 Count Type: Driveway Classification Counts

	Entering				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
12:00	0	0	0	1	1
12:15	0	0	2	3	5
12:30	0	0	0	0	0
12:45	0	0	2	0	2
13:00	0	0	1	0	1
13:15	0	1	1	1	3
13:30	0	0	1	0	1
13:45	0	0	0	0	0
14:00	0	0	1	0	1
14:15	1	0	1	1	3
14:30	0	0	0	2	2
14:45	0	0	1	1	2
15:00	0	0	3	1	4
15:15	0	1	2	2	5
15:30	0	0	3	0	3
15:45	0	0	2	3	5
16:00	0	1	3	0	4
16:15	0	0	0	0	0
16:30	0	0	0	0	0
16:45	0	0	0	0	0
17:00	0	0	1	0	1
17:15	0	0	2	0	2
17:30	0	0	0	0	0
17:45	0	0	0	0	0
18:00	0	0	0	0	0
18:15	0	0	0	0	0
18:30	0	0	0	0	0
18:45	0	0	0	0	0
19:00	0	0	0	0	0
19:15	0	0	1	0	1
19:30	0	0	0	0	0
19:45	0	0	0	0	0
20:00	0	0	0	0	0
20:15	0	0	0	0	0
20:30	0	0	0	0	0
20:45	0	0	0	1	1
21:00	0	0	0	0	0
21:15	0	0	0	0	0
21:30	0	0	0	1	1
21:45	0	0	0	0	0
22:00	0	0	0	0	0
22:15	0	0	0	0	0
22:30	0	0	0	3	3
22:45	0	0	1	0	1
23:00	0	0	0	1	1
23:15	0	0	0	0	0
23:30	0	0	0	1	1
23:45	0	0	0	1	1
<b>TOTAL</b>	<b>4</b>	<b>4</b>	<b>35</b>	<b>60</b>	<b>103</b>

	Exiting				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
12:00	0	0	0	0	0
12:15	0	0	1	2	3
12:30	0	0	0	2	2
12:45	0	0	0	0	0
13:00	0	0	0	1	1
13:15	0	0	0	1	1
13:30	0	0	1	0	1
13:45	0	0	0	1	1
14:00	1	0	0	1	2
14:15	0	0	0	0	0
14:30	0	1	1	1	3
14:45	0	0	0	1	1
15:00	0	0	1	3	4
15:15	0	0	0	2	2
15:30	0	1	0	2	3
15:45	0	0	0	7	7
16:00	0	0	2	5	7
16:15	0	0	0	1	1
16:30	0	0	0	1	1
16:45	0	1	0	0	1
17:00	0	0	0	1	1
17:15	0	0	0	0	0
17:30	0	0	0	1	1
17:45	0	0	0	1	1
18:00	0	0	0	0	0
18:15	0	0	0	0	0
18:30	0	0	0	0	0
18:45	0	0	0	0	0
19:00	0	0	0	0	0
19:15	0	0	0	1	1
19:30	0	0	0	0	0
19:45	0	0	0	0	0
20:00	0	0	0	0	0
20:15	0	0	0	0	0
20:30	0	0	1	0	1
20:45	0	0	1	0	1
21:00	0	0	0	0	0
21:15	0	0	0	0	0
21:30	0	0	1	1	2
21:45	0	0	1	1	2
22:00	0	0	0	0	0
22:15	0	0	0	0	0
22:30	0	0	0	0	0
22:45	0	0	0	3	3
23:00	0	0	1	0	1
23:15	0	0	0	0	0
23:30	0	0	0	0	0
23:45	0	0	0	0	0
<b>TOTAL</b>	<b>4</b>	<b>4</b>	<b>45</b>	<b>54</b>	<b>107</b>



City: Moreno Valley  
 Location: Heacock - Driveway 3 - East Dwy ONLY  
 Date: 5/12/2020  
 Count Type: Driveway Classification Counts

	Entering				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
0:00	0	0	0	0	0
0:15	2	0	0	0	2
0:30	1	0	0	0	1
0:45	0	0	0	0	0
1:00	2	0	0	0	2
1:15	0	0	0	0	0
1:30	0	0	0	0	0
1:45	0	0	0	0	0
2:00	1	0	0	0	1
2:15	1	0	0	0	1
2:30	1	0	0	0	1
2:45	0	0	0	0	0
3:00	0	0	0	0	0
3:15	4	0	0	0	4
3:30	21	0	0	0	21
3:45	22	0	0	0	22
4:00	1	0	0	0	1
4:15	4	0	0	0	4
4:30	4	0	0	0	4
4:45	6	0	0	0	6
5:00	4	0	0	0	4
5:15	2	0	0	0	2
5:30	1	0	0	0	1
5:45	12	0	0	0	12
6:00	13	0	0	0	13
6:15	16	0	0	0	16
6:30	8	0	0	0	8
6:45	6	0	0	0	6
7:00	2	0	0	1	3
7:15	12	1	0	0	13
7:30	13	0	0	0	13
7:45	34	0	0	0	34
8:00	7	0	0	0	7
8:15	10	0	0	0	10
8:30	3	0	0	0	3
8:45	4	0	1	0	5
9:00	2	0	0	0	2
9:15	1	0	0	0	1
9:30	0	0	0	0	0
9:45	2	0	0	0	2
10:00	0	0	0	0	0
10:15	2	0	0	0	2
10:30	1	0	0	0	1
10:45	2	0	0	0	2
11:00	0	0	0	0	0
11:15	1	0	0	0	1
11:30	0	0	0	0	0
11:45	3	0	0	0	3

	Exiting				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
0:00	1	0	0	0	1
0:15	0	0	0	0	0
0:30	3	0	0	0	3
0:45	2	0	0	0	2
1:00	3	0	0	0	3
1:15	3	0	0	0	3
1:30	0	0	0	0	0
1:45	1	0	0	0	1
2:00	1	0	0	0	1
2:15	2	0	0	0	2
2:30	0	0	0	0	0
2:45	0	0	0	0	0
3:00	5	0	0	0	5
3:15	1	0	0	0	1
3:30	0	0	0	0	0
3:45	4	0	0	0	4
4:00	2	0	0	0	2
4:15	1	0	0	0	1
4:30	6	0	0	0	6
4:45	2	0	0	0	2
5:00	6	0	0	0	6
5:15	3	0	0	0	3
5:30	1	0	0	0	1
5:45	0	0	0	0	0
6:00	4	0	0	0	4
6:15	4	0	0	0	4
6:30	3	0	0	0	3
6:45	1	0	0	0	1
7:00	3	0	0	0	3
7:15	3	0	0	1	4
7:30	14	0	0	0	14
7:45	5	0	0	0	5
8:00	2	0	0	0	2
8:15	5	0	0	0	5
8:30	3	0	0	0	3
8:45	0	0	0	0	0
9:00	2	0	0	0	2
9:15	1	0	0	0	1
9:30	4	0	0	0	4
9:45	3	0	0	0	3
10:00	0	0	1	0	1
10:15	3	0	0	0	3
10:30	4	0	0	0	4
10:45	0	0	0	0	0
11:00	1	0	0	0	1
11:15	0	0	0	0	0
11:30	5	0	0	0	5
11:45	1	0	0	0	1



City: Moreno Valley  
 Location: Heacock - Driveway 3 - East Dwy ONLY  
 Date: 5/12/2020  
 Count Type: Driveway Classification Counts

	Entering				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
12:00	2	0	0	0	2
12:15	2	0	0	0	2
12:30	5	0	0	0	5
12:45	6	0	0	0	6
13:00	1	0	0	0	1
13:15	2	0	0	0	2
13:30	3	0	0	0	3
13:45	3	0	0	0	3
14:00	0	1	0	0	1
14:15	0	0	0	0	0
14:30	1	0	0	0	1
14:45	1	0	0	0	1
15:00	0	0	0	0	0
15:15	0	0	0	0	0
15:30	0	0	0	0	0
15:45	0	0	0	0	0
16:00	0	0	0	0	0
16:15	0	0	0	0	0
16:30	1	0	0	0	1
16:45	0	0	0	0	0
17:00	0	0	0	0	0
17:15	2	0	0	0	2
17:30	0	0	0	0	0
17:45	1	0	0	0	1
18:00	1	0	0	0	1
18:15	0	0	0	0	0
18:30	0	0	0	0	0
18:45	0	0	0	0	0
19:00	0	0	0	0	0
19:15	0	0	0	0	0
19:30	1	0	0	0	1
19:45	0	0	0	0	0
20:00	3	0	0	0	3
20:15	1	0	0	0	1
20:30	3	0	0	0	3
20:45	4	0	0	0	4
21:00	0	0	0	0	0
21:15	1	0	0	0	1
21:30	1	0	0	0	1
21:45	5	0	0	0	5
22:00	3	0	0	0	3
22:15	8	0	0	0	8
22:30	25	0	0	0	25
22:45	23	0	0	0	23
23:00	2	0	0	0	2
23:15	2	0	0	0	2
23:30	0	0	0	0	0
23:45	0	0	0	0	0
<b>TOTAL</b>	<b>344</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>348</b>

	Exiting				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
12:00	1	0	0	0	1
12:15	3	1	0	0	4
12:30	10	0	0	0	10
12:45	8	0	0	0	8
13:00	8	0	0	0	8
13:15	8	0	0	0	8
13:30	30	0	0	0	30
13:45	5	0	0	0	5
14:00	6	0	0	0	6
14:15	11	0	0	0	11
14:30	8	0	0	0	8
14:45	18	0	0	0	18
15:00	13	0	0	0	13
15:15	1	1	0	0	2
15:30	2	0	0	0	2
15:45	4	0	0	0	4
16:00	2	0	0	0	2
16:15	9	0	0	0	9
16:30	13	0	0	0	13
16:45	4	0	0	0	4
17:00	8	0	0	0	8
17:15	2	0	0	0	2
17:30	5	0	0	0	5
17:45	0	0	0	0	0
18:00	3	0	0	0	3
18:15	1	0	0	0	1
18:30	1	0	0	0	1
18:45	0	0	0	0	0
19:00	1	0	0	0	1
19:15	0	0	0	0	0
19:30	0	0	0	0	0
19:45	0	0	0	0	0
20:00	0	0	0	0	0
20:15	1	0	0	0	1
20:30	2	0	0	0	2
20:45	2	0	0	0	2
21:00	2	0	0	0	2
21:15	1	0	0	0	1
21:30	2	0	0	0	2
21:45	2	0	0	0	2
22:00	1	0	0	0	1
22:15	0	0	0	0	0
22:30	3	0	0	0	3
22:45	4	0	0	0	4
23:00	0	0	0	0	0
23:15	0	0	0	0	0
23:30	0	0	0	0	0
23:45	0	0	0	0	0
<b>TOTAL</b>	<b>323</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>327</b>





City: Moreno Valley  
 Location: Heacock - Driveway 3 - East Dwy ONLY  
 Date: 5/13/2020  
 Count Type: Driveway Classification Counts

	Entering				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
0:00	1	0	0	0	1
0:15	0	0	0	0	0
0:30	0	0	0	0	0
0:45	0	0	0	0	0
1:00	0	0	0	0	0
1:15	0	0	0	0	0
1:30	1	0	0	0	1
1:45	0	0	0	0	0
2:00	1	0	0	0	1
2:15	0	0	0	0	0
2:30	0	0	0	0	0
2:45	0	0	0	0	0
3:00	2	0	0	0	2
3:15	4	0	0	0	4
3:30	9	0	0	0	9
3:45	29	0	0	0	29
4:00	4	0	0	0	4
4:15	4	0	0	0	4
4:30	3	0	0	0	3
4:45	7	0	0	0	7
5:00	6	0	0	0	6
5:15	4	0	0	0	4
5:30	4	0	0	0	4
5:45	13	0	0	0	13
6:00	13	0	0	0	13
6:15	18	0	0	0	18
6:30	6	0	0	0	6
6:45	5	0	0	0	5
7:00	7	0	0	0	7
7:15	16	0	0	0	16
7:30	23	1	0	0	24
7:45	27	0	0	0	27
8:00	14	0	0	0	14
8:15	7	0	0	0	7
8:30	2	0	0	0	2
8:45	5	0	0	0	5
9:00	2	0	0	0	2
9:15	3	0	0	0	3
9:30	0	0	0	0	0
9:45	1	0	0	0	1
10:00	2	0	0	0	2
10:15	0	0	0	0	0
10:30	0	0	0	0	0
10:45	1	0	0	0	1
11:00	2	0	0	0	2
11:15	1	0	0	0	1
11:30	1	1	0	0	2
11:45	1	0	0	0	1

	Exiting				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
0:00	0	0	0	0	0
0:15	0	0	0	0	0
0:30	0	0	0	0	0
0:45	0	0	0	0	0
1:00	0	0	0	0	0
1:15	0	0	0	0	0
1:30	0	0	0	0	0
1:45	0	0	0	0	0
2:00	1	0	0	0	1
2:15	0	0	0	0	0
2:30	1	0	0	0	1
2:45	1	0	0	0	1
3:00	4	0	0	0	4
3:15	0	0	0	0	0
3:30	2	0	0	0	2
3:45	2	0	0	0	2
4:00	1	0	0	0	1
4:15	1	0	0	0	1
4:30	1	0	0	0	1
4:45	2	0	0	0	2
5:00	7	0	0	0	7
5:15	8	0	0	0	8
5:30	3	0	0	0	3
5:45	5	0	0	0	5
6:00	1	0	0	0	1
6:15	3	0	0	0	3
6:30	3	0	0	0	3
6:45	5	0	0	0	5
7:00	0	0	0	0	0
7:15	7	0	0	0	7
7:30	20	0	0	0	20
7:45	7	0	0	0	7
8:00	11	0	0	0	11
8:15	7	0	0	0	7
8:30	1	0	0	0	1
8:45	5	0	0	0	5
9:00	2	0	0	0	2
9:15	2	0	0	0	2
9:30	3	0	0	0	3
9:45	4	0	0	0	4
10:00	3	0	0	0	3
10:15	3	0	0	0	3
10:30	5	0	0	0	5
10:45	2	0	0	0	2
11:00	3	0	0	0	3
11:15	5	0	0	0	5
11:30	2	1	0	0	3
11:45	4	0	0	0	4



City: Moreno Valley  
 Location: Heacock - Driveway 3 - East Dwy ONLY  
 Date: 5/13/2020  
 Count Type: Driveway Classification Counts

	Entering				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
12:00	2	0	0	0	2
12:15	2	0	0	0	2
12:30	7	0	0	0	7
12:45	4	0	0	0	4
13:00	3	1	0	0	4
13:15	2	0	0	0	2
13:30	1	1	0	0	2
13:45	0	0	0	0	0
14:00	1	1	0	0	2
14:15	1	0	0	0	1
14:30	0	0	0	0	0
14:45	1	0	0	0	1
15:00	1	0	0	0	1
15:15	1	1	0	0	2
15:30	0	0	0	0	0
15:45	0	1	0	0	1
16:00	1	0	0	0	1
16:15	0	0	0	0	0
16:30	0	0	0	0	0
16:45	0	0	0	0	0
17:00	1	0	0	0	1
17:15	1	0	0	0	1
17:30	0	0	0	0	0
17:45	0	0	0	0	0
18:00	0	0	0	0	0
18:15	0	0	0	0	0
18:30	0	0	0	0	0
18:45	0	0	0	0	0
19:00	0	0	0	0	0
19:15	1	0	0	0	1
19:30	0	0	0	0	0
19:45	0	0	0	0	0
20:00	4	0	0	0	4
20:15	1	0	0	0	1
20:30	3	0	0	0	3
20:45	3	0	0	0	3
21:00	2	0	0	0	2
21:15	1	0	0	0	1
21:30	3	0	0	0	3
21:45	6	0	0	0	6
22:00	4	0	0	0	4
22:15	10	0	0	0	10
22:30	28	0	0	0	28
22:45	29	0	0	0	29
23:00	4	0	0	0	4
23:15	1	0	0	0	1
23:30	0	0	0	0	0
23:45	1	0	0	0	1
<b>TOTAL</b>	<b>379</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>386</b>

	Exiting				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
12:00	9	0	0	0	9
12:15	4	0	0	0	4
12:30	27	0	0	0	27
12:45	4	0	0	0	4
13:00	6	1	0	0	7
13:15	5	0	0	0	5
13:30	7	0	0	0	7
13:45	15	3	0	0	18
14:00	5	0	0	0	5
14:15	12	0	0	0	12
14:30	16	0	0	0	16
14:45	10	0	0	0	10
15:00	11	0	0	0	11
15:15	3	0	0	0	3
15:30	5	1	0	0	6
15:45	0	0	0	0	0
16:00	1	0	0	0	1
16:15	3	0	0	0	3
16:30	7	0	0	0	7
16:45	9	0	0	0	9
17:00	11	0	0	0	11
17:15	2	0	0	0	2
17:30	0	0	0	0	0
17:45	3	0	0	0	3
18:00	6	0	0	0	6
18:15	0	0	0	0	0
18:30	1	0	0	0	1
18:45	1	0	0	0	1
19:00	0	0	0	0	0
19:15	1	0	0	0	1
19:30	0	0	0	0	0
19:45	2	0	0	0	2
20:00	0	0	0	0	0
20:15	0	0	0	0	0
20:30	2	0	0	0	2
20:45	2	0	0	0	2
21:00	3	0	0	0	3
21:15	1	0	0	0	1
21:30	3	0	0	0	3
21:45	1	0	0	0	1
22:00	0	0	0	0	0
22:15	0	0	0	0	0
22:30	2	0	0	0	2
22:45	7	0	0	0	7
23:00	0	0	0	0	0
23:15	0	0	0	0	0
23:30	0	0	0	0	0
23:45	0	0	0	0	0
<b>TOTAL</b>	<b>354</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>360</b>



City: Moreno Valley  
 Location: Heacock - Driveway 3 - East Dwy ONLY  
 Date: 5/14/2020  
 Count Type: Driveway Classification Counts

	Entering				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
0:00	0	0	0	0	0
0:15	0	0	0	0	0
0:30	0	0	0	0	0
0:45	0	0	0	0	0
1:00	1	0	0	0	1
1:15	0	0	0	0	0
1:30	0	0	0	0	0
1:45	0	0	0	0	0
2:00	0	0	0	0	0
2:15	1	0	0	0	1
2:30	1	0	0	0	1
2:45	0	0	0	0	0
3:00	0	0	0	0	0
3:15	4	0	0	0	4
3:30	7	0	0	0	7
3:45	24	0	0	0	24
4:00	2	0	0	0	2
4:15	4	0	0	0	4
4:30	2	0	0	0	2
4:45	5	0	0	0	5
5:00	6	0	0	0	6
5:15	1	0	0	0	1
5:30	8	0	1	0	9
5:45	11	0	0	0	11
6:00	24	0	0	0	24
6:15	16	0	0	0	16
6:30	5	0	0	0	5
6:45	6	0	0	0	6
7:00	5	0	0	0	5
7:15	12	0	0	0	12
7:30	13	0	0	0	13
7:45	36	0	0	0	36
8:00	18	0	0	0	18
8:15	8	0	0	0	8
8:30	2	1	0	0	3
8:45	3	0	0	0	3
9:00	1	0	0	0	1
9:15	1	0	0	0	1
9:30	2	0	0	0	2
9:45	1	0	0	0	1
10:00	1	0	0	0	1
10:15	2	0	0	0	2
10:30	2	0	0	0	2
10:45	0	0	0	0	0
11:00	2	0	0	0	2
11:15	1	0	0	0	1
11:30	2	0	0	0	2
11:45	2	0	0	0	2

	Exiting				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
0:00	0	0	0	0	0
0:15	0	0	0	0	0
0:30	2	0	0	0	2
0:45	0	0	0	0	0
1:00	1	0	0	0	1
1:15	0	0	0	0	0
1:30	1	0	0	0	1
1:45	0	0	0	0	0
2:00	0	0	0	0	0
2:15	0	0	0	0	0
2:30	0	0	0	0	0
2:45	2	0	0	0	2
3:00	0	0	0	0	0
3:15	1	0	0	0	1
3:30	0	0	0	0	0
3:45	0	0	0	0	0
4:00	0	0	0	0	0
4:15	2	0	0	0	2
4:30	2	0	0	0	2
4:45	1	0	0	0	1
5:00	6	0	0	0	6
5:15	1	0	0	0	1
5:30	4	0	1	0	5
5:45	2	0	0	0	2
6:00	4	0	0	0	4
6:15	1	0	0	0	1
6:30	5	0	0	0	5
6:45	3	0	0	0	3
7:00	5	0	0	0	5
7:15	4	0	0	0	4
7:30	26	0	0	0	26
7:45	19	0	0	0	19
8:00	8	0	0	0	8
8:15	11	0	0	0	11
8:30	8	0	0	0	8
8:45	3	1	0	0	4
9:00	5	0	0	0	5
9:15	4	0	0	0	4
9:30	0	0	0	0	0
9:45	0	0	0	0	0
10:00	1	0	0	0	1
10:15	1	0	0	0	1
10:30	4	0	0	0	4
10:45	11	0	0	0	11
11:00	1	0	0	0	1
11:15	1	0	0	0	1
11:30	2	0	0	0	2
11:45	2	0	0	0	2



City: Moreno Valley  
 Location: Heacock - Driveway 3 - East Dwy ONLY  
 Date: 5/14/2020  
 Count Type: Driveway Classification Counts

	Entering				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
12:00	2	0	0	0	2
12:15	5	0	0	0	5
12:30	4	0	0	0	4
12:45	4	0	0	0	4
13:00	3	0	0	0	3
13:15	3	0	0	0	3
13:30	0	0	0	0	0
13:45	2	0	0	0	2
14:00	1	0	0	0	1
14:15	0	0	0	0	0
14:30	0	0	0	0	0
14:45	1	1	0	0	2
15:00	0	0	0	0	0
15:15	0	0	0	0	0
15:30	0	0	0	0	0
15:45	0	0	0	0	0
16:00	0	0	0	0	0
16:15	0	0	0	0	0
16:30	0	0	0	0	0
16:45	0	0	0	0	0
17:00	2	0	0	0	2
17:15	1	0	0	0	1
17:30	1	0	0	0	1
17:45	0	0	0	0	0
18:00	1	0	0	0	1
18:15	0	0	0	0	0
18:30	0	0	0	0	0
18:45	0	0	0	0	0
19:00	0	0	0	0	0
19:15	0	0	0	0	0
19:30	1	0	0	0	1
19:45	1	0	0	0	1
20:00	1	0	0	0	1
20:15	1	0	0	0	1
20:30	3	0	0	0	3
20:45	3	0	0	0	3
21:00	1	0	0	0	1
21:15	1	0	0	0	1
21:30	0	0	0	0	0
21:45	5	0	0	0	5
22:00	6	0	0	0	6
22:15	11	0	0	0	11
22:30	18	0	0	0	18
22:45	20	0	0	0	20
23:00	5	0	0	0	5
23:15	2	0	0	0	2
23:30	0	0	0	0	0
23:45	0	0	0	0	0
<b>TOTAL</b>	<b>351</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>354</b>

	Exiting				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
12:00	16	0	0	0	16
12:15	5	0	0	0	5
12:30	35	0	0	0	35
12:45	9	0	0	0	9
13:00	5	0	0	0	5
13:15	1	0	0	0	1
13:30	4	0	0	0	4
13:45	1	0	0	0	1
14:00	3	0	0	0	3
14:15	7	0	0	0	7
14:30	9	0	0	0	9
14:45	2	0	0	0	2
15:00	11	0	0	0	11
15:15	0	0	0	0	0
15:30	0	1	0	0	1
15:45	9	0	0	0	9
16:00	2	0	0	0	2
16:15	4	0	0	0	4
16:30	23	0	0	0	23
16:45	11	0	0	0	11
17:00	17	0	0	0	17
17:15	6	0	0	0	6
17:30	4	0	0	0	4
17:45	1	0	0	0	1
18:00	1	0	0	0	1
18:15	0	0	0	0	0
18:30	1	0	0	0	1
18:45	4	0	0	0	4
19:00	0	0	0	0	0
19:15	2	0	0	0	2
19:30	0	0	0	0	0
19:45	0	0	0	0	0
20:00	0	0	0	0	0
20:15	1	0	0	0	1
20:30	2	0	0	0	2
20:45	1	0	0	0	1
21:00	2	0	0	0	2
21:15	1	0	0	0	1
21:30	2	0	0	0	2
21:45	0	0	0	0	0
22:00	1	0	0	0	1
22:15	0	0	0	0	0
22:30	3	0	0	0	3
22:45	1	0	0	0	1
23:00	2	0	0	0	2
23:15	2	0	0	0	2
23:30	0	0	0	0	0
23:45	0	0	0	0	0
<b>TOTAL</b>	<b>365</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>368</b>

**APPENDIX 5.1:**

**E+P (NON-PEAK) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**

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Timings

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

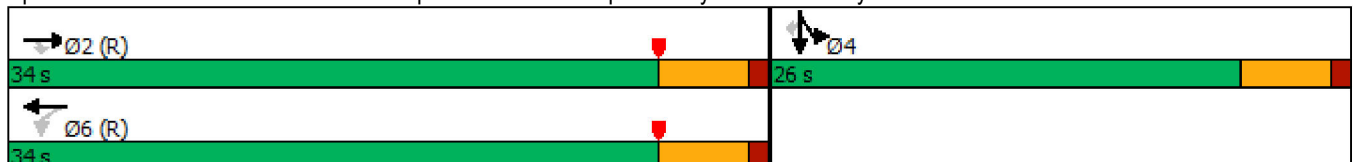


Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↑
Traffic Volume (vph)	671	4	115	189	1	142
Future Volume (vph)	671	4	115	189	1	142
Turn Type	NA	Perm	Perm	NA	NA	Perm
Protected Phases	2			6	4	
Permitted Phases		2	6			4
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	25.0	25.0	10.0	10.0
Total Split (s)	34.0	34.0	34.0	34.0	26.0	26.0
Total Split (%)	56.7%	56.7%	56.7%	56.7%	43.3%	43.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	31.5	31.5	31.5	31.5	18.5	18.5
Actuated g/C Ratio	0.52	0.52	0.52	0.52	0.31	0.31
v/c Ratio	0.41	0.01	0.47	0.11	0.81	0.28
Control Delay	10.1	0.0	29.8	16.2	35.4	4.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.1	0.0	29.8	16.2	35.4	4.4
LOS	B	A	C	B	D	A
Approach Delay	10.1			21.4	25.9	
Approach LOS	B			C	C	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection  
 Natural Cycle: 55  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.81  
 Intersection Signal Delay: 17.5  
 Intersection LOS: B  
 Intersection Capacity Utilization 89.2%  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

11/09/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑						↑	↑
Traffic Volume (veh/h)	0	671	4	115	189	0	0	0	0	318	1	142
Future Volume (veh/h)	0	671	4	115	189	0	0	0	0	318	1	142
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1811	1530	1500	1826	0				1441	1900	1707
Adj Flow Rate, veh/h	0	729	4	125	205	0				346	1	94
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	6	25	27	5	0				31	0	13
Cap, veh/h	0	2050	772	403	2067	0				429	1	344
Arrive On Green	0.00	0.60	0.60	1.00	1.00	0.00				0.24	0.24	0.24
Sat Flow, veh/h	0	3532	1296	580	3561	0				1805	5	1447
Grp Volume(v), veh/h	0	729	4	125	205	0				347	0	94
Grp Sat Flow(s),veh/h/ln	0	1721	1296	580	1735	0				1810	0	1447
Q Serve(g_s), s	0.0	6.5	0.1	3.7	0.0	0.0				10.9	0.0	3.2
Cycle Q Clear(g_c), s	0.0	6.5	0.1	10.2	0.0	0.0				10.9	0.0	3.2
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2050	772	403	2067	0				430	0	344
V/C Ratio(X)	0.00	0.36	0.01	0.31	0.10	0.00				0.81	0.00	0.27
Avail Cap(c_a), veh/h	0	2050	772	403	2067	0				633	0	506
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.98	0.98	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	6.2	4.9	0.9	0.0	0.0				21.6	0.0	18.7
Incr Delay (d2), s/veh	0.0	0.5	0.0	2.0	0.1	0.0				4.8	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.6	0.0	0.2	0.0	0.0				4.5	0.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	6.7	4.9	2.9	0.1	0.0				26.4	0.0	19.1
LnGrp LOS	A	A	A	A	A	A				C	A	B
Approach Vol, veh/h		733			330						441	
Approach Delay, s/veh		6.7			1.2						24.9	
Approach LOS		A			A						C	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		40.7		19.3		40.7						
Change Period (Y+Rc), s		5.0		5.0		5.0						
Max Green Setting (Gmax), s		29.0		21.0		29.0						
Max Q Clear Time (g_c+I1), s		8.5		12.9		12.2						
Green Ext Time (p_c), s		2.9		1.4		1.6						
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				10.8								
HCM 6th LOS				B								



Timings

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

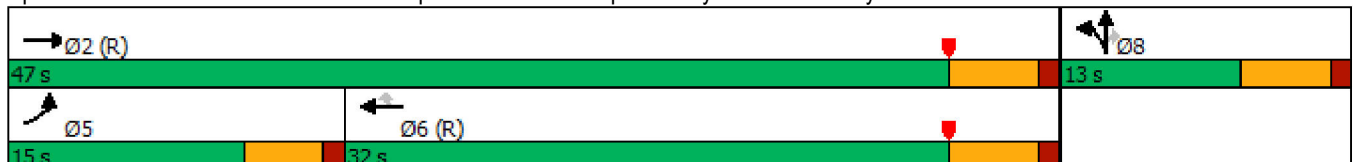


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations	↘	↕↕	↕↕	↗	↖	↗
Traffic Volume (vph)	393	596	299	824	3	50
Future Volume (vph)	393	596	299	824	3	50
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	26.0	24.0	24.0	10.0	10.0
Total Split (s)	15.0	47.0	32.0	32.0	13.0	13.0
Total Split (%)	25.0%	78.3%	53.3%	53.3%	21.7%	21.7%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max
Act Effct Green (s)	10.5	42.0	27.0	27.0	8.0	8.0
Actuated g/C Ratio	0.18	0.70	0.45	0.45	0.13	0.13
v/c Ratio	1.43	0.31	0.23	0.98	0.04	0.20
Control Delay	233.1	3.9	10.6	37.3	23.1	2.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	233.1	3.9	10.6	37.3	23.1	2.3
LOS	F	A	B	D	C	A
Approach Delay		94.9	30.2		5.0	
Approach LOS		F	C		A	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 29 (48%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.43  
 Intersection Signal Delay: 59.1  
 Intersection LOS: E  
 Intersection Capacity Utilization 89.2%  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

11/17/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑			↑↑	↗		↘	↗			
Traffic Volume (veh/h)	393	596	0	0	299	824	5	3	50	0	0	0
Future Volume (veh/h)	393	596	0	0	299	824	5	3	50	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1811	1618	0	0	1707	1737	1544	1900	1544			
Adj Flow Rate, veh/h	427	648	0	0	325	564	5	3	-11			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	6	19	0	0	13	11	24	0	24			
Cap, veh/h	302	2152	0	0	1460	662	154	92	174			
Arrive On Green	0.12	0.47	0.00	0.00	0.45	0.45	0.13	0.13	0.00			
Sat Flow, veh/h	1725	3156	0	0	3329	1471	1152	691	1309			
Grp Volume(v), veh/h	427	648	0	0	325	564	8	0	-11			
Grp Sat Flow(s),veh/h/ln	1725	1537	0	0	1622	1471	1842	0	1309			
Q Serve(g_s), s	10.5	7.8	0.0	0.0	3.7	20.5	0.2	0.0	0.0			
Cycle Q Clear(g_c), s	10.5	7.8	0.0	0.0	3.7	20.5	0.2	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.62		1.00			
Lane Grp Cap(c), veh/h	302	2152	0	0	1460	662	246	0	174			
V/C Ratio(X)	1.41	0.30	0.00	0.00	0.22	0.85	0.03	0.00	-0.06			
Avail Cap(c_a), veh/h	302	2152	0	0	1460	662	246	0	174			
HCM Platoon Ratio	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.92	0.92	0.00	0.00	0.92	0.92	1.00	0.00	0.00			
Uniform Delay (d), s/veh	26.5	6.9	0.0	0.0	10.1	14.7	22.6	0.0	0.0			
Incr Delay (d2), s/veh	203.7	0.3	0.0	0.0	0.3	12.2	0.2	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	21.1	1.4	0.0	0.0	1.1	7.3	0.1	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	230.2	7.2	0.0	0.0	10.4	26.9	22.9	0.0	0.0			
LnGrp LOS	F	A	A	A	B	C	C	A	A			
Approach Vol, veh/h		1075			889			-3				
Approach Delay, s/veh		95.8			20.9			0.0				
Approach LOS		F			C			A				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		47.0			15.0	32.0		13.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		42.0			10.5	27.0		8.0				
Max Q Clear Time (g_c+1), s		9.8			12.5	22.5		2.2				
Green Ext Time (p_c), s		2.8			0.0	1.2		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					62.0							
HCM 6th LOS					E							

Timings  
3: Western Way & Harley Knox Bl.



Lane Group	EBL	EBT	WBT	SBL	SBT	Ø1	Ø8
Lane Configurations	↖	↑↑↑	↑↑↑	↖	↗		
Traffic Volume (vph)	66	593	1110	5	0		
Future Volume (vph)	66	593	1110	5	0		
Turn Type	Prot	NA	NA	Perm	NA		
Protected Phases	5	2	6		4	1	8
Permitted Phases				4			
Detector Phase	5	2	6	4	4		
Switch Phase							
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	21.8	21.8	32.6	32.6	9.6	32.6
Total Split (s)	22.0	75.4	63.0	35.0	35.0	9.6	35.0
Total Split (%)	18.3%	62.8%	52.5%	29.2%	29.2%	8%	29%
Yellow Time (s)	3.6	4.8	4.8	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.6	5.8	5.8	4.6	4.6		
Lead/Lag	Lead	Lag	Lag			Lead	
Lead-Lag Optimize?	Yes	Yes	Yes			Yes	
Recall Mode	None	None	None	None	None	None	None
Act Effct Green (s)	9.7	38.8	32.7	17.0	17.0		
Actuated g/C Ratio	0.19	0.78	0.66	0.34	0.34		
v/c Ratio	0.23	0.19	0.40	0.01	0.07		
Control Delay	29.9	4.7	12.0	22.6	0.3		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	29.9	4.7	12.0	22.6	0.3		
LOS	C	A	B	C	A		
Approach Delay		7.2	12.0		2.9		
Approach LOS		A	B		A		

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 49.9  
 Natural Cycle: 65  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.40  
 Intersection Signal Delay: 10.1  
 Intersection LOS: B  
 Intersection Capacity Utilization 47.7%  
 ICU Level of Service A  
 Analysis Period (min) 15


























Splits and Phases: 3: Western Way & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 3: Western Way & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  							
Traffic Volume (veh/h)	66	593	0	0	1110	33	0	0	0	5	0	34
Future Volume (veh/h)	66	593	0	0	1110	33	0	0	0	5	0	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1693	1604	1900	1900	1752	1678	1900	1900	1900	1337	1900	1203
Adj Flow Rate, veh/h	71	638	0	0	1194	33	0	0	0	5	0	28
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	14	20	0	0	10	15	0	0	0	38	0	47
Cap, veh/h	110	2877	1058	5	2261	62	182	153	0	284	0	129
Arrive On Green	0.07	0.66	0.00	0.00	0.47	0.47	0.00	0.00	0.00	0.08	0.00	0.08
Sat Flow, veh/h	1612	4378	1610	1810	4784	132	1404	1900	0	1268	0	1610
Grp Volume(v), veh/h	71	638	0	0	796	431	0	0	0	5	0	28
Grp Sat Flow(s),veh/h/ln	1612	1459	1610	1810	1594	1728	1404	1900	0	1268	0	1610
Q Serve(g_s), s	1.7	2.3	0.0	0.0	6.9	7.0	0.0	0.0	0.0	0.1	0.0	0.6
Cycle Q Clear(g_c), s	1.7	2.3	0.0	0.0	6.9	7.0	0.0	0.0	0.0	0.1	0.0	0.6
Prop In Lane	1.00		1.00	1.00		0.08	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	110	2877	1058	5	1507	817	182	153	0	284	0	129
V/C Ratio(X)	0.64	0.22	0.00	0.00	0.53	0.53	0.00	0.00	0.00	0.02	0.00	0.22
Avail Cap(c_a), veh/h	708	7691	2829	228	4603	2495	1146	1458	0	1155	0	1236
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.0	2.7	0.0	0.0	7.3	7.3	0.0	0.0	0.0	16.8	0.0	17.0
Incr Delay (d2), s/veh	2.3	0.0	0.0	0.0	0.3	0.5	0.0	0.0	0.0	0.0	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.1	0.0	0.0	1.2	1.4	0.0	0.0	0.0	0.0	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.3	2.8	0.0	0.0	7.6	7.9	0.0	0.0	0.0	16.8	0.0	17.9
LnGrp LOS	C	A	A	A	A	A	A	A	A	B	A	B
Approach Vol, veh/h		709			1227			0				33
Approach Delay, s/veh		4.5			7.7			0.0				17.7
Approach LOS		A			A							B
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	31.8		7.8	7.3	24.5		7.8				
Change Period (Y+Rc), s	4.6	5.8		4.6	4.6	5.8		4.6				
Max Green Setting (Gmax), s	5.0	69.6		30.4	17.4	57.2		30.4				
Max Q Clear Time (g_c+1), s	0.0	4.3		2.6	3.7	9.0		0.0				
Green Ext Time (p_c), s	0.0	4.6		0.1	0.1	9.8		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			6.7									
HCM 6th LOS			A									

Timings

4: Patterson Av. & Harley Knox Bl.

11/09/2020

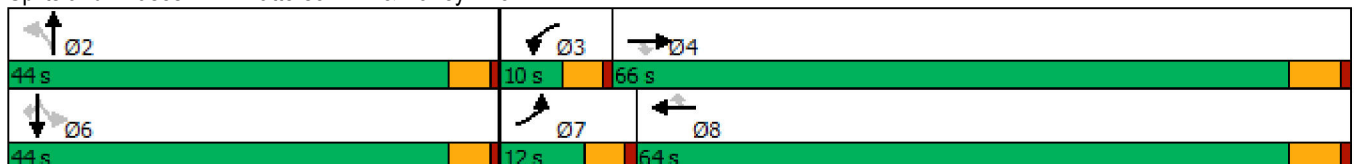


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑	↗	↖	↑↑	↗		↕		↕	↗
Traffic Volume (vph)	20	539	11	12	1074	14	53	6	11	3	17
Future Volume (vph)	20	539	11	12	1074	14	53	6	11	3	17
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	7	4		3	8			2		6	
Permitted Phases			4			8	2		6		6
Detector Phase	7	4	4	3	8	8	2	2	6	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	9.6	31.8	31.8	33.7	33.7	40.7	40.7	40.7
Total Split (s)	12.0	66.0	66.0	10.0	64.0	64.0	44.0	44.0	44.0	44.0	44.0
Total Split (%)	10.0%	55.0%	55.0%	8.3%	53.3%	53.3%	36.7%	36.7%	36.7%	36.7%	36.7%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8		4.7		4.7	4.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	6.7	42.5	42.5	6.1	40.1	40.1		15.1		15.1	15.1
Actuated g/C Ratio	0.11	0.67	0.67	0.10	0.63	0.63		0.24		0.24	0.24
v/c Ratio	0.15	0.19	0.01	0.12	0.56	0.02		0.27		0.07	0.06
Control Delay	39.7	7.5	0.0	41.8	13.1	0.1		24.8		25.1	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	39.7	7.5	0.0	41.8	13.1	0.1		24.8		25.1	0.4
LOS	D	A	A	D	B	A		C		C	A
Approach Delay		8.5			13.3			24.8		11.6	
Approach LOS		A			B			C		B	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 63.3  
 Natural Cycle: 85  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.56  
 Intersection Signal Delay: 12.2  
 Intersection LOS: B  
 Intersection Capacity Utilization 59.0%  
 ICU Level of Service B  
 Analysis Period (min) 15



























Splits and Phases: 4: Patterson Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 4: Patterson Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/09/2020

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		  			 			 				 	
Traffic Volume (veh/h)	20	539	11	12	1074	14	53	6	11	11	3	17	
Future Volume (veh/h)	20	539	11	12	1074	14	53	6	11	11	3	17	
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No			No			No			No		
Adj Sat Flow, veh/h/ln	1455	1678	1767	1055	1767	1026	1559	1426	1633	863	952	1278	
Adj Flow Rate, veh/h	22	586	12	13	1167	15	58	7	12	12	3	18	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Percent Heavy Veh, %	30	15	9	57	9	59	23	32	18	70	64	42	
Cap, veh/h	37	2376	777	17	1708	442	249	30	28	227	33	171	
Arrive On Green	0.03	0.52	0.52	0.02	0.51	0.51	0.16	0.16	0.16	0.16	0.16	0.16	
Sat Flow, veh/h	1386	4580	1497	1005	3357	869	762	190	176	601	211	1083	
Grp Volume(v), veh/h	22	586	12	13	1167	15	77	0	0	15	0	18	
Grp Sat Flow(s),veh/h/ln	1386	1527	1497	1005	1678	869	1128	0	0	813	0	1083	
Q Serve(g_s), s	0.8	3.5	0.2	0.6	12.9	0.4	2.3	0.0	0.0	0.0	0.0	0.7	
Cycle Q Clear(g_c), s	0.8	3.5	0.2	0.6	12.9	0.4	2.9	0.0	0.0	0.7	0.0	0.7	
Prop In Lane	1.00		1.00	1.00		1.00	0.75		0.16	0.80		1.00	
Lane Grp Cap(c), veh/h	37	2376	777	17	1708	442	306	0	0	260	0	171	
V/C Ratio(X)	0.60	0.25	0.02	0.78	0.68	0.03	0.25	0.00	0.00	0.06	0.00	0.11	
Avail Cap(c_a), veh/h	208	5600	1831	110	3968	1027	1015	0	0	738	0	864	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	
Uniform Delay (d), s/veh	23.7	6.5	5.7	24.1	9.1	6.0	18.6	0.0	0.0	17.7	0.0	17.7	
Incr Delay (d2), s/veh	5.8	0.1	0.0	24.9	0.5	0.0	0.4	0.0	0.0	0.1	0.0	0.3	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.3	0.7	0.0	0.2	2.9	0.1	0.7	0.0	0.0	0.1	0.0	0.2	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	29.5	6.6	5.8	49.0	9.6	6.1	19.1	0.0	0.0	17.8	0.0	18.0	
LnGrp LOS	C	A	A	D	A	A	B	A	A	B	A	B	
Approach Vol, veh/h		620			1195			77				33	
Approach Delay, s/veh		7.4			10.0			19.1				17.9	
Approach LOS		A			A			B				B	
Timer - Assigned Phs		2	3	4		6	7	8					
Phs Duration (G+Y+Rc), s		12.5	5.4	31.3		12.5	5.9	30.9					
Change Period (Y+Rc), s		* 4.7	4.6	5.8		* 4.7	4.6	5.8					
Max Green Setting (Gmax), s		* 39	5.4	60.2		* 39	7.4	58.2					
Max Q Clear Time (g_c+I1), s		4.9	2.6	5.5		2.7	2.8	14.9					
Green Ext Time (p_c), s		0.4	0.0	4.2		0.1	0.0	10.2					
<b>Intersection Summary</b>													
HCM 6th Ctrl Delay			9.6										
HCM 6th LOS			A										
<b>Notes</b>													
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.													

Timings  
5: Heacock Street & Cactus Avenue

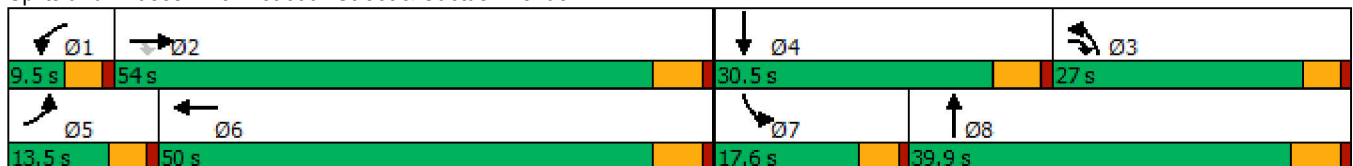


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↗	↘	↖	↗	↖	↗	↖	↗
Traffic Volume (vph)	111	507	420	27	1131	604	431	99	201
Future Volume (vph)	111	507	420	27	1131	604	431	99	201
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	3	1	6	3	8	7	4
Permitted Phases			2						
Detector Phase	5	2	3	1	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.5	30.5	9.5	9.5	30.5	9.5	30.5	9.5	30.5
Total Split (s)	13.5	54.0	27.0	9.5	50.0	27.0	39.9	17.6	30.5
Total Split (%)	11.2%	44.6%	22.3%	7.9%	41.3%	22.3%	33.0%	14.5%	25.2%
Yellow Time (s)	3.5	4.5	3.5	3.5	4.5	3.5	4.5	3.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	4.5	4.5	5.5	4.5	5.5	4.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None
Act Effct Green (s)	8.8	48.4	73.3	5.1	40.4	21.8	25.6	9.9	13.7
Actuated g/C Ratio	0.08	0.46	0.70	0.05	0.39	0.21	0.24	0.09	0.13
v/c Ratio	0.74	0.31	0.34	0.31	0.88	0.85	0.53	0.59	0.56
Control Delay	77.1	19.9	2.2	61.6	38.8	52.8	37.4	61.7	41.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	77.1	19.9	2.2	61.6	38.8	52.8	37.4	61.7	41.0
LOS	E	B	A	E	D	D	D	E	D
Approach Delay		18.8			39.3		46.3		46.4
Approach LOS		B			D		D		D

Intersection Summary

Cycle Length: 121  
 Actuated Cycle Length: 104.9  
 Natural Cycle: 110  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.88  
 Intersection Signal Delay: 36.3  
 Intersection LOS: D  
 Intersection Capacity Utilization 82.8%  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 5: Heacock Street & Cactus Avenue


























HCM 6th Signalized Intersection Summary  
5: Heacock Street & Cactus Avenue

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	111	507	420	27	1131	98	604	431	16	99	201	75
Future Volume (veh/h)	111	507	420	27	1131	98	604	431	16	99	201	75
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1856	1707	1900	1885	1841	1811	1826	1811	1870	1811	1885
Adj Flow Rate, veh/h	116	528	438	28	1178	102	629	449	17	103	209	78
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	3	13	0	1	4	6	5	6	2	6	1
Cap, veh/h	144	1632	931	50	1320	114	703	883	33	130	283	102
Arrive On Green	0.08	0.44	0.44	0.03	0.39	0.39	0.20	0.25	0.25	0.07	0.11	0.11
Sat Flow, veh/h	1781	3711	1447	1810	3421	296	3450	3496	132	1781	2540	917
Grp Volume(v), veh/h	116	528	438	28	648	632	629	234	232	103	147	140
Grp Sat Flow(s),veh/h/ln	1781	1856	1447	1810	1885	1832	1725	1826	1802	1781	1811	1646
Q Serve(g_s), s	6.2	9.0	3.1	1.5	31.0	31.2	17.1	10.6	10.6	5.5	7.6	8.0
Cycle Q Clear(g_c), s	6.2	9.0	3.1	1.5	31.0	31.2	17.1	10.6	10.6	5.5	7.6	8.0
Prop In Lane	1.00		1.00	1.00		0.16	1.00		0.07	1.00		0.56
Lane Grp Cap(c), veh/h	144	1632	931	50	728	707	703	461	455	130	202	184
V/C Ratio(X)	0.80	0.32	0.47	0.57	0.89	0.89	0.89	0.51	0.51	0.79	0.73	0.76
Avail Cap(c_a), veh/h	166	1866	1022	94	870	845	805	651	643	242	469	427
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.6	17.7	2.3	46.3	27.7	27.8	37.4	30.9	30.9	44.0	41.4	41.6
Incr Delay (d2), s/veh	18.7	0.0	0.1	3.7	9.1	9.5	10.6	0.3	0.3	4.0	1.9	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	3.5	0.7	0.7	14.6	14.3	7.9	4.5	4.4	2.5	3.3	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.3	17.7	2.5	50.1	36.8	37.3	48.0	31.2	31.3	48.0	43.3	44.1
LnGrp LOS	E	B	A	D	D	D	D	C	C	D	D	D
Approach Vol, veh/h		1082			1308			1095			390	
Approach Delay, s/veh		16.3			37.3			40.9			44.8	
Approach LOS		B			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.1	47.9	25.2	16.3	12.3	42.7	11.6	29.9				
Change Period (Y+Rc), s	4.5	5.5	5.5	* 5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	5.0	48.5	22.5	* 25	9.0	44.5	13.1	34.4				
Max Q Clear Time (g_c+I1), s	3.5	11.0	19.1	10.0	8.2	33.2	7.5	12.6				
Green Ext Time (p_c), s	0.0	2.8	0.5	0.8	0.0	4.0	0.0	1.5				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			33.2									
HCM 6th LOS			C									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												



Timings  
6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

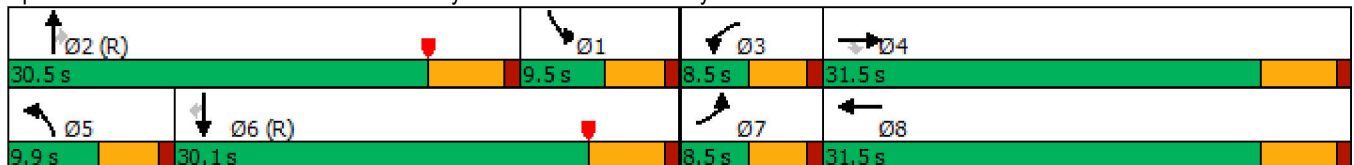
11/09/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	35	32	87	15	193	24	781	44	89	508	17	
Future Volume (vph)	35	32	87	15	193	24	781	44	89	508	17	
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	7	4		3	8	5	2		1	6		
Permitted Phases			4					2			6	
Detector Phase	7	4	4	3	8	5	2	2	1	6	6	
Switch Phase												
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	
Minimum Split (s)	8.5	23.5	23.5	8.5	31.5	8.5	30.5	30.5	8.5	23.5	23.5	
Total Split (s)	8.5	31.5	31.5	8.5	31.5	9.9	30.5	30.5	9.5	30.1	30.1	
Total Split (%)	10.6%	39.4%	39.4%	10.6%	39.4%	12.4%	38.1%	38.1%	11.9%	37.6%	37.6%	
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5	4.5	4.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	5.5	4.5	5.5	5.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max	
Act Effct Green (s)	4.0	15.0	15.0	4.0	11.6	5.3	42.8	42.8	5.0	48.1	48.1	
Actuated g/C Ratio	0.05	0.19	0.19	0.05	0.14	0.07	0.54	0.54	0.06	0.60	0.60	
v/c Ratio	0.44	0.10	0.17	0.19	0.55	0.21	0.42	0.05	0.81	0.26	0.02	
Control Delay	54.9	23.2	0.7	41.9	18.4	39.6	14.7	0.1	84.6	11.8	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	54.9	23.2	0.7	41.9	18.4	39.6	14.7	0.1	84.6	11.8	0.1	
LOS	D	C	A	D	B	D	B	A	F	B	A	
Approach Delay		17.5			19.3		14.6			22.0		
Approach LOS		B			B		B			C		

Intersection Summary

Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 80  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.81  
 Intersection Signal Delay: 18.0  
 Intersection LOS: B  
 Intersection Capacity Utilization 59.2%  
 ICU Level of Service B  
 Analysis Period (min) 15
























Splits and Phases: 6: Heacock Street & Meyer Drive/John F. Kennedy Drive















HCM 6th Signalized Intersection Summary  
 6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	32	87	15	193	170	24	781	44	89	508	17
Future Volume (veh/h)	35	32	87	15	193	170	24	781	44	89	508	17
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.95	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1648	1767	1826	1707	1841	1885	1781	1811	1767	1856	1737	1648
Adj Flow Rate, veh/h	36	33	91	16	201	177	25	814	46	93	529	18
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	17	9	5	13	4	1	8	6	9	3	11	17
Cap, veh/h	43	302	265	24	294	244	36	1132	443	422	1885	748
Arrive On Green	0.03	0.17	0.17	0.01	0.16	0.16	0.02	0.31	0.31	0.24	0.54	0.54
Sat Flow, veh/h	1570	1767	1547	1626	1853	1535	1697	3622	1417	1767	3474	1379
Grp Volume(v), veh/h	36	33	91	16	200	178	25	814	46	93	529	18
Grp Sat Flow(s),veh/h/ln	1570	1767	1547	1626	1841	1547	1697	1811	1417	1767	1737	1379
Q Serve(g_s), s	1.8	1.3	4.1	0.8	8.2	8.8	1.2	15.9	1.5	3.4	6.6	0.5
Cycle Q Clear(g_c), s	1.8	1.3	4.1	0.8	8.2	8.8	1.2	15.9	1.5	3.4	6.6	0.5
Prop In Lane	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	43	302	265	24	292	245	36	1132	443	422	1885	748
V/C Ratio(X)	0.83	0.11	0.34	0.66	0.68	0.73	0.69	0.72	0.10	0.22	0.28	0.02
Avail Cap(c_a), veh/h	78	574	503	81	598	503	115	1132	443	422	1885	748
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.93	0.93	0.93	0.91	0.91	0.91
Uniform Delay (d), s/veh	38.7	28.0	29.2	39.2	31.8	32.0	38.9	24.4	12.4	24.5	9.9	8.5
Incr Delay (d2), s/veh	14.0	0.1	0.3	10.7	1.1	1.5	7.9	3.7	0.4	0.1	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.5	1.5	0.4	3.5	3.2	0.5	6.6	0.6	1.3	2.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.8	28.1	29.5	49.9	32.8	33.6	46.8	28.1	12.8	24.6	10.2	8.5
LnGrp LOS	D	C	C	D	C	C	D	C	B	C	B	A
Approach Vol, veh/h		160			394			885			640	
Approach Delay, s/veh		34.4			33.8			27.8			12.3	
Approach LOS		C			C			C			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	24.6	30.5	5.7	19.2	6.2	48.9	6.7	18.2				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	5.0	* 25	4.0	26.0	5.4	24.6	4.0	26.0				
Max Q Clear Time (g_c+I1), s	5.4	17.9	2.8	6.1	3.2	8.6	3.8	10.8				
Green Ext Time (p_c), s	0.0	2.1	0.0	0.2	0.0	1.8	0.0	1.1				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			24.7									
HCM 6th LOS			C									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings  
7: Heacock Street & Gentian Avenue

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	12	13	690	8	81	538
Future Volume (vph)	12	13	690	8	81	538
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	27.6	27.6	27.2	27.2	9.6	16.2
Total Split (s)	28.0	28.0	65.0	65.0	27.0	92.0
Total Split (%)	23.3%	23.3%	54.2%	54.2%	22.5%	76.7%
Yellow Time (s)	3.6	3.6	5.2	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	6.2	6.2	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	12.6	12.6	29.1	29.1	7.6	41.6
Actuated g/C Ratio	0.25	0.25	0.59	0.59	0.15	0.84
v/c Ratio	0.03	0.03	0.39	0.01	0.30	0.22
Control Delay	18.2	10.5	11.7	10.5	26.2	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.2	10.5	11.7	10.5	26.2	4.2
LOS	B	B	B	B	C	A
Approach Delay	14.2		11.7			7.0
Approach LOS	B		B			A

Intersection Summary













Cycle Length: 120	
Actuated Cycle Length: 49.7	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.39	
Intersection Signal Delay: 9.6	Intersection LOS: A
Intersection Capacity Utilization 44.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 7: Heacock Street & Gentian Avenue



















HCM 6th Signalized Intersection Summary  
7: Heacock Street & Gentian Avenue

Gateway Aviation TA (JN:13445)  
11/09/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	12	13	690	8	81	538
Future Volume (veh/h)	12	13	690	8	81	538
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1781	1707	1870	1870	1678
Adj Flow Rate, veh/h	13	14	726	8	85	566
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	8	13	2	2	15
Cap, veh/h	120	100	1264	617	146	1942
Arrive On Green	0.07	0.07	0.39	0.39	0.08	0.61
Sat Flow, veh/h	1810	1510	3329	1585	1781	3272
Grp Volume(v), veh/h	13	14	726	8	85	566
Grp Sat Flow(s),veh/h/ln	1810	1510	1622	1585	1781	1594
Q Serve(g_s), s	0.2	0.3	5.9	0.1	1.5	2.8
Cycle Q Clear(g_c), s	0.2	0.3	5.9	0.1	1.5	2.8
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	120	100	1264	617	146	1942
V/C Ratio(X)	0.11	0.14	0.57	0.01	0.58	0.29
Avail Cap(c_a), veh/h	1271	1061	5727	2798	1198	8212
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.6	14.7	8.0	6.2	14.7	3.1
Incr Delay (d2), s/veh	0.1	0.2	0.4	0.0	1.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.1	0.9	0.0	0.5	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	14.8	14.9	8.4	6.2	16.1	3.2
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	27		734			651
Approach Delay, s/veh	14.8		8.4			4.9
Approach LOS	B		A			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	7.3	19.2			26.5	6.8
Change Period (Y+Rc), s	4.6	6.2			6.2	4.6
Max Green Setting (Gmax), s	22.4	58.8			85.8	23.4
Max Q Clear Time (g_c+I1), s	3.5	7.9			4.8	2.3
Green Ext Time (p_c), s	0.1	5.1			3.8	0.0
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			6.9			
HCM 6th LOS			A			

Timings  
8: Heacock Street & Iris Avenue

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 		 		 	 
Traffic Volume (vph)	63	367	327	53	234	324
Future Volume (vph)	63	367	327	53	234	324
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	15.8	15.8	33.2	33.2	9.6	16.2
Total Split (s)	48.0	48.0	61.0	61.0	11.0	72.0
Total Split (%)	40.0%	40.0%	50.8%	50.8%	9.2%	60.0%
Yellow Time (s)	4.8	4.8	5.2	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	6.2	6.2	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	10.4	10.4	13.1	13.1	6.5	24.3
Actuated g/C Ratio	0.22	0.22	0.28	0.28	0.14	0.52
v/c Ratio	0.09	0.57	0.43	0.13	0.55	0.23
Control Delay	16.9	6.1	14.9	4.4	26.2	6.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.9	6.1	14.9	4.4	26.2	6.4
LOS	B	A	B	A	C	A
Approach Delay	7.7		13.5			14.7
Approach LOS	A		B			B

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 46.9	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.57	
Intersection Signal Delay: 12.2	Intersection LOS: B
Intersection Capacity Utilization 41.8%	ICU Level of Service A
Analysis Period (min) 15	

















Splits and Phases: 8: Heacock Street & Iris Avenue



HCM 6th Signalized Intersection Summary  
8: Heacock Street & Iris Avenue

Gateway Aviation TA (JN:13445)

11/09/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 		 		 	 
Traffic Volume (veh/h)	63	367	327	53	234	324
Future Volume (veh/h)	63	367	327	53	234	324
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1856	1885	1707	1870	1870	1678
Adj Flow Rate, veh/h	74	432	385	62	275	381
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	3	1	13	2	2	15
Cap, veh/h	1123	524	678	331	401	1343
Arrive On Green	0.33	0.33	0.21	0.21	0.12	0.42
Sat Flow, veh/h	3428	1598	3329	1585	3456	3272
Grp Volume(v), veh/h	74	432	385	62	275	381
Grp Sat Flow(s),veh/h/ln	1714	1598	1622	1585	1728	1594
Q Serve(g_s), s	0.7	11.9	5.1	1.5	3.7	3.8
Cycle Q Clear(g_c), s	0.7	11.9	5.1	1.5	3.7	3.8
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	1123	524	678	331	401	1343
V/C Ratio(X)	0.07	0.83	0.57	0.19	0.69	0.28
Avail Cap(c_a), veh/h	3025	1410	3717	1816	462	4386
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.0	14.8	17.0	15.6	20.3	9.1
Incr Delay (d2), s/veh	0.0	3.4	0.7	0.3	2.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	3.7	1.5	0.5	1.3	0.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.1	18.2	17.7	15.8	22.7	9.2
LnGrp LOS	B	B	B	B	C	A
Approach Vol, veh/h	506		447			656
Approach Delay, s/veh	17.1		17.5			14.9
Approach LOS	B		B			B
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	10.2	16.2			26.4	21.5
Change Period (Y+Rc), s	4.6	6.2			6.2	5.8
Max Green Setting (Gmax), s	6.4	54.8			65.8	42.2
Max Q Clear Time (g_c+I1), s	5.7	7.1			5.8	13.9
Green Ext Time (p_c), s	0.0	2.6			2.4	1.8
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			16.3			
HCM 6th LOS			B			

Timings  
9: Heacock Street & Krameria Avenue-North



Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations	↶	↷	↕	↷	↕
Traffic Volume (vph)	12	52	236	18	289
Future Volume (vph)	12	52	236	18	289
Turn Type	Prot	Perm	NA	Prot	NA
Protected Phases	8		2	1	6
Permitted Phases		8			
Detector Phase	8	8	2	1	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	29.1	29.1	29.2	9.6	16.2
Total Split (s)	39.0	39.0	55.0	26.0	81.0
Total Split (%)	32.5%	32.5%	45.8%	21.7%	67.5%
Yellow Time (s)	4.1	4.1	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	6.2	4.6	6.2
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	Min	Max	Min
Act Effct Green (s)	12.6	12.6	12.5	22.8	43.5
Actuated g/C Ratio	0.22	0.22	0.22	0.40	0.77
v/c Ratio	0.04	0.14	0.40	0.04	0.14
Control Delay	21.2	7.5	22.4	18.2	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	21.2	7.5	22.4	18.2	4.8
LOS	C	A	C	B	A
Approach Delay	10.1		22.4		5.6
Approach LOS	B		C		A

Intersection Summary














Cycle Length: 120  
 Actuated Cycle Length: 56.7  
 Natural Cycle: 70  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.40  
 Intersection Signal Delay: 12.7  
 Intersection LOS: B  
 Intersection Capacity Utilization 32.7%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 9: Heacock Street & Krameria Avenue-North



HCM 6th Signalized Intersection Summary  
 9: Heacock Street & Krameria Avenue-North

Gateway Aviation TA (JN:13445)  
 11/09/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			 			 
Traffic Volume (veh/h)	12	52	236	9	18	289
Future Volume (veh/h)	12	52	236	9	18	289
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1648	1841	1811	1722	1233	1781
Adj Flow Rate, veh/h	15	64	291	11	22	357
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	17	4	6	12	45	8
Cap, veh/h	201	200	623	23	463	2246
Arrive On Green	0.13	0.13	0.18	0.18	0.39	0.66
Sat Flow, veh/h	1570	1560	3472	127	1174	3474
Grp Volume(v), veh/h	15	64	148	154	22	357
Grp Sat Flow(s),veh/h/ln	1570	1560	1721	1788	1174	1692
Q Serve(g_s), s	0.5	2.0	4.2	4.2	0.6	2.2
Cycle Q Clear(g_c), s	0.5	2.0	4.2	4.2	0.6	2.2
Prop In Lane	1.00	1.00		0.07	1.00	
Lane Grp Cap(c), veh/h	201	200	317	330	463	2246
V/C Ratio(X)	0.07	0.32	0.47	0.47	0.05	0.16
Avail Cap(c_a), veh/h	981	975	1547	1608	463	4666
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.8	21.5	19.7	19.8	10.1	3.4
Incr Delay (d2), s/veh	0.1	0.3	0.4	0.4	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.7	1.4	1.5	0.1	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	20.9	21.8	20.1	20.1	10.3	3.4
LnGrp LOS	C	C	C	C	B	A
Approach Vol, veh/h	79		302			379
Approach Delay, s/veh	21.7		20.1			3.8
Approach LOS	C		C			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	26.0	16.2			42.2	12.1
Change Period (Y+Rc), s	4.6	6.2			6.2	5.1
Max Green Setting (Gmax), s	21.4	48.8			74.8	33.9
Max Q Clear Time (g_c+1), s	2.6	6.2			4.2	4.0
Green Ext Time (p_c), s	0.0	0.9			1.3	0.1
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			12.2			
HCM 6th LOS			B			



Timings  
10: Heacock Street & Driveway 1



Lane Group	EBL	EBT	NBL	NBT	SBT	SBR	Ø1	Ø8
Lane Configurations								
Traffic Volume (vph)	31	0	56	193	221	57		
Future Volume (vph)	31	0	56	193	221	57		
Turn Type	Perm	NA	Prot	NA	NA	Perm		
Protected Phases		4	5	2	6		1	8
Permitted Phases	4					6		
Detector Phase	4	4	5	2	6	6		
Switch Phase								
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	26.6	26.6	9.6	23.2	23.2	23.2	9.6	26.6
Total Split (s)	26.6	26.6	9.6	83.8	83.8	83.8	9.6	26.6
Total Split (%)	22.2%	22.2%	8.0%	69.8%	69.8%	69.8%	8%	22%
Yellow Time (s)	3.6	3.6	3.6	5.2	5.2	5.2	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.6	4.6	4.6	6.2	6.2	6.2		
Lead/Lag			Lead	Lag	Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	Min	Min	Min	None	None
Act Effct Green (s)	12.0	12.0	5.1	30.3	17.7	17.7		
Actuated g/C Ratio	0.27	0.27	0.12	0.68	0.40	0.40		
v/c Ratio	0.09	0.04	0.34	0.09	0.18	0.09		
Control Delay	12.6	0.1	27.0	6.4	12.7	5.5		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay	12.6	0.1	27.0	6.4	12.7	5.5		
LOS	B	A	C	A	B	A		
Approach Delay		6.1		11.0	11.2			
Approach LOS		A		B	B			

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 44.3	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.34	
Intersection Signal Delay: 10.6	Intersection LOS: B
Intersection Capacity Utilization 33.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 10: Heacock Street & Driveway 1

Ø1	Ø2	Ø4
9.6 s	83.8 s	26.6 s
Ø5	Ø6	Ø8
9.6 s	83.8 s	26.6 s

HCM 6th Signalized Intersection Summary  
 10: Heacock Street & Driveway 1

Gateway Aviation TA (JN:13445)

11/17/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	31	0	34	0	0	0	56	193	0	0	221	57	
Future Volume (veh/h)	31	0	34	0	0	0	56	193	0	0	221	57	
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1663	1781	1781	1900	1737	1900	
Adj Flow Rate, veh/h	34	0	37	0	0	0	61	210	0	0	240	62	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Percent Heavy Veh, %	0	0	0	0	0	0	16	8	8	0	11	0	
Cap, veh/h	488	0	235	0	277	0	103	1756	0	6	1025	500	
Arrive On Green	0.15	0.00	0.15	0.00	0.00	0.00	0.07	0.52	0.00	0.00	0.31	0.31	
Sat Flow, veh/h	1810	0	1610	0	1900	0	1584	3474	0	1810	3300	1610	
Grp Volume(v), veh/h	34	0	37	0	0	0	61	210	0	0	240	62	
Grp Sat Flow(s),veh/h/ln	1810	0	1610	0	1900	0	1584	1692	0	1810	1650	1610	
Q Serve(g_s), s	0.5	0.0	0.6	0.0	0.0	0.0	1.2	1.0	0.0	0.0	1.7	0.9	
Cycle Q Clear(g_c), s	0.5	0.0	0.6	0.0	0.0	0.0	1.2	1.0	0.0	0.0	1.7	0.9	
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	1.00		1.00	
Lane Grp Cap(c), veh/h	488	0	235	0	277	0	103	1756	0	6	1025	500	
V/C Ratio(X)	0.07	0.00	0.16	0.00	0.00	0.00	0.59	0.12	0.00	0.00	0.23	0.12	
Avail Cap(c_a), veh/h	1460	0	1100	0	1298	0	246	8156	0	281	7952	3880	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	
Uniform Delay (d), s/veh	12.0	0.0	12.0	0.0	0.0	0.0	14.6	4.0	0.0	0.0	8.3	8.0	
Incr Delay (d2), s/veh	0.1	0.0	0.3	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.1	0.1	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.2	0.0	0.0	0.0	0.3	0.1	0.0	0.0	0.3	0.2	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	12.0	0.0	12.3	0.0	0.0	0.0	16.6	4.0	0.0	0.0	8.4	8.1	
LnGrp LOS	B	A	B	A	A	A	B	A	A	A	A	A	
Approach Vol, veh/h		71			0			271			302		
Approach Delay, s/veh		12.2			0.0			6.8			8.3		
Approach LOS		B						A			A		
Timer - Assigned Phs	1	2		4	5	6		8					
Phs Duration (G+Y+Rc), s	0.0	22.9		9.3	6.7	16.2		9.3					
Change Period (Y+Rc), s	4.6	6.2		4.6	4.6	6.2		4.6					
Max Green Setting (Gmax), s	5.0	77.6		22.0	5.0	77.6		22.0					
Max Q Clear Time (g_c+I1), s	0.0	3.0		2.6	3.2	3.7		0.0					
Green Ext Time (p_c), s	0.0	1.3		0.2	0.0	1.6		0.0					
<b>Intersection Summary</b>													
HCM 6th Ctrl Delay				8.1									
HCM 6th LOS				A									

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↕	↗	↘	↕
Traffic Vol, veh/h	1	3	470	8	4	458
Future Vol, veh/h	1	3	470	8	4	458
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	0	140	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	100	98	14	12	74	21
Mvmt Flow	1	3	534	9	5	520

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	804	267	0	0	543	0
Stage 1	534	-	-	-	-	-
Stage 2	270	-	-	-	-	-
Critical Hdwy	8.8	8.86	-	-	5.58	-
Critical Hdwy Stg 1	7.8	-	-	-	-	-
Critical Hdwy Stg 2	7.8	-	-	-	-	-
Follow-up Hdwy	4.5	4.28	-	-	2.94	-
Pot Cap-1 Maneuver	178	509	-	-	653	-
Stage 1	345	-	-	-	-	-
Stage 2	525	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	177	509	-	-	653	-
Mov Cap-2 Maneuver	265	-	-	-	-	-
Stage 1	345	-	-	-	-	-
Stage 2	521	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.7	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	265	509	653	-
HCM Lane V/C Ratio	-	-	0.004	0.007	0.007	-
HCM Control Delay (s)	-	-	18.6	12.1	10.6	-
HCM Lane LOS	-	-	C	B	B	-
HCM 95th %tile Q(veh)	-	-	0	0	0	-

Timings  
12: Heacock Street & San Michele Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↕	↖	↗	↘
Traffic Volume (vph)	2	2	3	3	4	183	1	44	101	93	7
Future Volume (vph)	2	2	3	3	4	183	1	44	101	93	7
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	1	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	4.0	5.0	4.0	5.0	5.0
Minimum Split (s)	9.5	30.5	30.5	8.5	30.5	8.5	8.5	34.5	8.5	34.5	34.5
Total Split (s)	13.0	41.0	41.0	13.0	41.0	28.0	12.0	38.0	28.0	54.0	54.0
Total Split (%)	10.8%	34.2%	34.2%	10.8%	34.2%	23.3%	10.0%	31.7%	23.3%	45.0%	45.0%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	3.5	4.5	3.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	4.5	5.5	4.5	5.5	5.5
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	None	Max	Max
Act Effct Green (s)	5.1	7.8	7.8	5.1	7.8	17.2	4.9	35.1	13.5	57.5	57.5
Actuated g/C Ratio	0.08	0.12	0.12	0.08	0.12	0.27	0.08	0.55	0.21	0.89	0.89
v/c Ratio	0.02	0.02	0.01	0.04	0.03	0.37	0.01	0.04	0.35	0.09	0.01
Control Delay	36.0	27.5	0.0	36.3	27.0	4.0	38.0	12.4	27.6	6.2	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.0	27.5	0.0	36.3	27.0	4.0	38.0	12.4	27.6	6.2	0.0
LOS	D	C	A	D	C	A	D	B	C	A	A
Approach Delay		19.1			5.0			12.8		16.7	
Approach LOS		B			A			B		B	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 64.4  
 Natural Cycle: 85  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.37  
 Intersection Signal Delay: 11.4  
 Intersection LOS: B  
 Intersection Capacity Utilization 30.9%  
 ICU Level of Service A  
 Analysis Period (min) 15

























Splits and Phases: 12: Heacock Street & San Michele Road

↑ Ø2 38 s	↖ Ø1 28 s	→ Ø4 41 s	↘ Ø3 13 s
↖ Ø5 12 s	↓ Ø6 54 s	← Ø8 41 s	↗ Ø7 13 s

HCM 6th Signalized Intersection Summary  
 12: Heacock Street & San Michele Road

Gateway Aviation TA (JN:13445)

04/19/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	2	3	3	4	183	1	44	3	101	93	7
Future Volume (veh/h)	2	2	3	3	4	183	1	44	3	101	93	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	551	1455	1011	1559	1841	1900	1426	1455	1841	1618	1678
Adj Flow Rate, veh/h	3	3	4	4	5	244	1	59	4	135	124	9
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh, %	0	91	30	60	23	4	0	32	30	4	19	15
Cap, veh/h	8	37	83	4	105	424	2	1133	76	358	1063	933
Arrive On Green	0.00	0.07	0.07	0.00	0.07	0.07	0.00	0.44	0.44	0.20	0.66	0.66
Sat Flow, veh/h	1810	551	1233	963	1559	1560	1810	2576	173	1753	1618	1422
Grp Volume(v), veh/h	3	3	4	4	5	244	1	31	32	135	124	9
Grp Sat Flow(s),veh/h/ln	1810	551	1233	963	1559	1560	1810	1354	1395	1753	1618	1422
Q Serve(g_s), s	0.1	0.4	0.2	0.3	0.2	0.0	0.0	1.0	1.0	4.9	2.1	0.1
Cycle Q Clear(g_c), s	0.1	0.4	0.2	0.3	0.2	0.0	0.0	1.0	1.0	4.9	2.1	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	8	37	83	4	105	424	2	596	614	358	1063	933
V/C Ratio(X)	0.39	0.08	0.05	0.97	0.05	0.58	0.41	0.05	0.05	0.38	0.12	0.01
Avail Cap(c_a), veh/h	208	265	593	111	749	1068	184	596	614	558	1063	933
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.7	32.3	23.5	36.8	32.2	23.2	36.9	11.9	11.9	25.3	4.7	1.5
Incr Delay (d2), s/veh	11.5	0.3	0.1	118.4	0.1	0.5	35.8	0.2	0.2	0.2	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.1	0.1	0.2	0.1	3.3	0.0	0.3	0.3	1.9	0.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.1	32.6	23.6	155.1	32.3	23.7	72.7	12.0	12.0	25.6	4.9	1.6
LnGrp LOS	D	C	C	F	C	C	E	B	B	C	A	A
Approach Vol, veh/h		10			253			64			268	
Approach Delay, s/veh		33.7			25.9			13.0			15.2	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.6	38.0	4.8	10.5	4.6	54.0	4.8	10.5				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	23.5	* 33	8.5	35.5	7.5	48.5	8.5	35.5				
Max Q Clear Time (g_c+I1), s	6.9	3.0	2.3	2.4	2.0	4.1	2.1	2.2				
Green Ext Time (p_c), s	0.1	0.2	0.0	0.0	0.0	0.4	0.0	0.4				

Intersection Summary

HCM 6th Ctrl Delay	19.9
HCM 6th LOS	B

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection					
Intersection Delay, s/veh	8.0				
Intersection LOS	A				
Approach	EB	WB		NB	
Entry Lanes	3	2		2	
Conflicting Circle Lanes	2	2		2	
Adj Approach Flow, veh/h	0	1212		15	
Demand Flow Rate, veh/h	0	1332		20	
Vehicles Circulating, veh/h	10	8		702	
Vehicles Exiting, veh/h	1330	714		25	
Ped Vol Crossing Leg, #/h	0	0		0	
Ped Cap Adj	1.000	1.000		1.000	
Approach Delay, s/veh	0.0	8.0		6.6	
Approach LOS	-	A		A	
Lane	Left		Right		
Designated Moves	LT		TR		L LTR
Assumed Moves	LT		TR		L TR
RT Channelized					
Lane Util	0.470	0.530	0.400	0.600	
Follow-Up Headway, s	2.667	2.535	2.667	2.535	
Critical Headway, s	4.645	4.328	4.645	4.328	
Entry Flow, veh/h	626	706	8	12	
Cap Entry Lane, veh/h	1340	1410	708	782	
Entry HV Adj Factor	0.910	0.910	0.625	0.833	
Flow Entry, veh/h	570	642	5	10	
Cap Entry, veh/h	1219	1283	442	652	
V/C Ratio	0.467	0.501	0.011	0.015	
Control Delay, s/veh	7.9	8.1	8.3	5.7	
LOS	A		A		A
95th %tile Queue, veh	3	3	0	0	

Timings  
14: Indian Street & San Michele Road

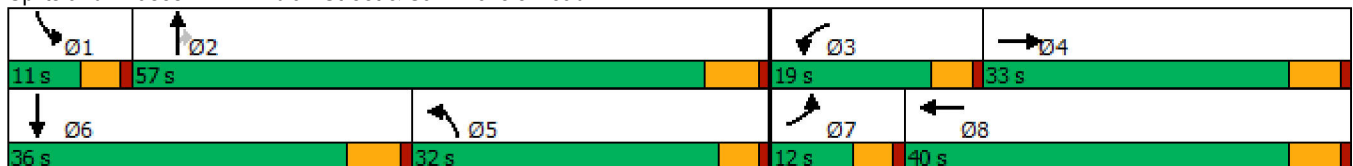


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↖	↗	↖	↗	↖	↗	↗	↖	↗
Traffic Volume (vph)	3	56	51	188	325	8	92	3	2
Future Volume (vph)	3	56	51	188	325	8	92	3	2
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8	5	2		1	6
Permitted Phases							2		
Detector Phase	7	4	3	8	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	31.8	9.6	31.8	9.6	32.8	32.8	9.6	32.8
Total Split (s)	12.0	33.0	19.0	40.0	32.0	57.0	57.0	11.0	36.0
Total Split (%)	10.0%	27.5%	15.8%	33.3%	26.7%	47.5%	47.5%	9.2%	30.0%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	6.2	13.8	7.8	19.8	14.7	15.4	15.4	6.2	13.9
Actuated g/C Ratio	0.12	0.27	0.15	0.39	0.29	0.30	0.30	0.12	0.27
v/c Ratio	0.03	0.18	0.26	0.19	0.43	0.02	0.20	0.02	0.01
Control Delay	33.7	12.1	29.5	13.7	21.1	16.4	3.4	33.7	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.7	12.1	29.5	13.7	21.1	16.4	3.4	33.7	0.0
LOS	C	B	C	B	C	B	A	C	A
Approach Delay		12.7		17.0		17.1			13.5
Approach LOS		B		B		B			B

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 51.4	
Natural Cycle: 85	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.43	
Intersection Signal Delay: 16.4	Intersection LOS: B
Intersection Capacity Utilization 39.6%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 14: Indian Street & San Michele Road



HCM 6th Signalized Intersection Summary  
 14: Indian Street & San Michele Road



















Gateway Aviation TA (JN:13445)

11/09/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	56	59	51	188	6	325	8	92	3	2	2
Future Volume (veh/h)	3	56	59	51	188	6	325	8	92	3	2	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.99	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1011	1737	1856	1781	1870	1900	1841	1515	1781	1900	551	1900
Adj Flow Rate, veh/h	4	77	81	70	258	8	445	11	126	4	3	3
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Percent Heavy Veh, %	60	11	3	8	2	0	4	26	8	0	91	0
Cap, veh/h	5	309	275	98	863	27	585	608	598	10	121	99
Arrive On Green	0.01	0.19	0.19	0.06	0.24	0.24	0.17	0.40	0.40	0.01	0.22	0.22
Sat Flow, veh/h	963	1650	1472	1697	3607	111	3506	1515	1490	1810	551	448
Grp Volume(v), veh/h	4	77	81	70	133	133	445	11	126	4	3	3
Grp Sat Flow(s),veh/h/ln	963	1650	1472	1697	1870	1848	1753	1515	1490	1810	551	448
Q Serve(g_s), s	0.2	2.4	2.8	2.4	3.5	3.5	7.2	0.3	3.3	0.1	0.3	0.3
Cycle Q Clear(g_c), s	0.2	2.4	2.8	2.4	3.5	3.5	7.2	0.3	3.3	0.1	0.3	0.3
Prop In Lane	1.00		1.00	1.00		0.06	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	5	309	275	98	448	442	585	608	598	10	121	99
V/C Ratio(X)	0.77	0.25	0.29	0.72	0.30	0.30	0.76	0.02	0.21	0.41	0.02	0.03
Avail Cap(c_a), veh/h	119	752	671	409	1071	1058	1609	1299	1278	194	279	227
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.7	20.7	20.9	27.7	18.6	18.6	23.7	10.8	11.7	29.6	18.3	18.3
Incr Delay (d2), s/veh	59.9	0.2	0.2	3.7	0.1	0.1	0.8	0.0	0.1	10.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.8	0.9	1.0	1.3	1.3	2.6	0.1	0.9	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	89.6	20.8	21.1	31.3	18.7	18.8	24.5	10.8	11.7	39.6	18.3	18.3
LnGrp LOS	F	C	C	C	B	B	C	B	B	D	B	B
Approach Vol, veh/h		162			336			582				10
Approach Delay, s/veh		22.7			21.4			21.5				26.8
Approach LOS		C			C			C				C
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.9	29.8	8.0	17.0	15.8	18.9	4.9	20.1				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	5.8	* 5.8	4.6	5.8				
Max Green Setting (Gmax), s	6.4	51.2	14.4	27.2	27.4	* 30	7.4	34.2				
Max Q Clear Time (g_c+I1), s	2.1	5.3	4.4	4.8	9.2	2.3	2.2	5.5				
Green Ext Time (p_c), s	0.0	0.2	0.0	0.5	0.7	0.0	0.0	0.8				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				21.7								
HCM 6th LOS				C								
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												



Timings  
15: Indian Street & Nandina Avenue

										
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	
Lane Configurations										
Traffic Volume (vph)	3	24	86	10	32	117	339	6	62	
Future Volume (vph)	3	24	86	10	32	117	339	6	62	
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA	
Protected Phases	7	4	5	3	8	5	2	1	6	
Permitted Phases	4									
Detector Phase	7	4	5	3	8	5	2	1	6	
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0	
Minimum Split (s)	9.6	29.8	9.6	9.6	29.8	9.6	26.8	9.6	26.8	
Total Split (s)	13.0	35.0	19.0	15.0	37.0	19.0	56.0	14.0	51.0	
Total Split (%)	10.8%	29.2%	15.8%	12.5%	30.8%	15.8%	46.7%	11.7%	42.5%	
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	3.6	4.8	3.6	4.8	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	4.6	5.8	4.6	5.8	
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	Min	None	Min	
Act Effct Green (s)	5.7	13.0	20.2	6.0	13.2	9.9	33.6	5.8	16.2	
Actuated g/C Ratio	0.11	0.26	0.41	0.12	0.27	0.20	0.68	0.12	0.33	
v/c Ratio	0.01	0.08	0.16	0.08	0.15	0.43	0.16	0.05	0.07	
Control Delay	29.7	19.3	3.0	29.4	14.5	26.7	9.5	29.5	17.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	29.7	19.3	3.0	29.4	14.5	26.7	9.5	29.5	17.8	
LOS	C	B	A	C	B	C	A	C	B	
Approach Delay	7.1		16.9				13.8		18.8	
Approach LOS	A		B				B		B	

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 49.6	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.43	
Intersection Signal Delay: 13.5	Intersection LOS: B
Intersection Capacity Utilization 31.3%	ICU Level of Service A
Analysis Period (min) 15	























Splits and Phases: 15: Indian Street & Nandina Avenue



HCM 6th Signalized Intersection Summary  
 15: Indian Street & Nandina Avenue

Gateway Aviation TA (JN:13445)

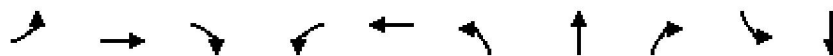
11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	24	86	10	32	17	117	339	14	6	62	4
Future Volume (veh/h)	3	24	86	10	32	17	117	339	14	6	62	4
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1233	1292	1026	1426	1470	1515	1811	1174	1174	1633	1900
Adj Flow Rate, veh/h	3	27	96	11	36	19	130	377	16	7	69	4
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	45	41	59	32	29	26	6	49	49	18	0
Cap, veh/h	7	244	335	14	183	96	156	1105	47	10	678	39
Arrive On Green	0.00	0.20	0.20	0.01	0.21	0.21	0.11	0.32	0.32	0.01	0.22	0.22
Sat Flow, veh/h	1810	1233	1095	977	879	464	1443	3446	146	1118	3059	176
Grp Volume(v), veh/h	3	27	96	11	0	55	130	198	195	7	37	36
Grp Sat Flow(s),veh/h/ln	1810	1233	1095	977	0	1342	1443	1811	1781	1118	1633	1602
Q Serve(g_s), s	0.1	0.8	3.0	0.5	0.0	1.5	4.0	3.8	3.8	0.3	0.8	0.8
Cycle Q Clear(g_c), s	0.1	0.8	3.0	0.5	0.0	1.5	4.0	3.8	3.8	0.3	0.8	0.8
Prop In Lane	1.00		1.00	1.00		0.35	1.00		0.08	1.00		0.11
Lane Grp Cap(c), veh/h	7	244	335	14	0	279	156	581	571	10	362	355
V/C Ratio(X)	0.41	0.11	0.29	0.79	0.00	0.20	0.83	0.34	0.34	0.67	0.10	0.10
Avail Cap(c_a), veh/h	335	793	823	224	0	922	457	2002	1968	231	1625	1594
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.6	14.9	12.0	22.3	0.0	14.9	19.8	11.8	11.8	22.4	14.1	14.1
Incr Delay (d2), s/veh	12.7	0.2	0.5	29.6	0.0	0.3	4.3	0.3	0.4	24.5	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.2	0.6	0.2	0.0	0.4	1.2	1.1	1.1	0.1	0.2	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.3	15.1	12.5	51.9	0.0	15.2	24.2	12.1	12.1	46.9	14.2	14.2
LnGrp LOS	D	B	B	D	A	B	C	B	B	D	B	B
Approach Vol, veh/h		126			66			523			80	
Approach Delay, s/veh		13.6			21.3			15.1			17.1	
Approach LOS		B			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.0	20.4	5.2	14.8	9.5	15.9	4.8	15.2				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	9.4	50.2	10.4	29.2	14.4	45.2	8.4	31.2				
Max Q Clear Time (g_c+I1), s	2.3	5.8	2.5	5.0	6.0	2.8	2.1	3.5				
Green Ext Time (p_c), s	0.0	2.1	0.0	0.4	0.1	0.3	0.0	0.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			15.6									
HCM 6th LOS			B									

Timings  
16: Indian Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/09/2020

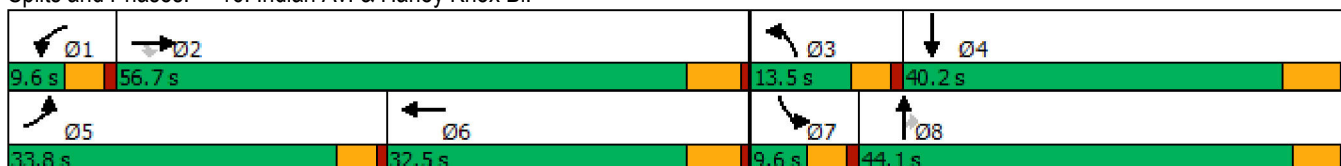


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↖	↗↗↗	↗	↖	↗↗↗	↖↖	↗↗	↗	↖	↗↗
Traffic Volume (vph)	242	262	32	12	629	98	244	17	10	63
Future Volume (vph)	242	262	32	12	629	98	244	17	10	63
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	5	2		1	6	3	8		7	4
Permitted Phases			2					8		
Detector Phase	5	2	2	1	6	3	8	8	7	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	35.8	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2
Total Split (s)	33.8	56.7	56.7	9.6	32.5	13.5	44.1	44.1	9.6	40.2
Total Split (%)	28.2%	47.3%	47.3%	8.0%	27.1%	11.3%	36.8%	36.8%	8.0%	33.5%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.4	4.4	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	5.4	5.4	4.6	6.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	19.6	42.3	42.3	5.4	19.0	7.5	23.0	23.0	5.4	14.0
Actuated g/C Ratio	0.24	0.53	0.53	0.07	0.24	0.09	0.29	0.29	0.07	0.18
v/c Ratio	0.73	0.12	0.05	0.12	0.62	0.37	0.28	0.04	0.10	0.37
Control Delay	44.0	12.0	0.1	48.9	31.8	44.4	24.4	0.2	48.3	14.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.0	12.0	0.1	48.9	31.8	44.4	24.4	0.2	48.3	14.9
LOS	D	B	A	D	C	D	C	A	D	B
Approach Delay		25.7			32.1		28.7			16.7
Approach LOS		C			C		C			B

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 80  
 Natural Cycle: 100  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.73  
 Intersection Signal Delay: 27.8  
 Intersection LOS: C  
 Intersection Capacity Utilization 56.7%  
 ICU Level of Service B  
 Analysis Period (min) 15































Splits and Phases: 16: Indian Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 16: Indian Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 			 	
Traffic Volume (veh/h)	242	262	32	12	629	43	98	244	17	10	63	117
Future Volume (veh/h)	242	262	32	12	629	43	98	244	17	10	63	117
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1574	1752	1441	1663	1841	1870	1722	1796	1544	1752	1707	1248
Adj Flow Rate, veh/h	266	288	26	13	691	27	108	268	12	11	69	80
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	22	10	31	16	4	2	12	7	24	10	13	44
Cap, veh/h	310	1968	502	26	1098	43	217	736	282	23	262	234
Arrive On Green	0.21	0.41	0.41	0.02	0.22	0.22	0.07	0.22	0.22	0.01	0.16	0.16
Sat Flow, veh/h	1499	4782	1221	1584	4963	193	3182	3413	1309	1668	1622	1447
Grp Volume(v), veh/h	266	288	26	13	466	252	108	268	12	11	69	80
Grp Sat Flow(s),veh/h/ln	1499	1594	1221	1584	1675	1806	1591	1706	1309	1668	1622	1447
Q Serve(g_s), s	10.6	2.3	0.8	0.5	7.8	7.8	2.0	4.1	0.4	0.4	2.3	3.0
Cycle Q Clear(g_c), s	10.6	2.3	0.8	0.5	7.8	7.8	2.0	4.1	0.4	0.4	2.3	3.0
Prop In Lane	1.00		1.00	1.00		0.11	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	310	1968	502	26	741	399	217	736	282	23	262	234
V/C Ratio(X)	0.86	0.15	0.05	0.51	0.63	0.63	0.50	0.36	0.04	0.47	0.26	0.34
Avail Cap(c_a), veh/h	707	3934	1004	128	1445	779	458	2134	818	135	891	795
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.7	11.4	10.9	30.2	21.8	21.8	27.8	20.7	19.2	30.3	22.7	23.0
Incr Delay (d2), s/veh	2.7	0.0	0.0	5.7	0.9	1.7	0.7	0.3	0.1	5.5	0.5	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	0.7	0.2	0.2	2.7	3.1	0.7	1.5	0.1	0.2	0.8	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.4	11.4	11.0	35.9	22.7	23.5	28.5	21.0	19.3	35.8	23.2	23.9
LnGrp LOS	C	B	B	D	C	C	C	C	B	D	C	C
Approach Vol, veh/h		580			731			388				160
Approach Delay, s/veh		18.3			23.2			23.0				24.4
Approach LOS		B			C			C				C
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.6	31.3	8.8	16.2	17.4	19.5	5.5	19.6				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	5.0	50.9	8.9	34.0	29.2	26.7	5.0	* 39				
Max Q Clear Time (g_c+I1), s	2.5	4.3	4.0	5.0	12.6	9.8	2.4	6.1				
Green Ext Time (p_c), s	0.0	1.9	0.1	0.8	0.3	3.9	0.0	1.6				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				21.7								
HCM 6th LOS				C								
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

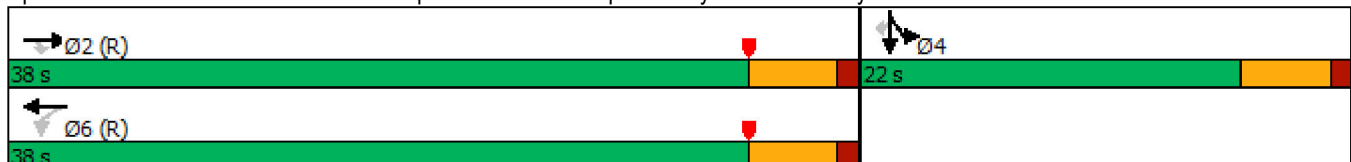


Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations	↑↑	↑	↘	↑↑	↘	↘
Traffic Volume (vph)	354	30	318	187	0	124
Future Volume (vph)	354	30	318	187	0	124
Turn Type	NA	Perm	Perm	NA	NA	Perm
Protected Phases	2			6	4	
Permitted Phases		2	6			4
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	25.0	25.0	10.0	10.0
Total Split (s)	38.0	38.0	38.0	38.0	22.0	22.0
Total Split (%)	63.3%	63.3%	63.3%	63.3%	36.7%	36.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	34.7	34.7	34.7	34.7	15.3	15.3
Actuated g/C Ratio	0.58	0.58	0.58	0.58	0.26	0.26
v/c Ratio	0.21	0.04	0.68	0.11	0.79	0.30
Control Delay	6.8	2.6	27.0	10.0	37.4	5.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.8	2.6	27.0	10.0	37.4	5.6
LOS	A	A	C	A	D	A
Approach Delay	6.5			20.7	27.0	
Approach LOS	A			C	C	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.79  
 Intersection Signal Delay: 18.3  
 Intersection LOS: B  
 Intersection Capacity Utilization 60.9%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

11/09/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑						↑	↑
Traffic Volume (veh/h)	0	354	30	318	187	0	0	0	0	254	0	124
Future Volume (veh/h)	0	354	30	318	187	0	0	0	0	254	0	124
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1767	1856	1811	1796	0				1530	1900	1693
Adj Flow Rate, veh/h	0	402	34	361	212	0				289	0	79
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88				0.88	0.88	0.88
Percent Heavy Veh, %	0	9	3	6	7	0				25	0	14
Cap, veh/h	0	2126	995	658	2162	0				362	0	287
Arrive On Green	0.00	0.63	0.63	1.00	1.00	0.00				0.20	0.00	0.20
Sat Flow, veh/h	0	3445	1572	922	3503	0				1810	0	1434
Grp Volume(v), veh/h	0	402	34	361	212	0				289	0	79
Grp Sat Flow(s),veh/h/ln	0	1678	1572	922	1706	0				1810	0	1434
Q Serve(g_s), s	0.0	3.0	0.5	4.8	0.0	0.0				9.1	0.0	2.8
Cycle Q Clear(g_c), s	0.0	3.0	0.5	7.8	0.0	0.0				9.1	0.0	2.8
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2126	995	658	2162	0				362	0	287
V/C Ratio(X)	0.00	0.19	0.03	0.55	0.10	0.00				0.80	0.00	0.28
Avail Cap(c_a), veh/h	0	2126	995	658	2162	0				513	0	406
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.93	0.93	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	4.6	4.1	0.3	0.0	0.0				22.9	0.0	20.3
Incr Delay (d2), s/veh	0.0	0.2	0.1	3.0	0.1	0.0				5.9	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.6	0.1	0.6	0.0	0.0				4.0	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	4.8	4.2	3.4	0.1	0.0				28.7	0.0	20.8
LnGrp LOS	A	A	A	A	A	A				C	A	C
Approach Vol, veh/h		436			573						368	
Approach Delay, s/veh		4.7			2.1						27.0	
Approach LOS		A			A						C	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		43.0		17.0		43.0						
Change Period (Y+Rc), s		5.0		5.0		5.0						
Max Green Setting (Gmax), s		33.0		17.0		33.0						
Max Q Clear Time (g_c+I1), s		5.0		11.1		9.8						
Green Ext Time (p_c), s		1.6		0.9		2.1						
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			9.6									
HCM 6th LOS			A									

Timings

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

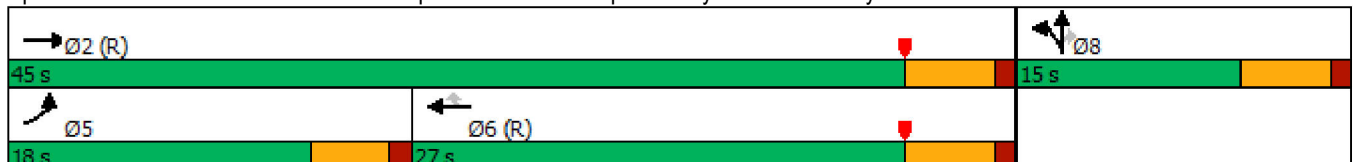


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations	↘	↑↑	↑↑	↗	↘	↗
Traffic Volume (vph)	205	403	487	487	3	222
Future Volume (vph)	205	403	487	487	3	222
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	26.0	24.0	24.0	10.0	10.0
Total Split (s)	18.0	45.0	27.0	27.0	15.0	15.0
Total Split (%)	30.0%	75.0%	45.0%	45.0%	25.0%	25.0%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max
Act Effct Green (s)	11.3	40.0	24.2	24.2	10.0	10.0
Actuated g/C Ratio	0.19	0.67	0.40	0.40	0.17	0.17
v/c Ratio	0.71	0.22	0.38	0.61	0.08	0.56
Control Delay	28.2	3.8	14.3	5.0	22.1	9.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.2	3.8	14.3	5.0	22.1	9.5
LOS	C	A	B	A	C	A
Approach Delay		12.0	9.6		10.5	
Approach LOS		B	A		B	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 29 (48%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 50  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.71  
 Intersection Signal Delay: 10.5  
 Intersection LOS: B  
 Intersection Capacity Utilization 60.9%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.





HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

11/09/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷			↷	↶		↶	↷			
Traffic Volume (veh/h)	205	403	0	0	487	487	17	3	222	0	0	0
Future Volume (veh/h)	205	403	0	0	487	487	17	3	222	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1796	1604	0	0	1811	1648	1648	1900	1633			
Adj Flow Rate, veh/h	223	438	0	0	529	465	18	3	176			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	7	20	0	0	6	17	17	0	18			
Cap, veh/h	274	2031	0	0	1485	603	260	43	231			
Arrive On Green	0.05	0.22	0.00	0.00	0.43	0.43	0.17	0.17	0.17			
Sat Flow, veh/h	1711	3127	0	0	3532	1397	1562	260	1384			
Grp Volume(v), veh/h	223	438	0	0	529	465	21	0	176			
Grp Sat Flow(s),veh/h/ln	1711	1523	0	0	1721	1397	1822	0	1384			
Q Serve(g_s), s	7.7	7.1	0.0	0.0	6.2	17.0	0.6	0.0	7.3			
Cycle Q Clear(g_c), s	7.7	7.1	0.0	0.0	6.2	17.0	0.6	0.0	7.3			
Prop In Lane	1.00		0.00	0.00		1.00	0.86		1.00			
Lane Grp Cap(c), veh/h	274	2031	0	0	1485	603	304	0	231			
V/C Ratio(X)	0.81	0.22	0.00	0.00	0.36	0.77	0.07	0.00	0.76			
Avail Cap(c_a), veh/h	385	2031	0	0	1485	603	304	0	231			
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.99	0.99	0.00	0.00	0.91	0.91	1.00	0.00	1.00			
Uniform Delay (d), s/veh	27.5	10.6	0.0	0.0	11.5	14.5	21.1	0.0	23.9			
Incr Delay (d2), s/veh	6.0	0.2	0.0	0.0	0.6	8.5	0.4	0.0	21.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	3.5	1.6	0.0	0.0	2.0	5.5	0.3	0.0	3.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.5	10.8	0.0	0.0	12.1	23.0	21.5	0.0	44.9			
LnGrp LOS	C	B	A	A	B	C	C	A	D			
Approach Vol, veh/h		661			994			197				
Approach Delay, s/veh		18.5			17.2			42.4				
Approach LOS		B			B			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		45.0			14.1	30.9		15.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		40.0			13.5	22.0		10.0				
Max Q Clear Time (g_c+I1), s		9.1			9.7	19.0		9.3				
Green Ext Time (p_c), s		1.8			0.1	1.1		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				20.3								
HCM 6th LOS				C								



Timings  
3: Western Way & Harley Knox Bl.



Lane Group	EBL	EBT	WBT	SBL	SBT	Ø1	Ø8
Lane Configurations	↖	↑↑↑	↑↑↑	↖	↗		
Traffic Volume (vph)	18	619	902	9	0		
Future Volume (vph)	18	619	902	9	0		
Turn Type	Prot	NA	NA	Perm	NA		
Protected Phases	5	2	6		4	1	8
Permitted Phases				4			
Detector Phase	5	2	6	4	4		
Switch Phase							
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	21.8	21.8	32.6	32.6	9.6	32.6
Total Split (s)	18.0	71.4	63.0	39.0	39.0	9.6	39.0
Total Split (%)	15.0%	59.5%	52.5%	32.5%	32.5%	8%	33%
Yellow Time (s)	3.6	4.8	4.8	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.6	5.8	5.8	4.6	4.6		
Lead/Lag	Lead	Lag	Lag			Lead	
Lead-Lag Optimize?	Yes	Yes	Yes			Yes	
Recall Mode	None	None	None	None	None	None	None
Act Effct Green (s)	7.0	25.5	24.2	14.5	14.5		
Actuated g/C Ratio	0.16	0.59	0.56	0.33	0.33		
v/c Ratio	0.11	0.29	0.43	0.03	0.18		
Control Delay	26.3	7.3	10.6	15.8	0.9		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	26.3	7.3	10.6	15.8	0.9		
LOS	C	A	B	B	A		
Approach Delay		7.9	10.6		2.3		
Approach LOS		A	B		A		

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 43.5	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.43	
Intersection Signal Delay: 9.0	Intersection LOS: A
Intersection Capacity Utilization 34.6%	ICU Level of Service A
Analysis Period (min) 15	


























Splits and Phases: 3: Western Way & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 3: Western Way & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  							
Traffic Volume (veh/h)	18	619	0	0	902	7	0	0	0	9	0	91
Future Volume (veh/h)	18	619	0	0	902	7	0	0	0	9	0	91
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1233	1618	1900	1900	1722	1500	1900	1900	1900	1737	1900	1796
Adj Flow Rate, veh/h	22	746	0	0	1087	6	0	0	0	11	0	97
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	45	19	0	0	12	27	0	0	0	11	0	7
Cap, veh/h	32	2499	911	5	2043	11	180	332	0	469	0	281
Arrive On Green	0.03	0.57	0.00	0.00	0.42	0.42	0.00	0.00	0.00	0.17	0.00	0.17
Sat Flow, veh/h	1174	4418	1610	1810	4825	27	1319	1900	0	1654	0	1610
Grp Volume(v), veh/h	22	746	0	0	706	387	0	0	0	11	0	97
Grp Sat Flow(s),veh/h/ln	1174	1473	1610	1810	1567	1717	1319	1900	0	1654	0	1610
Q Serve(g_s), s	0.7	3.5	0.0	0.0	6.7	6.7	0.0	0.0	0.0	0.2	0.0	2.1
Cycle Q Clear(g_c), s	0.7	3.5	0.0	0.0	6.7	6.7	0.0	0.0	0.0	0.2	0.0	2.1
Prop In Lane	1.00		1.00	1.00		0.02	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	32	2499	911	5	1327	727	180	332	0	469	0	281
V/C Ratio(X)	0.69	0.30	0.00	0.00	0.53	0.53	0.00	0.00	0.00	0.02	0.00	0.34
Avail Cap(c_a), veh/h	393	7241	2639	226	4479	2454	1083	1633	0	1602	0	1384
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.3	4.5	0.0	0.0	8.6	8.6	0.0	0.0	0.0	13.7	0.0	14.5
Incr Delay (d2), s/veh	9.5	0.1	0.0	0.0	0.3	0.6	0.0	0.0	0.0	0.0	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.4	0.0	0.0	1.3	1.5	0.0	0.0	0.0	0.1	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.8	4.6	0.0	0.0	8.9	9.2	0.0	0.0	0.0	13.7	0.0	15.2
LnGrp LOS	C	A	A	A	A	A	A	A	A	B	A	B
Approach Vol, veh/h		768			1093			0				108
Approach Delay, s/veh		5.3			9.0			0.0				15.1
Approach LOS		A			A							B
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	28.4		11.6	5.7	22.8		11.6				
Change Period (Y+Rc), s	4.6	5.8		4.6	4.6	5.8		4.6				
Max Green Setting (Gmax), s	5.0	65.6		34.4	13.4	57.2		34.4				
Max Q Clear Time (g_c+I1), s	0.0	5.5		4.1	2.7	8.7		0.0				
Green Ext Time (p_c), s	0.0	5.6		0.6	0.0	8.2		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					7.9							
HCM 6th LOS					A							

Timings  
4: Patterson Av. & Harley Knox Bl.

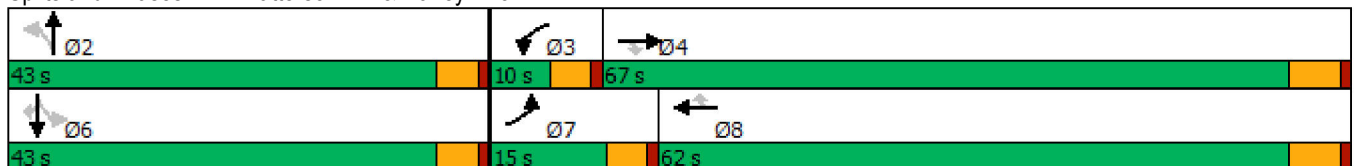


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑	↗	↖	↑↑	↗		↕		↖	↗
Traffic Volume (vph)	20	569	19	5	849	7	35	2	19	3	25
Future Volume (vph)	20	569	19	5	849	7	35	2	19	3	25
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	7	4		3	8			2		6	
Permitted Phases			4			8	2		6		6
Detector Phase	7	4	4	3	8	8	2	2	6	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	9.6	31.8	31.8	33.7	33.7	40.7	40.7	40.7
Total Split (s)	15.0	67.0	67.0	10.0	62.0	62.0	43.0	43.0	43.0	43.0	43.0
Total Split (%)	12.5%	55.8%	55.8%	8.3%	51.7%	51.7%	35.8%	35.8%	35.8%	35.8%	35.8%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8		4.7		4.7	4.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	7.2	43.6	43.6	6.1	40.9	40.9		14.8		14.8	14.8
Actuated g/C Ratio	0.12	0.75	0.75	0.10	0.70	0.70		0.25		0.25	0.25
v/c Ratio	0.17	0.21	0.02	0.03	0.46	0.01		0.16		0.09	0.07
Control Delay	37.6	6.9	0.2	38.8	12.0	0.0		22.4		23.9	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	37.6	6.9	0.2	38.8	12.0	0.0		22.4		23.9	0.3
LOS	D	A	A	D	B	A		C		C	A
Approach Delay		7.7			12.1			22.4		11.5	
Approach LOS		A			B			C		B	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 58.4  
 Natural Cycle: 85  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.46  
 Intersection Signal Delay: 10.6  
 Intersection Capacity Utilization 52.8%  
 Analysis Period (min) 15  
 Intersection LOS: B  
 ICU Level of Service A


























Splits and Phases: 4: Patterson Av. & Harley Knox Bl.



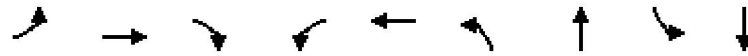
HCM 6th Signalized Intersection Summary  
 4: Patterson Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			 			 				
Traffic Volume (veh/h)	20	569	19	5	849	7	35	2	4	19	3	25
Future Volume (veh/h)	20	569	19	5	849	7	35	2	4	19	3	25
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1070	1663	1826	1900	1722	1292	1737	1900	1189	1663	1426	1604
Adj Flow Rate, veh/h	24	694	23	6	1035	9	43	2	5	23	4	30
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	56	16	5	0	12	41	11	0	48	16	32	20
Cap, veh/h	29	2250	767	15	1554	509	328	20	22	301	38	222
Arrive On Green	0.03	0.50	0.50	0.01	0.47	0.47	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1019	4540	1547	1810	3272	1072	1106	125	137	944	231	1359
Grp Volume(v), veh/h	24	694	23	6	1035	9	50	0	0	27	0	30
Grp Sat Flow(s),veh/h/ln	1019	1513	1547	1810	1636	1072	1368	0	0	1176	0	1359
Q Serve(g_s), s	1.1	4.1	0.3	0.1	11.0	0.2	1.0	0.0	0.0	0.0	0.0	0.9
Cycle Q Clear(g_c), s	1.1	4.1	0.3	0.1	11.0	0.2	1.7	0.0	0.0	0.7	0.0	0.9
Prop In Lane	1.00		1.00	1.00		1.00	0.86		0.10	0.85		1.00
Lane Grp Cap(c), veh/h	29	2250	767	15	1554	509	371	0	0	339	0	222
V/C Ratio(X)	0.82	0.31	0.03	0.41	0.67	0.02	0.13	0.00	0.00	0.08	0.00	0.14
Avail Cap(c_a), veh/h	234	6129	2089	216	4057	1330	1346	0	0	1099	0	1148
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.9	6.8	5.9	22.4	9.1	6.3	16.6	0.0	0.0	16.2	0.0	16.2
Incr Delay (d2), s/veh	18.2	0.1	0.0	6.8	0.5	0.0	0.2	0.0	0.0	0.1	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.8	0.1	0.1	2.4	0.0	0.4	0.0	0.0	0.2	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.1	6.9	5.9	29.2	9.6	6.3	16.8	0.0	0.0	16.3	0.0	16.5
LnGrp LOS	D	A	A	C	A	A	B	A	A	B	A	B
Approach Vol, veh/h		741			1050			50				57
Approach Delay, s/veh		7.9			9.7			16.8				16.4
Approach LOS		A			A			B				B
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		12.1	5.0	28.3		12.1	5.9	27.3				
Change Period (Y+Rc), s		* 4.7	4.6	5.8		* 4.7	4.6	5.8				
Max Green Setting (Gmax), s		* 38	5.4	61.2		* 38	10.4	56.2				
Max Q Clear Time (g_c+I1), s		3.7	2.1	6.1		2.9	3.1	13.0				
Green Ext Time (p_c), s		0.2	0.0	5.2		0.2	0.0	8.5				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			9.4									
HCM 6th LOS			A									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings  
5: Heacock Street & Cactus Avenue

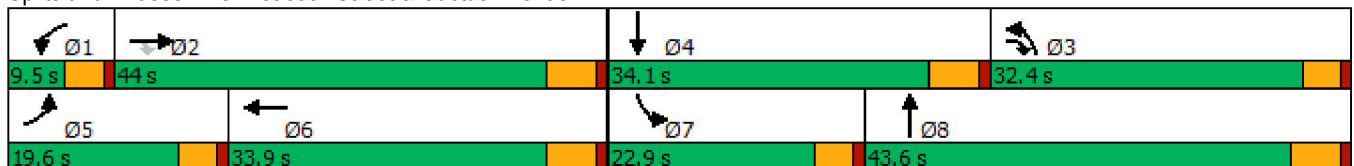


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↗	↘	↖	↗	↖	↗	↖	↗
Traffic Volume (vph)	173	1109	857	9	568	411	397	117	446
Future Volume (vph)	173	1109	857	9	568	411	397	117	446
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	3	1	6	3	8	7	4
Permitted Phases			2						
Detector Phase	5	2	3	1	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.5	30.5	9.5	9.5	30.5	9.5	30.5	9.5	30.5
Total Split (s)	19.6	44.0	32.4	9.5	33.9	32.4	43.6	22.9	34.1
Total Split (%)	16.3%	36.7%	27.0%	7.9%	28.3%	27.0%	36.3%	19.1%	28.4%
Yellow Time (s)	3.5	4.5	3.5	3.5	4.5	3.5	4.5	3.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	4.5	4.5	5.5	4.5	5.5	4.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None
Act Effct Green (s)	12.9	37.4	61.8	5.2	21.4	23.4	30.3	10.9	17.8
Actuated g/C Ratio	0.13	0.39	0.64	0.05	0.22	0.24	0.31	0.11	0.18
v/c Ratio	0.71	0.79	0.74	0.10	0.80	0.51	0.37	0.57	0.73
Control Delay	59.4	32.4	11.6	54.1	44.3	35.3	27.5	54.9	44.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.4	32.4	11.6	54.1	44.3	35.3	27.5	54.9	44.9
LOS	E	C	B	D	D	D	C	D	D
Approach Delay		26.2			44.4		31.4		46.8
Approach LOS		C			D		C		D

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 96.3  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.80  
 Intersection Signal Delay: 33.0  
 Intersection LOS: C  
 Intersection Capacity Utilization 83.6%  
 ICU Level of Service E  
 Analysis Period (min) 15



























Splits and Phases: 5: Heacock Street & Cactus Avenue



HCM 6th Signalized Intersection Summary  
5: Heacock Street & Cactus Avenue

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 		 	 			 	
Traffic Volume (veh/h)	173	1109	857	9	568	77	411	397	17	117	446	37
Future Volume (veh/h)	173	1109	857	9	568	77	411	397	17	117	446	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1811	1737	1870	1856	1767	1870	1811	1900	1856	1900
Adj Flow Rate, veh/h	180	1155	893	9	592	80	428	414	18	122	465	39
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	1	6	11	2	3	9	2	6	0	3	0
Cap, veh/h	219	1435	824	19	873	118	529	957	41	156	627	52
Arrive On Green	0.12	0.38	0.38	0.01	0.27	0.27	0.16	0.27	0.27	0.09	0.19	0.19
Sat Flow, veh/h	1810	3770	1531	1654	3227	435	3365	3555	154	1810	3377	282
Grp Volume(v), veh/h	180	1155	893	9	343	329	428	217	215	122	255	249
Grp Sat Flow(s),veh/h/ln	1810	1885	1531	1654	1870	1792	1682	1870	1839	1810	1856	1804
Q Serve(g_s), s	7.7	21.6	17.3	0.4	12.9	13.0	9.7	7.6	7.6	5.2	10.3	10.3
Cycle Q Clear(g_c), s	7.7	21.6	17.3	0.4	12.9	13.0	9.7	7.6	7.6	5.2	10.3	10.3
Prop In Lane	1.00		1.00	1.00		0.24	1.00		0.08	1.00		0.16
Lane Grp Cap(c), veh/h	219	1435	824	19	506	485	529	503	495	156	344	335
V/C Ratio(X)	0.82	0.80	1.08	0.48	0.68	0.68	0.81	0.43	0.43	0.78	0.74	0.74
Avail Cap(c_a), veh/h	345	1834	986	105	671	643	1186	901	885	421	671	652
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.9	21.9	7.4	38.9	25.8	25.8	32.2	23.9	23.9	35.4	30.4	30.5
Incr Delay (d2), s/veh	4.2	1.6	54.0	6.9	0.7	0.8	1.1	0.2	0.2	3.2	1.2	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	8.5	16.0	0.2	5.3	5.1	3.7	3.1	3.1	2.3	4.3	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.2	23.5	61.4	45.8	26.5	26.6	33.3	24.1	24.2	38.6	31.6	31.7
LnGrp LOS	D	C	F	D	C	C	C	C	C	D	C	C
Approach Vol, veh/h		2228			681			860			626	
Approach Delay, s/veh		39.9			26.8			28.7			33.0	
Approach LOS		D			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.4	35.6	17.9	20.2	14.1	26.9	11.3	26.8				
Change Period (Y+Rc), s	4.5	5.5	5.5	* 5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	5.0	38.5	27.9	* 29	15.1	28.4	18.4	38.1				
Max Q Clear Time (g_c+I1), s	2.4	23.6	11.7	12.3	9.7	15.0	7.2	9.6				
Green Ext Time (p_c), s	0.0	6.5	0.7	1.5	0.1	2.0	0.1	1.4				

Intersection Summary												
HCM 6th Ctrl Delay			34.7									
HCM 6th LOS			C									

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

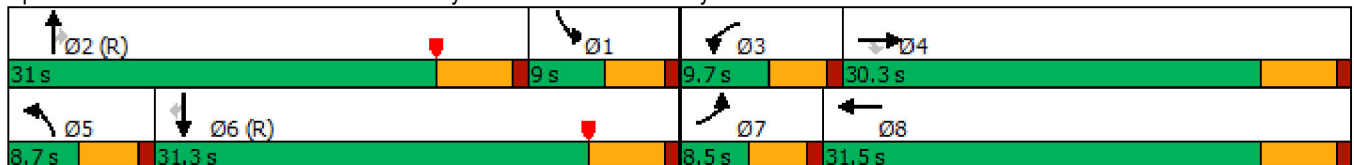
Timings  
6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	27	172	287	24	67	65	656	57	261	908	15	
Future Volume (vph)	27	172	287	24	67	65	656	57	261	908	15	
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	7	4		3	8	5	2		1	6		
Permitted Phases			4					2			6	
Detector Phase	7	4	4	3	8	5	2	2	1	6	6	
Switch Phase												
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	
Minimum Split (s)	8.5	23.5	23.5	8.5	31.5	8.5	30.5	30.5	8.5	23.5	23.5	
Total Split (s)	8.5	30.3	30.3	9.7	31.5	8.7	31.0	31.0	9.0	31.3	31.3	
Total Split (%)	10.6%	37.9%	37.9%	12.1%	39.4%	10.9%	38.8%	38.8%	11.3%	39.1%	39.1%	
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5	4.5	4.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	5.5	4.5	5.5	5.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max	
Act Effct Green (s)	4.0	14.4	14.4	5.0	14.8	6.8	41.8	41.8	4.5	41.4	41.4	
Actuated g/C Ratio	0.05	0.18	0.18	0.06	0.18	0.08	0.52	0.52	0.06	0.52	0.52	
v/c Ratio	0.33	0.59	0.60	0.24	0.28	0.46	0.41	0.06	2.94	0.57	0.02	
Control Delay	46.1	35.9	11.5	40.7	9.8	47.4	15.1	0.1	917.3	18.9	0.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	46.1	35.9	11.5	40.7	9.8	47.4	15.1	0.1	917.3	18.9	0.0	
LOS	D	D	B	D	A	D	B	A	F	B	A	
Approach Delay		22.1			13.1		16.7			216.7		
Approach LOS		C			B		B			F		

Intersection Summary

Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 2.94  
 Intersection Signal Delay: 105.9  
 Intersection LOS: F  
 Intersection Capacity Utilization 61.6%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 6: Heacock Street & Meyer Drive/John F. Kennedy Drive





























HCM 6th Signalized Intersection Summary  
 6: Heacock Street & Meyer Drive/John F. Kennedy Drive













Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	172	287	24	67	133	65	656	57	261	908	15
Future Volume (veh/h)	27	172	287	24	67	133	65	656	57	261	908	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1900	1900	1885	1885	1900	1781	1900	1841	1796	1900
Adj Flow Rate, veh/h	31	198	330	28	77	153	75	754	66	300	1044	17
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	1	0	0	1	1	0	8	0	4	7	0
Cap, veh/h	45	440	375	42	436	370	95	1136	513	285	1585	710
Arrive On Green	0.02	0.23	0.23	0.02	0.23	0.23	0.05	0.32	0.32	0.16	0.44	0.44
Sat Flow, veh/h	1810	1885	1610	1810	1885	1598	1810	3563	1610	1753	3593	1610
Grp Volume(v), veh/h	31	198	330	28	77	153	75	754	66	300	1044	17
Grp Sat Flow(s),veh/h/ln	1810	1885	1610	1810	1885	1598	1810	1781	1610	1753	1796	1610
Q Serve(g_s), s	1.4	7.2	15.8	1.2	2.6	6.5	3.3	14.6	1.8	13.0	18.3	0.5
Cycle Q Clear(g_c), s	1.4	7.2	15.8	1.2	2.6	6.5	3.3	14.6	1.8	13.0	18.3	0.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	45	440	375	42	436	370	95	1136	513	285	1585	710
V/C Ratio(X)	0.69	0.45	0.88	0.67	0.18	0.41	0.79	0.66	0.13	1.05	0.66	0.02
Avail Cap(c_a), veh/h	90	584	499	118	613	519	95	1136	513	285	1585	710
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.90	0.90	0.90	0.61	0.61	0.61
Uniform Delay (d), s/veh	38.7	26.3	29.6	38.8	24.6	26.1	37.5	23.5	11.9	33.5	17.6	12.6
Incr Delay (d2), s/veh	6.8	0.3	10.9	6.6	0.1	0.3	29.8	2.8	0.5	56.5	1.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	3.1	6.7	0.6	1.1	2.3	2.1	5.9	0.9	9.5	6.6	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.4	26.6	40.5	45.4	24.7	26.4	67.3	26.3	12.3	90.0	18.9	12.7
LnGrp LOS	D	C	D	D	C	C	E	C	B	F	B	B
Approach Vol, veh/h		559			258			895			1361	
Approach Delay, s/veh		35.8			28.0			28.7			34.5	
Approach LOS		D			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.5	31.0	6.4	24.2	8.7	40.8	6.5	24.0				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	4.5	* 26	5.2	24.8	4.2	25.8	4.0	26.0				
Max Q Clear Time (g_c+I1), s	15.0	16.6	3.2	17.8	5.3	20.3	3.4	8.5				
Green Ext Time (p_c), s	0.0	2.2	0.0	0.8	0.0	2.3	0.0	0.7				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			32.5									
HCM 6th LOS			C									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												



Timings  
7: Heacock Street & Gentian Avenue

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	6	88	688	11	96	1048
Future Volume (vph)	6	88	688	11	96	1048
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	27.6	27.6	27.2	27.2	9.6	16.2
Total Split (s)	31.0	31.0	62.0	62.0	27.0	89.0
Total Split (%)	25.8%	25.8%	51.7%	51.7%	22.5%	74.2%
Yellow Time (s)	3.6	3.6	5.2	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	6.2	6.2	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	12.4	12.4	27.4	27.4	8.5	37.8
Actuated g/C Ratio	0.22	0.22	0.49	0.49	0.15	0.68
v/c Ratio	0.02	0.20	0.47	0.01	0.39	0.51
Control Delay	20.5	6.6	15.7	10.9	29.4	7.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.5	6.6	15.7	10.9	29.4	7.8
LOS	C	A	B	B	C	A
Approach Delay	7.5		15.6			9.6
Approach LOS	A		B			A

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 55.7	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.51	
Intersection Signal Delay: 11.6	Intersection LOS: B
Intersection Capacity Utilization 46.3%	ICU Level of Service A
Analysis Period (min) 15	













Splits and Phases: 7: Heacock Street & Gentian Avenue



















HCM 6th Signalized Intersection Summary  
7: Heacock Street & Gentian Avenue

Gateway Aviation TA (JN:13445)

11/09/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	6	88	688	11	96	1048
Future Volume (veh/h)	6	88	688	11	96	1048
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1796	1900	1826	1826
Adj Flow Rate, veh/h	7	100	782	12	109	1191
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	7	0	5	5
Cap, veh/h	310	275	1263	596	150	1969
Arrive On Green	0.17	0.17	0.37	0.37	0.09	0.57
Sat Flow, veh/h	1810	1610	3503	1610	1739	3561
Grp Volume(v), veh/h	7	100	782	12	109	1191
Grp Sat Flow(s),veh/h/ln	1810	1610	1706	1610	1739	1735
Q Serve(g_s), s	0.1	2.3	7.7	0.2	2.5	9.3
Cycle Q Clear(g_c), s	0.1	2.3	7.7	0.2	2.5	9.3
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	310	275	1263	596	150	1969
V/C Ratio(X)	0.02	0.36	0.62	0.02	0.73	0.60
Avail Cap(c_a), veh/h	1155	1028	4606	2173	942	6948
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.3	15.1	10.6	8.3	18.4	5.9
Incr Delay (d2), s/veh	0.0	0.3	0.5	0.0	2.5	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.7	1.8	0.0	0.9	1.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	14.3	15.4	11.1	8.3	20.9	6.2
LnGrp LOS	B	B	B	A	C	A
Approach Vol, veh/h	107		794			1300
Approach Delay, s/veh	15.4		11.1			7.4
Approach LOS	B		B			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	8.2	21.5			29.7	11.7
Change Period (Y+Rc), s	4.6	6.2			6.2	4.6
Max Green Setting (Gmax), s	22.4	55.8			82.8	26.4
Max Q Clear Time (g_c+1), s	4.5	9.7			11.3	4.3
Green Ext Time (p_c), s	0.1	5.6			10.3	0.1
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			9.1			
HCM 6th LOS			A			

Timings  
8: Heacock Street & Iris Avenue

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 		 		 	 
Traffic Volume (vph)	29	248	453	49	416	648
Future Volume (vph)	29	248	453	49	416	648
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	15.8	15.8	33.2	33.2	9.6	16.2
Total Split (s)	35.0	35.0	47.0	47.0	38.0	85.0
Total Split (%)	29.2%	29.2%	39.2%	39.2%	31.7%	70.8%
Yellow Time (s)	4.8	4.8	5.2	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	6.2	6.2	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	10.4	10.4	16.1	16.1	12.4	33.2
Actuated g/C Ratio	0.19	0.19	0.29	0.29	0.22	0.59
v/c Ratio	0.05	0.49	0.55	0.11	0.59	0.37
Control Delay	22.5	7.1	19.2	5.4	23.6	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.5	7.1	19.2	5.4	23.6	6.2
LOS	C	A	B	A	C	A
Approach Delay	8.7		17.8			13.0
Approach LOS	A		B			B

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 55.9	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.59	
Intersection Signal Delay: 13.7	Intersection LOS: B
Intersection Capacity Utilization 46.6%	ICU Level of Service A
Analysis Period (min) 15	

















Splits and Phases: 8: Heacock Street & Iris Avenue



HCM 6th Signalized Intersection Summary  
8: Heacock Street & Iris Avenue

Gateway Aviation TA (JN:13445)

11/09/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 		 		 	 
Traffic Volume (veh/h)	29	248	453	49	416	648
Future Volume (veh/h)	29	248	453	49	416	648
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1752	1900	1885	1796
Adj Flow Rate, veh/h	33	285	521	56	478	745
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	0	10	0	1	7
Cap, veh/h	787	361	833	403	650	1812
Arrive On Green	0.22	0.22	0.25	0.25	0.19	0.53
Sat Flow, veh/h	3510	1610	3416	1610	3483	3503
Grp Volume(v), veh/h	33	285	521	56	478	745
Grp Sat Flow(s),veh/h/ln	1755	1610	1664	1610	1742	1706
Q Serve(g_s), s	0.4	8.2	6.8	1.3	6.3	6.4
Cycle Q Clear(g_c), s	0.4	8.2	6.8	1.3	6.3	6.4
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	787	361	833	403	650	1812
V/C Ratio(X)	0.04	0.79	0.63	0.14	0.74	0.41
Avail Cap(c_a), veh/h	2092	959	2771	1340	2374	5487
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.9	17.9	16.3	14.3	18.8	6.9
Incr Delay (d2), s/veh	0.0	3.9	0.8	0.2	0.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	2.8	2.1	0.4	2.1	1.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	14.9	21.8	17.1	14.4	19.4	7.0
LnGrp LOS	B	C	B	B	B	A
Approach Vol, veh/h	318		577			1223
Approach Delay, s/veh	21.1		16.8			11.9
Approach LOS	C		B			B
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	13.7	18.5			32.2	16.8
Change Period (Y+Rc), s	4.6	6.2			6.2	5.8
Max Green Setting (Gmax), s	33.4	40.8			78.8	29.2
Max Q Clear Time (g_c+I1), s	8.3	8.8			8.4	10.2
Green Ext Time (p_c), s	0.8	3.5			5.2	1.0
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			14.6			
HCM 6th LOS			B			

Timings  
9: Heacock Street & Krameria Avenue-North



Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations	↖	↗	↕	↖	↕
Traffic Volume (vph)	3	22	377	33	403
Future Volume (vph)	3	22	377	33	403
Turn Type	Prot	Perm	NA	Prot	NA
Protected Phases	8		2	1	6
Permitted Phases		8			
Detector Phase	8	8	2	1	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	29.1	29.1	29.2	9.6	16.2
Total Split (s)	35.0	35.0	61.0	24.0	85.0
Total Split (%)	29.2%	29.2%	50.8%	20.0%	70.8%
Yellow Time (s)	4.1	4.1	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	6.2	4.6	6.2
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	Min	Max	Min
Act Effct Green (s)	12.6	12.6	13.7	21.0	44.4
Actuated g/C Ratio	0.24	0.24	0.26	0.40	0.84
v/c Ratio	0.01	0.08	0.54	0.06	0.17
Control Delay	20.0	9.7	20.8	17.4	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	20.0	9.7	20.8	17.4	4.0
LOS	B	A	C	B	A
Approach Delay	11.1		20.8		5.0
Approach LOS	B		C		A

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 52.8  
 Natural Cycle: 70  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.54  
 Intersection Signal Delay: 12.5  
 Intersection LOS: B  
 Intersection Capacity Utilization 37.0%  
 ICU Level of Service A  
 Analysis Period (min) 15













Splits and Phases: 9: Heacock Street & Krameria Avenue-North



HCM 6th Signalized Intersection Summary  
 9: Heacock Street & Krameria Avenue-North

Gateway Aviation TA (JN:13445)

11/09/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	3	22	377	18	33	403
Future Volume (veh/h)	3	22	377	18	33	403
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1011	1366	1841	1900	1678	1811
Adj Flow Rate, veh/h	4	27	465	22	41	498
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	60	36	4	0	15	6
Cap, veh/h	68	81	703	33	635	2403
Arrive On Green	0.07	0.07	0.21	0.21	0.40	0.70
Sat Flow, veh/h	963	1158	3492	161	1598	3532
Grp Volume(v), veh/h	4	27	239	248	41	498
Grp Sat Flow(s),veh/h/ln	963	1158	1749	1811	1598	1721
Q Serve(g_s), s	0.2	1.1	6.1	6.2	0.8	2.5
Cycle Q Clear(g_c), s	0.2	1.1	6.1	6.2	0.8	2.5
Prop In Lane	1.00	1.00		0.09	1.00	
Lane Grp Cap(c), veh/h	68	81	361	374	635	2403
V/C Ratio(X)	0.06	0.33	0.66	0.66	0.06	0.21
Avail Cap(c_a), veh/h	590	709	1963	2033	635	5554
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.2	21.6	17.8	17.8	9.1	2.6
Incr Delay (d2), s/veh	0.1	0.9	0.8	0.8	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.3	2.0	2.1	0.2	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	21.3	22.5	18.6	18.6	9.3	2.6
LnGrp LOS	C	C	B	B	A	A
Approach Vol, veh/h	31		487			539
Approach Delay, s/veh	22.3		18.6			3.1
Approach LOS	C		B			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	24.0	16.3			40.3	8.5
Change Period (Y+Rc), s	4.6	6.2			6.2	5.1
Max Green Setting (Gmax), s	19.4	54.8			78.8	29.9
Max Q Clear Time (g_c+I1), s	2.8	8.2			4.5	3.1
Green Ext Time (p_c), s	0.0	1.5			1.9	0.0
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			10.8			
HCM 6th LOS			B			

Timings  
10: Heacock Street & Driveway 1



Lane Group	EBL	EBT	NBL	NBT	SBT	SBR	Ø1	Ø8
Lane Configurations								
Traffic Volume (vph)	31	0	18	329	366	2		
Future Volume (vph)	31	0	18	329	366	2		
Turn Type	Perm	NA	Prot	NA	NA	Perm		
Protected Phases		4	5	2	6		1	8
Permitted Phases	4					6		
Detector Phase	4	4	5	2	6	6		
Switch Phase								
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	26.6	26.6	9.6	23.2	23.2	23.2	9.6	26.6
Total Split (s)	26.6	26.6	9.6	83.8	83.8	83.8	9.6	26.6
Total Split (%)	22.2%	22.2%	8.0%	69.8%	69.8%	69.8%	8%	22%
Yellow Time (s)	3.6	3.6	3.6	5.2	5.2	5.2	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.6	4.6	4.6	6.2	6.2	6.2		
Lead/Lag			Lead	Lag	Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	Min	Min	Min	None	None
Act Effct Green (s)	12.2	12.2	5.3	25.3	24.0	24.0		
Actuated g/C Ratio	0.32	0.32	0.14	0.66	0.62	0.62		
v/c Ratio	0.08	0.07	0.16	0.16	0.19	0.00		
Control Delay	11.0	0.2	22.7	6.8	9.1	0.0		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay	11.0	0.2	22.7	6.8	9.1	0.0		
LOS	B	A	C	A	A	A		
Approach Delay		4.5		7.6	9.1			
Approach LOS		A		A	A			

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 38.6	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.19	
Intersection Signal Delay: 8.0	Intersection LOS: A
Intersection Capacity Utilization 32.3%	ICU Level of Service A
Analysis Period (min) 15	






















Splits and Phases: 10: Heacock Street & Driveway 1

9.6 s	83.8 s	26.6 s
9.6 s	83.8 s	26.6 s

HCM 6th Signalized Intersection Summary  
 10: Heacock Street & Driveway 1

Gateway Aviation TA (JN:13445)

11/17/2020

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	31	0	47	0	0	0	18	329	0	0	366	2	
Future Volume (veh/h)	31	0	47	0	0	0	18	329	0	0	366	2	
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	507	1826	1826	1900	1796	1900	
Adj Flow Rate, veh/h	34	0	51	0	0	0	20	358	0	0	398	2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Percent Heavy Veh, %	0	0	0	0	0	0	94	5	5	0	7	0	
Cap, veh/h	531	0	268	0	317	0	12	1699	0	6	1085	512	
Arrive On Green	0.17	0.00	0.17	0.00	0.00	0.00	0.03	0.49	0.00	0.00	0.32	0.32	
Sat Flow, veh/h	1810	0	1610	0	1900	0	483	3561	0	1810	3413	1610	
Grp Volume(v), veh/h	34	0	51	0	0	0	20	358	0	0	398	2	
Grp Sat Flow(s),veh/h/ln	1810	0	1610	0	1900	0	483	1735	0	1810	1706	1610	
Q Serve(g_s), s	0.5	0.0	0.9	0.0	0.0	0.0	0.8	1.8	0.0	0.0	2.8	0.0	
Cycle Q Clear(g_c), s	0.5	0.0	0.9	0.0	0.0	0.0	0.8	1.8	0.0	0.0	2.8	0.0	
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	1.00		1.00	
Lane Grp Cap(c), veh/h	531	0	268	0	317	0	12	1699	0	6	1085	512	
V/C Ratio(X)	0.06	0.00	0.19	0.00	0.00	0.00	1.63	0.21	0.00	0.00	0.37	0.00	
Avail Cap(c_a), veh/h	1495	0	1127	0	1329	0	77	8562	0	288	8423	3974	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	
Uniform Delay (d), s/veh	11.1	0.0	11.3	0.0	0.0	0.0	15.3	4.6	0.0	0.0	8.3	7.3	
Incr Delay (d2), s/veh	0.1	0.0	0.3	0.0	0.0	0.0	309.2	0.1	0.0	0.0	0.2	0.0	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.3	0.0	0.0	0.0	1.1	0.1	0.0	0.0	0.5	0.0	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	11.2	0.0	11.6	0.0	0.0	0.0	324.5	4.6	0.0	0.0	8.5	7.3	
LnGrp LOS	B	A	B	A	A	A	F	A	A	A	A	A	
Approach Vol, veh/h		85			0			378			400		
Approach Delay, s/veh		11.4			0.0			21.5			8.5		
Approach LOS		B						C			A		
Timer - Assigned Phs	1	2		4	5	6		8					
Phs Duration (G+Y+Rc), s	0.0	21.6		9.8	5.4	16.2		9.8					
Change Period (Y+Rc), s	4.6	6.2		4.6	4.6	6.2		4.6					
Max Green Setting (Gmax), s	5.0	77.6		22.0	5.0	77.6		22.0					
Max Q Clear Time (g_c+I1), s	0.0	3.8		2.9	2.8	4.8		0.0					
Green Ext Time (p_c), s	0.0	2.2		0.3	0.0	2.5		0.0					
<b>Intersection Summary</b>													
HCM 6th Ctrl Delay			14.5										
HCM 6th LOS			B										



Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↕	↗	↘	↕
Traffic Vol, veh/h	4	5	516	6	6	772
Future Vol, veh/h	4	5	516	6	6	772
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	0	140	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	25	78	12	33	16	15
Mvmt Flow	5	6	662	8	8	990

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1173	331	0	0	670	0
Stage 1	662	-	-	-	-	-
Stage 2	511	-	-	-	-	-
Critical Hdwy	7.3	8.46	-	-	4.42	-
Critical Hdwy Stg 1	6.3	-	-	-	-	-
Critical Hdwy Stg 2	6.3	-	-	-	-	-
Follow-up Hdwy	3.75	4.08	-	-	2.36	-
Pot Cap-1 Maneuver	154	486	-	-	828	-
Stage 1	417	-	-	-	-	-
Stage 2	506	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	152	486	-	-	828	-
Mov Cap-2 Maneuver	276	-	-	-	-	-
Stage 1	417	-	-	-	-	-
Stage 2	501	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.1	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	276	486	828	-
HCM Lane V/C Ratio	-	-	0.019	0.013	0.009	-
HCM Control Delay (s)	-	-	18.3	12.5	9.4	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	0	-

Timings  
12: Heacock Street & San Michele Road



Lane Group	EBL	EBT	EBR	WBL	WBR	NBT	SBL	SBT	SBR	Ø5	Ø8
Lane Configurations	↖	↗	↘	↖	↗	↕	↖	↗	↘		
Traffic Volume (vph)	12	7	6	12	215	94	192	235	2		
Future Volume (vph)	12	7	6	12	215	94	192	235	2		
Turn Type	Prot	NA	Perm	Prot	pm+ov	NA	Prot	NA	Perm		
Protected Phases	7	4		3	1	2	1	6		5	8
Permitted Phases			4		8				6		
Detector Phase	7	4	4	3	1	2	1	6	6		
Switch Phase											
Minimum Initial (s)	4.0	5.0	5.0	4.0	4.0	5.0	4.0	5.0	5.0	4.0	5.0
Minimum Split (s)	9.5	30.5	30.5	8.5	8.5	34.5	8.5	34.5	34.5	8.5	30.5
Total Split (s)	12.0	37.4	37.4	9.6	34.0	39.0	34.0	64.5	64.5	8.5	35.0
Total Split (%)	10.0%	31.2%	31.2%	8.0%	28.3%	32.5%	28.3%	53.8%	53.8%	7%	29%
Yellow Time (s)	3.5	4.5	4.5	3.5	3.5	4.5	3.5	4.5	4.5	3.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.5	5.5	5.5	4.5	4.5	5.5	4.5	5.5	5.5		
Lead/Lag	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	None	Max	Max	None	None
Act Effct Green (s)	5.4	8.0	8.0	5.3	29.2	35.1	22.9	66.7	66.7		
Actuated g/C Ratio	0.07	0.10	0.10	0.07	0.38	0.46	0.30	0.87	0.87		
v/c Ratio	0.13	0.05	0.03	0.13	0.28	0.10	0.49	0.23	0.00		
Control Delay	42.5	33.6	0.2	42.8	0.7	16.5	28.7	5.0	0.0		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay	42.5	33.6	0.2	42.8	0.7	16.5	28.7	5.0	0.0		
LOS	D	C	A	D	A	B	C	A	A		
Approach Delay		29.4				16.5		15.5			
Approach LOS		C				B		B			

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 76.4  
 Natural Cycle: 85  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.49  
 Intersection Signal Delay: 12.4  
 Intersection LOS: B  
 Intersection Capacity Utilization 34.2%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 12: Heacock Street & San Michele Road



HCM 6th Signalized Intersection Summary  
 12: Heacock Street & San Michele Road

Gateway Aviation TA (JN:13445)

04/19/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	7	6	12	0	215	0	94	3	192	235	2
Future Volume (veh/h)	12	7	6	12	0	215	0	94	3	192	235	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1841	1900	1618	1900	1885	1693	1900
Adj Flow Rate, veh/h	17	10	9	17	0	307	0	134	4	274	336	3
Peak Hour Factor	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Percent Heavy Veh, %	0	0	0	0	0	4	0	19	0	1	14	0
Cap, veh/h	28	123	100	28	123	486	2	1261	38	443	1233	1173
Arrive On Green	0.02	0.06	0.06	0.02	0.00	0.06	0.00	0.41	0.41	0.25	0.73	0.73
Sat Flow, veh/h	1810	1900	1547	1810	1900	1560	1810	3049	91	1795	1693	1610
Grp Volume(v), veh/h	17	10	9	17	0	307	0	67	71	274	336	3
Grp Sat Flow(s),veh/h/ln	1810	1900	1547	1810	1900	1560	1810	1537	1602	1795	1693	1610
Q Serve(g_s), s	0.8	0.4	0.4	0.8	0.0	0.0	0.0	2.2	2.2	11.0	5.4	0.0
Cycle Q Clear(g_c), s	0.8	0.4	0.4	0.8	0.0	0.0	0.0	2.2	2.2	11.0	5.4	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	28	123	100	28	123	486	2	636	663	443	1233	1173
V/C Ratio(X)	0.60	0.08	0.09	0.60	0.00	0.63	0.00	0.11	0.11	0.62	0.27	0.00
Avail Cap(c_a), veh/h	168	748	609	114	692	953	89	636	663	654	1233	1173
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.6	35.6	30.7	39.6	0.0	23.9	0.0	14.6	14.6	27.1	3.7	0.7
Incr Delay (d2), s/veh	7.3	0.1	0.1	7.3	0.0	0.5	0.0	0.3	0.3	0.5	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.2	0.2	0.4	0.0	4.6	0.0	0.7	0.8	4.3	1.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.9	35.7	30.8	46.9	0.0	24.4	0.0	14.9	14.9	27.6	4.3	0.7
LnGrp LOS	D	D	C	D	A	C	A	B	B	C	A	A
Approach Vol, veh/h		36			324			138			613	
Approach Delay, s/veh		39.8			25.6			14.9			14.7	
Approach LOS		D			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	25.5	39.0	5.8	10.7	0.0	64.5	5.8	10.7				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	29.5	* 34	5.1	31.9	4.0	59.0	7.5	29.5				
Max Q Clear Time (g_c+I1), s	13.0	4.2	2.8	2.4	0.0	7.4	2.8	2.0				
Green Ext Time (p_c), s	0.3	0.4	0.0	0.0	0.0	1.1	0.0	0.5				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			18.7									
HCM 6th LOS			B									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Intersection					
Intersection Delay, s/veh 7.7					
Intersection LOS A					
Approach	EB	WB	NB		
Entry Lanes	3	2	2		
Conflicting Circle Lanes	2	2	2		
Adj Approach Flow, veh/h	0	1080	42		
Demand Flow Rate, veh/h	0	1210	48		
Vehicles Circulating, veh/h	9	38	846		
Vehicles Exiting, veh/h	1239	856	42		
Ped Vol Crossing Leg, #/h	0	0	0		
Ped Cap Adj	1.000	1.000	1.000		
Approach Delay, s/veh	0.0	7.7	6.7		
Approach LOS	-	A	A		
Lane	Left	Right	Left	Right	
Designated Moves	LT	TR	L	LTR	
Assumed Moves	LT	TR	L	LTR	
RT Channelized					
Lane Util	0.470	0.530	0.521	0.479	
Follow-Up Headway, s	2.667	2.535	2.667	2.535	
Critical Headway, s	4.645	4.328	4.645	4.328	
Entry Flow, veh/h	569	641	25	23	
Cap Entry Lane, veh/h	1303	1375	620	692	
Entry HV Adj Factor	0.892	0.893	0.890	0.858	
Flow Entry, veh/h	508	573	22	20	
Cap Entry, veh/h	1163	1228	552	594	
V/C Ratio	0.437	0.466	0.040	0.033	
Control Delay, s/veh	7.7	7.8	7.0	6.4	
LOS	A	A	A	A	
95th %tile Queue, veh	2	3	0	0	

Timings  
14: Indian Street & San Michele Road

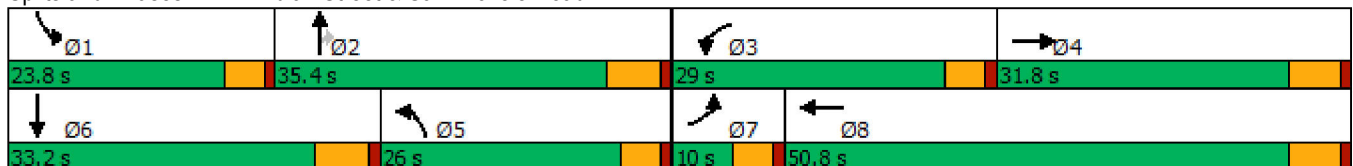


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↖	↗	↖	↗	↖	↗	↗	↖	↗
Traffic Volume (vph)	10	155	158	252	285	50	120	112	134
Future Volume (vph)	10	155	158	252	285	50	120	112	134
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8	5	2		1	6
Permitted Phases							2		
Detector Phase	7	4	3	8	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	31.8	9.6	31.8	9.6	32.8	32.8	9.6	32.8
Total Split (s)	10.0	31.8	29.0	50.8	26.0	35.4	35.4	23.8	33.2
Total Split (%)	8.3%	26.5%	24.2%	42.3%	21.7%	29.5%	29.5%	19.8%	27.7%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	5.5	15.3	15.3	34.2	14.7	15.8	15.8	12.2	13.2
Actuated g/C Ratio	0.07	0.19	0.19	0.42	0.18	0.20	0.20	0.15	0.16
v/c Ratio	0.13	0.77	0.68	0.30	0.67	0.23	0.36	0.60	0.41
Control Delay	48.1	22.8	43.4	16.5	38.7	33.2	7.6	44.8	32.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.1	22.8	43.4	16.5	38.7	33.2	7.6	44.8	32.6
LOS	D	C	D	B	D	C	A	D	C
Approach Delay		23.4		25.7		29.9			37.7
Approach LOS		C		C		C			D

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 80.7  
 Natural Cycle: 95  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.77  
 Intersection Signal Delay: 28.3  
 Intersection LOS: C  
 Intersection Capacity Utilization 74.4%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 14: Indian Street & San Michele Road



HCM 6th Signalized Intersection Summary  
 14: Indian Street & San Michele Road

Gateway Aviation TA (JN:13445)

11/09/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	155	262	158	252	50	285	50	120	112	134	22
Future Volume (veh/h)	10	155	262	158	252	50	285	50	120	112	134	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		1.00	1.00		0.68
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1841	1752	1870	1856	1900	1781	1722	1870	1885	1841	1767
Adj Flow Rate, veh/h	15	235	397	239	382	76	432	76	182	170	203	33
Peak Hour Factor	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66
Percent Heavy Veh, %	10	4	10	2	3	0	8	12	2	1	4	9
Cap, veh/h	28	425	370	271	1134	223	501	514	472	201	732	111
Arrive On Green	0.02	0.24	0.24	0.15	0.38	0.38	0.15	0.30	0.30	0.11	0.25	0.25
Sat Flow, veh/h	1668	1749	1521	1781	2997	589	3393	1722	1583	1795	2909	442
Grp Volume(v), veh/h	15	235	397	239	235	223	432	76	182	170	123	113
Grp Sat Flow(s),veh/h/ln	1668	1749	1521	1781	1856	1731	1697	1722	1583	1795	1841	1511
Q Serve(g_s), s	1.0	12.6	26.0	14.0	9.6	9.8	13.3	3.5	9.7	9.9	5.7	6.5
Cycle Q Clear(g_c), s	1.0	12.6	26.0	14.0	9.6	9.8	13.3	3.5	9.7	9.9	5.7	6.5
Prop In Lane	1.00		1.00	1.00		0.34	1.00		1.00	1.00		0.29
Lane Grp Cap(c), veh/h	28	425	370	271	702	655	501	514	472	201	463	380
V/C Ratio(X)	0.53	0.55	1.07	0.88	0.33	0.34	0.86	0.15	0.39	0.85	0.27	0.30
Avail Cap(c_a), veh/h	84	425	370	407	781	729	679	514	472	323	472	387
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.1	35.4	40.4	44.4	23.6	23.7	44.5	27.5	29.7	46.6	32.1	32.4
Incr Delay (d2), s/veh	5.8	0.9	67.5	10.2	0.1	0.1	6.7	0.0	0.2	5.9	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	5.2	16.2	6.7	4.0	3.8	5.8	1.4	3.6	4.6	2.5	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.9	36.3	108.0	54.6	23.7	23.8	51.2	27.6	29.9	52.4	32.2	32.5
LnGrp LOS	E	D	F	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		647			697			690			406	
Approach Delay, s/veh		80.8			34.3			43.0			40.8	
Approach LOS		F			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.6	37.7	20.8	31.8	21.6	32.7	6.4	46.2				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	5.8	* 5.8	4.6	5.8				
Max Green Setting (Gmax), s	19.2	29.6	24.4	26.0	21.4	* 27	5.4	45.0				
Max Q Clear Time (g_c+I1), s	11.9	11.7	16.0	28.0	15.3	8.5	3.0	11.8				
Green Ext Time (p_c), s	0.1	0.4	0.2	0.0	0.5	0.7	0.0	1.5				

Intersection Summary

HCM 6th Ctrl Delay	50.2
HCM 6th LOS	D

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
15: Indian Street & Nandina Avenue

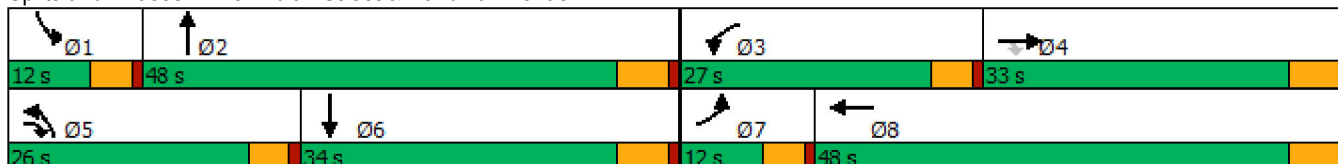


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↑	↗	↖	↗	↖	↑↔	↖	↑↔
Traffic Volume (vph)	22	84	312	84	27	103	194	17	159
Future Volume (vph)	22	84	312	84	27	103	194	17	159
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	5	3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	5	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	29.8	9.6	9.6	29.8	9.6	26.8	9.6	26.8
Total Split (s)	12.0	33.0	26.0	27.0	48.0	26.0	48.0	12.0	34.0
Total Split (%)	10.0%	27.5%	21.7%	22.5%	40.0%	21.7%	40.0%	10.0%	28.3%
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	6.7	14.3	26.3	11.1	22.5	12.5	31.3	6.7	13.8
Actuated g/C Ratio	0.10	0.22	0.41	0.17	0.35	0.19	0.49	0.10	0.21
v/c Ratio	0.16	0.31	0.47	0.46	0.18	0.51	0.18	0.13	0.33
Control Delay	38.2	30.4	4.4	36.9	10.7	36.3	17.1	38.4	27.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.2	30.4	4.4	36.9	10.7	36.3	17.1	38.4	27.0
LOS	D	C	A	D	B	D	B	D	C
Approach Delay		11.4			24.5		23.2		27.9
Approach LOS		B			C		C		C

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 64.5  
 Natural Cycle: 80  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.51  
 Intersection Signal Delay: 19.8  
 Intersection LOS: B  
 Intersection Capacity Utilization 45.1%  
 ICU Level of Service A  
 Analysis Period (min) 15
























Splits and Phases: 15: Indian Street & Nandina Avenue



HCM 6th Signalized Intersection Summary  
 15: Indian Street & Nandina Avenue

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	84	312	84	27	48	103	194	29	17	159	26
Future Volume (veh/h)	22	84	312	84	27	48	103	194	29	17	159	26
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1722	1707	1470	1396	1870	1441	1826	1796	1811	1811	1841
Adj Flow Rate, veh/h	31	117	433	117	38	67	143	269	40	24	221	36
Peak Hour Factor	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72
Percent Heavy Veh, %	0	12	13	29	34	2	31	5	7	6	6	4
Cap, veh/h	60	517	614	141	167	294	171	786	115	47	472	76
Arrive On Green	0.03	0.30	0.30	0.10	0.37	0.37	0.12	0.25	0.25	0.03	0.16	0.16
Sat Flow, veh/h	1810	1722	1447	1400	453	799	1372	3112	457	1725	3044	488
Grp Volume(v), veh/h	31	117	433	117	0	105	143	156	153	24	130	127
Grp Sat Flow(s),veh/h/ln	1810	1722	1447	1400	0	1252	1372	1826	1744	1725	1811	1721
Q Serve(g_s), s	1.1	3.3	16.0	5.3	0.0	3.8	6.6	4.6	4.7	0.9	4.3	4.4
Cycle Q Clear(g_c), s	1.1	3.3	16.0	5.3	0.0	3.8	6.6	4.6	4.7	0.9	4.3	4.4
Prop In Lane	1.00		1.00	1.00		0.64	1.00		0.26	1.00		0.28
Lane Grp Cap(c), veh/h	60	517	614	141	0	461	171	461	441	47	281	267
V/C Ratio(X)	0.52	0.23	0.70	0.83	0.00	0.23	0.84	0.34	0.35	0.51	0.46	0.48
Avail Cap(c_a), veh/h	206	719	785	482	0	812	451	1183	1130	196	784	746
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.0	17.1	15.4	28.7	0.0	14.2	27.9	19.9	19.9	31.3	25.0	25.1
Incr Delay (d2), s/veh	2.6	0.2	2.0	4.7	0.0	0.2	4.1	0.4	0.5	3.2	1.2	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.2	4.6	1.8	0.0	0.9	2.1	1.7	1.7	0.4	1.7	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.6	17.3	17.4	33.4	0.0	14.4	32.0	20.3	20.4	34.5	26.2	26.4
LnGrp LOS	C	B	B	C	A	B	C	C	C	C	C	C
Approach Vol, veh/h		581			222			452			281	
Approach Delay, s/veh		18.3			24.5			24.0			27.0	
Approach LOS		B			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.4	22.2	11.2	25.3	12.7	15.9	6.7	29.8				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	7.4	42.2	22.4	27.2	21.4	28.2	7.4	42.2				
Max Q Clear Time (g_c+I1), s	2.9	6.7	7.3	18.0	8.6	6.4	3.1	5.8				
Green Ext Time (p_c), s	0.0	1.6	0.1	1.5	0.1	1.2	0.0	0.6				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			22.5									
HCM 6th LOS			C									





Lane Group	EBL	EBT	EBR	WBL	WBT	WBL	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	214	342	31	11	289	41	177	21	45	227	227
Future Volume (vph)	214	342	31	11	289	41	177	21	45	227	227
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	NA
Protected Phases	5	2		1	6	3	8		7		4
Permitted Phases		2							8		
Detector Phase	5	2		1	6	3	8		8		4
Switch Phase	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	35.8	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2	40.2
Total Split (s)	36.3	59.2	59.2	9.6	32.5	10.8	37.4	37.4	13.8	40.4	40.4
Total Split (%)	30.3%	49.3%	49.3%	8.0%	27.1%	9.0%	31.2%	31.2%	11.5%	33.7%	33.7%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.4	4.4	3.6	5.2	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	5.4	5.4	4.6	6.2	6.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effort Green (s)	19.9	38.2	38.2	5.6	14.5	6.2	19.0	19.0	7.4	19.1	19.1
Actuated g/C Ratio	0.26	0.49	0.49	0.07	0.19	0.08	0.25	0.25	0.10	0.25	0.25
v/c Ratio	0.74	0.18	0.06	0.13	0.43	0.23	0.30	0.06	0.33	0.70	0.70
Control Delay	42.8	13.2	0.2	49.1	32.4	45.7	28.3	0.2	46.7	20.4	20.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.8	13.2	0.2	49.1	32.4	45.7	28.3	0.2	46.7	20.4	20.4
LOS	D	B	A	D	C	D	C	A	D	C	C
Approach Delay	23.3				33.0				28.8		22.5
Approach LOS	C				C				C		C

Intersection Summary  
 Cycle Length: 120  
 Actuated Cycle Length: 77.4  
 Natural Cycle: 100  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.74  
 Intersection Signal Delay: 25.6  
 Intersection Capacity Utilization 58.0%  
 ICU Level of Service B  
 Analysis Period (min) 15































Splits and Phases: 16: Indian Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 16: Indian Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 			 	
Traffic Volume (veh/h)	214	342	31	11	289	10	41	177	21	45	227	300
Future Volume (veh/h)	214	342	31	11	289	10	41	177	21	45	227	300
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1500	1811	1426	1648	1722	1752	1500	1633	1693	1900	1826	1678
Adj Flow Rate, veh/h	268	428	29	14	361	-10	51	221	19	56	284	319
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	27	6	32	17	12	10	27	18	14	0	5	15
Cap, veh/h	307	1721	421	27	707	0	127	831	379	88	469	418
Arrive On Green	0.21	0.35	0.35	0.02	0.15	0.00	0.05	0.27	0.27	0.05	0.27	0.27
Sat Flow, veh/h	1428	4944	1208	1570	4856	0	2771	3103	1416	1810	1735	1547
Grp Volume(v), veh/h	268	428	29	14	351	0	51	221	19	56	284	319
Grp Sat Flow(s),veh/h/ln	1428	1648	1208	1570	1567	0	1386	1552	1416	1810	1735	1547
Q Serve(g_s), s	12.1	4.1	1.1	0.6	4.6	0.0	1.2	3.7	0.7	2.0	9.5	12.6
Cycle Q Clear(g_c), s	12.1	4.1	1.1	0.6	4.6	0.0	1.2	3.7	0.7	2.0	9.5	12.6
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	307	1721	421	27	707	0	127	831	379	88	469	418
V/C Ratio(X)	0.87	0.25	0.07	0.52	0.50	0.00	0.40	0.27	0.05	0.64	0.61	0.76
Avail Cap(c_a), veh/h	681	3968	970	118	1887	0	258	1492	681	250	892	795
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.2	15.5	14.5	32.4	26.0	0.0	30.9	19.2	18.1	31.1	21.2	22.3
Incr Delay (d2), s/veh	3.1	0.1	0.1	5.7	0.5	0.0	0.8	0.2	0.1	2.9	1.3	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	1.3	0.3	0.2	1.6	0.0	0.4	1.2	0.2	0.9	3.5	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.3	15.6	14.6	38.1	26.5	0.0	31.6	19.4	18.1	33.9	22.4	25.2
LnGrp LOS	C	B	B	D	C	A	C	B	B	C	C	C
Approach Vol, veh/h		725			365			291			659	
Approach Delay, s/veh		20.2			26.9			21.4			24.8	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.7	29.0	7.7	24.2	18.9	15.8	7.8	24.0				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	*6.2				
Max Green Setting (Gmax), s	5.0	53.4	6.2	34.2	31.7	26.7	9.2	*32				
Max Q Clear Time (g_c+I1), s	2.6	6.1	3.2	14.6	14.1	6.6	4.0	5.7				
Green Ext Time (p_c), s	0.0	2.9	0.0	3.4	0.3	2.0	0.0	1.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				23.1								
HCM 6th LOS				C								
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

**APPENDIX 5.2:**

**E+P (PEAK) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**

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Timings

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

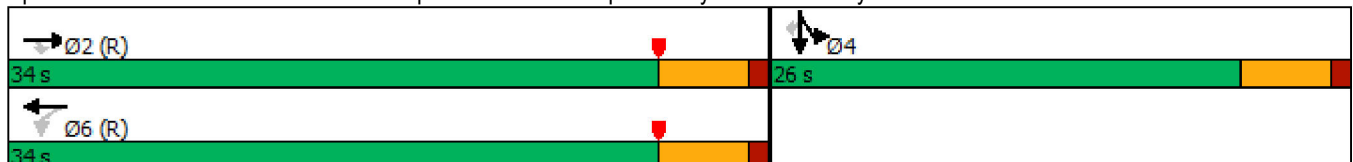


Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↑
Traffic Volume (vph)	671	4	119	189	1	142
Future Volume (vph)	671	4	119	189	1	142
Turn Type	NA	Perm	Perm	NA	NA	Perm
Protected Phases	2			6	4	
Permitted Phases		2	6			4
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	25.0	25.0	10.0	10.0
Total Split (s)	34.0	34.0	34.0	34.0	26.0	26.0
Total Split (%)	56.7%	56.7%	56.7%	56.7%	43.3%	43.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	31.2	31.2	31.2	31.2	18.8	18.8
Actuated g/C Ratio	0.52	0.52	0.52	0.52	0.31	0.31
v/c Ratio	0.41	0.01	0.49	0.11	0.83	0.28
Control Delay	10.3	0.0	30.8	16.4	36.5	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.3	0.0	30.8	16.4	36.5	4.3
LOS	B	A	C	B	D	A
Approach Delay	10.2			21.9	26.8	
Approach LOS	B			C	C	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection  
 Natural Cycle: 55  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.83  
 Intersection Signal Delay: 18.0  
 Intersection LOS: B  
 Intersection Capacity Utilization 89.5%  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

11/09/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑						↑	↑
Traffic Volume (veh/h)	0	671	4	119	189	0	0	0	0	326	1	142
Future Volume (veh/h)	0	671	4	119	189	0	0	0	0	326	1	142
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1811	1530	1500	1826	0				1426	1900	1707
Adj Flow Rate, veh/h	0	729	4	129	205	0				354	1	94
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	6	25	27	5	0				32	0	13
Cap, veh/h	0	2036	767	400	2052	0				436	1	350
Arrive On Green	0.00	0.59	0.59	1.00	1.00	0.00				0.24	0.24	0.24
Sat Flow, veh/h	0	3532	1296	580	3561	0				1805	5	1447
Grp Volume(v), veh/h	0	729	4	129	205	0				355	0	94
Grp Sat Flow(s),veh/h/ln	0	1721	1296	580	1735	0				1810	0	1447
Q Serve(g_s), s	0.0	6.6	0.1	4.0	0.0	0.0				11.1	0.0	3.2
Cycle Q Clear(g_c), s	0.0	6.6	0.1	10.6	0.0	0.0				11.1	0.0	3.2
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2036	767	400	2052	0				438	0	350
V/C Ratio(X)	0.00	0.36	0.01	0.32	0.10	0.00				0.81	0.00	0.27
Avail Cap(c_a), veh/h	0	2036	767	400	2052	0				633	0	506
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.98	0.98	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	6.3	5.0	1.0	0.0	0.0				21.5	0.0	18.4
Incr Delay (d2), s/veh	0.0	0.5	0.0	2.1	0.1	0.0				5.2	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.6	0.0	0.2	0.0	0.0				4.6	0.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	6.8	5.0	3.1	0.1	0.0				26.6	0.0	18.9
LnGrp LOS	A	A	A	A	A	A				C	A	B
Approach Vol, veh/h		733			334						449	
Approach Delay, s/veh		6.8			1.2						25.0	
Approach LOS		A			A						C	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		40.5		19.5		40.5						
Change Period (Y+Rc), s		5.0		5.0		5.0						
Max Green Setting (Gmax), s		29.0		21.0		29.0						
Max Q Clear Time (g_c+I1), s		8.6		13.1		12.6						
Green Ext Time (p_c), s		2.9		1.4		1.6						
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				11.0								
HCM 6th LOS				B								

Timings

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

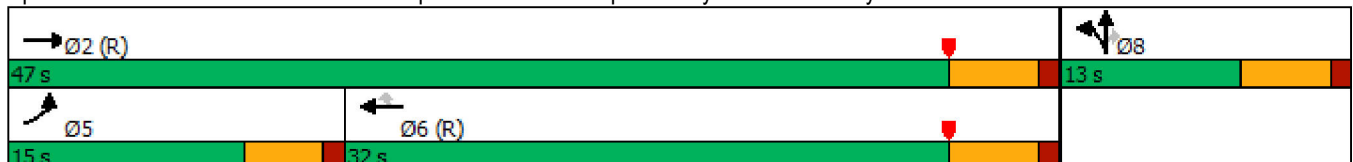


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations	↘	↕↕	↕↕	↗	↖	↗
Traffic Volume (vph)	393	604	303	830	3	58
Future Volume (vph)	393	604	303	830	3	58
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	26.0	24.0	24.0	10.0	10.0
Total Split (s)	15.0	47.0	32.0	32.0	13.0	13.0
Total Split (%)	25.0%	78.3%	53.3%	53.3%	21.7%	21.7%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max
Act Effect Green (s)	10.5	42.0	27.0	27.0	8.0	8.0
Actuated g/C Ratio	0.18	0.70	0.45	0.45	0.13	0.13
v/c Ratio	1.43	0.31	0.23	0.99	0.04	0.23
Control Delay	233.0	3.9	10.7	39.0	23.1	3.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	233.0	3.9	10.7	39.0	23.1	3.6
LOS	F	A	B	D	C	A
Approach Delay		94.2	31.4		5.8	
Approach LOS		F	C		A	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 29 (48%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.43  
 Intersection Signal Delay: 59.2  
 Intersection Capacity Utilization 89.5%  
 Analysis Period (min) 15  
 Intersection LOS: E  
 ICU Level of Service E

Splits and Phases: 2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

11/17/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷			↷	↶		↶	↷			
Traffic Volume (veh/h)	393	604	0	0	303	830	5	3	58	0	0	0
Future Volume (veh/h)	393	604	0	0	303	830	5	3	58	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1811	1618	0	0	1707	1737	1559	1900	1559			
Adj Flow Rate, veh/h	427	657	0	0	329	598	5	3	-2			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	6	19	0	0	13	11	23	0	23			
Cap, veh/h	302	2152	0	0	1460	662	154	92	176			
Arrive On Green	0.12	0.47	0.00	0.00	0.45	0.45	0.13	0.13	0.00			
Sat Flow, veh/h	1725	3156	0	0	3329	1471	1152	691	1321			
Grp Volume(v), veh/h	427	657	0	0	329	598	8	0	-2			
Grp Sat Flow(s),veh/h/ln	1725	1537	0	0	1622	1471	1842	0	1321			
Q Serve(g_s), s	10.5	7.9	0.0	0.0	3.7	22.6	0.2	0.0	0.0			
Cycle Q Clear(g_c), s	10.5	7.9	0.0	0.0	3.7	22.6	0.2	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.62		1.00			
Lane Grp Cap(c), veh/h	302	2152	0	0	1460	662	246	0	176			
V/C Ratio(X)	1.41	0.31	0.00	0.00	0.23	0.90	0.03	0.00	-0.01			
Avail Cap(c_a), veh/h	302	2152	0	0	1460	662	246	0	176			
HCM Platoon Ratio	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.92	0.92	0.00	0.00	0.92	0.92	1.00	0.00	0.00			
Uniform Delay (d), s/veh	26.5	6.9	0.0	0.0	10.1	15.3	22.6	0.0	0.0			
Incr Delay (d2), s/veh	203.7	0.3	0.0	0.0	0.3	16.9	0.2	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	21.1	1.4	0.0	0.0	1.1	8.7	0.1	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	230.2	7.2	0.0	0.0	10.4	32.1	22.9	0.0	0.0			
LnGrp LOS	F	A	A	A	B	C	C	A	A			
Approach Vol, veh/h		1084			927			6				
Approach Delay, s/veh		95.1			24.4			30.5				
Approach LOS		F			C			C				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		47.0			15.0	32.0		13.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		42.0			10.5	27.0		8.0				
Max Q Clear Time (g_c+1), s		9.9			12.5	24.6		2.2				
Green Ext Time (p_c), s		2.8			0.0	0.8		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					62.4							
HCM 6th LOS					E							



Timings  
3: Western Way & Harley Knox Bl.

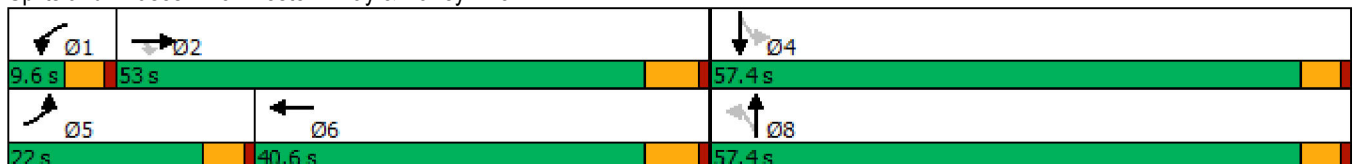


Lane Group	EBL	EBT	WBT	SBL	SBT	Ø1	Ø8
Lane Configurations	↖	↑↑↑	↑↑↑	↖	↗		
Traffic Volume (vph)	66	609	1121	5	0		
Future Volume (vph)	66	609	1121	5	0		
Turn Type	Prot	NA	NA	Perm	NA		
Protected Phases	5	2	6		4	1	8
Permitted Phases				4			
Detector Phase	5	2	6	4	4		
Switch Phase							
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	21.8	21.8	32.6	32.6	9.6	32.6
Total Split (s)	22.0	53.0	40.6	57.4	57.4	9.6	57.4
Total Split (%)	18.3%	44.2%	33.8%	47.8%	47.8%	8%	48%
Yellow Time (s)	3.6	4.8	4.8	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.6	5.8	5.8	4.6	4.6		
Lead/Lag	Lead	Lag	Lag			Lead	
Lead-Lag Optimize?	Yes	Yes	Yes			Yes	
Recall Mode	None	None	None	None	None	None	None
Act Effct Green (s)	9.3	38.7	32.7	16.4	16.4		
Actuated g/C Ratio	0.19	0.78	0.66	0.33	0.33		
v/c Ratio	0.24	0.20	0.40	0.01	0.07		
Control Delay	29.7	4.8	12.1	21.4	0.2		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	29.7	4.8	12.1	21.4	0.2		
LOS	C	A	B	C	A		
Approach Delay		7.3	12.1		2.8		
Approach LOS		A	B		A		

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 49.8  
 Natural Cycle: 70  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.40  
 Intersection Signal Delay: 10.2  
 Intersection LOS: B  
 Intersection Capacity Utilization 47.9%  
 ICU Level of Service A  
 Analysis Period (min) 15


























Splits and Phases: 3: Western Way & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 3: Western Way & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  							
Traffic Volume (veh/h)	66	609	0	0	1121	33	0	0	0	5	0	34
Future Volume (veh/h)	66	609	0	0	1121	33	0	0	0	5	0	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1693	1604	1900	1900	1752	1678	1900	1900	1900	1337	1900	1203
Adj Flow Rate, veh/h	71	655	0	0	1205	33	0	0	0	5	0	25
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	14	20	0	0	10	15	0	0	0	38	0	47
Cap, veh/h	112	2852	1049	5	2206	60	189	142	0	285	0	121
Arrive On Green	0.07	0.65	0.00	0.00	0.46	0.46	0.00	0.00	0.00	0.07	0.00	0.07
Sat Flow, veh/h	1612	4378	1610	1810	4785	131	1408	1900	0	1268	0	1610
Grp Volume(v), veh/h	71	655	0	0	803	435	0	0	0	5	0	25
Grp Sat Flow(s),veh/h/ln	1612	1459	1610	1810	1594	1728	1408	1900	0	1268	0	1610
Q Serve(g_s), s	1.6	2.3	0.0	0.0	6.9	6.9	0.0	0.0	0.0	0.1	0.0	0.6
Cycle Q Clear(g_c), s	1.6	2.3	0.0	0.0	6.9	6.9	0.0	0.0	0.0	0.1	0.0	0.6
Prop In Lane	1.00		1.00	1.00		0.08	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	112	2852	1049	5	1470	797	189	142	0	285	0	121
V/C Ratio(X)	0.63	0.23	0.00	0.00	0.55	0.55	0.00	0.00	0.00	0.02	0.00	0.21
Avail Cap(c_a), veh/h	738	5437	2000	238	2919	1582	2040	2640	0	1951	0	2237
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.2	2.7	0.0	0.0	7.4	7.4	0.0	0.0	0.0	16.3	0.0	16.5
Incr Delay (d2), s/veh	2.2	0.0	0.0	0.0	0.3	0.6	0.0	0.0	0.0	0.0	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.0	0.0	1.2	1.4	0.0	0.0	0.0	0.0	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.4	2.8	0.0	0.0	7.7	8.0	0.0	0.0	0.0	16.3	0.0	17.4
LnGrp LOS	B	A	A	A	A	A	A	A	A	B	A	B
Approach Vol, veh/h		726			1238			0				30
Approach Delay, s/veh		4.4			7.8			0.0				17.2
Approach LOS		A			A							B
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	30.6		7.5	7.2	23.3		7.5				
Change Period (Y+Rc), s	4.6	5.8		4.6	4.6	5.8		4.6				
Max Green Setting (Gmax), s	5.0	47.2		52.8	17.4	34.8		52.8				
Max Q Clear Time (g_c+I1), s	0.0	4.3		2.6	3.6	8.9		0.0				
Green Ext Time (p_c), s	0.0	4.7		0.1	0.1	8.6		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				6.7								
HCM 6th LOS				A								

Timings  
4: Patterson Av. & Harley Knox Bl.

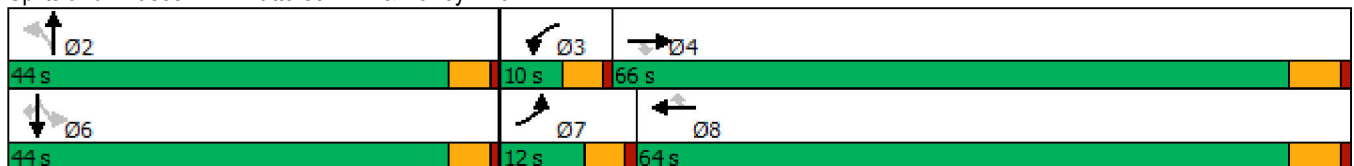


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↶	↶↶↶	↶	↶	↶↶	↶		↶↶		↶	↶
Traffic Volume (vph)	20	555	11	13	1085	14	53	6	11	3	17
Future Volume (vph)	20	555	11	13	1085	14	53	6	11	3	17
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	7	4		3	8			2		6	
Permitted Phases			4			8	2		6		6
Detector Phase	7	4	4	3	8	8	2	2	6	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	9.6	31.8	31.8	33.7	33.7	40.7	40.7	40.7
Total Split (s)	12.0	66.0	66.0	10.0	64.0	64.0	44.0	44.0	44.0	44.0	44.0
Total Split (%)	10.0%	55.0%	55.0%	8.3%	53.3%	53.3%	36.7%	36.7%	36.7%	36.7%	36.7%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8		4.7		4.7	4.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	6.7	43.2	43.2	6.1	40.9	40.9		15.2		15.2	15.2
Actuated g/C Ratio	0.10	0.68	0.68	0.10	0.64	0.64		0.24		0.24	0.24
v/c Ratio	0.15	0.20	0.01	0.12	0.56	0.02		0.28		0.07	0.06
Control Delay	40.2	7.5	0.0	42.5	13.1	0.1		24.9		25.6	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	40.2	7.5	0.0	42.5	13.1	0.1		24.9		25.6	0.4
LOS	D	A	A	D	B	A		C		C	A
Approach Delay		8.5			13.3			24.9		11.8	
Approach LOS		A			B			C		B	

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 64	
Natural Cycle: 85	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.56	
Intersection Signal Delay: 12.2	Intersection LOS: B
Intersection Capacity Utilization 59.3%	ICU Level of Service B
Analysis Period (min) 15	




























Splits and Phases: 4: Patterson Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 4: Patterson Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/09/2020

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		  			 			 				 	 
Traffic Volume (veh/h)	20	555	11	13	1085	14	53	6	14	11	3	17	
Future Volume (veh/h)	20	555	11	13	1085	14	53	6	14	11	3	17	
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No			No			No			No		
Adj Sat Flow, veh/h/ln	1455	1663	1767	1129	1767	1026	1559	1426	1693	863	952	1278	
Adj Flow Rate, veh/h	22	603	12	14	1179	15	58	7	15	12	3	18	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Percent Heavy Veh, %	30	16	9	52	9	59	23	32	14	70	64	42	
Cap, veh/h	37	2362	779	19	1718	445	240	31	34	226	33	172	
Arrive On Green	0.03	0.52	0.52	0.02	0.51	0.51	0.16	0.16	0.16	0.16	0.16	0.16	
Sat Flow, veh/h	1386	4540	1497	1076	3357	869	728	195	213	602	211	1083	
Grp Volume(v), veh/h	22	603	12	14	1179	15	80	0	0	15	0	18	
Grp Sat Flow(s),veh/h/ln	1386	1513	1497	1076	1678	869	1136	0	0	813	0	1083	
Q Serve(g_s), s	0.8	3.7	0.2	0.6	13.2	0.4	2.3	0.0	0.0	0.0	0.0	0.7	
Cycle Q Clear(g_c), s	0.8	3.7	0.2	0.6	13.2	0.4	3.1	0.0	0.0	0.7	0.0	0.7	
Prop In Lane	1.00		1.00	1.00		1.00	0.72		0.19	0.80		1.00	
Lane Grp Cap(c), veh/h	37	2362	779	19	1718	445	305	0	0	259	0	172	
V/C Ratio(X)	0.60	0.26	0.02	0.74	0.69	0.03	0.26	0.00	0.00	0.06	0.00	0.10	
Avail Cap(c_a), veh/h	206	5487	1810	117	3923	1016	1005	0	0	729	0	854	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	
Uniform Delay (d), s/veh	24.0	6.6	5.8	24.3	9.2	6.0	18.9	0.0	0.0	17.9	0.0	17.9	
Incr Delay (d2), s/veh	5.8	0.1	0.0	18.4	0.5	0.0	0.5	0.0	0.0	0.1	0.0	0.3	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.3	0.7	0.0	0.2	3.0	0.1	0.8	0.0	0.0	0.1	0.0	0.2	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	29.8	6.7	5.8	42.7	9.6	6.1	19.3	0.0	0.0	18.0	0.0	18.2	
LnGrp LOS	C	A	A	D	A	A	B	A	A	B	A	B	
Approach Vol, veh/h		637			1208			80				33	
Approach Delay, s/veh		7.4			10.0			19.3				18.1	
Approach LOS		A			A			B				B	
Timer - Assigned Phs		2	3	4		6	7	8					
Phs Duration (G+Y+Rc), s		12.6	5.5	31.7		12.6	5.9	31.3					
Change Period (Y+Rc), s		* 4.7	4.6	5.8		* 4.7	4.6	5.8					
Max Green Setting (Gmax), s		* 39	5.4	60.2		* 39	7.4	58.2					
Max Q Clear Time (g_c+I1), s		5.1	2.6	5.7		2.7	2.8	15.2					
Green Ext Time (p_c), s		0.4	0.0	4.3		0.1	0.0	10.3					
<b>Intersection Summary</b>													
HCM 6th Ctrl Delay			9.7										
HCM 6th LOS			A										
<b>Notes</b>													
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.													

Timings  
5: Heacock Street & Cactus Avenue

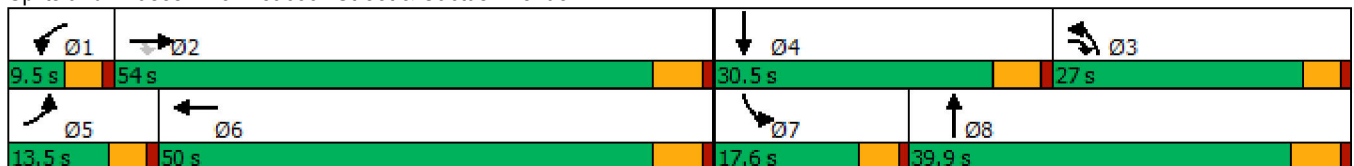


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	111	507	430	33	1131	609	432	99	203
Future Volume (vph)	111	507	430	33	1131	609	432	99	203
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	3	1	6	3	8	7	4
Permitted Phases			2						
Detector Phase	5	2	3	1	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.5	30.5	9.5	9.5	30.5	9.5	30.5	9.5	30.5
Total Split (s)	13.5	54.0	27.0	9.5	50.0	27.0	39.9	17.6	30.5
Total Split (%)	11.2%	44.6%	22.3%	7.9%	41.3%	22.3%	33.0%	14.5%	25.2%
Yellow Time (s)	3.5	4.5	3.5	3.5	4.5	3.5	4.5	3.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	4.5	4.5	5.5	4.5	5.5	4.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None
Act Effct Green (s)	8.8	48.5	73.4	5.1	40.5	21.9	25.7	9.9	13.7
Actuated g/C Ratio	0.08	0.46	0.70	0.05	0.39	0.21	0.24	0.09	0.13
v/c Ratio	0.74	0.31	0.35	0.37	0.88	0.85	0.53	0.59	0.57
Control Delay	77.2	19.9	2.4	64.5	38.8	53.1	37.4	61.8	41.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	77.2	19.9	2.4	64.5	38.8	53.1	37.4	61.8	41.1
LOS	E	B	A	E	D	D	D	E	D
Approach Delay		18.8			39.5		46.4		46.5
Approach LOS		B			D		D		D

Intersection Summary

Cycle Length: 121  
 Actuated Cycle Length: 105.1  
 Natural Cycle: 110  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.88  
 Intersection Signal Delay: 36.4  
 Intersection LOS: D  
 Intersection Capacity Utilization 82.9%  
 ICU Level of Service E  
 Analysis Period (min) 15























Splits and Phases: 5: Heacock Street & Cactus Avenue



HCM 6th Signalized Intersection Summary  
5: Heacock Street & Cactus Avenue

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	111	507	430	33	1131	98	609	432	20	99	203	75
Future Volume (veh/h)	111	507	430	33	1131	98	609	432	20	99	203	75
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1856	1707	1900	1885	1841	1811	1826	1826	1870	1811	1885
Adj Flow Rate, veh/h	116	528	448	34	1178	102	634	450	21	103	211	78
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	3	13	0	1	4	6	5	5	2	6	1
Cap, veh/h	144	1617	927	56	1319	114	707	879	41	130	285	102
Arrive On Green	0.08	0.44	0.44	0.03	0.39	0.39	0.20	0.25	0.25	0.07	0.11	0.11
Sat Flow, veh/h	1781	3711	1447	1810	3421	296	3450	3462	161	1781	2547	911
Grp Volume(v), veh/h	116	528	448	34	648	632	634	237	234	103	148	141
Grp Sat Flow(s),veh/h/ln	1781	1856	1447	1810	1885	1832	1725	1826	1797	1781	1811	1647
Q Serve(g_s), s	6.2	9.1	3.4	1.8	31.2	31.4	17.4	10.8	10.8	5.5	7.7	8.1
Cycle Q Clear(g_c), s	6.2	9.1	3.4	1.8	31.2	31.4	17.4	10.8	10.8	5.5	7.7	8.1
Prop In Lane	1.00		1.00	1.00		0.16	1.00		0.09	1.00		0.55
Lane Grp Cap(c), veh/h	144	1617	927	56	727	706	707	464	456	130	203	184
V/C Ratio(X)	0.80	0.33	0.48	0.61	0.89	0.89	0.90	0.51	0.51	0.79	0.73	0.76
Avail Cap(c_a), veh/h	165	1857	1020	93	865	841	801	648	638	241	467	425
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.8	18.0	2.4	46.4	27.9	27.9	37.5	31.0	31.0	44.2	41.6	41.8
Incr Delay (d2), s/veh	19.0	0.0	0.1	3.9	9.3	9.7	11.0	0.3	0.3	4.0	1.9	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	3.5	0.7	0.8	14.7	14.4	8.0	4.5	4.5	2.5	3.4	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.7	18.0	2.6	50.3	37.2	37.7	48.6	31.3	31.3	48.2	43.5	44.3
LnGrp LOS	E	B	A	D	D	D	D	C	C	D	D	D
Approach Vol, veh/h		1092			1314			1105			392	
Approach Delay, s/veh		16.4			37.7			41.2			45.0	
Approach LOS		B			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.5	47.7	25.4	16.4	12.4	42.9	11.6	30.1				
Change Period (Y+Rc), s	4.5	5.5	5.5	* 5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	5.0	48.5	22.5	* 25	9.0	44.5	13.1	34.4				
Max Q Clear Time (g_c+I1), s	3.8	11.1	19.4	10.1	8.2	33.4	7.5	12.8				
Green Ext Time (p_c), s	0.0	2.8	0.5	0.8	0.0	4.0	0.0	1.5				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			33.5									
HCM 6th LOS			C									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings  
6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

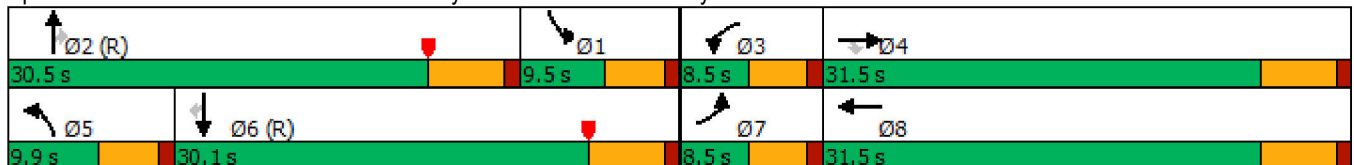
11/09/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	35	32	87	17	193	24	790	44	89	527	17	
Future Volume (vph)	35	32	87	17	193	24	790	44	89	527	17	
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	7	4		3	8	5	2		1	6		
Permitted Phases			4					2			6	
Detector Phase	7	4	4	3	8	5	2	2	1	6	6	
Switch Phase												
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	
Minimum Split (s)	8.5	23.5	23.5	8.5	31.5	8.5	30.5	30.5	8.5	23.5	23.5	
Total Split (s)	8.5	31.5	31.5	8.5	31.5	9.9	30.5	30.5	9.5	30.1	30.1	
Total Split (%)	10.6%	39.4%	39.4%	10.6%	39.4%	12.4%	38.1%	38.1%	11.9%	37.6%	37.6%	
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5	4.5	4.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	5.5	4.5	5.5	5.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max	
Act Effct Green (s)	4.0	13.3	13.3	4.0	11.6	5.3	42.8	42.8	5.0	48.1	48.1	
Actuated g/C Ratio	0.05	0.17	0.17	0.05	0.14	0.07	0.54	0.54	0.06	0.60	0.60	
v/c Ratio	0.44	0.11	0.18	0.21	0.55	0.21	0.43	0.05	0.81	0.26	0.02	
Control Delay	54.9	25.4	0.8	42.7	18.4	39.6	14.8	0.1	84.6	11.8	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	54.9	25.4	0.8	42.7	18.4	39.6	14.8	0.1	84.6	11.8	0.1	
LOS	D	C	A	D	B	D	B	A	F	B	A	
Approach Delay		18.1			19.5		14.7			21.7		
Approach LOS		B			B		B			C		

Intersection Summary

Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 80  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.81  
 Intersection Signal Delay: 18.1  
 Intersection LOS: B  
 Intersection Capacity Utilization 59.4%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 6: Heacock Street & Meyer Drive/John F. Kennedy Drive




























HCM 6th Signalized Intersection Summary  
 6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	32	87	17	193	170	24	790	44	89	527	17
Future Volume (veh/h)	35	32	87	17	193	170	24	790	44	89	527	17
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.95	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1648	1767	1826	1722	1841	1885	1781	1811	1767	1856	1752	1648
Adj Flow Rate, veh/h	36	33	91	18	201	177	25	823	46	93	549	18
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	17	9	5	12	4	1	8	6	9	3	10	17
Cap, veh/h	43	300	263	27	294	244	36	1132	443	422	1901	748
Arrive On Green	0.03	0.17	0.17	0.02	0.16	0.16	0.02	0.31	0.31	0.24	0.54	0.54
Sat Flow, veh/h	1570	1767	1547	1640	1853	1535	1697	3622	1417	1767	3504	1379
Grp Volume(v), veh/h	36	33	91	18	200	178	25	823	46	93	549	18
Grp Sat Flow(s),veh/h/ln	1570	1767	1547	1640	1841	1547	1697	1811	1417	1767	1752	1379
Q Serve(g_s), s	1.8	1.3	4.2	0.9	8.2	8.8	1.2	16.2	1.5	3.4	6.8	0.5
Cycle Q Clear(g_c), s	1.8	1.3	4.2	0.9	8.2	8.8	1.2	16.2	1.5	3.4	6.8	0.5
Prop In Lane	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	43	300	263	27	292	245	36	1132	443	422	1901	748
V/C Ratio(X)	0.83	0.11	0.35	0.67	0.68	0.73	0.69	0.73	0.10	0.22	0.29	0.02
Avail Cap(c_a), veh/h	78	574	503	82	598	503	115	1132	443	422	1901	748
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.93	0.93	0.93	0.90	0.90	0.90
Uniform Delay (d), s/veh	38.7	28.1	29.3	39.1	31.8	32.0	38.9	24.5	12.3	24.5	9.9	8.5
Incr Delay (d2), s/veh	14.0	0.1	0.3	10.0	1.1	1.5	7.9	3.8	0.4	0.1	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.5	1.5	0.4	3.5	3.2	0.5	6.7	0.6	1.3	2.2	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.8	28.2	29.6	49.1	32.8	33.6	46.8	28.3	12.8	24.6	10.3	8.5
LnGrp LOS	D	C	C	D	C	C	D	C	B	C	B	A
Approach Vol, veh/h		160			396			894			660	
Approach Delay, s/veh		34.5			33.9			28.0			12.2	
Approach LOS		C			C			C			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	24.6	30.5	5.8	19.1	6.2	48.9	6.7	18.2				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	5.0	* 25	4.0	26.0	5.4	24.6	4.0	26.0				
Max Q Clear Time (g_c+I1), s	5.4	18.2	2.9	6.2	3.2	8.8	3.8	10.8				
Green Ext Time (p_c), s	0.0	2.1	0.0	0.2	0.0	1.9	0.0	1.1				

Intersection Summary













HCM 6th Ctrl Delay	24.7
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Timings  
7: Heacock Street & Gentian Avenue

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	12	13	701	8	81	557
Future Volume (vph)	12	13	701	8	81	557
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	27.6	27.6	27.2	27.2	9.6	16.2
Total Split (s)	28.0	28.0	65.0	65.0	27.0	92.0
Total Split (%)	23.3%	23.3%	54.2%	54.2%	22.5%	76.7%
Yellow Time (s)	3.6	3.6	5.2	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	6.2	6.2	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	12.7	12.7	29.8	29.8	7.7	42.4
Actuated g/C Ratio	0.25	0.25	0.59	0.59	0.15	0.84
v/c Ratio	0.03	0.03	0.40	0.01	0.30	0.23
Control Delay	19.0	10.9	11.7	10.2	26.8	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.0	10.9	11.7	10.2	26.8	4.1
LOS	B	B	B	B	C	A
Approach Delay	14.8		11.7			7.0
Approach LOS	B		B			A

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 50.4	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.40	
Intersection Signal Delay: 9.6	Intersection LOS: A
Intersection Capacity Utilization 45.0%	ICU Level of Service A
Analysis Period (min) 15	













Splits and Phases: 7: Heacock Street & Gentian Avenue



HCM 6th Signalized Intersection Summary  
7: Heacock Street & Gentian Avenue

Gateway Aviation TA (JN:13445)

11/09/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	12	13	701	8	81	557
Future Volume (veh/h)	12	13	701	8	81	557
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	0.97	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1781	1707	1870	1870	1678
Adj Flow Rate, veh/h	13	14	738	8	85	586
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	8	13	2	2	15
Cap, veh/h	120	97	1277	624	145	1951
Arrive On Green	0.07	0.07	0.39	0.39	0.08	0.61
Sat Flow, veh/h	1810	1461	3329	1585	1781	3272
Grp Volume(v), veh/h	13	14	738	8	85	586
Grp Sat Flow(s),veh/h/ln	1810	1461	1622	1585	1781	1594
Q Serve(g_s), s	0.2	0.3	6.0	0.1	1.5	2.9
Cycle Q Clear(g_c), s	0.2	0.3	6.0	0.1	1.5	2.9
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	120	97	1277	624	145	1951
V/C Ratio(X)	0.11	0.14	0.58	0.01	0.59	0.30
Avail Cap(c_a), veh/h	1261	1018	5681	2776	1188	8145
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.7	14.8	8.0	6.2	14.9	3.1
Incr Delay (d2), s/veh	0.1	0.3	0.4	0.0	1.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.1	1.0	0.0	0.5	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	14.9	15.0	8.4	6.2	16.3	3.2
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	27		746			671
Approach Delay, s/veh	15.0		8.4			4.8
Approach LOS	B		A			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	7.3	19.4			26.8	6.8
Change Period (Y+Rc), s	4.6	6.2			6.2	4.6
Max Green Setting (Gmax), s	22.4	58.8			85.8	23.4
Max Q Clear Time (g_c+I1), s	3.5	8.0			4.9	2.3
Green Ext Time (p_c), s	0.1	5.2			3.9	0.0
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			6.9			
HCM 6th LOS			A			

Timings  
8: Heacock Street & Iris Avenue



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖↗	↗	↕↕	↗	↖↗	↕↕
Traffic Volume (vph)	68	367	338	55	234	343
Future Volume (vph)	68	367	338	55	234	343
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	15.8	15.8	33.2	33.2	9.6	16.2
Total Split (s)	48.0	48.0	61.0	61.0	11.0	72.0
Total Split (%)	40.0%	40.0%	50.8%	50.8%	9.2%	60.0%
Yellow Time (s)	4.8	4.8	5.2	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	6.2	6.2	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	10.4	10.4	13.2	13.2	6.5	24.4
Actuated g/C Ratio	0.22	0.22	0.28	0.28	0.14	0.52
v/c Ratio	0.10	0.58	0.44	0.13	0.55	0.25
Control Delay	16.9	6.2	15.1	4.3	26.3	6.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.9	6.2	15.1	4.3	26.3	6.4
LOS	B	A	B	A	C	A
Approach Delay	7.9		13.6			14.5
Approach LOS	A		B			B

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 47  
 Natural Cycle: 60  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.58  
 Intersection Signal Delay: 12.2  
 Intersection LOS: B  
 Intersection Capacity Utilization 42.1%  
 ICU Level of Service A  
 Analysis Period (min) 15

















Splits and Phases: 8: Heacock Street & Iris Avenue



HCM 6th Signalized Intersection Summary  
8: Heacock Street & Iris Avenue

Gateway Aviation TA (JN:13445)

11/09/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 		 		 	 
Traffic Volume (veh/h)	68	367	338	55	234	343
Future Volume (veh/h)	68	367	338	55	234	343
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1856	1885	1707	1870	1870	1693
Adj Flow Rate, veh/h	80	432	398	65	275	404
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	3	1	13	2	2	14
Cap, veh/h	1125	524	678	331	401	1354
Arrive On Green	0.33	0.33	0.21	0.21	0.12	0.42
Sat Flow, veh/h	3428	1598	3329	1585	3456	3300
Grp Volume(v), veh/h	80	432	398	65	275	404
Grp Sat Flow(s),veh/h/ln	1714	1598	1622	1585	1728	1608
Q Serve(g_s), s	0.8	11.9	5.3	1.6	3.7	4.0
Cycle Q Clear(g_c), s	0.8	11.9	5.3	1.6	3.7	4.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	1125	524	678	331	401	1354
V/C Ratio(X)	0.07	0.82	0.59	0.20	0.69	0.30
Avail Cap(c_a), veh/h	3024	1409	3715	1815	462	4422
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.1	14.8	17.1	15.6	20.3	9.2
Incr Delay (d2), s/veh	0.0	3.3	0.8	0.3	2.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	3.7	1.6	0.5	1.3	0.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.1	18.1	17.9	15.9	22.8	9.3
LnGrp LOS	B	B	B	B	C	A
Approach Vol, veh/h	512		463			679
Approach Delay, s/veh	17.0		17.6			14.7
Approach LOS	B		B			B
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	10.2	16.2			26.4	21.5
Change Period (Y+Rc), s	4.6	6.2			6.2	5.8
Max Green Setting (Gmax), s	6.4	54.8			65.8	42.2
Max Q Clear Time (g_c+I1), s	5.7	7.3			6.0	13.9
Green Ext Time (p_c), s	0.0	2.7			2.6	1.8
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			16.3			
HCM 6th LOS			B			

Timings  
9: Heacock Street & Krameria Avenue-North

	↙	↖	↑	↘	↓
Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations	↙	↖	↑↔	↘	↑↑
Traffic Volume (vph)	15	52	249	18	314
Future Volume (vph)	15	52	249	18	314
Turn Type	Prot	Perm	NA	Prot	NA
Protected Phases	8		2	1	6
Permitted Phases		8			
Detector Phase	8	8	2	1	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	29.1	29.1	29.2	9.6	16.2
Total Split (s)	39.0	39.0	54.0	27.0	81.0
Total Split (%)	32.5%	32.5%	45.0%	22.5%	67.5%
Yellow Time (s)	4.1	4.1	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	6.2	4.6	6.2
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	Min	Max	Min
Act Effct Green (s)	12.5	12.5	12.5	23.9	44.6
Actuated g/C Ratio	0.22	0.22	0.22	0.41	0.77
v/c Ratio	0.05	0.14	0.43	0.04	0.15
Control Delay	21.9	7.6	23.1	17.9	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	21.9	7.6	23.1	17.9	4.8
LOS	C	A	C	B	A
Approach Delay	10.9		23.1		5.5
Approach LOS	B		C		A

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 57.8	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.43	
Intersection Signal Delay: 13.0	Intersection LOS: B
Intersection Capacity Utilization 32.7%	ICU Level of Service A
Analysis Period (min) 15	












Splits and Phases: 9: Heacock Street & Krameria Avenue-North



HCM 6th Signalized Intersection Summary  
 9: Heacock Street & Krameria Avenue-North

Gateway Aviation TA (JN:13445)

11/09/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	15	52	249	10	18	314
Future Volume (veh/h)	15	52	249	10	18	314
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1693	1841	1811	1737	1233	1796
Adj Flow Rate, veh/h	19	64	307	12	22	388
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	14	4	6	11	45	7
Cap, veh/h	210	203	608	24	474	2274
Arrive On Green	0.13	0.13	0.18	0.18	0.40	0.67
Sat Flow, veh/h	1612	1560	3467	132	1174	3503
Grp Volume(v), veh/h	19	64	156	163	22	388
Grp Sat Flow(s),veh/h/ln	1612	1560	1721	1787	1174	1706
Q Serve(g_s), s	0.6	2.1	4.5	4.6	0.6	2.4
Cycle Q Clear(g_c), s	0.6	2.1	4.5	4.6	0.6	2.4
Prop In Lane	1.00	1.00		0.07	1.00	
Lane Grp Cap(c), veh/h	210	203	310	322	474	2274
V/C Ratio(X)	0.09	0.32	0.50	0.51	0.05	0.17
Avail Cap(c_a), veh/h	984	952	1481	1539	474	4598
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.3	21.9	20.5	20.5	10.1	3.5
Incr Delay (d2), s/veh	0.1	0.3	0.5	0.5	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.7	1.6	1.6	0.1	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	21.3	22.2	21.0	21.0	10.3	3.5
LnGrp LOS	C	C	C	C	B	A
Approach Vol, veh/h	83		319			410
Approach Delay, s/veh	22.0		21.0			3.9
Approach LOS	C		C			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	27.0	16.2			43.2	12.3
Change Period (Y+Rc), s	4.6	6.2			6.2	5.1
Max Green Setting (Gmax), s	22.4	47.8			74.8	33.9
Max Q Clear Time (g_c+I1), s	2.6	6.6			4.4	4.1
Green Ext Time (p_c), s	0.0	1.0			1.5	0.1
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			12.4			
HCM 6th LOS			B			

Timings  
10: Heacock Street & Driveway 1



Lane Group	EBL	EBT	NBL	NBT	SBT	SBR	Ø1	Ø8
Lane Configurations								
Traffic Volume (vph)	45	0	82	193	221	84		
Future Volume (vph)	45	0	82	193	221	84		
Turn Type	Perm	NA	Prot	NA	NA	Perm		
Protected Phases		4	5	2	6		1	8
Permitted Phases	4					6		
Detector Phase	4	4	5	2	6	6		
Switch Phase								
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	26.6	26.6	9.6	23.2	23.2	23.2	9.6	26.6
Total Split (s)	26.6	26.6	9.6	83.8	83.8	83.8	9.6	26.6
Total Split (%)	22.2%	22.2%	8.0%	69.8%	69.8%	69.8%	8%	22%
Yellow Time (s)	3.6	3.6	3.6	5.2	5.2	5.2	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.6	4.6	4.6	6.2	6.2	6.2		
Lead/Lag			Lead	Lag	Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	Min	Min	Min	None	None
Act Effct Green (s)	12.3	12.3	5.3	28.5	15.2	15.2		
Actuated g/C Ratio	0.29	0.29	0.13	0.68	0.36	0.36		
v/c Ratio	0.12	0.06	0.45	0.09	0.20	0.14		
Control Delay	12.6	0.1	31.5	6.4	13.0	5.0		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay	12.6	0.1	31.5	6.4	13.0	5.0		
LOS	B	A	C	A	B	A		
Approach Delay		6.1		13.9	10.8			
Approach LOS		A		B	B			

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 41.7	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.45	
Intersection Signal Delay: 11.4	Intersection LOS: B
Intersection Capacity Utilization 34.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 10: Heacock Street & Driveway 1

Ø1	Ø2	Ø4
9.6 s	83.8 s	26.6 s
Ø5	Ø6	Ø8
9.6 s	83.8 s	26.6 s

HCM 6th Signalized Intersection Summary  
 10: Heacock Street & Driveway 1

Gateway Aviation TA (JN:13445)

11/17/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	0	50	0	0	0	82	193	0	0	221	84
Future Volume (veh/h)	45	0	50	0	0	0	82	193	0	0	221	84
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1663	1781	1781	1900	1737	1900
Adj Flow Rate, veh/h	49	0	54	0	0	0	89	210	0	0	240	91
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	16	8	8	0	11	0
Cap, veh/h	537	0	293	0	345	0	132	1712	0	5	955	466
Arrive On Green	0.18	0.00	0.18	0.00	0.00	0.00	0.08	0.51	0.00	0.00	0.29	0.29
Sat Flow, veh/h	1810	0	1610	0	1900	0	1584	3474	0	1810	3300	1610
Grp Volume(v), veh/h	49	0	54	0	0	0	89	210	0	0	240	91
Grp Sat Flow(s),veh/h/ln	1810	0	1610	0	1900	0	1584	1692	0	1810	1650	1610
Q Serve(g_s), s	0.8	0.0	1.0	0.0	0.0	0.0	1.9	1.1	0.0	0.0	1.9	1.5
Cycle Q Clear(g_c), s	0.8	0.0	1.0	0.0	0.0	0.0	1.9	1.1	0.0	0.0	1.9	1.5
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	537	0	293	0	345	0	132	1712	0	5	955	466
V/C Ratio(X)	0.09	0.00	0.18	0.00	0.00	0.00	0.68	0.12	0.00	0.00	0.25	0.20
Avail Cap(c_a), veh/h	1361	0	1025	0	1210	0	229	7602	0	262	7412	3616
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	11.9	0.0	12.0	0.0	0.0	0.0	15.4	4.5	0.0	0.0	9.4	9.2
Incr Delay (d2), s/veh	0.1	0.0	0.3	0.0	0.0	0.0	2.3	0.0	0.0	0.0	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.3	0.0	0.0	0.0	0.6	0.1	0.0	0.0	0.4	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.0	0.0	12.3	0.0	0.0	0.0	17.6	4.5	0.0	0.0	9.5	9.4
LnGrp LOS	B	A	B	A	A	A	B	A	A	A	A	A
Approach Vol, veh/h		103			0			299			331	
Approach Delay, s/veh		12.1			0.0			8.4			9.5	
Approach LOS		B						A			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	23.7		10.9	7.5	16.2		10.9				
Change Period (Y+Rc), s	4.6	6.2		4.6	4.6	6.2		4.6				
Max Green Setting (Gmax), s	5.0	77.6		22.0	5.0	77.6		22.0				
Max Q Clear Time (g_c+I1), s	0.0	3.1		3.0	3.9	3.9		0.0				
Green Ext Time (p_c), s	0.0	1.3		0.4	0.0	1.7		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			9.4									
HCM 6th LOS			A									



Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↕	↗	↘	↕
Traffic Vol, veh/h	1	3	496	8	4	474
Future Vol, veh/h	1	3	496	8	4	474
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	0	140	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	100	98	14	12	74	22
Mvmt Flow	1	3	564	9	5	539

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	844	282	0	0	573	0
Stage 1	564	-	-	-	-	-
Stage 2	280	-	-	-	-	-
Critical Hdwy	8.8	8.86	-	-	5.58	-
Critical Hdwy Stg 1	7.8	-	-	-	-	-
Critical Hdwy Stg 2	7.8	-	-	-	-	-
Follow-up Hdwy	4.5	4.28	-	-	2.94	-
Pot Cap-1 Maneuver	165	495	-	-	631	-
Stage 1	328	-	-	-	-	-
Stage 2	517	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	164	495	-	-	631	-
Mov Cap-2 Maneuver	252	-	-	-	-	-
Stage 1	328	-	-	-	-	-
Stage 2	513	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.1	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	252	495	631	-
HCM Lane V/C Ratio	-	-	0.005	0.007	0.007	-
HCM Control Delay (s)	-	-	19.4	12.3	10.7	-
HCM Lane LOS	-	-	C	B	B	-
HCM 95th %tile Q(veh)	-	-	0	0	0	-

Timings  
12: Heacock Street & San Michele Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	2	2	3	3	4	205	1	48	113	97	7
Future Volume (vph)	2	2	3	3	4	205	1	48	113	97	7
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	1	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	4.0	5.0	4.0	5.0	5.0
Minimum Split (s)	9.5	30.5	30.5	8.5	30.5	8.5	8.5	34.5	8.5	34.5	34.5
Total Split (s)	13.0	41.0	41.0	13.0	41.0	28.0	12.0	38.0	28.0	54.0	54.0
Total Split (%)	10.8%	34.2%	34.2%	10.8%	34.2%	23.3%	10.0%	31.7%	23.3%	45.0%	45.0%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	3.5	4.5	3.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	4.5	5.5	4.5	5.5	5.5
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	None	Max	Max
Act Effct Green (s)	5.1	7.8	7.8	5.2	7.8	17.2	4.9	34.9	13.5	57.2	57.2
Actuated g/C Ratio	0.08	0.12	0.12	0.08	0.12	0.27	0.08	0.54	0.21	0.89	0.89
v/c Ratio	0.02	0.02	0.01	0.04	0.03	0.39	0.01	0.05	0.39	0.09	0.01
Control Delay	36.0	27.5	0.0	36.3	27.0	4.0	38.0	12.4	28.2	6.2	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.0	27.5	0.0	36.3	27.0	4.0	38.0	12.4	28.2	6.2	0.0
LOS	D	C	A	D	C	A	D	B	C	A	A
Approach Delay		19.1			4.9			12.8		17.5	
Approach LOS		B			A			B		B	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 64.1  
 Natural Cycle: 85  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.39  
 Intersection Signal Delay: 11.5  
 Intersection LOS: B  
 Intersection Capacity Utilization 32.3%  
 ICU Level of Service A  
 Analysis Period (min) 15

























Splits and Phases: 12: Heacock Street & San Michele Road

Ø2 38 s	Ø1 28 s	Ø4 41 s	Ø3 13 s
Ø5 12 s	Ø6 54 s	Ø8 41 s	Ø7 13 s

HCM 6th Signalized Intersection Summary  
 12: Heacock Street & San Michele Road

Gateway Aviation TA (JN:13445)

04/19/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	2	3	3	4	205	1	48	3	113	97	7
Future Volume (veh/h)	2	2	3	3	4	205	1	48	3	113	97	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	551	1455	1011	1559	1856	1900	1352	1455	1841	1559	1678
Adj Flow Rate, veh/h	3	3	4	4	5	273	1	64	4	151	129	9
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh, %	0	91	30	60	23	3	0	37	30	4	23	15
Cap, veh/h	8	37	83	4	105	427	2	1080	67	358	1023	933
Arrive On Green	0.00	0.07	0.07	0.00	0.07	0.07	0.00	0.44	0.44	0.20	0.66	0.66
Sat Flow, veh/h	1810	551	1233	963	1559	1572	1810	2456	152	1753	1559	1422
Grp Volume(v), veh/h	3	3	4	4	5	273	1	33	35	151	129	9
Grp Sat Flow(s),veh/h/ln	1810	551	1233	963	1559	1572	1810	1284	1324	1753	1559	1422
Q Serve(g_s), s	0.1	0.4	0.2	0.3	0.2	0.0	0.0	1.1	1.1	5.5	2.3	0.1
Cycle Q Clear(g_c), s	0.1	0.4	0.2	0.3	0.2	0.0	0.0	1.1	1.1	5.5	2.3	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	8	37	83	4	105	427	2	565	583	358	1023	933
V/C Ratio(X)	0.39	0.08	0.05	0.97	0.05	0.64	0.41	0.06	0.06	0.42	0.13	0.01
Avail Cap(c_a), veh/h	208	265	593	111	749	1077	184	565	583	558	1023	933
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.7	32.3	23.5	36.8	32.2	23.7	36.9	11.9	11.9	25.6	4.8	1.5
Incr Delay (d2), s/veh	11.4	0.3	0.1	118.4	0.1	0.6	35.9	0.2	0.2	0.3	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.1	0.1	0.2	0.1	3.8	0.0	0.3	0.3	2.1	0.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.1	32.6	23.6	155.1	32.3	24.3	72.7	12.1	12.1	25.9	5.0	1.6
LnGrp LOS	D	C	C	F	C	C	E	B	B	C	A	A
Approach Vol, veh/h		10			282			69			289	
Approach Delay, s/veh		33.7			26.3			13.0			15.8	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.6	38.0	4.8	10.5	4.6	54.0	4.8	10.5				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	23.5	* 33	8.5	35.5	7.5	48.5	8.5	35.5				
Max Q Clear Time (g_c+I1), s	7.5	3.1	2.3	2.4	2.0	4.3	2.1	2.2				
Green Ext Time (p_c), s	0.2	0.2	0.0	0.0	0.0	0.4	0.0	0.5				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			20.3									
HCM 6th LOS			C									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Intersection					
Intersection Delay, s/veh	8.0				
Intersection LOS	A				
Approach	EB	WB		NB	
Entry Lanes	3	2		2	
Conflicting Circle Lanes	2	2		2	
Adj Approach Flow, veh/h	0	1225		15	
Demand Flow Rate, veh/h	0	1346		20	
Vehicles Circulating, veh/h	10	8		726	
Vehicles Exiting, veh/h	1344	738		25	
Ped Vol Crossing Leg, #/h	0	0		0	
Ped Cap Adj	1.000	1.000		1.000	
Approach Delay, s/veh	0.0	8.1		6.7	
Approach LOS	-	A		A	
Lane	Left		Right		
Designated Moves	LT		TR		L LTR
Assumed Moves	LT		TR		L TR
RT Channelized					
Lane Util	0.470	0.530	0.400	0.600	
Follow-Up Headway, s	2.667	2.535	2.667	2.535	
Critical Headway, s	4.645	4.328	4.645	4.328	
Entry Flow, veh/h	633	713	8	12	
Cap Entry Lane, veh/h	1340	1410	692	766	
Entry HV Adj Factor	0.909	0.910	0.625	0.833	
Flow Entry, veh/h	576	649	5	10	
Cap Entry, veh/h	1218	1284	433	638	
V/C Ratio	0.472	0.505	0.012	0.016	
Control Delay, s/veh	7.9	8.2	8.5	5.8	
LOS	A		A		A
95th %tile Queue, veh	3	3	0	0	

Timings  
14: Indian Street & San Michele Road

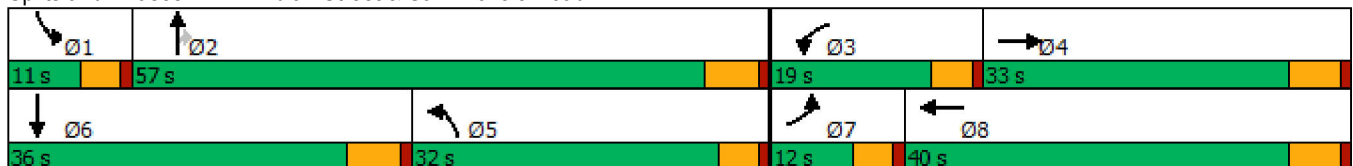


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↖	↗	↖	↗	↖	↗	↗	↖	↗
Traffic Volume (vph)	3	58	51	193	343	8	92	3	2
Future Volume (vph)	3	58	51	193	343	8	92	3	2
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8	5	2		1	6
Permitted Phases							2		
Detector Phase	7	4	3	8	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	31.8	9.6	31.8	9.6	32.8	32.8	9.6	32.8
Total Split (s)	12.0	33.0	19.0	40.0	32.0	57.0	57.0	11.0	36.0
Total Split (%)	10.0%	27.5%	15.8%	33.3%	26.7%	47.5%	47.5%	9.2%	30.0%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	6.2	13.8	7.9	19.9	14.9	15.5	15.5	6.2	13.9
Actuated g/C Ratio	0.12	0.27	0.15	0.39	0.29	0.30	0.30	0.12	0.27
v/c Ratio	0.03	0.19	0.26	0.19	0.45	0.02	0.20	0.02	0.01
Control Delay	34.0	11.7	29.7	13.9	21.2	16.2	3.3	34.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.0	11.7	29.7	13.9	21.2	16.2	3.3	34.0	0.0
LOS	C	B	C	B	C	B	A	C	A
Approach Delay		12.2		17.1		17.4			13.6
Approach LOS		B		B		B			B

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 51.6	
Natural Cycle: 85	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.45	
Intersection Signal Delay: 16.5	Intersection LOS: B
Intersection Capacity Utilization 46.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 14: Indian Street & San Michele Road



HCM 6th Signalized Intersection Summary  
 14: Indian Street & San Michele Road

Gateway Aviation TA (JN:13445)

11/09/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	58	68	51	193	6	343	8	92	3	2	2
Future Volume (veh/h)	3	58	68	51	193	6	343	8	92	3	2	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.99	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1011	1752	1856	1781	1870	1900	1841	1515	1781	1900	551	1900
Adj Flow Rate, veh/h	4	79	93	70	264	8	470	11	126	4	3	3
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Percent Heavy Veh, %	60	10	3	8	2	0	4	26	8	0	91	0
Cap, veh/h	5	309	275	97	857	26	610	617	607	10	121	98
Arrive On Green	0.01	0.19	0.19	0.06	0.24	0.24	0.17	0.41	0.41	0.01	0.22	0.22
Sat Flow, veh/h	963	1664	1485	1697	3610	109	3506	1515	1490	1810	551	448
Grp Volume(v), veh/h	4	79	93	70	136	136	470	11	126	4	3	3
Grp Sat Flow(s),veh/h/ln	963	1664	1485	1697	1870	1848	1753	1515	1490	1810	551	448
Q Serve(g_s), s	0.3	2.4	3.3	2.4	3.6	3.6	7.7	0.3	3.3	0.1	0.3	0.3
Cycle Q Clear(g_c), s	0.3	2.4	3.3	2.4	3.6	3.6	7.7	0.3	3.3	0.1	0.3	0.3
Prop In Lane	1.00		1.00	1.00		0.06	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	5	309	275	97	444	439	610	617	607	10	121	98
V/C Ratio(X)	0.77	0.26	0.34	0.72	0.31	0.31	0.77	0.02	0.21	0.41	0.02	0.03
Avail Cap(c_a), veh/h	118	751	670	405	1061	1048	1593	1286	1265	192	276	224
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.0	21.0	21.3	28.0	18.9	18.9	23.8	10.7	11.6	29.9	18.5	18.5
Incr Delay (d2), s/veh	60.0	0.2	0.3	3.7	0.1	0.1	0.8	0.0	0.1	10.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.8	1.0	1.0	1.4	1.4	2.8	0.1	0.9	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	89.9	21.2	21.6	31.7	19.1	19.1	24.6	10.7	11.6	39.9	18.5	18.6
LnGrp LOS	F	C	C	C	B	B	C	B	B	D	B	B
Approach Vol, veh/h		176			342			607				10
Approach Delay, s/veh		23.0			21.7			21.6				27.1
Approach LOS		C			C			C				C
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.9	30.4	8.1	17.0	16.3	19.0	4.9	20.1				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	5.8	* 5.8	4.6	5.8				
Max Green Setting (Gmax), s	6.4	51.2	14.4	27.2	27.4	* 30	7.4	34.2				
Max Q Clear Time (g_c+I1), s	2.1	5.3	4.4	5.3	9.7	2.3	2.3	5.6				
Green Ext Time (p_c), s	0.0	0.2	0.0	0.5	0.8	0.0	0.0	0.8				

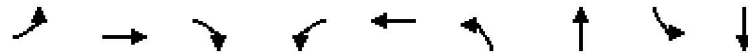
Intersection Summary

HCM 6th Ctrl Delay	21.9
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
15: Indian Street & Nandina Avenue



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↑	↗	↖	↗	↖	↕	↖	↕
Traffic Volume (vph)	3	24	90	10	32	121	357	6	71
Future Volume (vph)	3	24	90	10	32	121	357	6	71
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	5	3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	5	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	29.8	9.6	9.6	29.8	9.6	26.8	9.6	26.8
Total Split (s)	13.0	35.0	34.0	15.0	37.0	34.0	56.0	14.0	36.0
Total Split (%)	10.8%	29.2%	28.3%	12.5%	30.8%	28.3%	46.7%	11.7%	30.0%
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	5.8	13.1	20.1	6.1	13.3	9.9	33.7	5.9	16.2
Actuated g/C Ratio	0.12	0.26	0.41	0.12	0.27	0.20	0.68	0.12	0.33
v/c Ratio	0.01	0.08	0.17	0.08	0.14	0.46	0.17	0.05	0.08
Control Delay	30.3	19.9	2.9	30.0	14.8	27.1	9.4	30.0	18.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.3	19.9	2.9	30.0	14.8	27.1	9.4	30.0	18.2
LOS	C	B	A	C	B	C	A	C	B
Approach Delay		7.1			17.4		13.7		19.1
Approach LOS		A			B		B		B

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 49.6	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.46	
Intersection Signal Delay: 13.6	Intersection LOS: B
Intersection Capacity Utilization 31.5%	ICU Level of Service A
Analysis Period (min) 15	























Splits and Phases: 15: Indian Street & Nandina Avenue



HCM 6th Signalized Intersection Summary  
 15: Indian Street & Nandina Avenue

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	24	90	10	32	17	121	357	14	6	71	4
Future Volume (veh/h)	3	24	90	10	32	17	121	357	14	6	71	4
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1233	1248	1026	1426	1470	1470	1811	1174	1174	1663	1900
Adj Flow Rate, veh/h	3	27	100	11	36	19	134	397	16	7	79	4
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	45	44	59	32	29	29	6	49	49	16	0
Cap, veh/h	7	243	331	14	182	96	161	1124	45	10	689	35
Arrive On Green	0.00	0.20	0.20	0.01	0.21	0.21	0.12	0.33	0.33	0.01	0.22	0.22
Sat Flow, veh/h	1810	1233	1058	977	879	464	1400	3455	139	1118	3140	158
Grp Volume(v), veh/h	3	27	100	11	0	55	134	208	205	7	42	41
Grp Sat Flow(s),veh/h/ln	1810	1233	1058	977	0	1342	1400	1811	1782	1118	1663	1634
Q Serve(g_s), s	0.1	0.8	3.3	0.5	0.0	1.6	4.3	4.0	4.0	0.3	0.9	0.9
Cycle Q Clear(g_c), s	0.1	0.8	3.3	0.5	0.0	1.6	4.3	4.0	4.0	0.3	0.9	0.9
Prop In Lane	1.00		1.00	1.00		0.35	1.00		0.08	1.00		0.10
Lane Grp Cap(c), veh/h	7	243	331	14	0	279	161	589	580	10	365	359
V/C Ratio(X)	0.41	0.11	0.30	0.79	0.00	0.20	0.83	0.35	0.35	0.67	0.11	0.12
Avail Cap(c_a), veh/h	331	785	795	222	0	913	898	1982	1951	229	1095	1076
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.8	15.1	12.0	22.5	0.0	15.0	19.9	11.8	11.8	22.6	14.3	14.3
Incr Delay (d2), s/veh	12.7	0.2	0.5	29.7	0.0	0.3	4.2	0.4	0.4	24.5	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.2	0.6	0.2	0.0	0.4	1.3	1.2	1.2	0.1	0.3	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.5	15.3	12.5	52.2	0.0	15.4	24.0	12.1	12.2	47.2	14.5	14.5
LnGrp LOS	D	B	B	D	A	B	C	B	B	D	B	B
Approach Vol, veh/h		130			66			547			90	
Approach Delay, s/veh		13.6			21.5			15.1			17.0	
Approach LOS		B			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.0	20.7	5.3	14.9	9.9	15.9	4.8	15.3				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	9.4	50.2	10.4	29.2	29.4	30.2	8.4	31.2				
Max Q Clear Time (g_c+I1), s	2.3	6.0	2.5	5.3	6.3	2.9	2.1	3.6				
Green Ext Time (p_c), s	0.0	2.2	0.0	0.4	0.2	0.3	0.0	0.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			15.6									
HCM 6th LOS			B									



Timings  
16: Indian Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

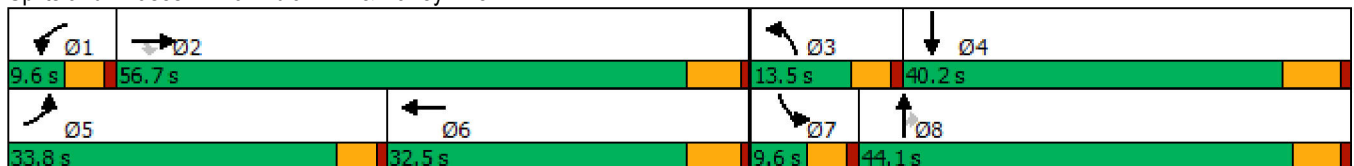
11/09/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	261	262	32	12	629	98	247	17	10	64
Future Volume (vph)	261	262	32	12	629	98	247	17	10	64
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	5	2		1	6	3	8		7	4
Permitted Phases			2					8		
Detector Phase	5	2	2	1	6	3	8	8	7	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	35.8	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2
Total Split (s)	33.8	56.7	56.7	9.6	32.5	13.5	44.1	44.1	9.6	40.2
Total Split (%)	28.2%	47.3%	47.3%	8.0%	27.1%	11.3%	36.8%	36.8%	8.0%	33.5%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.4	4.4	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	5.4	5.4	4.6	6.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	21.1	44.0	44.0	5.4	19.2	7.5	23.0	23.0	5.4	14.0
Actuated g/C Ratio	0.26	0.54	0.54	0.07	0.24	0.09	0.28	0.28	0.07	0.17
v/c Ratio	0.74	0.11	0.05	0.13	0.63	0.38	0.29	0.04	0.10	0.39
Control Delay	43.8	11.8	0.1	49.6	32.6	45.3	25.1	0.2	48.9	14.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.8	11.8	0.1	49.6	32.6	45.3	25.1	0.2	48.9	14.7
LOS	D	B	A	D	C	D	C	A	D	B
Approach Delay		26.2			32.9		29.4			16.4
Approach LOS		C			C		C			B

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 81.6  
 Natural Cycle: 100  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.74  
 Intersection Signal Delay: 28.3  
 Intersection LOS: C  
 Intersection Capacity Utilization 57.7%  
 ICU Level of Service B  
 Analysis Period (min) 15































Splits and Phases: 16: Indian Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
16: Indian Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 			 	
Traffic Volume (veh/h)	261	262	32	12	629	43	98	247	17	10	64	129
Future Volume (veh/h)	261	262	32	12	629	43	98	247	17	10	64	129
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1589	1752	1441	1663	1841	1870	1722	1796	1544	1752	1722	1263
Adj Flow Rate, veh/h	287	288	26	13	691	27	108	271	12	11	70	93
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	21	10	31	16	4	2	12	7	24	10	12	43
Cap, veh/h	331	2018	515	26	1089	42	214	723	277	23	259	231
Arrive On Green	0.22	0.42	0.42	0.02	0.22	0.22	0.07	0.21	0.21	0.01	0.16	0.16
Sat Flow, veh/h	1513	4782	1221	1584	4963	193	3182	3413	1309	1668	1636	1459
Grp Volume(v), veh/h	287	288	26	13	466	252	108	271	12	11	70	93
Grp Sat Flow(s),veh/h/ln	1513	1594	1221	1584	1675	1806	1591	1706	1309	1668	1636	1459
Q Serve(g_s), s	11.5	2.3	0.8	0.5	7.9	8.0	2.1	4.3	0.5	0.4	2.4	3.6
Cycle Q Clear(g_c), s	11.5	2.3	0.8	0.5	7.9	8.0	2.1	4.3	0.5	0.4	2.4	3.6
Prop In Lane	1.00		1.00	1.00		0.11	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	331	2018	515	26	735	396	214	723	277	23	259	231
V/C Ratio(X)	0.87	0.14	0.05	0.51	0.63	0.64	0.50	0.37	0.04	0.47	0.27	0.40
Avail Cap(c_a), veh/h	700	3859	985	126	1418	764	449	2094	803	132	882	787
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.8	11.2	10.8	30.8	22.3	22.3	28.4	21.3	19.8	30.9	23.3	23.9
Incr Delay (d2), s/veh	2.7	0.0	0.0	5.7	0.9	1.7	0.7	0.3	0.1	5.5	0.6	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	0.7	0.2	0.2	2.8	3.2	0.7	1.5	0.1	0.2	0.9	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.5	11.2	10.8	36.5	23.2	24.0	29.1	21.6	19.8	36.4	23.9	25.0
LnGrp LOS	C	B	B	D	C	C	C	C	B	D	C	C
Approach Vol, veh/h		601			731			391				174
Approach Delay, s/veh		18.5			23.7			23.6				25.3
Approach LOS		B			C			C				C
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.6	32.4	8.8	16.2	18.4	19.6	5.5	19.6				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	5.0	50.9	8.9	34.0	29.2	26.7	5.0	* 39				
Max Q Clear Time (g_c+I1), s	2.5	4.3	4.1	5.6	13.5	10.0	2.4	6.3				
Green Ext Time (p_c), s	0.0	1.9	0.1	0.8	0.3	3.8	0.0	1.7				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				22.2								
HCM 6th LOS				C								
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

11/09/2020

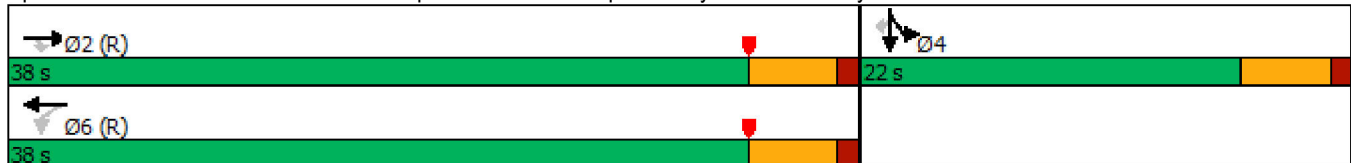


Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↑
Traffic Volume (vph)	354	30	323	187	0	124
Future Volume (vph)	354	30	323	187	0	124
Turn Type	NA	Perm	Perm	NA	NA	Perm
Protected Phases	2			6	4	
Permitted Phases		2	6			4
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	25.0	25.0	10.0	10.0
Total Split (s)	38.0	38.0	38.0	38.0	22.0	22.0
Total Split (%)	63.3%	63.3%	63.3%	63.3%	36.7%	36.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	34.5	34.5	34.5	34.5	15.5	15.5
Actuated g/C Ratio	0.58	0.58	0.58	0.58	0.26	0.26
v/c Ratio	0.21	0.04	0.70	0.11	0.81	0.30
Control Delay	6.9	2.6	28.3	10.0	39.7	5.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.9	2.6	28.3	10.0	39.7	5.6
LOS	A	A	C	B	D	A
Approach Delay	6.6			21.6	28.7	
Approach LOS	A			C	C	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.81  
 Intersection Signal Delay: 19.2  
 Intersection LOS: B  
 Intersection Capacity Utilization 61.5%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

11/09/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑						↑	↑
Traffic Volume (veh/h)	0	354	30	323	187	0	0	0	0	261	0	124
Future Volume (veh/h)	0	354	30	323	187	0	0	0	0	261	0	124
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1767	1856	1796	1796	0				1500	1900	1693
Adj Flow Rate, veh/h	0	402	34	367	212	0				297	0	79
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88				0.88	0.88	0.88
Percent Heavy Veh, %	0	9	3	7	7	0				27	0	14
Cap, veh/h	0	2112	989	649	2147	0				369	0	293
Arrive On Green	0.00	0.63	0.63	1.00	1.00	0.00				0.20	0.00	0.20
Sat Flow, veh/h	0	3445	1572	915	3503	0				1810	0	1434
Grp Volume(v), veh/h	0	402	34	367	212	0				297	0	79
Grp Sat Flow(s),veh/h/ln	0	1678	1572	915	1706	0				1810	0	1434
Q Serve(g_s), s	0.0	3.0	0.5	5.3	0.0	0.0				9.4	0.0	2.8
Cycle Q Clear(g_c), s	0.0	3.0	0.5	8.4	0.0	0.0				9.4	0.0	2.8
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2112	989	649	2147	0				369	0	293
V/C Ratio(X)	0.00	0.19	0.03	0.57	0.10	0.00				0.80	0.00	0.27
Avail Cap(c_a), veh/h	0	2112	989	649	2147	0				513	0	406
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.93	0.93	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	4.7	4.2	0.3	0.0	0.0				22.7	0.0	20.1
Incr Delay (d2), s/veh	0.0	0.2	0.1	3.3	0.1	0.0				6.3	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.7	0.1	0.6	0.0	0.0				4.1	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	4.9	4.3	3.6	0.1	0.0				29.1	0.0	20.6
LnGrp LOS	A	A	A	A	A	A				C	A	C
Approach Vol, veh/h		436			579						376	
Approach Delay, s/veh		4.8			2.3						27.3	
Approach LOS		A			A						C	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		42.7		17.3		42.7						
Change Period (Y+Rc), s		5.0		5.0		5.0						
Max Green Setting (Gmax), s		33.0		17.0		33.0						
Max Q Clear Time (g_c+I1), s		5.0		11.4		10.4						
Green Ext Time (p_c), s		1.6		0.9		2.1						
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				9.9								
HCM 6th LOS				A								

Timings

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

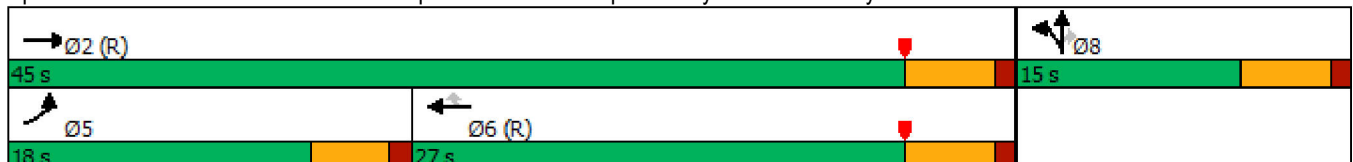


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	205	410	492	498	3	223
Future Volume (vph)	205	410	492	498	3	223
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	26.0	24.0	24.0	10.0	10.0
Total Split (s)	18.0	45.0	27.0	27.0	15.0	15.0
Total Split (%)	30.0%	75.0%	45.0%	45.0%	25.0%	25.0%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max
Act Effct Green (s)	11.3	40.0	24.2	24.2	10.0	10.0
Actuated g/C Ratio	0.19	0.67	0.40	0.40	0.17	0.17
v/c Ratio	0.71	0.23	0.39	0.62	0.08	0.57
Control Delay	28.1	3.7	14.3	5.2	22.1	9.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.1	3.7	14.3	5.2	22.1	9.6
LOS	C	A	B	A	C	A
Approach Delay		11.9	9.7		10.6	
Approach LOS		B	A		B	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 29 (48%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 50  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.71  
 Intersection Signal Delay: 10.5  
 Intersection LOS: B  
 Intersection Capacity Utilization 61.5%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

11/09/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↖	↗		↖	↗			
Traffic Volume (veh/h)	205	410	0	0	492	498	17	3	223	0	0	0
Future Volume (veh/h)	205	410	0	0	492	498	17	3	223	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1796	1574	0	0	1811	1633	1633	1900	1618			
Adj Flow Rate, veh/h	223	446	0	0	535	477	18	3	177			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	7	22	0	0	6	18	18	0	19			
Cap, veh/h	274	1994	0	0	1485	597	260	43	229			
Arrive On Green	0.05	0.22	0.00	0.00	0.43	0.43	0.17	0.17	0.17			
Sat Flow, veh/h	1711	3069	0	0	3532	1384	1562	260	1372			
Grp Volume(v), veh/h	223	446	0	0	535	477	21	0	177			
Grp Sat Flow(s),veh/h/ln	1711	1495	0	0	1721	1384	1822	0	1372			
Q Serve(g_s), s	7.7	7.3	0.0	0.0	6.3	17.9	0.6	0.0	7.4			
Cycle Q Clear(g_c), s	7.7	7.3	0.0	0.0	6.3	17.9	0.6	0.0	7.4			
Prop In Lane	1.00		0.00	0.00		1.00	0.86		1.00			
Lane Grp Cap(c), veh/h	274	1994	0	0	1485	597	304	0	229			
V/C Ratio(X)	0.81	0.22	0.00	0.00	0.36	0.80	0.07	0.00	0.77			
Avail Cap(c_a), veh/h	385	1994	0	0	1485	597	304	0	229			
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.99	0.99	0.00	0.00	0.90	0.90	1.00	0.00	1.00			
Uniform Delay (d), s/veh	27.5	10.7	0.0	0.0	11.5	14.8	21.1	0.0	23.9			
Incr Delay (d2), s/veh	6.0	0.3	0.0	0.0	0.6	9.7	0.4	0.0	22.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	3.5	1.7	0.0	0.0	2.0	5.9	0.3	0.0	3.5			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.5	10.9	0.0	0.0	12.1	24.5	21.5	0.0	46.1			
LnGrp LOS	C	B	A	A	B	C	C	A	D			
Approach Vol, veh/h		669			1012			198				
Approach Delay, s/veh		18.5			18.0			43.5				
Approach LOS		B			B			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		45.0			14.1	30.9		15.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		40.0			13.5	22.0		10.0				
Max Q Clear Time (g_c+11), s		9.3			9.7	19.9		9.4				
Green Ext Time (p_c), s		1.8			0.1	0.8		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					20.8							
HCM 6th LOS					C							

Timings  
3: Western Way & Harley Knox Bl.



Lane Group	EBL	EBT	WBT	SBL	SBT	Ø1	Ø8
Lane Configurations	↖	↑↑↑	↑↑↑	↖	↗		
Traffic Volume (vph)	18	627	919	9	0		
Future Volume (vph)	18	627	919	9	0		
Turn Type	Prot	NA	NA	Perm	NA		
Protected Phases	5	2	6		4	1	8
Permitted Phases				4			
Detector Phase	5	2	6	4	4		
Switch Phase							
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	21.8	21.8	32.6	32.6	9.6	32.6
Total Split (s)	18.0	71.4	63.0	39.0	39.0	9.6	39.0
Total Split (%)	15.0%	59.5%	52.5%	32.5%	32.5%	8%	33%
Yellow Time (s)	3.6	4.8	4.8	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.6	5.8	5.8	4.6	4.6		
Lead/Lag	Lead	Lag	Lag			Lead	
Lead-Lag Optimize?	Yes	Yes	Yes			Yes	
Recall Mode	None	None	None	None	None	None	None
Act Effct Green (s)	7.0	26.1	24.8	14.5	14.5		
Actuated g/C Ratio	0.16	0.59	0.56	0.33	0.33		
v/c Ratio	0.11	0.30	0.43	0.03	0.18		
Control Delay	26.9	7.3	10.5	16.2	1.0		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	26.9	7.3	10.5	16.2	1.0		
LOS	C	A	B	B	A		
Approach Delay		7.8	10.5		2.4		
Approach LOS		A	B		A		

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 44.1  
 Natural Cycle: 65  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.43  
 Intersection Signal Delay: 9.0  
 Intersection LOS: A  
 Intersection Capacity Utilization 34.9%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 3: Western Way & Harley Knox Bl.






























HCM 6th Signalized Intersection Summary  
 3: Western Way & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  							
Traffic Volume (veh/h)	18	627	0	0	919	7	0	0	0	9	0	91
Future Volume (veh/h)	18	627	0	0	919	7	0	0	0	9	0	91
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1233	1604	1900	1900	1707	1500	1900	1900	1900	1737	1900	1796
Adj Flow Rate, veh/h	22	755	0	0	1107	6	0	0	0	11	0	97
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	45	20	0	0	13	27	0	0	0	11	0	7
Cap, veh/h	32	2496	918	4	2056	11	177	330	0	464	0	279
Arrive On Green	0.03	0.57	0.00	0.00	0.43	0.43	0.00	0.00	0.00	0.17	0.00	0.17
Sat Flow, veh/h	1174	4378	1610	1810	4784	26	1319	1900	0	1654	0	1610
Grp Volume(v), veh/h	22	755	0	0	719	394	0	0	0	11	0	97
Grp Sat Flow(s),veh/h/ln	1174	1459	1610	1810	1554	1703	1319	1900	0	1654	0	1610
Q Serve(g_s), s	0.8	3.6	0.0	0.0	7.0	7.0	0.0	0.0	0.0	0.2	0.0	2.1
Cycle Q Clear(g_c), s	0.8	3.6	0.0	0.0	7.0	7.0	0.0	0.0	0.0	0.2	0.0	2.1
Prop In Lane	1.00		1.00	1.00		0.02	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	32	2496	918	4	1335	732	177	330	0	464	0	279
V/C Ratio(X)	0.69	0.30	0.00	0.00	0.54	0.54	0.00	0.00	0.00	0.02	0.00	0.35
Avail Cap(c_a), veh/h	388	7079	2603	223	4381	2401	1067	1611	0	1580	0	1365
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.6	4.5	0.0	0.0	8.6	8.6	0.0	0.0	0.0	13.9	0.0	14.7
Incr Delay (d2), s/veh	9.6	0.1	0.0	0.0	0.3	0.6	0.0	0.0	0.0	0.0	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.4	0.0	0.0	1.4	1.6	0.0	0.0	0.0	0.1	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.1	4.6	0.0	0.0	8.9	9.2	0.0	0.0	0.0	14.0	0.0	15.5
LnGrp LOS	C	A	A	A	A	A	A	A	A	B	A	B
Approach Vol, veh/h		777			1113			0				108
Approach Delay, s/veh		5.3			9.0			0.0				15.3
Approach LOS		A			A							B
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	28.9		11.6	5.7	23.2		11.6				
Change Period (Y+Rc), s	4.6	5.8		4.6	4.6	5.8		4.6				
Max Green Setting (Gmax), s	5.0	65.6		34.4	13.4	57.2		34.4				
Max Q Clear Time (g_c+1), s	0.0	5.6		4.1	2.8	9.0		0.0				
Green Ext Time (p_c), s	0.0	5.7		0.6	0.0	8.5		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					7.9							
HCM 6th LOS					A							



Timings  
4: Patterson Av. & Harley Knox Bl.

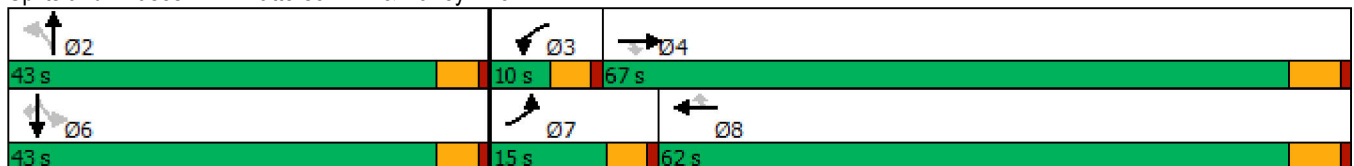
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	20	577	19	6	866	7	35	2	19	3	25
Future Volume (vph)	20	577	19	6	866	7	35	2	19	3	25
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	7	4		3	8			2		6	
Permitted Phases			4			8	2		6		6
Detector Phase	7	4	4	3	8	8	2	2	6	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	9.6	31.8	31.8	33.7	33.7	40.7	40.7	40.7
Total Split (s)	15.0	67.0	67.0	10.0	62.0	62.0	43.0	43.0	43.0	43.0	43.0
Total Split (%)	12.5%	55.8%	55.8%	8.3%	51.7%	51.7%	35.8%	35.8%	35.8%	35.8%	35.8%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8		4.7		4.7	4.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	7.3	44.7	44.7	6.2	41.9	41.9		14.9		14.9	14.9
Actuated g/C Ratio	0.12	0.75	0.75	0.10	0.71	0.71		0.25		0.25	0.25
v/c Ratio	0.17	0.21	0.02	0.04	0.47	0.01		0.16		0.09	0.07
Control Delay	38.5	6.8	0.1	39.5	12.0	0.0		23.2		24.8	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	38.5	6.8	0.1	39.5	12.0	0.0		23.2		24.8	0.3
LOS	D	A	A	D	B	A		C		C	A
Approach Delay		7.6			12.1			23.2		11.9	
Approach LOS		A			B			C		B	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 59.4  
 Natural Cycle: 85  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.47  
 Intersection Signal Delay: 10.6  
 Intersection Capacity Utilization 53.3%  
 Analysis Period (min) 15

Intersection LOS: B  
 ICU Level of Service A



























Splits and Phases: 4: Patterson Av. & Harley Knox Bl.



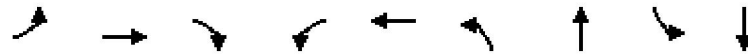
HCM 6th Signalized Intersection Summary  
 4: Patterson Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/09/2020

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		  			 			 				 	
Traffic Volume (veh/h)	20	577	19	6	866	7	35	2	4	19	3	25	
Future Volume (veh/h)	20	577	19	6	866	7	35	2	4	19	3	25	
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No			No			No			No		
Adj Sat Flow, veh/h/ln	1070	1648	1826	1900	1707	1292	1737	1900	1189	1663	1426	1604	
Adj Flow Rate, veh/h	24	704	23	7	1056	9	43	2	5	23	4	30	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	
Percent Heavy Veh, %	56	17	5	0	13	41	11	0	48	16	32	20	
Cap, veh/h	29	2259	777	17	1566	518	323	20	22	297	37	220	
Arrive On Green	0.03	0.50	0.50	0.01	0.48	0.48	0.16	0.16	0.16	0.16	0.16	0.16	
Sat Flow, veh/h	1019	4499	1547	1810	3244	1072	1104	125	137	946	231	1359	
Grp Volume(v), veh/h	24	704	23	7	1056	9	50	0	0	27	0	30	
Grp Sat Flow(s),veh/h/ln	1019	1500	1547	1810	1622	1072	1365	0	0	1177	0	1359	
Q Serve(g_s), s	1.1	4.3	0.3	0.2	11.5	0.2	1.0	0.0	0.0	0.0	0.0	0.9	
Cycle Q Clear(g_c), s	1.1	4.3	0.3	0.2	11.5	0.2	1.8	0.0	0.0	0.8	0.0	0.9	
Prop In Lane	1.00		1.00	1.00		1.00	0.86		0.10	0.85		1.00	
Lane Grp Cap(c), veh/h	29	2259	777	17	1566	518	366	0	0	335	0	220	
V/C Ratio(X)	0.82	0.31	0.03	0.42	0.67	0.02	0.14	0.00	0.00	0.08	0.00	0.14	
Avail Cap(c_a), veh/h	229	5962	2050	212	3947	1305	1321	0	0	1079	0	1127	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	
Uniform Delay (d), s/veh	22.3	6.8	5.8	22.8	9.2	6.2	17.0	0.0	0.0	16.5	0.0	16.6	
Incr Delay (d2), s/veh	18.4	0.1	0.0	6.0	0.5	0.0	0.2	0.0	0.0	0.1	0.0	0.3	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.4	0.8	0.1	0.1	2.5	0.0	0.4	0.0	0.0	0.2	0.0	0.2	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	40.7	6.9	5.8	28.7	9.7	6.2	17.2	0.0	0.0	16.6	0.0	16.9	
LnGrp LOS	D	A	A	C	A	A	B	A	A	B	A	B	
Approach Vol, veh/h		751			1072			50				57	
Approach Delay, s/veh		7.9			9.8			17.2				16.8	
Approach LOS		A			A			B				B	
Timer - Assigned Phs		2	3	4		6	7	8					
Phs Duration (G+Y+Rc), s		12.2	5.0	29.0		12.2	5.9	28.1					
Change Period (Y+Rc), s		* 4.7	4.6	5.8		* 4.7	4.6	5.8					
Max Green Setting (Gmax), s		* 38	5.4	61.2		* 38	10.4	56.2					
Max Q Clear Time (g_c+I1), s		3.8	2.2	6.3		2.9	3.1	13.5					
Green Ext Time (p_c), s		0.2	0.0	5.3		0.2	0.0	8.8					
<b>Intersection Summary</b>													
HCM 6th Ctrl Delay			9.4										
HCM 6th LOS			A										
<b>Notes</b>													
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.													

Timings  
5: Heacock Street & Cactus Avenue

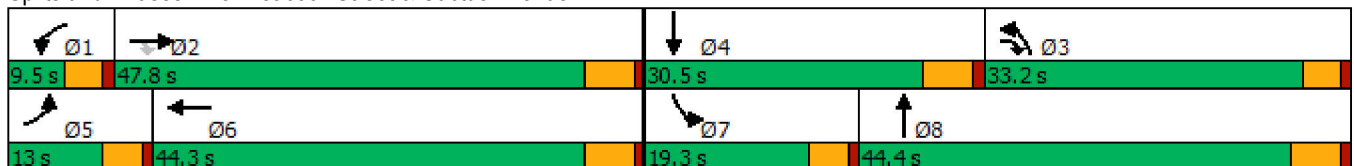


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↶	↶↶	↶	↶	↶↶	↶↶	↶↶	↶	↶↶
Traffic Volume (vph)	173	1109	857	10	568	417	398	117	446
Future Volume (vph)	173	1109	857	10	568	417	398	117	446
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	3	1	6	3	8	7	4
Permitted Phases			2						
Detector Phase	5	2	3	1	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.5	30.5	9.5	9.5	30.5	9.5	30.5	9.5	30.5
Total Split (s)	13.0	47.8	33.2	9.5	44.3	33.2	44.4	19.3	30.5
Total Split (%)	10.7%	39.5%	27.4%	7.9%	36.6%	27.4%	36.7%	16.0%	25.2%
Yellow Time (s)	3.5	4.5	3.5	3.5	4.5	3.5	4.5	3.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	4.5	4.5	5.5	4.5	5.5	4.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None
Act Effct Green (s)	8.9	34.7	59.1	5.2	22.6	23.3	30.2	10.4	17.2
Actuated g/C Ratio	0.10	0.37	0.64	0.06	0.24	0.25	0.33	0.11	0.19
v/c Ratio	0.99	0.82	0.74	0.10	0.74	0.49	0.36	0.58	0.73
Control Delay	112.8	33.8	11.7	53.6	37.3	33.4	25.8	54.5	43.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	112.8	33.8	11.7	53.6	37.3	33.4	25.8	54.5	43.7
LOS	F	C	B	D	D	C	C	D	D
Approach Delay		31.3			37.6		29.6		45.8
Approach LOS		C			D		C		D

Intersection Summary























Cycle Length: 121	
Actuated Cycle Length: 92.9	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.99	
Intersection Signal Delay: 34.0	Intersection LOS: C
Intersection Capacity Utilization 83.6%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 5: Heacock Street & Cactus Avenue



HCM 6th Signalized Intersection Summary  
5: Heacock Street & Cactus Avenue

Gateway Aviation TA (JN:13445)  
11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	173	1109	857	10	568	77	417	398	21	117	446	37
Future Volume (veh/h)	173	1109	857	10	568	77	417	398	21	117	446	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1811	1752	1870	1856	1781	1870	1826	1900	1856	1900
Adj Flow Rate, veh/h	180	1155	893	10	592	80	434	415	22	122	465	39
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	1	6	10	2	3	8	2	5	0	3	0
Cap, veh/h	191	1452	831	21	941	127	535	942	50	155	620	52
Arrive On Green	0.11	0.38	0.38	0.01	0.29	0.29	0.16	0.27	0.27	0.09	0.18	0.18
Sat Flow, veh/h	1810	3770	1531	1668	3227	435	3393	3517	186	1810	3377	282
Grp Volume(v), veh/h	180	1155	893	10	343	329	434	220	217	122	255	249
Grp Sat Flow(s),veh/h/ln	1810	1885	1531	1668	1870	1792	1697	1870	1832	1810	1856	1804
Q Serve(g_s), s	7.9	21.8	17.9	0.5	12.8	12.8	9.9	7.8	7.9	5.3	10.4	10.5
Cycle Q Clear(g_c), s	7.9	21.8	17.9	0.5	12.8	12.8	9.9	7.8	7.9	5.3	10.4	10.5
Prop In Lane	1.00		1.00	1.00		0.24	1.00		0.10	1.00		0.16
Lane Grp Cap(c), veh/h	191	1452	831	21	545	523	535	501	491	155	341	331
V/C Ratio(X)	0.94	0.80	1.07	0.48	0.63	0.63	0.81	0.44	0.44	0.79	0.75	0.75
Avail Cap(c_a), veh/h	191	1985	1048	104	903	866	1212	906	887	333	577	561
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.7	21.9	7.4	39.4	24.7	24.7	32.7	24.4	24.4	36.0	31.0	31.1
Incr Delay (d2), s/veh	47.5	1.1	48.9	6.3	0.4	0.5	1.1	0.2	0.2	3.3	1.2	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	8.5	15.0	0.2	5.2	5.0	3.9	3.2	3.2	2.3	4.4	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	83.2	23.0	56.4	45.7	25.1	25.2	33.8	24.6	24.7	39.3	32.3	32.4
LnGrp LOS	F	C	F	D	C	C	C	C	C	D	C	C
Approach Vol, veh/h		2228			682			871			626	
Approach Delay, s/veh		41.2			25.4			29.2			33.7	
Approach LOS		D			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.5	36.4	18.2	20.2	13.0	28.9	11.4	27.0				
Change Period (Y+Rc), s	4.5	5.5	5.5	* 5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	5.0	42.3	28.7	* 25	8.5	38.8	14.8	38.9				
Max Q Clear Time (g_c+I1), s	2.5	23.8	11.9	12.5	9.9	14.8	7.3	9.9				
Green Ext Time (p_c), s	0.0	7.1	0.7	1.4	0.0	2.3	0.1	1.4				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			35.3									
HCM 6th LOS			D									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

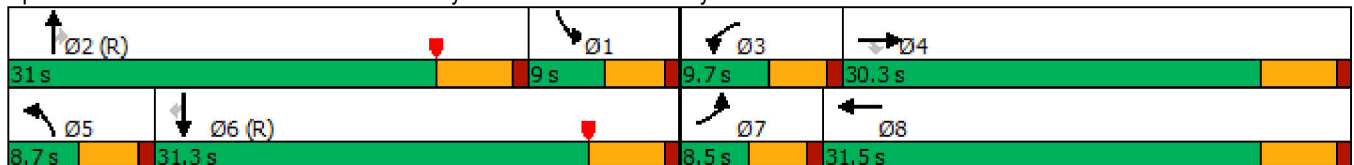
Timings  
6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	27	172	287	24	67	65	666	58	261	908	15
Future Volume (vph)	27	172	287	24	67	65	666	58	261	908	15
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4					2			6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Minimum Split (s)	8.5	23.5	23.5	8.5	31.5	8.5	30.5	30.5	8.5	23.5	23.5
Total Split (s)	8.5	30.3	30.3	9.7	31.5	8.7	31.0	31.0	9.0	31.3	31.3
Total Split (%)	10.6%	37.9%	37.9%	12.1%	39.4%	10.9%	38.8%	38.8%	11.3%	39.1%	39.1%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	5.5	4.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	4.0	14.4	14.4	5.0	14.8	6.8	41.8	41.8	4.5	41.4	41.4
Actuated g/C Ratio	0.05	0.18	0.18	0.06	0.18	0.08	0.52	0.52	0.06	0.52	0.52
v/c Ratio	0.33	0.59	0.60	0.24	0.28	0.46	0.42	0.06	2.94	0.57	0.02
Control Delay	46.1	35.9	11.5	40.7	9.8	47.4	15.1	0.1	917.3	18.9	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.1	35.9	11.5	40.7	9.8	47.4	15.1	0.1	917.3	18.9	0.0
LOS	D	D	B	D	A	D	B	A	F	B	A
Approach Delay		22.1			13.1		16.7			216.7	
Approach LOS		C			B		B			F	

Intersection Summary

Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 2.94  
 Intersection Signal Delay: 105.6  
 Intersection Capacity Utilization 61.9%  
 Analysis Period (min) 15  
 Intersection LOS: F  
 ICU Level of Service B

Splits and Phases: 6: Heacock Street & Meyer Drive/John F. Kennedy Drive



HCM 6th Signalized Intersection Summary  
 6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

11/09/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↕		↖	↕	↗	↖	↕	↗
Traffic Volume (veh/h)	27	172	287	24	67	133	65	666	58	261	908	15
Future Volume (veh/h)	27	172	287	24	67	133	65	666	58	261	908	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1900	1900	1885	1885	1900	1781	1900	1841	1796	1900
Adj Flow Rate, veh/h	31	198	330	28	77	153	75	766	67	300	1044	17
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	1	0	0	1	1	0	8	0	4	7	0
Cap, veh/h	45	440	375	42	436	370	95	1136	513	285	1585	710
Arrive On Green	0.02	0.23	0.23	0.02	0.23	0.23	0.05	0.32	0.32	0.16	0.44	0.44
Sat Flow, veh/h	1810	1885	1610	1810	1885	1598	1810	3563	1610	1753	3593	1610
Grp Volume(v), veh/h	31	198	330	28	77	153	75	766	67	300	1044	17
Grp Sat Flow(s),veh/h/ln	1810	1885	1610	1810	1885	1598	1810	1781	1610	1753	1796	1610
Q Serve(g_s), s	1.4	7.2	15.8	1.2	2.6	6.5	3.3	14.9	1.9	13.0	18.3	0.5
Cycle Q Clear(g_c), s	1.4	7.2	15.8	1.2	2.6	6.5	3.3	14.9	1.9	13.0	18.3	0.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	45	440	375	42	436	370	95	1136	513	285	1585	710
V/C Ratio(X)	0.69	0.45	0.88	0.67	0.18	0.41	0.79	0.67	0.13	1.05	0.66	0.02
Avail Cap(c_a), veh/h	90	584	499	118	613	519	95	1136	513	285	1585	710
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.90	0.90	0.90	0.60	0.60	0.60
Uniform Delay (d), s/veh	38.7	26.3	29.6	38.8	24.6	26.1	37.5	23.6	11.9	33.5	17.6	12.6
Incr Delay (d2), s/veh	6.8	0.3	10.9	6.6	0.1	0.3	29.8	2.9	0.5	56.2	1.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	3.1	6.7	0.6	1.1	2.3	2.1	6.0	0.9	9.5	6.6	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.4	26.6	40.5	45.4	24.7	26.4	67.3	26.5	12.3	89.7	18.9	12.7
LnGrp LOS	D	C	D	D	C	C	E	C	B	F	B	B
Approach Vol, veh/h		559			258			908			1361	
Approach Delay, s/veh		35.8			28.0			28.9			34.4	
Approach LOS		D			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.5	31.0	6.4	24.2	8.7	40.8	6.5	24.0				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	4.5	* 26	5.2	24.8	4.2	25.8	4.0	26.0				
Max Q Clear Time (g_c+I1), s	15.0	16.9	3.2	17.8	5.3	20.3	3.4	8.5				
Green Ext Time (p_c), s	0.0	2.2	0.0	0.8	0.0	2.3	0.0	0.7				













Intersection Summary

HCM 6th Ctrl Delay	32.5
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
7: Heacock Street & Gentian Avenue

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	6	88	699	11	96	1049
Future Volume (vph)	6	88	699	11	96	1049
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	27.6	27.6	27.2	27.2	9.6	16.2
Total Split (s)	31.0	31.0	62.0	62.0	27.0	89.0
Total Split (%)	25.8%	25.8%	51.7%	51.7%	22.5%	74.2%
Yellow Time (s)	3.6	3.6	5.2	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	6.2	6.2	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	12.4	12.4	27.6	27.6	8.5	38.1
Actuated g/C Ratio	0.22	0.22	0.49	0.49	0.15	0.68
v/c Ratio	0.02	0.20	0.48	0.01	0.40	0.51
Control Delay	20.7	6.6	15.7	10.9	29.5	7.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.7	6.6	15.7	10.9	29.5	7.7
LOS	C	A	B	B	C	A
Approach Delay	7.5		15.6			9.5
Approach LOS	A		B			A

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 55.9	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.51	
Intersection Signal Delay: 11.7	Intersection LOS: B
Intersection Capacity Utilization 46.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 7: Heacock Street & Gentian Avenue

















HCM 6th Signalized Intersection Summary  
7: Heacock Street & Gentian Avenue

















Gateway Aviation TA (JN:13445)

11/09/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	6	88	699	11	96	1049
Future Volume (veh/h)	6	88	699	11	96	1049
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1796	1900	1826	1826
Adj Flow Rate, veh/h	7	100	794	12	109	1192
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	7	0	5	5
Cap, veh/h	308	274	1276	602	150	1979
Arrive On Green	0.17	0.17	0.37	0.37	0.09	0.57
Sat Flow, veh/h	1810	1610	3503	1610	1739	3561
Grp Volume(v), veh/h	7	100	794	12	109	1192
Grp Sat Flow(s),veh/h/ln	1810	1610	1706	1610	1739	1735
Q Serve(g_s), s	0.1	2.3	7.9	0.2	2.5	9.4
Cycle Q Clear(g_c), s	0.1	2.3	7.9	0.2	2.5	9.4
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	308	274	1276	602	150	1979
V/C Ratio(X)	0.02	0.36	0.62	0.02	0.73	0.60
Avail Cap(c_a), veh/h	1147	1020	4571	2157	935	6895
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.4	15.3	10.6	8.2	18.6	5.9
Incr Delay (d2), s/veh	0.0	0.3	0.5	0.0	2.5	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.7	1.9	0.0	0.9	1.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	14.4	15.6	11.1	8.2	21.1	6.2
LnGrp LOS	B	B	B	A	C	A
Approach Vol, veh/h	107		806			1301
Approach Delay, s/veh	15.5		11.1			7.4
Approach LOS	B		B			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	8.2	21.8			30.0	11.7
Change Period (Y+Rc), s	4.6	6.2			6.2	4.6
Max Green Setting (Gmax), s	22.4	55.8			82.8	26.4
Max Q Clear Time (g_c+1), s	4.5	9.9			11.4	4.3
Green Ext Time (p_c), s	0.1	5.7			10.4	0.1
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			9.1			
HCM 6th LOS			A			



Timings  
8: Heacock Street & Iris Avenue

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 		 		 	 
Traffic Volume (vph)	29	248	464	51	416	649
Future Volume (vph)	29	248	464	51	416	649
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	15.8	15.8	33.2	33.2	9.6	16.2
Total Split (s)	35.0	35.0	47.0	47.0	38.0	85.0
Total Split (%)	29.2%	29.2%	39.2%	39.2%	31.7%	70.8%
Yellow Time (s)	4.8	4.8	5.2	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	6.2	6.2	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	10.4	10.4	16.3	16.3	12.4	33.4
Actuated g/C Ratio	0.19	0.19	0.29	0.29	0.22	0.60
v/c Ratio	0.05	0.49	0.56	0.12	0.59	0.37
Control Delay	22.7	7.1	19.3	5.4	23.7	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.7	7.1	19.3	5.4	23.7	6.2
LOS	C	A	B	A	C	A
Approach Delay	8.7		17.9			13.0
Approach LOS	A		B			B

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 56.1	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.59	
Intersection Signal Delay: 13.7	Intersection LOS: B
Intersection Capacity Utilization 46.9%	ICU Level of Service A
Analysis Period (min) 15	

















Splits and Phases: 8: Heacock Street & Iris Avenue



HCM 6th Signalized Intersection Summary  
8: Heacock Street & Iris Avenue

Gateway Aviation TA (JN:13445)

11/09/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 		 		 	 
Traffic Volume (veh/h)	29	248	464	51	416	649
Future Volume (veh/h)	29	248	464	51	416	649
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1752	1900	1885	1796
Adj Flow Rate, veh/h	33	285	533	59	478	746
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	0	10	0	1	7
Cap, veh/h	786	360	846	409	649	1821
Arrive On Green	0.22	0.22	0.25	0.25	0.19	0.53
Sat Flow, veh/h	3510	1610	3416	1610	3483	3503
Grp Volume(v), veh/h	33	285	533	59	478	746
Grp Sat Flow(s),veh/h/ln	1755	1610	1664	1610	1742	1706
Q Serve(g_s), s	0.4	8.3	7.0	1.4	6.4	6.5
Cycle Q Clear(g_c), s	0.4	8.3	7.0	1.4	6.4	6.5
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	786	360	846	409	649	1821
V/C Ratio(X)	0.04	0.79	0.63	0.14	0.74	0.41
Avail Cap(c_a), veh/h	2072	950	2745	1328	2352	5437
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.0	18.1	16.4	14.3	19.0	6.9
Incr Delay (d2), s/veh	0.0	3.9	0.8	0.2	0.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	2.9	2.1	0.4	2.1	1.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	15.1	22.0	17.2	14.4	19.6	7.0
LnGrp LOS	B	C	B	B	B	A
Approach Vol, veh/h	318		592			1224
Approach Delay, s/veh	21.3		16.9			11.9
Approach LOS	C		B			B
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	13.8	18.8			32.6	16.9
Change Period (Y+Rc), s	4.6	6.2			6.2	5.8
Max Green Setting (Gmax), s	33.4	40.8			78.8	29.2
Max Q Clear Time (g_c+I1), s	8.4	9.0			8.5	10.3
Green Ext Time (p_c), s	0.8	3.5			5.3	1.0
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			14.7			
HCM 6th LOS			B			

Timings  
9: Heacock Street & Krameria Avenue-North

	↙	↖	↑	↘	↓
Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations	↙	↖	↑↔	↘	↑↑
Traffic Volume (vph)	3	22	390	33	403
Future Volume (vph)	3	22	390	33	403
Turn Type	Prot	Perm	NA	Prot	NA
Protected Phases	8		2	1	6
Permitted Phases		8			
Detector Phase	8	8	2	1	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	29.1	29.1	29.2	9.6	16.2
Total Split (s)	35.0	35.0	61.0	24.0	85.0
Total Split (%)	29.2%	29.2%	50.8%	20.0%	70.8%
Yellow Time (s)	4.1	4.1	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	6.2	4.6	6.2
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	Min	Max	Min
Act Effect Green (s)	12.6	12.6	13.8	21.0	44.5
Actuated g/C Ratio	0.24	0.24	0.26	0.40	0.84
v/c Ratio	0.01	0.08	0.56	0.06	0.17
Control Delay	20.0	9.8	21.0	17.5	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	20.0	9.8	21.0	17.5	4.0
LOS	B	A	C	B	A
Approach Delay	11.1		21.0		5.0
Approach LOS	B		C		A

Intersection Summary














Cycle Length: 120	
Actuated Cycle Length: 52.9	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.56	
Intersection Signal Delay: 12.7	Intersection LOS: B
Intersection Capacity Utilization 37.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 9: Heacock Street & Krameria Avenue-North



HCM 6th Signalized Intersection Summary  
 9: Heacock Street & Krameria Avenue-North

Gateway Aviation TA (JN:13445)  
 11/09/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			 			 
Traffic Volume (veh/h)	3	22	390	19	33	403
Future Volume (veh/h)	3	22	390	19	33	403
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1011	1366	1841	1900	1678	1811
Adj Flow Rate, veh/h	4	27	481	23	41	498
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	60	36	4	0	15	6
Cap, veh/h	68	81	702	34	635	2403
Arrive On Green	0.07	0.07	0.21	0.21	0.40	0.70
Sat Flow, veh/h	963	1158	3490	162	1598	3532
Grp Volume(v), veh/h	4	27	247	257	41	498
Grp Sat Flow(s),veh/h/ln	963	1158	1749	1811	1598	1721
Q Serve(g_s), s	0.2	1.1	6.4	6.4	0.8	2.5
Cycle Q Clear(g_c), s	0.2	1.1	6.4	6.4	0.8	2.5
Prop In Lane	1.00	1.00		0.09	1.00	
Lane Grp Cap(c), veh/h	68	81	361	374	635	2403
V/C Ratio(X)	0.06	0.33	0.68	0.69	0.06	0.21
Avail Cap(c_a), veh/h	590	709	1963	2033	635	5554
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.2	21.6	17.9	17.9	9.1	2.6
Incr Delay (d2), s/veh	0.1	0.9	0.9	0.8	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.3	2.1	2.2	0.2	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	21.3	22.5	18.8	18.7	9.3	2.6
LnGrp LOS	C	C	B	B	A	A
Approach Vol, veh/h	31		504			539
Approach Delay, s/veh	22.3		18.7			3.1
Approach LOS	C		B			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	24.0	16.3			40.3	8.5
Change Period (Y+Rc), s	4.6	6.2			6.2	5.1
Max Green Setting (Gmax), s	19.4	54.8			78.8	29.9
Max Q Clear Time (g_c+11), s	2.8	8.4			4.5	3.1
Green Ext Time (p_c), s	0.0	1.6			1.9	0.0
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			11.0			
HCM 6th LOS			B			

Timings  
10: Heacock Street & Driveway 1



Lane Group	EBL	EBT	NBL	NBT	SBT	SBR	Ø1	Ø8
Lane Configurations								
Traffic Volume (vph)	46	0	27	329	366	2		
Future Volume (vph)	46	0	27	329	366	2		
Turn Type	Perm	NA	Prot	NA	NA	Perm		
Protected Phases		4	5	2	6		1	8
Permitted Phases	4					6		
Detector Phase	4	4	5	2	6	6		
Switch Phase								
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	26.6	26.6	9.6	23.2	23.2	23.2	9.6	26.6
Total Split (s)	26.6	26.6	9.6	83.8	83.8	83.8	9.6	26.6
Total Split (%)	22.2%	22.2%	8.0%	69.8%	69.8%	69.8%	8%	22%
Yellow Time (s)	3.6	3.6	3.6	5.2	5.2	5.2	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.6	4.6	4.6	6.2	6.2	6.2		
Lead/Lag			Lead	Lag	Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	Min	Min	Min	None	None
Act Effct Green (s)	12.2	12.2	5.3	22.8	19.6	19.6		
Actuated g/C Ratio	0.30	0.30	0.13	0.56	0.48	0.48		
v/c Ratio	0.12	0.11	0.24	0.19	0.25	0.00		
Control Delay	12.3	0.3	26.6	7.6	11.8	0.0		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay	12.3	0.3	26.6	7.6	11.8	0.0		
LOS	B	A	C	A	B	A		
Approach Delay		5.1		9.0	11.8			
Approach LOS		A		A	B			

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 41	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.25	
Intersection Signal Delay: 9.7	Intersection LOS: A
Intersection Capacity Utilization 35.5%	ICU Level of Service A
Analysis Period (min) 15	






















Splits and Phases: 10: Heacock Street & Driveway 1

Ø1	Ø2	Ø4
9.6 s	83.8 s	26.6 s
Ø5	Ø6	Ø8
9.6 s	83.8 s	26.6 s

HCM 6th Signalized Intersection Summary  
 10: Heacock Street & Driveway 1

Gateway Aviation TA (JN:13445)

11/17/2020

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	46	0	69	0	0	0	27	329	0	0	366	2	
Future Volume (veh/h)	46	0	69	0	0	0	27	329	0	0	366	2	
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	522	1826	1826	1900	1796	1900	
Adj Flow Rate, veh/h	50	0	75	0	0	0	29	358	0	0	398	2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Percent Heavy Veh, %	0	0	0	0	0	0	93	5	5	0	7	0	
Cap, veh/h	587	0	331	0	390	0	18	1637	0	5	1020	481	
Arrive On Green	0.21	0.00	0.21	0.00	0.00	0.00	0.04	0.47	0.00	0.00	0.30	0.30	
Sat Flow, veh/h	1810	0	1610	0	1900	0	497	3561	0	1810	3413	1610	
Grp Volume(v), veh/h	50	0	75	0	0	0	29	358	0	0	398	2	
Grp Sat Flow(s),veh/h/ln	1810	0	1610	0	1900	0	497	1735	0	1810	1706	1610	
Q Serve(g_s), s	0.8	0.0	1.3	0.0	0.0	0.0	1.2	2.0	0.0	0.0	3.1	0.0	
Cycle Q Clear(g_c), s	0.8	0.0	1.3	0.0	0.0	0.0	1.2	2.0	0.0	0.0	3.1	0.0	
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	1.00		1.00	
Lane Grp Cap(c), veh/h	587	0	331	0	390	0	18	1637	0	5	1020	481	
V/C Ratio(X)	0.09	0.00	0.23	0.00	0.00	0.00	1.65	0.22	0.00	0.00	0.39	0.00	
Avail Cap(c_a), veh/h	1405	0	1059	0	1250	0	74	8048	0	270	7917	3735	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	
Uniform Delay (d), s/veh	10.9	0.0	11.1	0.0	0.0	0.0	16.1	5.2	0.0	0.0	9.3	8.2	
Incr Delay (d2), s/veh	0.1	0.0	0.3	0.0	0.0	0.0	313.4	0.1	0.0	0.0	0.2	0.0	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.4	0.0	0.0	0.0	1.6	0.2	0.0	0.0	0.6	0.0	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	10.9	0.0	11.4	0.0	0.0	0.0	329.5	5.3	0.0	0.0	9.5	8.2	
LnGrp LOS	B	A	B	A	A	A	F	A	A	A	A	A	
Approach Vol, veh/h		125			0			387			400		
Approach Delay, s/veh		11.2			0.0			29.6			9.5		
Approach LOS		B						C			A		
Timer - Assigned Phs	1	2		4	5	6		8					
Phs Duration (G+Y+Rc), s	0.0	22.0		11.5	5.8	16.2		11.5					
Change Period (Y+Rc), s	4.6	6.2		4.6	4.6	6.2		4.6					
Max Green Setting (Gmax), s	5.0	77.6		22.0	5.0	77.6		22.0					
Max Q Clear Time (g_c+I1), s	0.0	4.0		3.3	3.2	5.1		0.0					
Green Ext Time (p_c), s	0.0	2.2		0.5	0.0	2.5		0.0					
<b>Intersection Summary</b>													
HCM 6th Ctrl Delay				18.3									
HCM 6th LOS				B									

Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↕	↗	↘	↕
Traffic Vol, veh/h	4	5	525	6	6	794
Future Vol, veh/h	4	5	525	6	6	794
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	0	140	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	25	78	13	33	16	16
Mvmt Flow	5	6	673	8	8	1018

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1198	337	0	0	681
Stage 1	673	-	-	-	-
Stage 2	525	-	-	-	-
Critical Hdwy	7.3	8.46	-	-	4.42
Critical Hdwy Stg 1	6.3	-	-	-	-
Critical Hdwy Stg 2	6.3	-	-	-	-
Follow-up Hdwy	3.75	4.08	-	-	2.36
Pot Cap-1 Maneuver	148	481	-	-	820
Stage 1	411	-	-	-	-
Stage 2	497	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	147	481	-	-	820
Mov Cap-2 Maneuver	271	-	-	-	-
Stage 1	411	-	-	-	-
Stage 2	492	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.2	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	271	481	820	-
HCM Lane V/C Ratio	-	-	0.019	0.013	0.009	-
HCM Control Delay (s)	-	-	18.5	12.6	9.4	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	0	-

Timings  
12: Heacock Street & San Michele Road



Lane Group	EBL	EBT	EBR	WBL	WBR	NBT	SBL	SBT	SBR	Ø5	Ø8
Lane Configurations	↖	↗	↘	↖	↗	↕	↖	↗	↘		
Traffic Volume (vph)	12	7	6	12	216	102	204	245	2		
Future Volume (vph)	12	7	6	12	216	102	204	245	2		
Turn Type	Prot	NA	Perm	Prot	pm+ov	NA	Prot	NA	Perm		
Protected Phases	7	4		3	1	2	1	6		5	8
Permitted Phases			4		8				6		
Detector Phase	7	4	4	3	1	2	1	6	6		
Switch Phase											
Minimum Initial (s)	4.0	5.0	5.0	4.0	4.0	5.0	4.0	5.0	5.0	4.0	5.0
Minimum Split (s)	9.5	30.5	30.5	8.5	8.5	34.5	8.5	34.5	34.5	8.5	30.5
Total Split (s)	12.0	37.4	37.4	9.6	34.0	39.0	34.0	64.5	64.5	8.5	35.0
Total Split (%)	10.0%	31.2%	31.2%	8.0%	28.3%	32.5%	28.3%	53.8%	53.8%	7%	29%
Yellow Time (s)	3.5	4.5	4.5	3.5	3.5	4.5	3.5	4.5	4.5	3.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.5	5.5	5.5	4.5	4.5	5.5	4.5	5.5	5.5		
Lead/Lag	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	None	Max	Max	None	None
Act Effct Green (s)	5.5	8.0	8.0	5.4	29.4	35.2	23.1	67.0	67.0		
Actuated g/C Ratio	0.07	0.10	0.10	0.07	0.38	0.46	0.30	0.87	0.87		
v/c Ratio	0.13	0.05	0.03	0.13	0.29	0.11	0.51	0.25	0.00		
Control Delay	42.9	34.0	0.2	43.2	0.7	16.8	29.0	5.0	0.0		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay	42.9	34.0	0.2	43.2	0.7	16.8	29.0	5.0	0.0		
LOS	D	C	A	D	A	B	C	A	A		
Approach Delay		29.8				16.8		15.8			
Approach LOS		C				B		B			

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 76.7  
 Natural Cycle: 85  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.51  
 Intersection Signal Delay: 12.8  
 Intersection LOS: B  
 Intersection Capacity Utilization 34.9%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 12: Heacock Street & San Michele Road





























HCM 6th Signalized Intersection Summary  
 12: Heacock Street & San Michele Road

Gateway Aviation TA (JN:13445)

04/19/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	7	6	12	0	216	0	102	3	204	245	2
Future Volume (veh/h)	12	7	6	12	0	216	0	102	3	204	245	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1841	1900	1530	1900	1885	1633	1900
Adj Flow Rate, veh/h	17	10	9	17	0	309	0	146	4	291	350	3
Peak Hour Factor	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Percent Heavy Veh, %	0	0	0	0	0	4	0	25	0	1	18	0
Cap, veh/h	28	123	100	28	123	486	2	1195	33	443	1190	1173
Arrive On Green	0.02	0.06	0.06	0.02	0.00	0.06	0.00	0.41	0.41	0.25	0.73	0.73
Sat Flow, veh/h	1810	1900	1547	1810	1900	1560	1810	2889	79	1795	1633	1610
Grp Volume(v), veh/h	17	10	9	17	0	309	0	73	77	291	350	3
Grp Sat Flow(s),veh/h/ln	1810	1900	1547	1810	1900	1560	1810	1453	1515	1795	1633	1610
Q Serve(g_s), s	0.8	0.4	0.4	0.8	0.0	0.0	0.0	2.5	2.5	11.8	6.0	0.0
Cycle Q Clear(g_c), s	0.8	0.4	0.4	0.8	0.0	0.0	0.0	2.5	2.5	11.8	6.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	28	123	100	28	123	486	2	601	627	443	1190	1173
V/C Ratio(X)	0.60	0.08	0.09	0.60	0.00	0.64	0.00	0.12	0.12	0.66	0.29	0.00
Avail Cap(c_a), veh/h	168	748	609	114	692	953	89	601	627	654	1190	1173
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.6	35.6	30.7	39.6	0.0	23.9	0.0	14.7	14.7	27.4	3.8	0.7
Incr Delay (d2), s/veh	7.3	0.1	0.1	7.3	0.0	0.5	0.0	0.4	0.4	0.6	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.2	0.2	0.4	0.0	4.7	0.0	0.8	0.8	4.6	1.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.9	35.7	30.8	46.9	0.0	24.5	0.0	15.1	15.1	28.0	4.4	0.7
LnGrp LOS	D	D	C	D	A	C	A	B	B	C	A	A
Approach Vol, veh/h		36			326			150			644	
Approach Delay, s/veh		39.8			25.6			15.1			15.1	
Approach LOS		D			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	25.5	39.0	5.8	10.7	0.0	64.5	5.8	10.7				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	29.5	* 34	5.1	31.9	4.0	59.0	7.5	29.5				
Max Q Clear Time (g_c+I1), s	13.8	4.5	2.8	2.4	0.0	8.0	2.8	2.0				
Green Ext Time (p_c), s	0.3	0.4	0.0	0.0	0.0	1.2	0.0	0.5				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			18.8									
HCM 6th LOS			B									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Intersection					
Intersection Delay, s/veh 7.9					
Intersection LOS A					
Approach	EB	WB	NB		
Entry Lanes	3	2	2		
Conflicting Circle Lanes	2	2	2		
Adj Approach Flow, veh/h	0	1103	42		
Demand Flow Rate, veh/h	0	1246	48		
Vehicles Circulating, veh/h	9	38	866		
Vehicles Exiting, veh/h	1275	876	42		
Ped Vol Crossing Leg, #/h	0	0	0		
Ped Cap Adj	1.000	1.000	1.000		
Approach Delay, s/veh	0.0	8.0	6.9		
Approach LOS	-	A	A		
Lane	Left	Right	Left	Right	
Designated Moves	LT	TR	L	LTR	
Assumed Moves	LT	TR	L	LTR	
RT Channelized					
Lane Util	0.470	0.530	0.521	0.479	
Follow-Up Headway, s	2.667	2.535	2.667	2.535	
Critical Headway, s	4.645	4.328	4.645	4.328	
Entry Flow, veh/h	586	660	25	23	
Cap Entry Lane, veh/h	1303	1375	609	680	
Entry HV Adj Factor	0.884	0.885	0.890	0.858	
Flow Entry, veh/h	518	584	22	20	
Cap Entry, veh/h	1153	1218	542	584	
V/C Ratio	0.450	0.480	0.041	0.034	
Control Delay, s/veh	7.9	8.1	7.1	6.6	
LOS	A	A	A	A	
95th %tile Queue, veh	2	3	0	0	

Timings  
14: Indian Street & San Michele Road

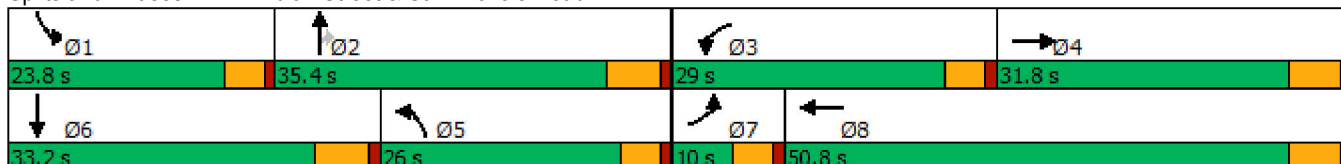


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↙	↕↗	↙	↕↗	↙↗	↕	↗	↙	↕↗
Traffic Volume (vph)	10	157	158	252	285	50	120	112	134
Future Volume (vph)	10	157	158	252	285	50	120	112	134
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8	5	2		1	6
Permitted Phases							2		
Detector Phase	7	4	3	8	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	31.8	9.6	31.8	9.6	32.8	32.8	9.6	32.8
Total Split (s)	10.0	31.8	29.0	50.8	26.0	35.4	35.4	23.8	33.2
Total Split (%)	8.3%	26.5%	24.2%	42.3%	21.7%	29.5%	29.5%	19.8%	27.7%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	5.5	15.7	15.3	34.6	14.8	15.8	15.8	12.3	13.3
Actuated g/C Ratio	0.07	0.19	0.19	0.43	0.18	0.19	0.19	0.15	0.16
v/c Ratio	0.13	0.77	0.68	0.30	0.68	0.23	0.36	0.60	0.41
Control Delay	48.5	22.7	43.7	16.5	39.0	33.5	7.6	45.1	32.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.5	22.7	43.7	16.5	39.0	33.5	7.6	45.1	32.9
LOS	D	C	D	B	D	C	A	D	C
Approach Delay		23.3		25.8		30.1			38.0
Approach LOS		C		C		C			D

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 81.2  
 Natural Cycle: 95  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.77  
 Intersection Signal Delay: 28.4  
 Intersection LOS: C  
 Intersection Capacity Utilization 74.6%  
 ICU Level of Service D  
 Analysis Period (min) 15























Splits and Phases: 14: Indian Street & San Michele Road



HCM 6th Signalized Intersection Summary  
 14: Indian Street & San Michele Road

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	157	271	158	252	50	285	50	120	112	134	22
Future Volume (veh/h)	10	157	271	158	252	50	285	50	120	112	134	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		1.00	1.00		0.68
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1841	1752	1870	1856	1900	1781	1722	1870	1885	1841	1767
Adj Flow Rate, veh/h	15	238	411	239	382	76	432	76	182	170	203	33
Peak Hour Factor	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66
Percent Heavy Veh, %	10	4	10	2	3	0	8	12	2	1	4	9
Cap, veh/h	28	425	370	271	1134	223	501	514	472	201	732	111
Arrive On Green	0.02	0.24	0.24	0.15	0.38	0.38	0.15	0.30	0.30	0.11	0.25	0.25
Sat Flow, veh/h	1668	1749	1521	1781	2997	589	3393	1722	1583	1795	2909	442
Grp Volume(v), veh/h	15	238	411	239	235	223	432	76	182	170	123	113
Grp Sat Flow(s),veh/h/ln	1668	1749	1521	1781	1856	1731	1697	1722	1583	1795	1841	1511
Q Serve(g_s), s	1.0	12.7	26.0	14.0	9.6	9.8	13.3	3.5	9.7	9.9	5.7	6.5
Cycle Q Clear(g_c), s	1.0	12.7	26.0	14.0	9.6	9.8	13.3	3.5	9.7	9.9	5.7	6.5
Prop In Lane	1.00		1.00	1.00		0.34	1.00		1.00	1.00		0.29
Lane Grp Cap(c), veh/h	28	425	370	271	702	655	501	514	472	201	463	380
V/C Ratio(X)	0.53	0.56	1.11	0.88	0.33	0.34	0.86	0.15	0.39	0.85	0.27	0.30
Avail Cap(c_a), veh/h	84	425	370	407	781	729	679	514	472	323	472	387
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.1	35.4	40.4	44.4	23.6	23.7	44.5	27.5	29.7	46.6	32.1	32.4
Incr Delay (d2), s/veh	5.8	1.0	80.1	10.2	0.1	0.1	6.7	0.0	0.2	5.9	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	5.3	17.5	6.7	4.0	3.8	5.8	1.4	3.6	4.6	2.5	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.9	36.4	120.5	54.6	23.7	23.8	51.2	27.6	29.9	52.4	32.2	32.5
LnGrp LOS	E	D	F	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		664			697			690			406	
Approach Delay, s/veh		89.0			34.3			43.0			40.8	
Approach LOS		F			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.6	37.7	20.8	31.8	21.6	32.7	6.4	46.2				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	5.8	* 5.8	4.6	5.8				
Max Green Setting (Gmax), s	19.2	29.6	24.4	26.0	21.4	* 27	5.4	45.0				
Max Q Clear Time (g_c+I1), s	11.9	11.7	16.0	28.0	15.3	8.5	3.0	11.8				
Green Ext Time (p_c), s	0.1	0.4	0.2	0.0	0.5	0.7	0.0	1.5				

Intersection Summary

HCM 6th Ctrl Delay	52.6
HCM 6th LOS	D

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
15: Indian Street & Nandina Avenue

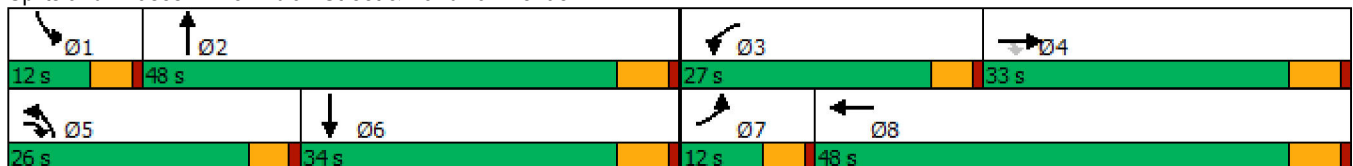


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↑	↗	↖	↗	↖	↑↗	↖	↑↗
Traffic Volume (vph)	22	84	322	84	27	111	194	17	168
Future Volume (vph)	22	84	322	84	27	111	194	17	168
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	5	3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	5	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	29.8	9.6	9.6	29.8	9.6	26.8	9.6	26.8
Total Split (s)	12.0	33.0	26.0	27.0	48.0	26.0	48.0	12.0	34.0
Total Split (%)	10.0%	27.5%	21.7%	22.5%	40.0%	21.7%	40.0%	10.0%	28.3%
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	6.8	14.4	27.2	11.3	22.7	13.4	32.3	6.7	14.0
Actuated g/C Ratio	0.10	0.22	0.41	0.17	0.35	0.20	0.49	0.10	0.21
v/c Ratio	0.16	0.32	0.50	0.46	0.19	0.54	0.17	0.13	0.35
Control Delay	39.0	31.1	5.1	37.6	11.0	37.4	16.9	39.2	27.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.0	31.1	5.1	37.6	11.0	37.4	16.9	39.2	27.7
LOS	D	C	A	D	B	D	B	D	C
Approach Delay		12.0			25.0		23.7		28.6
Approach LOS		B			C		C		C

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 65.6  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.54  
 Intersection Signal Delay: 20.4  
 Intersection LOS: C  
 Intersection Capacity Utilization 45.7%  
 ICU Level of Service A  
 Analysis Period (min) 15
























Splits and Phases: 15: Indian Street & Nandina Avenue



HCM 6th Signalized Intersection Summary  
 15: Indian Street & Nandina Avenue

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	84	322	84	27	48	111	194	29	17	168	26
Future Volume (veh/h)	22	84	322	84	27	48	111	194	29	17	168	26
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1722	1663	1470	1396	1870	1366	1826	1796	1811	1811	1841
Adj Flow Rate, veh/h	31	117	447	117	38	67	154	269	40	24	233	36
Peak Hour Factor	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72
Percent Heavy Veh, %	0	12	16	29	34	2	36	5	7	6	6	4
Cap, veh/h	59	530	629	141	170	300	181	810	119	46	454	69
Arrive On Green	0.03	0.31	0.31	0.10	0.38	0.38	0.14	0.26	0.26	0.03	0.15	0.15
Sat Flow, veh/h	1810	1722	1409	1400	453	799	1301	3112	457	1725	3069	467
Grp Volume(v), veh/h	31	117	447	117	0	105	154	156	153	24	136	133
Grp Sat Flow(s),veh/h/ln	1810	1722	1409	1400	0	1252	1301	1826	1744	1725	1811	1725
Q Serve(g_s), s	1.2	3.4	17.6	5.6	0.0	3.9	7.9	4.7	4.8	0.9	4.7	4.9
Cycle Q Clear(g_c), s	1.2	3.4	17.6	5.6	0.0	3.9	7.9	4.7	4.8	0.9	4.7	4.9
Prop In Lane	1.00		1.00	1.00		0.64	1.00		0.26	1.00		0.27
Lane Grp Cap(c), veh/h	59	530	629	141	0	470	181	475	454	46	268	255
V/C Ratio(X)	0.53	0.22	0.71	0.83	0.00	0.22	0.85	0.33	0.34	0.52	0.51	0.52
Avail Cap(c_a), veh/h	196	686	758	459	0	774	408	1129	1078	187	748	713
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.5	17.6	15.3	30.1	0.0	14.5	28.7	20.4	20.5	32.8	26.8	26.8
Incr Delay (d2), s/veh	2.7	0.2	2.5	4.7	0.0	0.2	4.3	0.4	0.4	3.3	1.5	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.2	5.0	1.9	0.0	1.0	2.4	1.8	1.8	0.4	1.9	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.2	17.8	17.8	34.8	0.0	14.8	33.0	20.8	20.9	36.1	28.3	28.5
LnGrp LOS	D	B	B	C	A	B	C	C	C	D	C	C
Approach Vol, veh/h		595			222			463			293	
Approach Delay, s/veh		18.7			25.3			24.9			29.0	
Approach LOS		B			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.4	23.6	11.5	26.8	14.1	15.9	6.8	31.4				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	7.4	42.2	22.4	27.2	21.4	28.2	7.4	42.2				
Max Q Clear Time (g_c+I1), s	2.9	6.8	7.6	19.6	9.9	6.9	3.2	5.9				
Green Ext Time (p_c), s	0.0	1.6	0.1	1.4	0.1	1.2	0.0	0.6				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			23.4									
HCM 6th LOS			C									

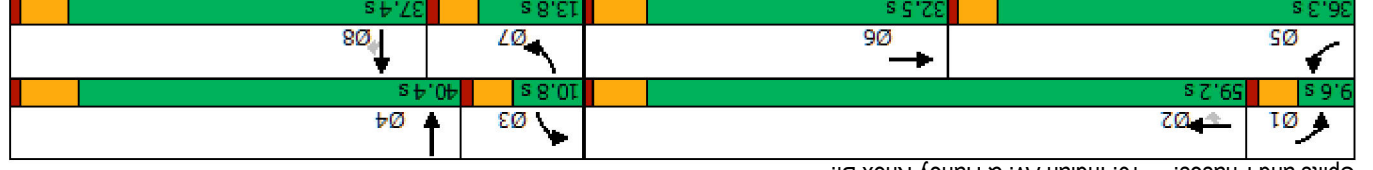


Lane Group	EBL	EBT	EBR	WBL	WBT	WBL	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	222	342	31	11	289	41	177	21	45	228	228
Future Volume (vph)	222	342	31	11	289	41	177	21	45	228	228
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	NA
Protected Phases	5	2		1	6	3	8		7	4	
Permitted Phases		2						8			
Detector Phase	5	2		1	6	3	8		7	4	
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	35.8	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2	40.2
Total Split (s)	36.3	59.2	59.2	9.6	32.5	10.8	37.4	37.4	13.8	40.4	40.4
Total Split (%)	30.3%	49.3%	49.3%	8.0%	27.1%	9.0%	31.2%	31.2%	11.5%	33.7%	33.7%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.4	4.4	3.6	5.2	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	5.4	5.4	4.6	6.2	6.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effort Green (s)	21.4	39.7	39.7	5.5	14.6	6.2	18.1	18.1	7.4	20.9	20.9
Actuated g/C Ratio	0.27	0.49	0.49	0.07	0.18	0.08	0.22	0.22	0.09	0.26	0.26
v/c Ratio	0.76	0.18	0.06	0.13	0.45	0.24	0.32	0.06	0.34	0.70	0.70
Control Delay	45.0	13.6	0.2	50.6	34.0	47.2	30.2	0.3	48.6	20.6	20.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.0	13.6	0.2	50.6	34.0	47.2	30.2	0.3	48.6	20.6	20.6
LOS	D	B	A	D	C	D	C	A	D	C	C
Approach Delay	24.6				34.6				30.5		22.7
Approach LOS	C				C				C		C

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 80.7
Natural Cycle: 100
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.76
Intersection Signal Delay: 26.6
Intersection Capacity Utilization 59.0%
ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 16: Indian Av. & Harley Knox Bl.



































HCM 6th Signalized Intersection Summary  
 16: Indian Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 			 	
Traffic Volume (veh/h)	222	342	31	11	289	10	41	177	21	45	228	318
Future Volume (veh/h)	222	342	31	11	289	10	41	177	21	45	228	318
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1455	1811	1426	1648	1722	1752	1500	1633	1693	1900	1826	1648
Adj Flow Rate, veh/h	278	428	29	14	361	-10	51	221	19	56	285	342
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	30	6	32	17	12	10	27	18	14	0	5	17
Cap, veh/h	314	1744	426	27	673	0	125	867	395	86	489	436
Arrive On Green	0.23	0.35	0.35	0.02	0.14	0.00	0.04	0.28	0.28	0.05	0.28	0.28
Sat Flow, veh/h	1386	4944	1208	1570	4856	0	2771	3103	1416	1810	1735	1547
Grp Volume(v), veh/h	278	428	29	14	351	0	51	221	19	56	285	342
Grp Sat Flow(s),veh/h/ln	1386	1648	1208	1570	1567	0	1386	1552	1416	1810	1735	1547
Q Serve(g_s), s	13.6	4.3	1.1	0.6	4.8	0.0	1.3	3.9	0.7	2.1	9.9	14.2
Cycle Q Clear(g_c), s	13.6	4.3	1.1	0.6	4.8	0.0	1.3	3.9	0.7	2.1	9.9	14.2
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	314	1744	426	27	673	0	125	867	395	86	489	436
V/C Ratio(X)	0.89	0.25	0.07	0.52	0.52	0.00	0.41	0.25	0.05	0.65	0.58	0.78
Avail Cap(c_a), veh/h	629	3780	924	112	1797	0	246	1422	649	238	849	758
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.1	16.0	15.0	34.0	27.7	0.0	32.5	19.5	18.4	32.7	21.6	23.1
Incr Delay (d2), s/veh	3.3	0.1	0.1	5.8	0.6	0.0	0.8	0.2	0.0	3.1	1.1	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	1.4	0.3	0.3	1.7	0.0	0.4	1.3	0.2	0.9	3.7	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.5	16.1	15.1	39.8	28.3	0.0	33.3	19.7	18.4	35.8	22.7	26.3
LnGrp LOS	C	B	B	D	C	A	C	B	B	D	C	C
Approach Vol, veh/h		735			365			291			683	
Approach Delay, s/veh		21.1			28.8			22.0			25.5	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.8	30.4	7.7	25.9	20.4	15.8	7.9	25.7				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	5.0	53.4	6.2	34.2	31.7	26.7	9.2	* 32				
Max Q Clear Time (g_c+I1), s	2.6	6.3	3.3	16.2	15.6	6.8	4.1	5.9				
Green Ext Time (p_c), s	0.0	2.9	0.0	3.4	0.3	2.0	0.0	1.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				24.0								
HCM 6th LOS				C								
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												



**APPENDIX 5.3:**

**E+P (NON-PEAK) CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS**

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### Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

<u>DIST</u>	<u>CO</u>	<u>RTE</u>	<u>PM</u>	TRAFFIC CONDITIONS	E+P (non-Peak)
Jurisdiction: <u>March AFB</u>				CALC <u>CP</u>	DATE <u>11/10/20</u>
Major Street: <u>Heacock St.</u>				CHK <u>CP</u>	DATE <u>11/10/20</u>
Minor Street: <u>Driveway 1</u>				Critical Approach Speed (Major) <u>45</u> mph	Critical Approach Speed (Minor) <u>25</u> mph
Major Street Approach Lanes = <u>2</u> lane				Minor Street Approach Lanes: <u>1</u> lane	
Major Street Future ADT = <u>9,373</u> vpd				Minor Street Future ADT = <u>638</u> vpd	
Speed limit or critical speed on major street traffic > 64 km/h (40 mph); .....					<input checked="" type="checkbox"/>
					or
In built up area of isolated community of < 10,000 population .....					<input type="checkbox"/>

**RURAL (R)**

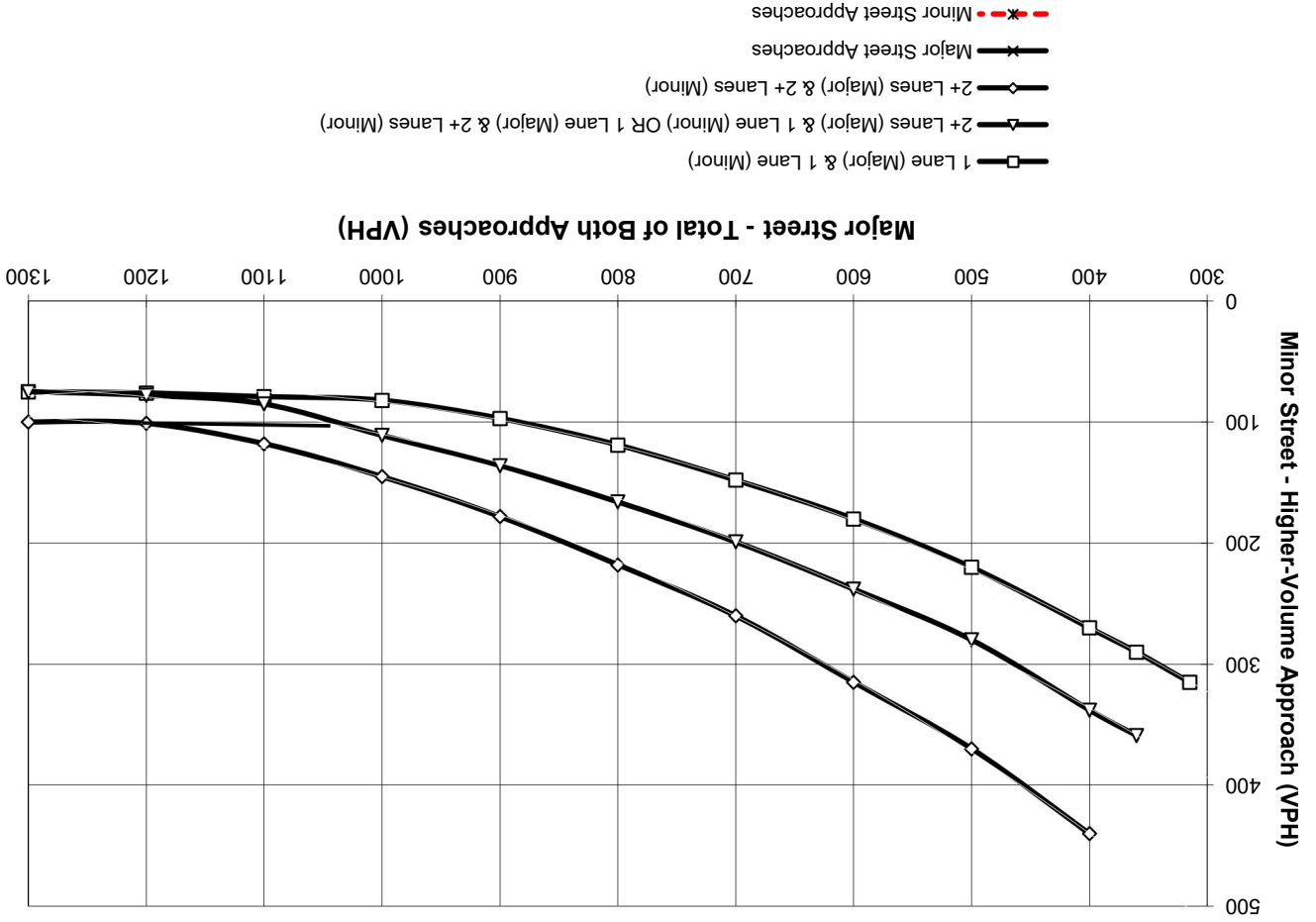
**(Based on Estimated Average Daily Traffic - See Note)**

<u>URBAN</u>	<u>RURAL</u>	Minimum Requirements EADT			
<b>CONDITION A - Minimum Vehicular Volume</b>		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Satisfied</u>	<u>Not Satisfied</u>				
	<b>XX</b>				
	<b>XX</b>				
Number of lanes for moving traffic on each approach		<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
<u>Major Street</u>	<u>Minor Street</u>				
1	1	8,000	5,600	2,400	1,680
2 + <b>9,373</b>	1 <b>638</b>	9,600	6,720 *	2,400	1,680
2 +	2 +	9,600	6,720	3,200	2,240
1	2 +	8,000	5,600	3,200	2,240
<b>CONDITION B - Interruption of Continuous Traffic</b>		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Satisfied</u>	<u>Not Satisfied</u>				
	<b>XX</b>				
Number of lanes for moving traffic on each approach		<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
<u>Major Street</u>	<u>Minor Street</u>				
1	1	12,000	8,400	1,200	850
2 + <b>9,373</b>	1 <b>638</b>	14,400	10,080	1,200	850
2 +	2 +	14,400	10,080	1,600	1,120
1	2 +	12,000	8,400	1,600	1,120
<b>Combination of CONDITIONS A + B</b>		2 CONDITIONS		2 CONDITIONS	
<u>Satisfied</u>	<u>Not Satisfied</u>	80%		80%	
No one condition satisfied, but following conditions fulfilled 80% of more .....	<b>XX</b>				
	<b>A</b>				
	<b>38%</b>				
	<b>B</b>				
	<b>75%</b>				

**Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.**

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

\*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane



**SIGNAL WARRANT NOT SATISFIED**

Minor Street Name = **Nandina Av.**  
 Major Street Name = **Heacock St.**  
 Traffic Conditions = **E+P (Non-Peak) Conditions**  
 Total of Both Approaches (VPH) = **251**  
 Number of Approach Lanes Major Street = **1**  
 High Volume Approach (VPH) = **96**  
 Number of Approach Lanes Minor Street = **1**

**Figure 4C-4. Warrant 3, Peak Hour (70% Factor)**  
 (COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

**APPENDIX 5.4:**

**E+P (PEAK) CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS**

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### Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

	<u>      </u>	<u>      </u>	<u>      </u>		TRAFFIC CONDITIONS	<b>E+P (Peak)</b>
DIST	CO	RTE	PM	CALC	<u>CP</u>	DATE <u>11/10/20</u>
Jurisdiction: <u>March AFB</u>				CHK	<u>CP</u>	DATE <u>11/10/20</u>
Major Street: <u>Heacock St.</u>				Critical Approach Speed (Major) <u>45</u> mph		
Minor Street: <u>Driveway 1</u>				Critical Approach Speed (Minor) <u>25</u> mph		
Major Street Approach Lanes = <u>2</u> lane				Minor Street Approach Lanes: <u>1</u> lane		
Major Street Future ADT = <u>9,540</u> vpd				Minor Street Future ADT = <u>940</u> vpd		
Speed limit or critical speed on major street traffic > 64 km/h (40 mph); .....						<input checked="" type="checkbox"/>
						or
In built up area of isolated community of < 10,000 population .....						<input type="checkbox"/>

**RURAL (R)**

**(Based on Estimated Average Daily Traffic - See Note)**

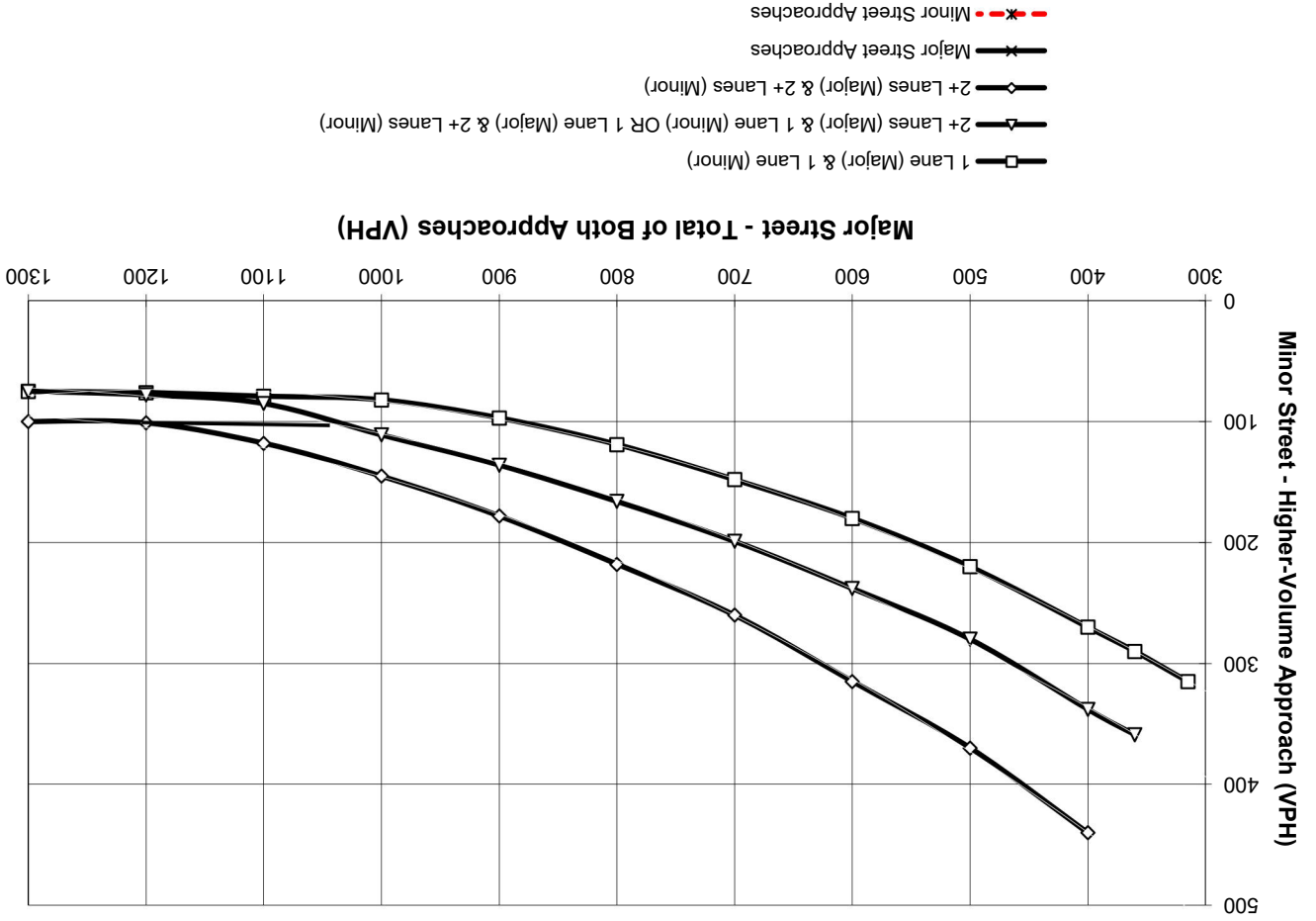
<u>URBAN</u>		<u>RURAL</u>		Minimum Requirements EADT			
<b>CONDITION A - Minimum Vehicular Volume</b>		<b>XX</b>					
<u>Satisfied</u>		<u>Not Satisfied</u>					
Number of lanes for moving traffic on each approach		Number of lanes for moving traffic on each approach		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Major Street</u>	<u>Minor Street</u>	<u>Major Street</u>	<u>Minor Street</u>	<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
1	1	1	1	8,000	5,600	2,400	1,680
2 + <b>9,540</b>	1 <b>940</b>	2 +	2 +	9,600	6,720 *	2,400	1,680
2 +	2 +	2 +	2 +	9,600	6,720	3,200	2,240
1	2 +	2 +	2 +	8,000	5,600	3,200	2,240
<b>CONDITION B - Interruption of Continuous Traffic</b>		<b>XX</b>					
<u>Satisfied</u>		<u>Not Satisfied</u>					
Number of lanes for moving traffic on each approach		Number of lanes for moving traffic on each approach		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Major Street</u>	<u>Minor Street</u>	<u>Major Street</u>	<u>Minor Street</u>	<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
1	1	1	1	12,000	8,400	1,200	850
2 + <b>9,540</b>	1 <b>940</b>	2 +	2 +	14,400	10,080	1,200	850 *
2 +	2 +	2 +	2 +	14,400	10,080	1,600	1,120
1	2 +	2 +	2 +	12,000	8,400	1,600	1,120
<b>Combination of CONDITIONS A + B</b>		<b>XX</b>					
<u>Satisfied</u>		<u>Not Satisfied</u>					
No one condition satisfied, but following conditions fulfilled 80% of more .....		No one condition satisfied, but following conditions fulfilled 80% of more .....		2 CONDITIONS 80%		2 CONDITIONS 80%	
		<u>A</u>	<u>B</u>				
		<b>56%</b>	<b>95%</b>				

**Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.**

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.



\*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane



**SIGNAL WARRANT NOT SATISFIED**

Traffic Conditions = **E+P (Peak) Conditions - PM Peak Hour**  
 Major Street Name = **Heacock St.** Total of Both Approaches (VPH) = **261** Number of Approach Lanes Major Street = **1**  
 Minor Street Name = **Nandina Av.** High Volume Approach (VPH) = **104** Number of Approach Lanes Minor Street = **1**

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

**Figure 4C-4. Warrant 3, Peak Hour (70% Factor)**



**APPENDIX 5.5:**  
**E+P (NON-PEAK) CONDITIONS FREEWAY OFF-RAMP QUEUING ANALYSIS**  
**WORKSHEETS**

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Queues

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



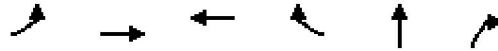
Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	729	4	125	205	347	154
v/c Ratio	0.41	0.01	0.47	0.11	0.81	0.28
Control Delay	10.1	0.0	29.8	16.2	35.4	4.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.1	0.0	29.8	16.2	35.4	4.4
Queue Length 50th (ft)	82	0	51	38	108	0
Queue Length 95th (ft)	123	0	100	70	#221	32
Internal Link Dist (ft)	844			286	1350	
Turn Bay Length (ft)		200	60			265
Base Capacity (vph)	1787	695	268	1803	484	600
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.01	0.47	0.11	0.72	0.26

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Queues

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	427	648	325	896	8	54
v/c Ratio	1.43	0.31	0.23	0.98	0.04	0.20
Control Delay	233.1	3.9	10.6	37.3	23.1	2.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	233.1	3.9	10.6	37.3	23.1	2.3
Queue Length 50th (ft)	~218	46	35	154	3	0
Queue Length 95th (ft)	#372	65	58	#436	13	5
Internal Link Dist (ft)		286	620		929	
Turn Bay Length (ft)	60					270
Base Capacity (vph)	298	2123	1437	910	218	275
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.43	0.31	0.23	0.98	0.04	0.20

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Queues

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



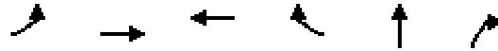
Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	402	34	361	213	289	141
v/c Ratio	0.21	0.04	0.68	0.11	0.79	0.30
Control Delay	6.8	2.6	27.0	10.0	37.4	5.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.8	2.6	27.0	10.0	37.4	5.6
Queue Length 50th (ft)	35	0	148	36	93	0
Queue Length 95th (ft)	53	9	#230	62	#187	33
Internal Link Dist (ft)	844			286	1350	
Turn Bay Length (ft)		200	60			265
Base Capacity (vph)	1915	910	533	1951	409	502
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.04	0.68	0.11	0.71	0.28

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Queues

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	223	438	529	529	21	241
v/c Ratio	0.71	0.22	0.38	0.61	0.08	0.56
Control Delay	28.2	3.8	14.3	5.0	22.1	9.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.2	3.8	14.3	5.0	22.1	9.5
Queue Length 50th (ft)	74	24	70	0	7	0
Queue Length 95th (ft)	131	m35	110	55	23	53
Internal Link Dist (ft)		286	620		929	
Turn Bay Length (ft)	60					270
Base Capacity (vph)	379	2005	1375	873	265	429
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.22	0.38	0.61	0.08	0.56

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

**APPENDIX 5.6:**

**E+P (PEAK) CONDITIONS FREEWAY OFF-RAMP QUEUING ANALYSIS WORKSHEETS**

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Queues

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



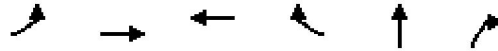
Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	729	4	129	205	355	154
v/c Ratio	0.41	0.01	0.49	0.11	0.83	0.28
Control Delay	10.3	0.0	30.8	16.4	36.5	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.3	0.0	30.8	16.4	36.5	4.3
Queue Length 50th (ft)	84	0	54	39	110	0
Queue Length 95th (ft)	123	0	#103	70	#230	32
Internal Link Dist (ft)	844			286	1350	
Turn Bay Length (ft)		200	60			265
Base Capacity (vph)	1770	688	264	1786	480	600
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.01	0.49	0.11	0.74	0.26

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Queues

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox Bl./Harley Knox Bl.



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	427	657	329	902	8	63
v/c Ratio	1.43	0.31	0.23	0.99	0.04	0.23
Control Delay	233.0	3.9	10.7	39.0	23.1	3.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	233.0	3.9	10.7	39.0	23.1	3.6
Queue Length 50th (ft)	~219	47	36	159	3	0
Queue Length 95th (ft)	#372	66	58	#443	13	10
Internal Link Dist (ft)		286	620		929	
Turn Bay Length (ft)	60					270
Base Capacity (vph)	298	2123	1437	910	218	277
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.43	0.31	0.23	0.99	0.04	0.23

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Queues

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



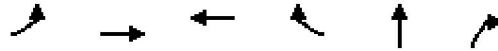
Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	402	34	367	213	297	141
v/c Ratio	0.21	0.04	0.70	0.11	0.81	0.30
Control Delay	6.9	2.6	28.3	10.0	39.7	5.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.9	2.6	28.3	10.0	39.7	5.6
Queue Length 50th (ft)	35	0	151	36	96	0
Queue Length 95th (ft)	53	9	#239	62	#198	33
Internal Link Dist (ft)	844			286	1350	
Turn Bay Length (ft)		200	60			265
Base Capacity (vph)	1903	904	525	1938	402	502
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.04	0.70	0.11	0.74	0.28

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Queues

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	223	446	535	541	21	242
v/c Ratio	0.71	0.23	0.39	0.62	0.08	0.57
Control Delay	28.1	3.7	14.3	5.2	22.1	9.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.1	3.7	14.3	5.2	22.1	9.6
Queue Length 50th (ft)	75	24	71	0	7	0
Queue Length 95th (ft)	134	m34	112	56	23	53
Internal Link Dist (ft)		286	620		929	
Turn Bay Length (ft)	60					270
Base Capacity (vph)	379	1972	1375	875	263	427
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.23	0.39	0.62	0.08	0.57

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

**APPENDIX 5.7:**

**E+P (NON-PEAK) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS  
WITH IMPROVEMENTS**

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Timings

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

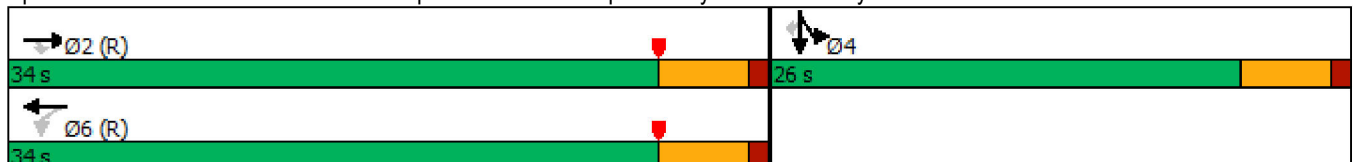


Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations	↑↑	↑	↑↑	↑	↑	↑
Traffic Volume (vph)	671	4	115	189	1	142
Future Volume (vph)	671	4	115	189	1	142
Turn Type	NA	Perm	Perm	NA	NA	Perm
Protected Phases	2			6	4	
Permitted Phases		2	6			4
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	25.0	25.0	10.0	10.0
Total Split (s)	34.0	34.0	34.0	34.0	26.0	26.0
Total Split (%)	56.7%	56.7%	56.7%	56.7%	43.3%	43.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	31.5	31.5	31.5	31.5	18.5	18.5
Actuated g/C Ratio	0.52	0.52	0.52	0.52	0.31	0.31
v/c Ratio	0.41	0.01	0.24	0.22	0.81	0.28
Control Delay	10.1	0.0	16.6	15.1	35.4	4.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.1	0.0	16.6	15.1	35.4	4.4
LOS	B	A	B	B	D	A
Approach Delay	10.1			15.6	25.9	
Approach LOS	B			B	C	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection  
 Natural Cycle: 45  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.81  
 Intersection Signal Delay: 16.3  
 Intersection LOS: B  
 Intersection Capacity Utilization 53.9%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

11/17/2020

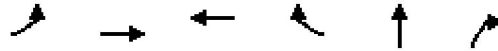


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑↑	↑						↑	↑
Traffic Volume (veh/h)	0	671	4	115	189	0	0	0	0	318	1	142
Future Volume (veh/h)	0	671	4	115	189	0	0	0	0	318	1	142
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1811	1530	1500	1826	0				1707	1900	1707
Adj Flow Rate, veh/h	0	729	4	125	205	0				346	1	94
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	6	25	27	5	0				13	0	13
Cap, veh/h	0	2050	772	788	1088	0				429	1	344
Arrive On Green	0.00	0.60	0.60	1.00	1.00	0.00				0.24	0.24	0.24
Sat Flow, veh/h	0	3532	1296	1126	1826	0				1805	5	1447
Grp Volume(v), veh/h	0	729	4	125	205	0				347	0	94
Grp Sat Flow(s),veh/h/ln	0	1721	1296	563	1826	0				1810	0	1447
Q Serve(g_s), s	0.0	6.5	0.1	1.5	0.0	0.0				10.9	0.0	3.2
Cycle Q Clear(g_c), s	0.0	6.5	0.1	8.0	0.0	0.0				10.9	0.0	3.2
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2050	772	788	1088	0				430	0	344
V/C Ratio(X)	0.00	0.36	0.01	0.16	0.19	0.00				0.81	0.00	0.27
Avail Cap(c_a), veh/h	0	2050	772	788	1088	0				633	0	506
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.97	0.97	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	6.2	4.9	0.7	0.0	0.0				21.6	0.0	18.7
Incr Delay (d2), s/veh	0.0	0.5	0.0	0.4	0.4	0.0				4.8	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.6	0.0	0.0	0.1	0.0				4.5	0.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	6.7	4.9	1.1	0.4	0.0				26.4	0.0	19.1
LnGrp LOS	A	A	A	A	A	A				C	A	B
Approach Vol, veh/h		733			330						441	
Approach Delay, s/veh		6.7			0.7						24.9	
Approach LOS		A			A						C	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		40.7		19.3		40.7						
Change Period (Y+Rc), s		5.0		5.0		5.0						
Max Green Setting (Gmax), s		29.0		21.0		29.0						
Max Q Clear Time (g_c+I1), s		8.5		12.9		10.0						
Green Ext Time (p_c), s		2.9		1.4		1.6						
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				10.7								
HCM 6th LOS				B								



Timings

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

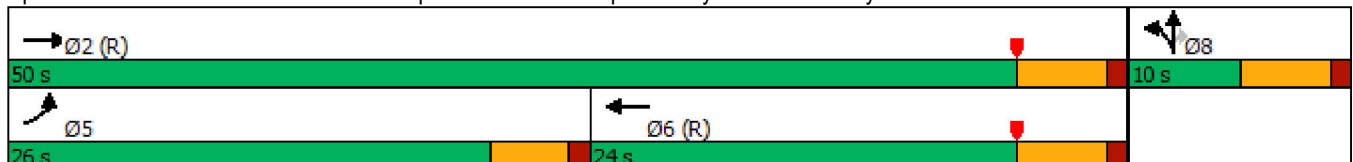


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	393	596	299	824	3	50
Future Volume (vph)	393	596	299	824	3	50
Turn Type	Prot	NA	NA	Free	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				Free		8
Detector Phase	5	2	6		8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	9.5	26.0	24.0		10.0	10.0
Total Split (s)	26.0	50.0	24.0		10.0	10.0
Total Split (%)	43.3%	83.3%	40.0%		16.7%	16.7%
Yellow Time (s)	3.5	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0		5.0	5.0
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	C-Max	C-Max		Max	Max
Act Effct Green (s)	18.3	45.0	22.2	60.0	5.0	5.0
Actuated g/C Ratio	0.30	0.75	0.37	1.00	0.08	0.08
v/c Ratio	0.82	0.28	0.28	0.62	0.06	0.25
Control Delay	22.6	2.7	15.1	2.0	26.4	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.6	2.7	15.1	2.0	26.4	3.5
LOS	C	A	B	A	C	A
Approach Delay		10.6	5.5		6.5	
Approach LOS		B	A		A	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 29 (48%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.82  
 Intersection Signal Delay: 7.9  
 Intersection Capacity Utilization 53.9%  
 Analysis Period (min) 15  
 Intersection LOS: A  
 ICU Level of Service A

Splits and Phases: 2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

11/17/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗			↗	↘		↗	↘			
Traffic Volume (veh/h)	393	596	0	0	299	824	5	3	50	0	0	0
Future Volume (veh/h)	393	596	0	0	299	824	5	3	50	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1811	1618	0	0	1707	1737	1544	1900	1544			
Adj Flow Rate, veh/h	427	648	0	0	325	0	5	3	-11			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	6	19	0	0	13	11	24	0	24			
Cap, veh/h	461	2306	0	0	1322		96	58	109			
Arrive On Green	0.53	1.00	0.00	0.00	0.41	0.00	0.08	0.08	0.00			
Sat Flow, veh/h	1725	3156	0	0	3329	1472	1152	691	1309			
Grp Volume(v), veh/h	427	648	0	0	325	0	8	0	-11			
Grp Sat Flow(s),veh/h/ln	1725	1537	0	0	1622	1472	1842	0	1309			
Q Serve(g_s), s	13.7	0.0	0.0	0.0	4.0	0.0	0.2	0.0	0.0			
Cycle Q Clear(g_c), s	13.7	0.0	0.0	0.0	4.0	0.0	0.2	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.62		1.00			
Lane Grp Cap(c), veh/h	461	2306	0	0	1322		154	0	109			
V/C Ratio(X)	0.93	0.28	0.00	0.00	0.25		0.05	0.00	-0.10			
Avail Cap(c_a), veh/h	618	2306	0	0	1322		154	0	109			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.92	0.92	0.00	0.00	0.92	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	13.4	0.0	0.0	0.0	11.7	0.0	25.3	0.0	0.0			
Incr Delay (d2), s/veh	13.7	0.3	0.0	0.0	0.4	0.0	0.6	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	4.5	0.1	0.0	0.0	1.2	0.0	0.1	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.1	0.3	0.0	0.0	12.1	0.0	26.0	0.0	0.0			
LnGrp LOS	C	A	A	A	B		C	A	A			
Approach Vol, veh/h		1075			325	A		-3				
Approach Delay, s/veh		10.9			12.1			0.0				
Approach LOS		B			B			A				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		50.0			20.5	29.5		10.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		45.0			21.5	19.0		5.0				
Max Q Clear Time (g_c+I1), s		2.0			15.7	6.0		2.2				
Green Ext Time (p_c), s		2.8			0.4	1.0		0.0				

Intersection Summary

HCM 6th Ctrl Delay	11.2
HCM 6th LOS	B

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Timings

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

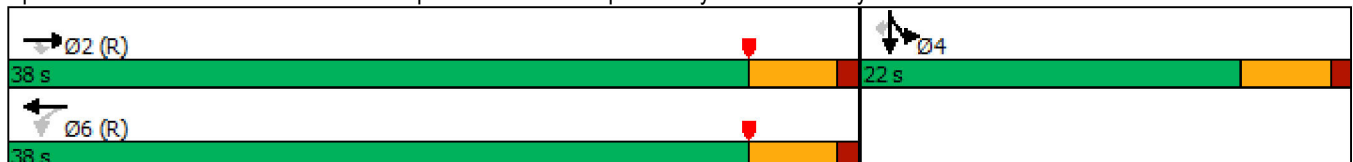


Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations	↑↑	↑	↔	↑	↔	↑
Traffic Volume (vph)	354	30	318	187	0	124
Future Volume (vph)	354	30	318	187	0	124
Turn Type	NA	Perm	Perm	NA	NA	Perm
Protected Phases	2			6	4	
Permitted Phases		2	6			4
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	25.0	25.0	10.0	10.0
Total Split (s)	38.0	38.0	38.0	38.0	22.0	22.0
Total Split (%)	63.3%	63.3%	63.3%	63.3%	36.7%	36.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	34.7	34.7	34.7	34.7	15.3	15.3
Actuated g/C Ratio	0.58	0.58	0.58	0.58	0.26	0.26
v/c Ratio	0.21	0.04	0.35	0.21	0.79	0.30
Control Delay	6.8	2.6	14.2	11.4	37.4	5.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.8	2.6	14.2	11.4	37.4	5.6
LOS	A	A	B	B	D	A
Approach Delay	6.5			13.1	27.0	
Approach LOS	A			B	C	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection  
 Natural Cycle: 45  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.79  
 Intersection Signal Delay: 15.3  
 Intersection LOS: B  
 Intersection Capacity Utilization 52.3%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

11/17/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑↑	↑						↑	↑
Traffic Volume (veh/h)	0	354	30	318	187	0	0	0	0	254	0	124
Future Volume (veh/h)	0	354	30	318	187	0	0	0	0	254	0	124
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1767	1856	1811	1796	0				1693	1900	1693
Adj Flow Rate, veh/h	0	402	34	361	212	0				289	0	79
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88				0.88	0.88	0.88
Percent Heavy Veh, %	0	9	3	6	7	0				14	0	14
Cap, veh/h	0	2126	995	1284	1138	0				362	0	287
Arrive On Green	0.00	0.63	0.63	1.00	1.00	0.00				0.20	0.00	0.20
Sat Flow, veh/h	0	3445	1572	1789	1796	0				1810	0	1434
Grp Volume(v), veh/h	0	402	34	361	212	0				289	0	79
Grp Sat Flow(s),veh/h/ln	0	1678	1572	894	1796	0				1810	0	1434
Q Serve(g_s), s	0.0	3.0	0.5	1.4	0.0	0.0				9.1	0.0	2.8
Cycle Q Clear(g_c), s	0.0	3.0	0.5	4.4	0.0	0.0				9.1	0.0	2.8
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2126	995	1284	1138	0				362	0	287
V/C Ratio(X)	0.00	0.19	0.03	0.28	0.19	0.00				0.80	0.00	0.28
Avail Cap(c_a), veh/h	0	2126	995	1284	1138	0				513	0	406
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.93	0.93	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	4.6	4.1	0.2	0.0	0.0				22.9	0.0	20.3
Incr Delay (d2), s/veh	0.0	0.2	0.1	0.5	0.3	0.0				5.9	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.6	0.1	0.1	0.1	0.0				4.0	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	4.8	4.2	0.7	0.3	0.0				28.7	0.0	20.8
LnGrp LOS	A	A	A	A	A	A				C	A	C
Approach Vol, veh/h		436			573						368	
Approach Delay, s/veh		4.7			0.6						27.0	
Approach LOS		A			A						C	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		43.0		17.0		43.0						
Change Period (Y+Rc), s		5.0		5.0		5.0						
Max Green Setting (Gmax), s		33.0		17.0		33.0						
Max Q Clear Time (g_c+I1), s		5.0		11.1		6.4						
Green Ext Time (p_c), s		1.6		0.9		2.3						
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				8.9								
HCM 6th LOS				A								

Timings

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

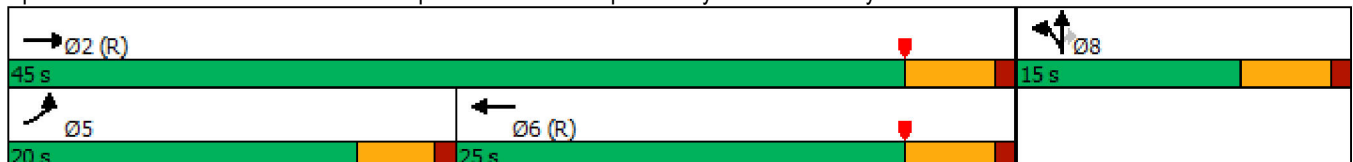


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	205	403	487	487	3	222
Future Volume (vph)	205	403	487	487	3	222
Turn Type	Prot	NA	NA	Free	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				Free		8
Detector Phase	5	2	6		8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	9.5	26.0	24.0		10.0	10.0
Total Split (s)	20.0	45.0	25.0		15.0	15.0
Total Split (%)	33.3%	75.0%	41.7%		25.0%	25.0%
Yellow Time (s)	3.5	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0		5.0	5.0
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	C-Max	C-Max		Max	Max
Act Effct Green (s)	11.8	40.0	23.7	60.0	10.0	10.0
Actuated g/C Ratio	0.20	0.67	0.40	1.00	0.17	0.17
v/c Ratio	0.67	0.22	0.39	0.38	0.08	0.56
Control Delay	25.2	3.8	15.0	0.8	22.1	9.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.2	3.8	15.0	0.8	22.1	9.5
LOS	C	A	B	A	C	A
Approach Delay		11.0	7.9		10.5	
Approach LOS		B	A		B	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 29 (48%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 50  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.67  
 Intersection Signal Delay: 9.3  
 Intersection Capacity Utilization 52.3%  
 Analysis Period (min) 15  
 Intersection LOS: A  
 ICU Level of Service A

Splits and Phases: 2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

11/17/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷			↷	↶		↶	↷			
Traffic Volume (veh/h)	205	403	0	0	487	487	17	3	222	0	0	0
Future Volume (veh/h)	205	403	0	0	487	487	17	3	222	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1796	1604	0	0	1811	1648	1633	1900	1633			
Adj Flow Rate, veh/h	223	438	0	0	529	0	18	3	176			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	7	20	0	0	6	17	18	0	18			
Cap, veh/h	275	2031	0	0	1482		260	43	231			
Arrive On Green	0.05	0.22	0.00	0.00	0.43	0.00	0.17	0.17	0.17			
Sat Flow, veh/h	1711	3127	0	0	3532	1397	1562	260	1384			
Grp Volume(v), veh/h	223	438	0	0	529	0	21	0	176			
Grp Sat Flow(s),veh/h/ln	1711	1523	0	0	1721	1397	1822	0	1384			
Q Serve(g_s), s	7.7	7.1	0.0	0.0	6.2	0.0	0.6	0.0	7.3			
Cycle Q Clear(g_c), s	7.7	7.1	0.0	0.0	6.2	0.0	0.6	0.0	7.3			
Prop In Lane	1.00		0.00	0.00		1.00	0.86		1.00			
Lane Grp Cap(c), veh/h	275	2031	0	0	1482		304	0	231			
V/C Ratio(X)	0.81	0.22	0.00	0.00	0.36		0.07	0.00	0.76			
Avail Cap(c_a), veh/h	442	2031	0	0	1482		304	0	231			
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.99	0.99	0.00	0.00	0.91	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	27.5	10.6	0.0	0.0	11.5	0.0	21.1	0.0	23.9			
Incr Delay (d2), s/veh	2.4	0.2	0.0	0.0	0.6	0.0	0.4	0.0	21.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	3.3	1.6	0.0	0.0	2.0	0.0	0.3	0.0	3.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.9	10.8	0.0	0.0	12.1	0.0	21.5	0.0	44.9			
LnGrp LOS	C	B	A	A	B		C	A	D			
Approach Vol, veh/h		661			529	A		197				
Approach Delay, s/veh		17.2			12.1			42.4				
Approach LOS		B			B			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		45.0			14.2	30.8		15.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		40.0			15.5	20.0		10.0				
Max Q Clear Time (g_c+I1), s		9.1			9.7	8.2		9.3				
Green Ext Time (p_c), s		1.8			0.2	1.7		0.0				

Intersection Summary

HCM 6th Ctrl Delay	18.8
HCM 6th LOS	B

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

**APPENDIX 5.8:**

**E+P (PEAK) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS WITH  
IMPROVEMENTS**

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Timings

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

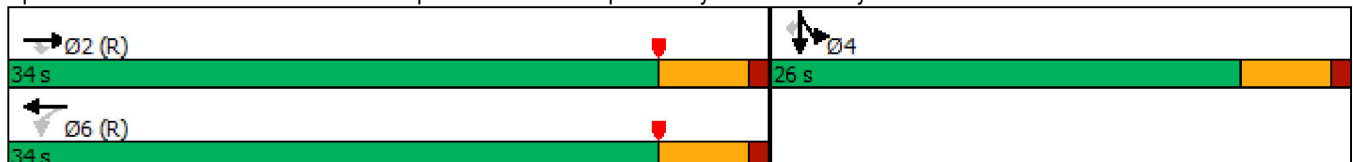


Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations	↑↑	↑	↔	↑↑	↓	↑
Traffic Volume (vph)	671	4	119	189	1	142
Future Volume (vph)	671	4	119	189	1	142
Turn Type	NA	Perm	Perm	NA	NA	Perm
Protected Phases	2			6	4	
Permitted Phases		2	6			4
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	25.0	25.0	10.0	10.0
Total Split (s)	34.0	34.0	34.0	34.0	26.0	26.0
Total Split (%)	56.7%	56.7%	56.7%	56.7%	43.3%	43.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	31.2	31.2	31.2	31.2	18.8	18.8
Actuated g/C Ratio	0.52	0.52	0.52	0.52	0.31	0.31
v/c Ratio	0.41	0.01	0.25	0.11	0.83	0.28
Control Delay	10.3	0.0	17.0	12.9	36.5	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.3	0.0	17.0	12.9	36.5	4.3
LOS	B	A	B	B	D	A
Approach Delay	10.2			14.5	26.8	
Approach LOS	B			B	C	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection  
 Natural Cycle: 50  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.83  
 Intersection Signal Delay: 16.5  
 Intersection LOS: B  
 Intersection Capacity Utilization 53.9%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

11/17/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑↑	↑↑						↑	↑
Traffic Volume (veh/h)	0	671	4	119	189	0	0	0	0	326	1	142
Future Volume (veh/h)	0	671	4	119	189	0	0	0	0	326	1	142
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1811	1530	1500	1826	0				1707	1900	1707
Adj Flow Rate, veh/h	0	729	4	129	205	0				354	1	94
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	6	25	27	5	0				13	0	13
Cap, veh/h	0	2036	767	782	2052	0				436	1	350
Arrive On Green	0.00	0.59	0.59	1.00	1.00	0.00				0.24	0.24	0.24
Sat Flow, veh/h	0	3532	1296	1126	3561	0				1805	5	1447
Grp Volume(v), veh/h	0	729	4	129	205	0				355	0	94
Grp Sat Flow(s),veh/h/ln	0	1721	1296	563	1735	0				1810	0	1447
Q Serve(g_s), s	0.0	6.6	0.1	1.6	0.0	0.0				11.1	0.0	3.2
Cycle Q Clear(g_c), s	0.0	6.6	0.1	8.2	0.0	0.0				11.1	0.0	3.2
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2036	767	782	2052	0				438	0	350
V/C Ratio(X)	0.00	0.36	0.01	0.16	0.10	0.00				0.81	0.00	0.27
Avail Cap(c_a), veh/h	0	2036	767	782	2052	0				633	0	506
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.97	0.97	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	6.3	5.0	0.8	0.0	0.0				21.5	0.0	18.4
Incr Delay (d2), s/veh	0.0	0.5	0.0	0.4	0.1	0.0				5.2	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.6	0.0	0.0	0.0	0.0				4.6	0.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	6.8	5.0	1.2	0.1	0.0				26.6	0.0	18.9
LnGrp LOS	A	A	A	A	A	A				C	A	B
Approach Vol, veh/h		733			334						449	
Approach Delay, s/veh		6.8			0.5						25.0	
Approach LOS		A			A						C	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		40.5		19.5		40.5						
Change Period (Y+Rc), s		5.0		5.0		5.0						
Max Green Setting (Gmax), s		29.0		21.0		29.0						
Max Q Clear Time (g_c+I1), s		8.6		13.1		10.2						
Green Ext Time (p_c), s		2.9		1.4		1.8						
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				10.8								
HCM 6th LOS				B								

Timings

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

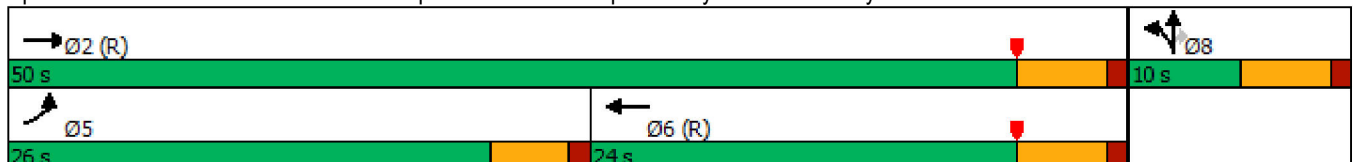


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	393	604	303	830	3	58
Future Volume (vph)	393	604	303	830	3	58
Turn Type	Prot	NA	NA	Free	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				Free		8
Detector Phase	5	2	6		8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	9.5	26.0	24.0		10.0	10.0
Total Split (s)	26.0	50.0	24.0		10.0	10.0
Total Split (%)	43.3%	83.3%	40.0%		16.7%	16.7%
Yellow Time (s)	3.5	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0		5.0	5.0
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	C-Max	C-Max		Max	Max
Act Effct Green (s)	18.3	45.0	22.2	60.0	5.0	5.0
Actuated g/C Ratio	0.30	0.75	0.37	1.00	0.08	0.08
v/c Ratio	0.82	0.29	0.28	0.63	0.06	0.29
Control Delay	22.5	2.7	15.1	2.1	26.4	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.5	2.7	15.1	2.1	26.4	5.2
LOS	C	A	B	A	C	A
Approach Delay		10.5	5.6		7.6	
Approach LOS		B	A		A	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 29 (48%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.82  
 Intersection Signal Delay: 7.9  
 Intersection LOS: A  
 Intersection Capacity Utilization 53.9%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

11/17/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷			↷	↶		↶	↷			
Traffic Volume (veh/h)	393	604	0	0	303	830	5	3	58	0	0	0
Future Volume (veh/h)	393	604	0	0	303	830	5	3	58	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1811	1618	0	0	1707	1737	1559	1900	1559			
Adj Flow Rate, veh/h	427	657	0	0	329	0	5	3	-2			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	6	19	0	0	13	11	23	0	23			
Cap, veh/h	461	2306	0	0	1322		96	58	110			
Arrive On Green	0.53	1.00	0.00	0.00	0.41	0.00	0.08	0.08	0.00			
Sat Flow, veh/h	1725	3156	0	0	3329	1472	1152	691	1321			
Grp Volume(v), veh/h	427	657	0	0	329	0	8	0	-2			
Grp Sat Flow(s),veh/h/ln	1725	1537	0	0	1622	1472	1842	0	1321			
Q Serve(g_s), s	13.7	0.0	0.0	0.0	4.0	0.0	0.2	0.0	0.0			
Cycle Q Clear(g_c), s	13.7	0.0	0.0	0.0	4.0	0.0	0.2	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.62		1.00			
Lane Grp Cap(c), veh/h	461	2306	0	0	1322		154	0	110			
V/C Ratio(X)	0.93	0.28	0.00	0.00	0.25		0.05	0.00	-0.02			
Avail Cap(c_a), veh/h	618	2306	0	0	1322		154	0	110			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.92	0.92	0.00	0.00	0.92	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	13.4	0.0	0.0	0.0	11.7	0.0	25.3	0.0	0.0			
Incr Delay (d2), s/veh	13.7	0.3	0.0	0.0	0.4	0.0	0.6	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	4.5	0.1	0.0	0.0	1.2	0.0	0.1	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.1	0.3	0.0	0.0	12.1	0.0	26.0	0.0	0.0			
LnGrp LOS	C	A	A	A	B		C	A	A			
Approach Vol, veh/h		1084			329	A		6				
Approach Delay, s/veh		10.8			12.1			34.6				
Approach LOS		B			B			C				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		50.0			20.5	29.5		10.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		45.0			21.5	19.0		5.0				
Max Q Clear Time (g_c+I1), s		2.0			15.7	6.0		2.2				
Green Ext Time (p_c), s		2.9			0.4	1.0		0.0				

Intersection Summary

HCM 6th Ctrl Delay	11.2
HCM 6th LOS	B

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Timings

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

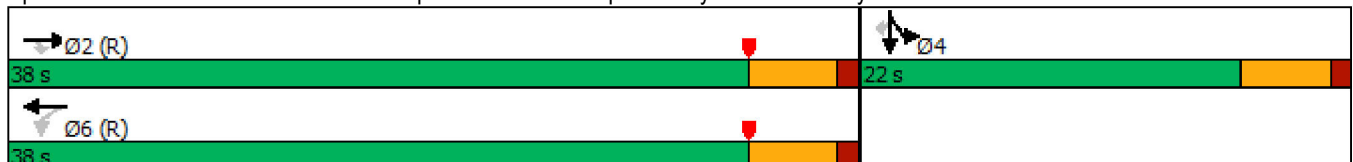


Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations	↑↑	↑	↔	↑↑	↓	↔
Traffic Volume (vph)	354	30	323	187	0	124
Future Volume (vph)	354	30	323	187	0	124
Turn Type	NA	Perm	Perm	NA	NA	Perm
Protected Phases	2			6	4	
Permitted Phases		2	6			4
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	25.0	25.0	10.0	10.0
Total Split (s)	38.0	38.0	38.0	38.0	22.0	22.0
Total Split (%)	63.3%	63.3%	63.3%	63.3%	36.7%	36.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	34.5	34.5	34.5	34.5	15.5	15.5
Actuated g/C Ratio	0.58	0.58	0.58	0.58	0.26	0.26
v/c Ratio	0.21	0.04	0.36	0.11	0.81	0.30
Control Delay	6.9	2.6	14.5	9.4	39.7	5.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.9	2.6	14.5	9.4	39.7	5.6
LOS	A	A	B	A	D	A
Approach Delay	6.6			12.6	28.7	
Approach LOS	A			B	C	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection  
 Natural Cycle: 45  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.81  
 Intersection Signal Delay: 15.6  
 Intersection LOS: B  
 Intersection Capacity Utilization 52.8%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

11/17/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↘↗	↑↑						↖	↗
Traffic Volume (veh/h)	0	354	30	323	187	0	0	0	0	261	0	124
Future Volume (veh/h)	0	354	30	323	187	0	0	0	0	261	0	124
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1767	1856	1796	1796	0				1693	1900	1693
Adj Flow Rate, veh/h	0	402	34	367	212	0				297	0	79
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88				0.88	0.88	0.88
Percent Heavy Veh, %	0	9	3	7	7	0				14	0	14
Cap, veh/h	0	2112	989	1267	2147	0				369	0	293
Arrive On Green	0.00	0.63	0.63	1.00	1.00	0.00				0.20	0.00	0.20
Sat Flow, veh/h	0	3445	1572	1774	3503	0				1810	0	1434
Grp Volume(v), veh/h	0	402	34	367	212	0				297	0	79
Grp Sat Flow(s),veh/h/ln	0	1678	1572	887	1706	0				1810	0	1434
Q Serve(g_s), s	0.0	3.0	0.5	1.5	0.0	0.0				9.4	0.0	2.8
Cycle Q Clear(g_c), s	0.0	3.0	0.5	4.5	0.0	0.0				9.4	0.0	2.8
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2112	989	1267	2147	0				369	0	293
V/C Ratio(X)	0.00	0.19	0.03	0.29	0.10	0.00				0.80	0.00	0.27
Avail Cap(c_a), veh/h	0	2112	989	1267	2147	0				513	0	406
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.92	0.92	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	4.7	4.2	0.2	0.0	0.0				22.7	0.0	20.1
Incr Delay (d2), s/veh	0.0	0.2	0.1	0.5	0.1	0.0				6.3	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.7	0.1	0.1	0.0	0.0				4.1	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	4.9	4.3	0.7	0.1	0.0				29.1	0.0	20.6
LnGrp LOS	A	A	A	A	A	A				C	A	C
Approach Vol, veh/h		436			579						376	
Approach Delay, s/veh		4.8			0.5						27.3	
Approach LOS		A			A						C	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		42.7		17.3		42.7						
Change Period (Y+Rc), s		5.0		5.0		5.0						
Max Green Setting (Gmax), s		33.0		17.0		33.0						
Max Q Clear Time (g_c+I1), s		5.0		11.4		6.5						
Green Ext Time (p_c), s		1.6		0.9		2.5						
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				9.1								
HCM 6th LOS				A								

Timings

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

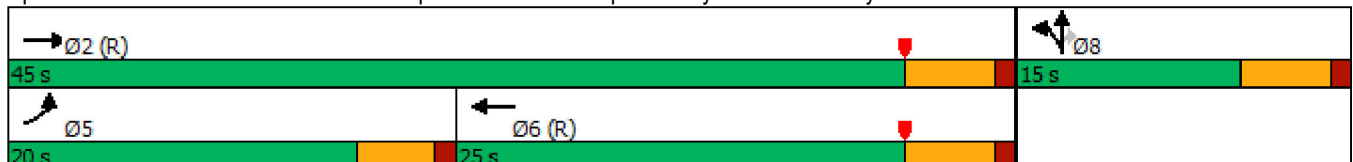


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations	↖	↗↗	↗↗	↖	↖	↖
Traffic Volume (vph)	205	410	492	498	3	223
Future Volume (vph)	205	410	492	498	3	223
Turn Type	Prot	NA	NA	Free	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				Free		8
Detector Phase	5	2	6		8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	9.5	26.0	24.0		10.0	10.0
Total Split (s)	20.0	45.0	25.0		15.0	15.0
Total Split (%)	33.3%	75.0%	41.7%		25.0%	25.0%
Yellow Time (s)	3.5	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0		5.0	5.0
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	C-Max	C-Max		Max	Max
Act Effct Green (s)	11.8	40.0	23.7	60.0	10.0	10.0
Actuated g/C Ratio	0.20	0.67	0.40	1.00	0.17	0.17
v/c Ratio	0.67	0.23	0.40	0.40	0.08	0.57
Control Delay	25.1	3.7	15.0	0.9	22.1	9.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.1	3.7	15.0	0.9	22.1	9.6
LOS	C	A	B	A	C	A
Approach Delay		10.9	7.9		10.6	
Approach LOS		B	A		B	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 29 (48%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 50  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.67  
 Intersection Signal Delay: 9.2  
 Intersection Capacity Utilization 52.8%  
 Analysis Period (min) 15  
 Intersection LOS: A  
 ICU Level of Service A

Splits and Phases: 2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox Bl./Harley Knox Bl.

11/17/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷			↷	↶		↶	↷			
Traffic Volume (veh/h)	205	410	0	0	492	498	17	3	223	0	0	0
Future Volume (veh/h)	205	410	0	0	492	498	17	3	223	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1796	1574	0	0	1811	1633	1618	1900	1618			
Adj Flow Rate, veh/h	223	446	0	0	535	0	18	3	177			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	7	22	0	0	6	18	19	0	19			
Cap, veh/h	275	1994	0	0	1482		260	43	229			
Arrive On Green	0.05	0.22	0.00	0.00	0.43	0.00	0.17	0.17	0.17			
Sat Flow, veh/h	1711	3069	0	0	3532	1384	1562	260	1372			
Grp Volume(v), veh/h	223	446	0	0	535	0	21	0	177			
Grp Sat Flow(s),veh/h/ln	1711	1495	0	0	1721	1384	1822	0	1372			
Q Serve(g_s), s	7.7	7.3	0.0	0.0	6.3	0.0	0.6	0.0	7.4			
Cycle Q Clear(g_c), s	7.7	7.3	0.0	0.0	6.3	0.0	0.6	0.0	7.4			
Prop In Lane	1.00		0.00	0.00		1.00	0.86		1.00			
Lane Grp Cap(c), veh/h	275	1994	0	0	1482		304	0	229			
V/C Ratio(X)	0.81	0.22	0.00	0.00	0.36		0.07	0.00	0.77			
Avail Cap(c_a), veh/h	442	1994	0	0	1482		304	0	229			
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.99	0.99	0.00	0.00	0.90	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	27.5	10.7	0.0	0.0	11.5	0.0	21.1	0.0	23.9			
Incr Delay (d2), s/veh	2.4	0.3	0.0	0.0	0.6	0.0	0.4	0.0	22.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	3.3	1.7	0.0	0.0	2.0	0.0	0.3	0.0	3.5			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.9	10.9	0.0	0.0	12.1	0.0	21.5	0.0	46.1			
LnGrp LOS	C	B	A	A	B		C	A	D			
Approach Vol, veh/h		669			535	A		198				
Approach Delay, s/veh		17.2			12.1			43.5				
Approach LOS		B			B			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		45.0			14.2	30.8		15.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		40.0			15.5	20.0		10.0				
Max Q Clear Time (g_c+I1), s		9.3			9.7	8.3		9.4				
Green Ext Time (p_c), s		1.8			0.2	1.7		0.0				

Intersection Summary

HCM 6th Ctrl Delay	19.0
HCM 6th LOS	B

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



**APPENDIX 6.1:**

**OPENING YEAR CUMULATIVE (2026) WITHOUT PROJECT CONDITIONS INTERSECTION  
OPERATIONS ANALYSIS WORKSHEETS**

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Timings

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

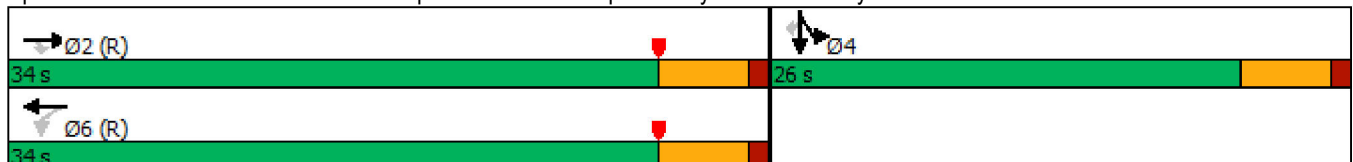


Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations	↑↑	↑	↵	↑↑	↵	↵
Traffic Volume (vph)	804	26	177	278	1	290
Future Volume (vph)	804	26	177	278	1	290
Turn Type	NA	Perm	Perm	NA	NA	Perm
Protected Phases	2			6	4	
Permitted Phases		2	6			4
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	25.0	25.0	10.0	10.0
Total Split (s)	34.0	34.0	34.0	34.0	26.0	26.0
Total Split (%)	56.7%	56.7%	56.7%	56.7%	43.3%	43.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	29.0	29.0	29.0	29.0	21.0	21.0
Actuated g/C Ratio	0.48	0.48	0.48	0.48	0.35	0.35
v/c Ratio	0.53	0.04	0.95	0.18	1.55	0.43
Control Delay	12.2	3.0	80.4	15.7	276.7	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.2	3.0	80.4	15.7	276.7	4.1
LOS	B	A	F	B	F	A
Approach Delay	11.9			40.9	204.5	
Approach LOS	B			D	F	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection  
 Natural Cycle: 110  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.55  
 Intersection Signal Delay: 106.0  
 Intersection LOS: F  
 Intersection Capacity Utilization 154.8%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

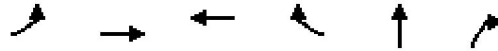
05/09/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑						↑	↑
Traffic Volume (veh/h)	0	804	26	177	278	0	0	0	0	803	1	290
Future Volume (veh/h)	0	804	26	177	278	0	0	0	0	803	1	290
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1826	1841	1633	1856	0				1722	1900	1796
Adj Flow Rate, veh/h	0	874	28	192	302	0				873	1	255
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	5	4	18	3	0				12	0	7
Cap, veh/h	0	1677	754	287	1704	0				633	1	533
Arrive On Green	0.00	0.48	0.48	0.97	0.97	0.00				0.35	0.35	0.35
Sat Flow, veh/h	0	3561	1560	539	3618	0				1808	2	1522
Grp Volume(v), veh/h	0	874	28	192	302	0				874	0	255
Grp Sat Flow(s),veh/h/ln	0	1735	1560	539	1763	0				1810	0	1522
Q Serve(g_s), s	0.0	10.4	0.6	18.6	0.2	0.0				21.0	0.0	7.8
Cycle Q Clear(g_c), s	0.0	10.4	0.6	29.0	0.2	0.0				21.0	0.0	7.8
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1677	754	287	1704	0				633	0	533
V/C Ratio(X)	0.00	0.52	0.04	0.67	0.18	0.00				1.38	0.00	0.48
Avail Cap(c_a), veh/h	0	1677	754	287	1704	0				633	0	533
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.96	0.96	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	10.7	8.2	7.4	0.5	0.0				19.5	0.0	15.2
Incr Delay (d2), s/veh	0.0	1.2	0.1	11.3	0.2	0.0				180.7	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.2	0.2	1.0	0.1	0.0				38.9	0.0	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	11.9	8.2	18.8	0.7	0.0				200.2	0.0	15.9
LnGrp LOS	A	B	A	B	A	A				F	A	B
Approach Vol, veh/h		902			494						1129	
Approach Delay, s/veh		11.8			7.7						158.6	
Approach LOS		B			A						F	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		34.0		26.0		34.0						
Change Period (Y+Rc), s		5.0		5.0		5.0						
Max Green Setting (Gmax), s		29.0		21.0		29.0						
Max Q Clear Time (g_c+I1), s		12.4		23.0		31.0						
Green Ext Time (p_c), s		3.5		0.0		0.0						
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				76.6								
HCM 6th LOS				E								

Timings

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

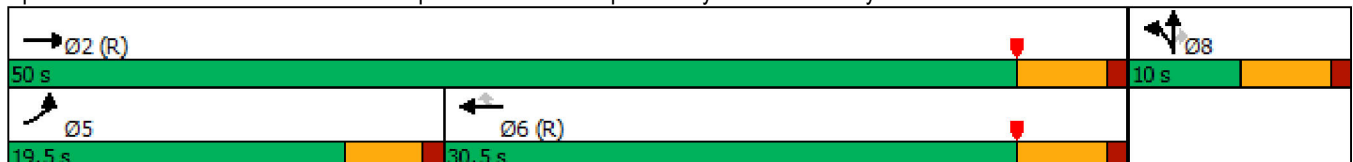


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	486	1007	401	1041	3	258
Future Volume (vph)	486	1007	401	1041	3	258
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	26.0	24.0	24.0	10.0	10.0
Total Split (s)	19.5	50.0	30.5	30.5	10.0	10.0
Total Split (%)	32.5%	83.3%	50.8%	50.8%	16.7%	16.7%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max
Act Effct Green (s)	15.0	45.0	25.5	25.5	5.0	5.0
Actuated g/C Ratio	0.25	0.75	0.42	0.42	0.08	0.08
v/c Ratio	1.23	0.45	0.31	1.41	0.41	1.02
Control Delay	138.8	2.4	12.2	208.7	35.0	78.2
Queue Delay	0.0	0.3	0.0	0.0	0.0	0.0
Total Delay	138.8	2.7	12.2	208.7	35.0	78.2
LOS	F	A	B	F	C	E
Approach Delay		47.0	154.1		70.5	
Approach LOS		D	F		E	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 29 (48%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.41  
 Intersection Signal Delay: 96.8  
 Intersection LOS: F  
 Intersection Capacity Utilization 154.8%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox Bl./Harley Knox Bl.

05/09/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑			↑↑	↗		↘	↗			
Traffic Volume (veh/h)	486	1007	0	0	401	1041	53	3	258	0	0	0
Future Volume (veh/h)	486	1007	0	0	401	1041	53	3	258	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1826	1737	0	0	1752	1781	1870	1900	1826			
Adj Flow Rate, veh/h	528	1095	0	0	436	1068	58	3	215			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	5	11	0	0	10	8	2	0	5			
Cap, veh/h	435	2475	0	0	1415	641	144	7	129			
Arrive On Green	0.50	1.00	0.00	0.00	0.43	0.43	0.08	0.08	0.08			
Sat Flow, veh/h	1739	3387	0	0	3416	1509	1725	89	1547			
Grp Volume(v), veh/h	528	1095	0	0	436	1068	61	0	215			
Grp Sat Flow(s),veh/h/ln	1739	1650	0	0	1664	1509	1814	0	1547			
Q Serve(g_s), s	15.0	0.0	0.0	0.0	5.2	25.5	1.9	0.0	5.0			
Cycle Q Clear(g_c), s	15.0	0.0	0.0	0.0	5.2	25.5	1.9	0.0	5.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.95		1.00			
Lane Grp Cap(c), veh/h	435	2475	0	0	1415	641	151	0	129			
V/C Ratio(X)	1.21	0.44	0.00	0.00	0.31	1.67	0.40	0.00	1.67			
Avail Cap(c_a), veh/h	435	2475	0	0	1415	641	151	0	129			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.84	0.84	0.00	0.00	0.84	0.84	1.00	0.00	1.00			
Uniform Delay (d), s/veh	15.0	0.0	0.0	0.0	11.4	17.3	26.1	0.0	27.5			
Incr Delay (d2), s/veh	113.3	0.5	0.0	0.0	0.5	305.4	7.8	0.0	331.9			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	16.8	0.2	0.0	0.0	1.6	61.1	1.1	0.0	13.5			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	128.3	0.5	0.0	0.0	11.9	322.6	33.9	0.0	359.4			
LnGrp LOS	F	A	A	A	B	F	C	A	F			
Approach Vol, veh/h		1623			1504			276				
Approach Delay, s/veh		42.1			232.5			287.4				
Approach LOS		D			F			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		50.0			19.5	30.5		10.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		45.0			15.0	25.5		5.0				
Max Q Clear Time (g_c+1), s		2.0			17.0	27.5		7.0				
Green Ext Time (p_c), s		5.4			0.0	0.0		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					146.1							
HCM 6th LOS					F							

Timings  
3: Western Way & Harley Knox Bl.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↵	↑↑↑	↵	↵	↑↑↑	↵	↵	↵	↵
Traffic Volume (vph)	97	1292	9	12	1420	1	0	7	0
Future Volume (vph)	97	1292	9	12	1420	1	0	7	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	NA
Protected Phases	5	2		1	6		8		4
Permitted Phases			2			8		4	
Detector Phase	5	2	2	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	21.8	21.8	9.6	21.8	32.6	32.6	32.6	32.6
Total Split (s)	22.0	75.4	75.4	9.6	63.0	35.0	35.0	35.0	35.0
Total Split (%)	18.3%	62.8%	62.8%	8.0%	52.5%	29.2%	29.2%	29.2%	29.2%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	10.9	52.8	52.8	6.6	40.9	15.3	15.3	15.3	15.3
Actuated g/C Ratio	0.17	0.80	0.80	0.10	0.62	0.23	0.23	0.23	0.23
v/c Ratio	0.38	0.36	0.01	0.07	0.53	0.00	0.00	0.03	0.11
Control Delay	38.2	5.8	0.0	43.9	13.4	31.0	0.0	31.3	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.2	5.8	0.0	43.9	13.4	31.0	0.0	31.3	0.5
LOS	D	A	A	D	B	C	A	C	A
Approach Delay		8.0			13.7		10.3		4.9
Approach LOS		A			B		B		A

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 65.8	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.53	
Intersection Signal Delay: 10.8	Intersection LOS: B
Intersection Capacity Utilization 55.0%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 3: Western Way & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 3: Western Way & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

05/09/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	97	1292	9	12	1420	39	1	0	2	7	0	45
Future Volume (veh/h)	97	1292	9	12	1420	39	1	0	2	7	0	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1767	1900	1900	1781	1693	1900	1900	1900	1411	1900	1337
Adj Flow Rate, veh/h	104	1389	10	13	1527	40	1	0	2	8	0	36
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	10	9	0	0	8	14	0	0	0	33	0	38
Cap, veh/h	131	2854	953	30	2580	68	249	0	158	244	0	159
Arrive On Green	0.08	0.59	0.59	0.02	0.53	0.53	0.10	0.00	0.10	0.10	0.00	0.10
Sat Flow, veh/h	1668	4823	1610	1810	4873	128	1394	0	1608	1064	0	1610
Grp Volume(v), veh/h	104	1389	10	13	1016	551	1	0	2	8	0	36
Grp Sat Flow(s),veh/h/ln	1668	1608	1610	1810	1621	1758	1394	0	1608	1064	0	1610
Q Serve(g_s), s	3.1	8.4	0.1	0.4	11.0	11.0	0.0	0.0	0.1	0.3	0.0	1.1
Cycle Q Clear(g_c), s	3.1	8.4	0.1	0.4	11.0	11.0	1.1	0.0	0.1	0.4	0.0	1.1
Prop In Lane	1.00		1.00	1.00		0.07	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	131	2854	953	30	1717	931	249	0	158	244	0	159
V/C Ratio(X)	0.79	0.49	0.01	0.44	0.59	0.59	0.00	0.00	0.01	0.03	0.00	0.23
Avail Cap(c_a), veh/h	568	6563	2191	177	3626	1966	940	0	956	772	0	957
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.1	6.0	4.3	24.9	8.2	8.2	21.8	0.0	20.8	21.0	0.0	21.3
Incr Delay (d2), s/veh	4.0	0.1	0.0	3.7	0.3	0.6	0.0	0.0	0.0	0.1	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	1.5	0.0	0.2	2.4	2.7	0.0	0.0	0.0	0.1	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.2	6.1	4.3	28.6	8.6	8.8	21.8	0.0	20.8	21.0	0.0	22.0
LnGrp LOS	C	A	A	C	A	A	C	A	C	C	A	C
Approach Vol, veh/h		1503			1580			3				44
Approach Delay, s/veh		7.6			8.8			21.2				21.8
Approach LOS		A			A			C				C
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.4	36.1		9.6	8.6	32.9		9.6				
Change Period (Y+Rc), s	4.6	5.8		4.6	4.6	5.8		4.6				
Max Green Setting (Gmax), s	5.0	69.6		30.4	17.4	57.2		30.4				
Max Q Clear Time (g_c+I1), s	2.4	10.4		3.1	5.1	13.0		3.1				
Green Ext Time (p_c), s	0.0	13.3		0.2	0.1	14.1		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			8.4									
HCM 6th LOS			A									



Timings

4: Patterson Av. & Harley Knox Bl.

05/09/2022

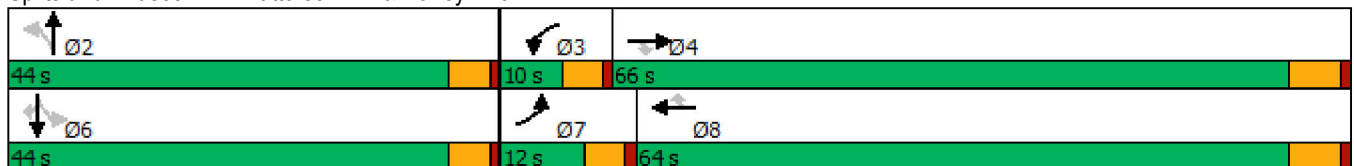


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑	↗	↖	↑↑	↗		↕		↕	↗
Traffic Volume (vph)	22	1167	76	42	1367	16	75	7	13	3	18
Future Volume (vph)	22	1167	76	42	1367	16	75	7	13	3	18
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	7	4		3	8			2		6	
Permitted Phases			4			8	2		6		6
Detector Phase	7	4	4	3	8	8	2	2	6	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	9.6	31.8	31.8	33.7	33.7	40.7	40.7	40.7
Total Split (s)	12.0	66.0	66.0	10.0	64.0	64.0	44.0	44.0	44.0	44.0	44.0
Total Split (%)	10.0%	55.0%	55.0%	8.3%	53.3%	53.3%	36.7%	36.7%	36.7%	36.7%	36.7%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8		4.7		4.7	4.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	6.3	42.0	42.0	5.8	46.8	46.8		16.2		16.2	16.2
Actuated g/C Ratio	0.08	0.54	0.54	0.07	0.60	0.60		0.21		0.21	0.21
v/c Ratio	0.21	0.49	0.09	0.41	0.73	0.03		0.48		0.09	0.07
Control Delay	48.2	12.9	3.2	55.0	16.7	0.1		30.4		30.0	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	48.2	12.9	3.2	55.0	16.7	0.1		30.4		30.0	0.4
LOS	D	B	A	D	B	A		C		C	A
Approach Delay		12.9			17.7			30.4		14.0	
Approach LOS		B			B			C		B	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 78  
 Natural Cycle: 95  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.73  
 Intersection Signal Delay: 16.1  
 Intersection LOS: B  
 Intersection Capacity Utilization 67.1%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 4: Patterson Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
4: Patterson Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

05/09/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	1167	76	42	1367	16	75	7	43	13	3	18
Future Volume (veh/h)	22	1167	76	42	1367	16	75	7	43	13	3	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1470	1796	1885	1633	1796	1070	1648	1426	1826	937	952	1278
Adj Flow Rate, veh/h	24	1268	83	46	1486	17	82	8	47	14	3	20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	29	7	1	18	7	56	17	32	5	65	64	42
Cap, veh/h	38	2763	900	68	1980	526	180	26	60	192	25	164
Arrive On Green	0.03	0.56	0.56	0.04	0.58	0.58	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1400	4904	1598	1555	3413	907	584	172	395	574	166	1083
Grp Volume(v), veh/h	24	1268	83	46	1486	17	137	0	0	17	0	20
Grp Sat Flow(s),veh/h/ln	1400	1635	1598	1555	1706	907	1152	0	0	739	0	1083
Q Serve(g_s), s	1.1	9.5	1.5	1.8	20.3	0.5	5.9	0.0	0.0	0.0	0.0	1.0
Cycle Q Clear(g_c), s	1.1	9.5	1.5	1.8	20.3	0.5	7.1	0.0	0.0	1.1	0.0	1.0
Prop In Lane	1.00		1.00	1.00		1.00	0.60		0.34	0.82		1.00
Lane Grp Cap(c), veh/h	38	2763	900	68	1980	526	267	0	0	217	0	164
V/C Ratio(X)	0.63	0.46	0.09	0.67	0.75	0.03	0.51	0.00	0.00	0.08	0.00	0.12
Avail Cap(c_a), veh/h	165	4709	1534	134	3168	842	800	0	0	560	0	679
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.2	8.1	6.3	29.5	9.8	5.6	25.5	0.0	0.0	23.0	0.0	23.0
Incr Delay (d2), s/veh	6.2	0.1	0.0	4.2	0.6	0.0	1.5	0.0	0.0	0.2	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	2.3	0.4	0.7	5.1	0.1	2.0	0.0	0.0	0.2	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.4	8.2	6.3	33.7	10.4	5.7	27.0	0.0	0.0	23.2	0.0	23.3
LnGrp LOS	D	A	A	C	B	A	C	A	A	C	A	C
Approach Vol, veh/h		1375			1549			137				37
Approach Delay, s/veh		8.6			11.0			27.0				23.2
Approach LOS		A			B			C				C
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		14.2	7.4	41.1		14.2	6.3	42.2				
Change Period (Y+Rc), s		* 4.7	4.6	5.8		* 4.7	4.6	5.8				
Max Green Setting (Gmax), s		* 39	5.4	60.2		* 39	7.4	58.2				
Max Q Clear Time (g_c+I1), s		9.1	3.8	11.5		3.1	3.1	22.3				
Green Ext Time (p_c), s		0.8	0.0	11.6		0.1	0.0	14.1				

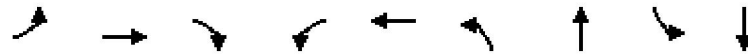
Intersection Summary

HCM 6th Ctrl Delay	10.8
HCM 6th LOS	B

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
5: Heacock Street & Cactus Avenue

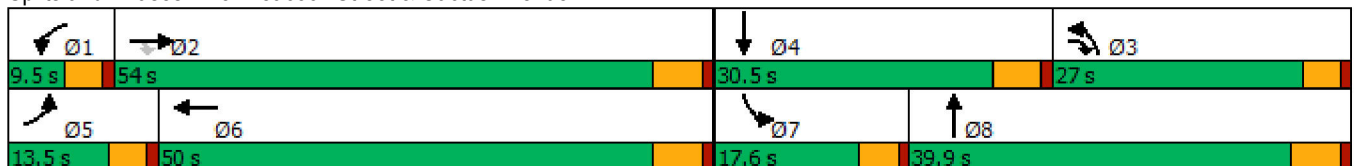


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	162	981	701	61	1904	789	663	129	343
Future Volume (vph)	162	981	701	61	1904	789	663	129	343
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	3	1	6	3	8	7	4
Permitted Phases			2						
Detector Phase	5	2	3	1	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.5	30.5	9.5	9.5	30.5	9.5	30.5	9.5	30.5
Total Split (s)	13.5	54.0	27.0	9.5	50.0	27.0	39.9	17.6	30.5
Total Split (%)	11.2%	44.6%	22.3%	7.9%	41.3%	22.3%	33.0%	14.5%	25.2%
Yellow Time (s)	3.5	4.5	3.5	3.5	4.5	3.5	4.5	3.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	4.5	4.5	5.5	4.5	5.5	4.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None
Act Effct Green (s)	9.0	48.5	72.2	5.0	44.5	22.7	29.2	11.4	18.0
Actuated g/C Ratio	0.08	0.42	0.63	0.04	0.39	0.20	0.26	0.10	0.16
v/c Ratio	1.14	0.65	0.64	0.77	1.45	1.15	0.76	0.72	0.76
Control Delay	165.3	28.9	9.9	105.7	237.0	123.2	45.3	72.3	51.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	165.3	28.9	9.9	105.7	237.0	123.2	45.3	72.3	51.5
LOS	F	C	A	F	F	F	D	E	D
Approach Delay		33.7			233.1		87.0		56.2
Approach LOS		C			F		F		E

Intersection Summary

Cycle Length: 121  
 Actuated Cycle Length: 114.2  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.45  
 Intersection Signal Delay: 119.1  
 Intersection LOS: F  
 Intersection Capacity Utilization 118.0%  
 ICU Level of Service H  
 Analysis Period (min) 15























Splits and Phases: 5: Heacock Street & Cactus Avenue



HCM 6th Signalized Intersection Summary  
5: Heacock Street & Cactus Avenue

Gateway Aviation TA (JN:13445)

05/09/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	162	981	701	61	1904	147	789	663	21	129	343	97
Future Volume (veh/h)	162	981	701	61	1904	147	789	663	21	129	343	97
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1870	1767	1900	1885	1856	1826	1841	1826	1870	1841	1885
Adj Flow Rate, veh/h	169	1022	730	64	1983	153	822	691	22	134	357	101
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	2	9	0	1	3	5	4	5	2	4	1
Cap, veh/h	141	1583	927	79	1343	102	683	952	30	161	426	119
Arrive On Green	0.08	0.42	0.42	0.04	0.39	0.39	0.20	0.27	0.27	0.09	0.15	0.15
Sat Flow, veh/h	1795	3741	1497	1810	3460	263	3478	3548	113	1781	2770	773
Grp Volume(v), veh/h	169	1022	730	64	1068	1068	822	358	355	134	236	222
Grp Sat Flow(s),veh/h/ln	1795	1870	1497	1810	1885	1838	1739	1841	1820	1781	1841	1702
Q Serve(g_s), s	9.0	24.9	9.0	4.0	44.5	44.5	22.5	20.3	20.3	8.5	14.2	14.6
Cycle Q Clear(g_c), s	9.0	24.9	9.0	4.0	44.5	44.5	22.5	20.3	20.3	8.5	14.2	14.6
Prop In Lane	1.00		1.00	1.00		0.14	1.00		0.06	1.00		0.45
Lane Grp Cap(c), veh/h	141	1583	927	79	732	713	683	494	489	161	283	262
V/C Ratio(X)	1.20	0.65	0.79	0.81	1.46	1.50	1.20	0.73	0.73	0.83	0.83	0.85
Avail Cap(c_a), veh/h	141	1583	927	79	732	713	683	552	546	204	401	371
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.8	26.3	5.3	54.4	35.1	35.1	46.1	38.1	38.1	51.3	47.1	47.2
Incr Delay (d2), s/veh	139.1	0.7	4.2	42.5	214.3	231.0	105.4	3.3	3.4	16.8	6.9	9.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.4	10.4	5.2	2.7	62.6	64.4	19.3	9.2	9.1	4.4	6.9	6.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	191.9	27.0	9.5	96.9	249.4	266.1	151.5	41.4	41.5	68.0	54.0	56.2
LnGrp LOS	F	C	A	F	F	F	F	D	D	E	D	E
Approach Vol, veh/h		1921			2200			1535			592	
Approach Delay, s/veh		34.8			253.1			100.4			58.0	
Approach LOS		C			F			F			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.5	54.0	28.0	23.1	13.5	50.0	14.9	36.3				
Change Period (Y+Rc), s	4.5	5.5	5.5	* 5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	5.0	48.5	22.5	* 25	9.0	44.5	13.1	34.4				
Max Q Clear Time (g_c+I1), s	6.0	26.9	24.5	16.6	11.0	46.5	10.5	22.3				
Green Ext Time (p_c), s	0.0	6.1	0.0	1.1	0.0	0.0	0.0	2.0				

Intersection Summary

HCM 6th Ctrl Delay	130.0
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

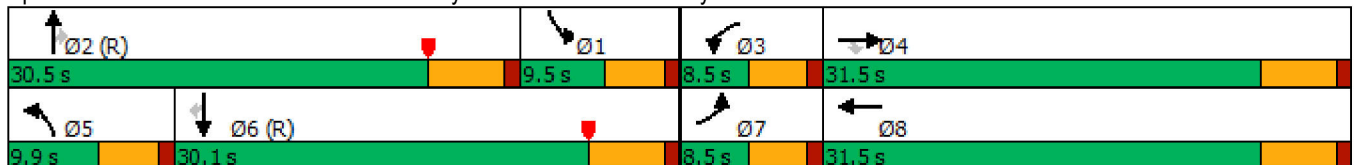
05/09/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	38	42	111	30	220	34	955	52	117	741	20	
Future Volume (vph)	38	42	111	30	220	34	955	52	117	741	20	
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	7	4		3	8	5	2		1	6		
Permitted Phases			4					2			6	
Detector Phase	7	4	4	3	8	5	2	2	1	6	6	
Switch Phase												
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	
Minimum Split (s)	8.5	23.5	23.5	8.5	31.5	8.5	30.5	30.5	8.5	23.5	23.5	
Total Split (s)	8.5	31.5	31.5	8.5	31.5	9.9	30.5	30.5	9.5	30.1	30.1	
Total Split (%)	10.6%	39.4%	39.4%	10.6%	39.4%	12.4%	38.1%	38.1%	11.9%	37.6%	37.6%	
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5	4.5	4.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	5.5	4.5	5.5	5.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max	
Act Effct Green (s)	4.0	13.9	13.9	4.0	12.2	5.6	42.2	42.2	5.0	45.3	45.3	
Actuated g/C Ratio	0.05	0.17	0.17	0.05	0.15	0.07	0.53	0.53	0.06	0.57	0.57	
v/c Ratio	0.49	0.14	0.23	0.35	0.60	0.28	0.53	0.06	1.06	0.39	0.02	
Control Delay	58.8	25.7	1.0	48.0	18.5	41.1	16.9	0.1	141.8	14.3	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	58.8	25.7	1.0	48.0	18.5	41.1	16.9	0.1	141.8	14.3	0.1	
LOS	E	C	A	D	B	D	B	A	F	B	A	
Approach Delay		18.0			20.4		16.8			31.0		
Approach LOS		B			C		B			C		

Intersection Summary

Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 80  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.06  
 Intersection Signal Delay: 22.4  
 Intersection LOS: C  
 Intersection Capacity Utilization 67.4%  
 ICU Level of Service C  
 Analysis Period (min) 15

























Splits and Phases: 6: Heacock Street & Meyer Drive/John F. Kennedy Drive



HCM 6th Signalized Intersection Summary  
 6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

05/09/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	42	111	30	220	213	34	955	52	117	741	20
Future Volume (veh/h)	38	42	111	30	220	213	34	955	52	117	741	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.95	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1648	1781	1841	1796	1856	1885	1811	1811	1781	1856	1781	1663
Adj Flow Rate, veh/h	40	44	116	31	229	222	35	995	54	122	772	21
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	17	8	4	7	3	1	6	6	8	3	8	16
Cap, veh/h	47	338	296	43	343	289	47	1132	446	372	1811	707
Arrive On Green	0.03	0.19	0.19	0.02	0.19	0.19	0.03	0.31	0.31	0.21	0.51	0.51
Sat Flow, veh/h	1570	1781	1560	1711	1856	1560	1725	3622	1429	1767	3563	1391
Grp Volume(v), veh/h	40	44	116	31	229	222	35	995	54	122	772	21
Grp Sat Flow(s),veh/h/ln	1570	1781	1560	1711	1856	1560	1725	1811	1429	1767	1781	1391
Q Serve(g_s), s	2.0	1.6	5.2	1.4	9.2	10.8	1.6	20.8	1.7	4.7	10.9	0.6
Cycle Q Clear(g_c), s	2.0	1.6	5.2	1.4	9.2	10.8	1.6	20.8	1.7	4.7	10.9	0.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	47	338	296	43	343	289	47	1132	446	372	1811	707
V/C Ratio(X)	0.86	0.13	0.39	0.73	0.67	0.77	0.75	0.88	0.12	0.33	0.43	0.03
Avail Cap(c_a), veh/h	78	579	507	86	603	507	116	1132	446	372	1811	707
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.90	0.90	0.90	0.66	0.66	0.66
Uniform Delay (d), s/veh	38.6	26.9	28.4	38.7	30.3	31.0	38.7	26.1	12.0	26.8	12.4	9.8
Incr Delay (d2), s/veh	18.0	0.1	0.3	8.5	0.8	1.6	7.8	8.9	0.5	0.1	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.7	1.8	0.7	3.9	3.9	0.7	9.3	0.7	1.8	3.6	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.6	27.0	28.7	47.2	31.1	32.6	46.5	35.0	12.5	26.9	12.8	9.9
LnGrp LOS	E	C	C	D	C	C	D	D	B	C	B	A
Approach Vol, veh/h		200			482			1084			915	
Approach Delay, s/veh		33.9			32.8			34.3			14.6	
Approach LOS		C			C			C			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	22.3	30.5	6.5	20.7	6.7	46.2	6.9	20.3				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	5.0	* 25	4.0	26.0	5.4	24.6	4.0	26.0				
Max Q Clear Time (g_c+I1), s	6.7	22.8	3.4	7.2	3.6	12.9	4.0	12.8				
Green Ext Time (p_c), s	0.0	1.0	0.0	0.3	0.0	2.5	0.0	1.3				

Intersection Summary

HCM 6th Ctrl Delay	27.3
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
7: Heacock Street & Gentian Avenue



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙	↗	↕	↗	↙	↕
Traffic Volume (vph)	14	22	874	9	94	812
Future Volume (vph)	14	22	874	9	94	812
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	27.6	27.6	27.2	27.2	9.6	16.2
Total Split (s)	28.0	28.0	70.0	70.0	22.0	92.0
Total Split (%)	23.3%	23.3%	58.3%	58.3%	18.3%	76.7%
Yellow Time (s)	3.6	3.6	5.2	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	6.2	6.2	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	12.8	12.8	32.9	32.9	8.4	46.3
Actuated g/C Ratio	0.24	0.24	0.61	0.61	0.16	0.86
v/c Ratio	0.03	0.05	0.46	0.01	0.34	0.31
Control Delay	22.0	11.1	11.9	9.8	29.2	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.0	11.1	11.9	9.8	29.2	4.0
LOS	C	B	B	A	C	A
Approach Delay	15.4		11.9			6.6
Approach LOS	B		B			A

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 54.1	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.46	
Intersection Signal Delay: 9.3	Intersection LOS: A
Intersection Capacity Utilization 50.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 7: Heacock Street & Gentian Avenue

















HCM 6th Signalized Intersection Summary  
 7: Heacock Street & Gentian Avenue

















Gateway Aviation TA (JN:13445)

05/09/2022

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	14	22	874	9	94	812
Future Volume (veh/h)	14	22	874	9	94	812
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	0.97	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1826	1796	1900	1870	1767
Adj Flow Rate, veh/h	15	23	920	9	99	855
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	5	7	0	2	9
Cap, veh/h	156	129	1490	703	150	2142
Arrive On Green	0.09	0.09	0.44	0.44	0.08	0.64
Sat Flow, veh/h	1810	1498	3503	1610	1781	3445
Grp Volume(v), veh/h	15	23	920	9	99	855
Grp Sat Flow(s),veh/h/ln	1810	1498	1706	1610	1781	1678
Q Serve(g_s), s	0.3	0.6	8.2	0.1	2.1	4.8
Cycle Q Clear(g_c), s	0.3	0.6	8.2	0.1	2.1	4.8
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	156	129	1490	703	150	2142
V/C Ratio(X)	0.10	0.18	0.62	0.01	0.66	0.40
Avail Cap(c_a), veh/h	1080	894	5555	2621	791	7347
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.5	16.6	8.5	6.3	17.4	3.4
Incr Delay (d2), s/veh	0.1	0.2	0.4	0.0	1.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.2	1.6	0.0	0.7	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	16.6	16.9	8.9	6.3	19.3	3.6
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	38		929			954
Approach Delay, s/veh	16.7		8.9			5.2
Approach LOS	B		A			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	7.9	23.3			31.2	8.0
Change Period (Y+Rc), s	4.6	6.2			6.2	4.6
Max Green Setting (Gmax), s	17.4	63.8			85.8	23.4
Max Q Clear Time (g_c+I1), s	4.1	10.2			6.8	2.6
Green Ext Time (p_c), s	0.1	7.0			6.3	0.0
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			7.2			
HCM 6th LOS			A			



Timings  
8: Heacock Street & Iris Avenue

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 		 		 	 
Traffic Volume (vph)	348	447	481	223	303	581
Future Volume (vph)	348	447	481	223	303	581
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	15.8	15.8	33.2	33.2	9.6	16.2
Total Split (s)	48.0	48.0	46.0	46.0	26.0	72.0
Total Split (%)	40.0%	40.0%	38.3%	38.3%	21.7%	60.0%
Yellow Time (s)	4.8	4.8	5.2	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	6.2	6.2	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	14.7	14.7	18.2	18.2	11.3	34.2
Actuated g/C Ratio	0.24	0.24	0.30	0.30	0.18	0.56
v/c Ratio	0.47	0.66	0.58	0.40	0.54	0.37
Control Delay	23.1	8.9	21.7	4.8	27.5	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.1	8.9	21.7	4.8	27.5	8.3
LOS	C	A	C	A	C	A
Approach Delay	15.1		16.3			14.9
Approach LOS	B		B			B

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 61.4	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay: 15.4	Intersection LOS: B
Intersection Capacity Utilization 51.0%	ICU Level of Service A
Analysis Period (min) 15	

















Splits and Phases: 8: Heacock Street & Iris Avenue



HCM 6th Signalized Intersection Summary  
8: Heacock Street & Iris Avenue

Gateway Aviation TA (JN:13445)

05/09/2022

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 		 		 	 
Traffic Volume (veh/h)	348	447	481	223	303	581
Future Volume (veh/h)	348	447	481	223	303	581
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1885	1885	1752	1900	1870	1767
Adj Flow Rate, veh/h	409	526	566	262	356	684
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	1	1	10	0	2	9
Cap, veh/h	1324	607	821	397	467	1503
Arrive On Green	0.38	0.38	0.25	0.25	0.14	0.45
Sat Flow, veh/h	3483	1598	3416	1610	3456	3445
Grp Volume(v), veh/h	409	526	566	262	356	684
Grp Sat Flow(s),veh/h/ln	1742	1598	1664	1610	1728	1678
Q Serve(g_s), s	5.8	21.2	10.8	10.2	6.9	9.9
Cycle Q Clear(g_c), s	5.8	21.2	10.8	10.2	6.9	9.9
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	1324	607	821	397	467	1503
V/C Ratio(X)	0.31	0.87	0.69	0.66	0.76	0.45
Avail Cap(c_a), veh/h	2105	966	1897	918	1059	3163
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.2	20.0	23.9	23.7	29.1	13.4
Incr Delay (d2), s/veh	0.1	5.1	1.0	1.9	1.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	7.5	3.8	3.6	2.6	3.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	15.3	25.0	24.9	25.5	30.1	13.6
LnGrp LOS	B	C	C	C	C	B
Approach Vol, veh/h	935		828			1040
Approach Delay, s/veh	20.8		25.1			19.2
Approach LOS	C		C			B
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	14.0	23.4			37.5	32.4
Change Period (Y+Rc), s	4.6	6.2			6.2	5.8
Max Green Setting (Gmax), s	21.4	39.8			65.8	42.2
Max Q Clear Time (g_c+1), s	8.9	12.8			11.9	23.2
Green Ext Time (p_c), s	0.5	4.5			4.7	3.3
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			21.5			
HCM 6th LOS			C			

Timings  
9: Heacock Street & Krameria Avenue-North



Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations	↶	↷	↕	↷	↕
Traffic Volume (vph)	99	125	480	216	626
Future Volume (vph)	99	125	480	216	626
Turn Type	Prot	Perm	NA	Prot	NA
Protected Phases	8		2	1	6
Permitted Phases		8			
Detector Phase	8	8	2	1	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	29.1	29.1	29.2	9.6	16.2
Total Split (s)	39.0	39.0	56.0	25.0	81.0
Total Split (%)	32.5%	32.5%	46.7%	20.8%	67.5%
Yellow Time (s)	4.1	4.1	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	6.2	4.6	6.2
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	Min	Max	Min
Act Effct Green (s)	12.5	12.5	21.6	20.8	47.2
Actuated g/C Ratio	0.18	0.18	0.30	0.29	0.66
v/c Ratio	0.37	0.34	0.79	0.50	0.34
Control Delay	30.4	7.3	26.9	27.5	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	30.4	7.3	26.9	27.5	6.1
LOS	C	A	C	C	A
Approach Delay	17.5		26.9		11.6
Approach LOS	B		C		B

Intersection Summary













Cycle Length: 120	
Actuated Cycle Length: 71.2	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 18.3	Intersection LOS: B
Intersection Capacity Utilization 53.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 9: Heacock Street & Krameria Avenue-North



HCM 6th Signalized Intersection Summary  
 9: Heacock Street & Krameria Avenue-North

Gateway Aviation TA (JN:13445)  
 05/09/2022

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	99	125	480	199	216	626
Future Volume (veh/h)	99	125	480	199	216	626
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1856	1885	1841	1841
Adj Flow Rate, veh/h	122	154	593	246	267	773
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	3	1	4	4
Cap, veh/h	267	238	734	304	540	2376
Arrive On Green	0.15	0.15	0.30	0.30	0.31	0.68
Sat Flow, veh/h	1781	1585	2523	1007	1753	3589
Grp Volume(v), veh/h	122	154	430	409	267	773
Grp Sat Flow(s),veh/h/ln	1781	1585	1763	1674	1753	1749
Q Serve(g_s), s	4.1	6.1	14.9	15.0	8.2	6.0
Cycle Q Clear(g_c), s	4.1	6.1	14.9	15.0	8.2	6.0
Prop In Lane	1.00	1.00		0.60	1.00	
Lane Grp Cap(c), veh/h	267	238	532	505	540	2376
V/C Ratio(X)	0.46	0.65	0.81	0.81	0.49	0.33
Avail Cap(c_a), veh/h	912	811	1325	1259	540	3950
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.7	26.5	21.3	21.4	18.7	4.4
Incr Delay (d2), s/veh	0.5	1.1	1.1	1.2	3.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	2.3	5.3	5.1	3.3	1.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	26.1	27.6	22.5	22.6	21.9	4.4
LnGrp LOS	C	C	C	C	C	A
Approach Vol, veh/h	276		839			1040
Approach Delay, s/veh	27.0		22.5			8.9
Approach LOS	C		C			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	25.0	26.2			51.2	15.0
Change Period (Y+Rc), s	4.6	6.2			6.2	5.1
Max Green Setting (Gmax), s	20.4	49.8			74.8	33.9
Max Q Clear Time (g_c+I1), s	10.2	17.0			8.0	8.1
Green Ext Time (p_c), s	0.3	3.0			3.2	0.4
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			16.5			
HCM 6th LOS			B			

Intersection						
Int Delay, s/veh	0.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↕	↗	↘	↕
Traffic Vol, veh/h	11	12	981	56	47	849
Future Vol, veh/h	11	12	981	56	47	849
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	0	140	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	19	26	6	2	7	11
Mvmt Flow	13	14	1115	64	53	965

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1704	558	0	0	1179
Stage 1	1115	-	-	-	-
Stage 2	589	-	-	-	-
Critical Hdwy	7.18	7.42	-	-	4.24
Critical Hdwy Stg 1	6.18	-	-	-	-
Critical Hdwy Stg 2	6.18	-	-	-	-
Follow-up Hdwy	3.69	3.56	-	-	2.27
Pot Cap-1 Maneuver	69	417	-	-	561
Stage 1	241	-	-	-	-
Stage 2	473	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	63	417	-	-	561
Mov Cap-2 Maneuver	167	-	-	-	-
Stage 1	241	-	-	-	-
Stage 2	429	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	20.8	0	0.6
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	167	417	561	-
HCM Lane V/C Ratio	-	-	0.075	0.033	0.095	-
HCM Control Delay (s)	-	-	28.3	13.9	12.1	-
HCM Lane LOS	-	-	D	B	B	-
HCM 95th %tile Q(veh)	-	-	0.2	0.1	0.3	-

Timings  
12: Heacock Street & San Michele Road

Gateway Aviation TA (JN:13445)

05/09/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	28	74	4	36	310	687	1	51	436	98	47
Future Volume (vph)	28	74	4	36	310	687	1	51	436	98	47
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	1	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	4.0	5.0	4.0	5.0	5.0
Minimum Split (s)	9.5	30.5	30.5	8.5	30.5	8.5	8.5	34.5	8.5	34.5	34.5
Total Split (s)	13.0	41.0	41.0	13.0	41.0	28.0	12.0	38.0	28.0	54.0	54.0
Total Split (%)	10.8%	34.2%	34.2%	10.8%	34.2%	23.3%	10.0%	31.7%	23.3%	45.0%	45.0%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	3.5	4.5	3.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	4.5	5.5	4.5	5.5	5.5
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	None	Max	Max
Act Effct Green (s)	6.5	17.5	17.5	15.5	26.5	55.9	4.7	33.0	23.9	59.8	59.8
Actuated g/C Ratio	0.06	0.17	0.17	0.15	0.25	0.53	0.04	0.31	0.23	0.57	0.57
v/c Ratio	0.32	0.32	0.01	0.18	0.87	0.68	0.01	0.08	1.37	0.13	0.06
Control Delay	58.8	45.6	0.0	41.1	57.4	6.3	55.0	26.0	214.3	15.2	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.8	45.6	0.0	41.1	57.4	6.3	55.0	26.0	214.3	15.2	1.0
LOS	E	D	A	D	E	A	D	C	F	B	A
Approach Delay		47.4			22.8			26.3		163.3	
Approach LOS		D			C			C		F	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 105.7

Natural Cycle: 115

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.37

Intersection Signal Delay: 70.3

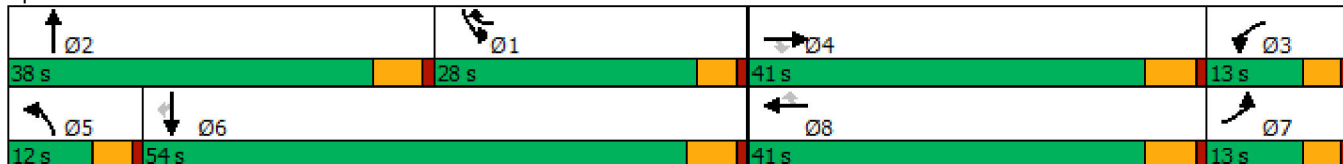
Intersection LOS: E

Intersection Capacity Utilization 63.3%

ICU Level of Service B

Analysis Period (min) 15

























Splits and Phases: 12: Heacock Street & San Michele Road



HCM 6th Signalized Intersection Summary  
 12: Heacock Street & San Michele Road

Gateway Aviation TA (JN:13445)

05/09/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	74	4	36	310	687	1	51	9	436	98	47
Future Volume (veh/h)	28	74	4	36	310	687	1	51	9	436	98	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1856	1455	1811	1900	1885	1900	1737	1737	1885	1752	1870
Adj Flow Rate, veh/h	37	99	5	48	413	916	1	68	12	581	131	63
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh, %	0	3	30	6	0	1	0	11	11	1	10	2
Cap, veh/h	47	135	89	450	584	816	2	792	136	365	862	780
Arrive On Green	0.03	0.07	0.07	0.26	0.31	0.31	0.00	0.28	0.28	0.20	0.49	0.49
Sat Flow, veh/h	1810	1856	1233	1725	1900	1598	1810	2815	485	1795	1752	1585
Grp Volume(v), veh/h	37	99	5	48	413	916	1	39	41	581	131	63
Grp Sat Flow(s),veh/h/ln	1810	1856	1233	1725	1900	1598	1810	1650	1650	1795	1752	1585
Q Serve(g_s), s	2.3	6.0	0.4	2.4	22.2	35.5	0.1	2.0	2.1	23.5	4.7	1.9
Cycle Q Clear(g_c), s	2.3	6.0	0.4	2.4	22.2	35.5	0.1	2.0	2.1	23.5	4.7	1.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.29	1.00		1.00
Lane Grp Cap(c), veh/h	47	135	89	450	584	816	2	464	464	365	862	780
V/C Ratio(X)	0.78	0.74	0.06	0.11	0.71	1.12	0.51	0.08	0.09	1.59	0.15	0.08
Avail Cap(c_a), veh/h	133	570	379	450	584	816	117	464	464	365	862	780
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.9	52.5	40.9	32.5	35.4	28.3	57.7	30.6	30.6	46.0	16.1	9.4
Incr Delay (d2), s/veh	9.8	2.9	0.1	0.0	3.4	70.9	59.0	0.4	0.4	278.5	0.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	2.9	0.1	1.0	10.4	25.9	0.1	0.8	0.9	38.2	1.9	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.8	55.4	41.0	32.5	38.8	99.2	116.6	30.9	31.0	324.6	16.5	9.6
LnGrp LOS	E	E	D	C	D	F	F	C	C	F	B	A
Approach Vol, veh/h		141			1377			81			775	
Approach Delay, s/veh		57.6			78.7			32.0			246.9	
Approach LOS		E			E			C			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	29.0	38.0	34.6	13.9	4.6	62.4	7.5	41.0				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	23.5	* 33	8.5	35.5	7.5	48.5	8.5	35.5				
Max Q Clear Time (g_c+I1), s	25.5	4.1	4.4	8.0	2.1	6.7	4.3	37.5				
Green Ext Time (p_c), s	0.0	0.2	0.0	0.3	0.0	0.5	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	130.8
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection					
Intersection Delay, s/veh	11.0				
Intersection LOS	B				
Approach	EB	WB	NB		
Entry Lanes	3	2	2		
Conflicting Circle Lanes	2	2	2		
Adj Approach Flow, veh/h	0	1510	81		
Demand Flow Rate, veh/h	0	1630	86		
Vehicles Circulating, veh/h	14	72	1265		
Vehicles Exiting, veh/h	1688	1279	194		
Ped Vol Crossing Leg, #/h	0	0	0		
Ped Cap Adj	1.000	1.000	1.000		
Approach Delay, s/veh	0.0	11.0	9.9		
Approach LOS	-	B	A		
Lane	Left		Right		
Designated Moves	LT		TR		L LTR
Assumed Moves	LT		TR		L LTR
RT Channelized					
Lane Util	0.470	0.530	0.535	0.465	
Follow-Up Headway, s	2.667	2.535	2.667	2.535	
Critical Headway, s	4.645	4.328	4.645	4.328	
Entry Flow, veh/h	766	864	46	40	
Cap Entry Lane, veh/h	1263	1336	422	484	
Entry HV Adj Factor	0.927	0.926	0.933	0.952	
Flow Entry, veh/h	710	800	43	38	
Cap Entry, veh/h	1171	1238	393	461	
V/C Ratio	0.606	0.647	0.109	0.083	
Control Delay, s/veh	10.7	11.3	10.8	8.9	
LOS	B	B	B	A	
95th %tile Queue, veh	4	5	0	0	



Timings  
14: Indian Street & San Michele Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↖	↗	↖	↗	↖	↗	↗	↖	↗
Traffic Volume (vph)	14	188	170	817	1411	198	216	5	128
Future Volume (vph)	14	188	170	817	1411	198	216	5	128
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8	5	2		1	6
Permitted Phases							2		
Detector Phase	7	4	3	8	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	31.8	9.6	31.8	9.6	32.8	32.8	9.6	32.8
Total Split (s)	12.0	33.0	19.0	40.0	32.0	57.0	57.0	11.0	36.0
Total Split (%)	10.0%	27.5%	15.8%	33.3%	26.7%	47.5%	47.5%	9.2%	30.0%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	5.8	19.8	14.6	34.9	27.7	43.6	43.6	5.3	13.0
Actuated g/C Ratio	0.06	0.21	0.15	0.36	0.29	0.45	0.45	0.06	0.14
v/c Ratio	0.19	0.76	0.84	0.83	1.78	0.32	0.30	0.07	0.38
Control Delay	51.6	24.1	66.9	35.9	380.5	19.5	3.2	50.0	38.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.6	24.1	66.9	35.9	380.5	19.5	3.2	50.0	38.6
LOS	D	C	E	D	F	B	A	D	D
Approach Delay		24.8		41.2		296.7			39.0
Approach LOS		C		D		F			D

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 96.1  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.78  
 Intersection Signal Delay: 171.9  
 Intersection LOS: F  
 Intersection Capacity Utilization 102.0%  
 ICU Level of Service G  
 Analysis Period (min) 15

Splits and Phases: 14: Indian Street & San Michele Road



HCM 6th Signalized Intersection Summary  
 14: Indian Street & San Michele Road

Gateway Aviation TA (JN:13445)

05/09/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	188	331	170	817	10	1411	198	216	5	128	12
Future Volume (veh/h)	14	188	331	170	817	10	1411	198	216	5	128	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		0.94
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1663	1856	1885	1856	1885	1900	1885	1885	1856	1900	1870	1900
Adj Flow Rate, veh/h	19	258	453	233	1119	14	1933	271	296	7	175	16
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Percent Heavy Veh, %	16	3	1	3	1	0	1	1	3	0	2	0
Cap, veh/h	32	447	399	237	1366	17	918	772	635	16	508	46
Arrive On Green	0.02	0.25	0.25	0.13	0.37	0.37	0.26	0.41	0.41	0.01	0.15	0.15
Sat Flow, veh/h	1584	1763	1572	1767	3715	46	3591	1885	1552	1810	3361	303
Grp Volume(v), veh/h	19	258	453	233	568	565	1933	271	296	7	96	95
Grp Sat Flow(s),veh/h/ln	1584	1763	1572	1767	1885	1876	1795	1885	1552	1810	1870	1793
Q Serve(g_s), s	1.3	13.7	27.2	14.1	29.2	29.2	27.4	10.6	14.9	0.4	4.9	5.1
Cycle Q Clear(g_c), s	1.3	13.7	27.2	14.1	29.2	29.2	27.4	10.6	14.9	0.4	4.9	5.1
Prop In Lane	1.00		1.00	1.00		0.02	1.00		1.00	1.00		0.17
Lane Grp Cap(c), veh/h	32	447	399	237	693	690	918	772	635	16	283	271
V/C Ratio(X)	0.60	0.58	1.14	0.98	0.82	0.82	2.11	0.35	0.47	0.44	0.34	0.35
Avail Cap(c_a), veh/h	109	447	399	237	693	690	918	900	741	108	527	505
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.1	35.0	40.0	46.3	30.7	30.7	39.9	21.9	23.1	52.9	40.7	40.8
Incr Delay (d2), s/veh	6.4	1.2	87.4	52.9	7.2	7.2	501.7	0.1	0.2	7.0	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	5.8	19.7	9.5	13.8	13.7	75.3	4.4	5.2	0.2	2.2	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.5	36.2	127.4	99.2	37.9	37.9	541.6	22.0	23.3	59.9	41.0	41.1
LnGrp LOS	E	D	F	F	D	D	F	C	C	E	D	D
Approach Vol, veh/h		730			1366			2500			198	
Approach Delay, s/veh		93.4			48.3			423.9			41.7	
Approach LOS		F			D			F			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.5	49.7	19.0	33.0	33.2	22.0	6.8	45.2				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	5.8	* 5.8	4.6	5.8				
Max Green Setting (Gmax), s	6.4	51.2	14.4	27.2	27.4	* 30	7.4	34.2				
Max Q Clear Time (g_c+I1), s	2.4	16.9	16.1	29.2	29.4	7.1	3.3	31.2				
Green Ext Time (p_c), s	0.0	1.3	0.0	0.0	0.0	0.5	0.0	1.4				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay	250.8											
HCM 6th LOS	F											
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings  
15: Indian Street & Nandina Avenue

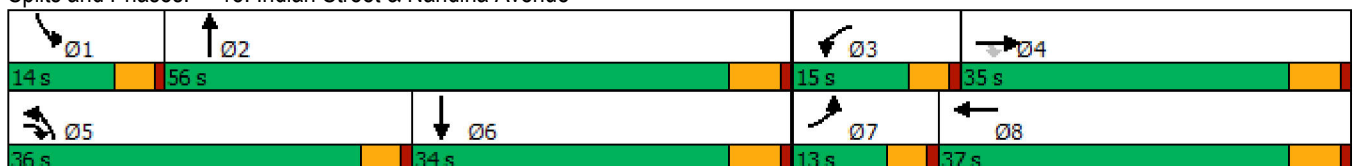


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↑	↗	↖	↗	↖	↕	↖	↕
Traffic Volume (vph)	7	32	143	33	41	326	1616	12	445
Future Volume (vph)	7	32	143	33	41	326	1616	12	445
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	5	3	8	5	2	1	6
Permitted Phases	4								
Detector Phase	7	4	5	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	29.8	9.6	9.6	29.8	9.6	26.8	9.6	26.8
Total Split (s)	13.0	35.0	36.0	15.0	37.0	36.0	56.0	14.0	34.0
Total Split (%)	10.8%	29.2%	30.0%	12.5%	30.8%	30.0%	46.7%	11.7%	28.3%
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	5.5	12.6	34.4	6.9	17.7	20.3	54.6	5.8	29.5
Actuated g/C Ratio	0.07	0.15	0.42	0.08	0.22	0.25	0.67	0.07	0.36
v/c Ratio	0.06	0.17	0.21	0.28	0.21	0.82	0.75	0.12	0.39
Control Delay	45.3	36.2	2.8	46.3	23.1	45.9	18.0	46.2	26.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.3	36.2	2.8	46.3	23.1	45.9	18.0	46.2	26.2
LOS	D	D	A	D	C	D	B	D	C
Approach Delay	10.4		31.1			22.5		26.7	
Approach LOS	B		C			C		C	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 81.5  
 Natural Cycle: 110  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.82  
 Intersection Signal Delay: 22.7  
 Intersection LOS: C  
 Intersection Capacity Utilization 73.1%  
 ICU Level of Service D  
 Analysis Period (min) 15























Splits and Phases: 15: Indian Street & Nandina Avenue



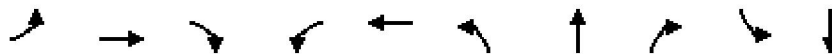
HCM 6th Signalized Intersection Summary  
 15: Indian Street & Nandina Avenue

Gateway Aviation TA (JN:13445)

05/09/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	32	143	33	41	22	326	1616	70	12	445	24
Future Volume (veh/h)	7	32	143	33	41	22	326	1616	70	12	445	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1352	1618	1618	1515	1530	1796	1885	1737	1485	1856	1900
Adj Flow Rate, veh/h	8	36	159	37	46	24	362	1796	78	13	494	27
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	37	19	19	26	25	7	1	11	28	3	0
Cap, veh/h	18	165	490	54	138	72	402	2052	88	22	1232	67
Arrive On Green	0.01	0.12	0.12	0.03	0.15	0.15	0.23	0.57	0.57	0.02	0.35	0.35
Sat Flow, veh/h	1810	1352	1372	1541	938	489	1711	3584	154	1414	3487	190
Grp Volume(v), veh/h	8	36	159	37	0	70	362	938	936	13	262	259
Grp Sat Flow(s),veh/h/ln	1810	1352	1372	1541	0	1427	1711	1885	1853	1414	1856	1821
Q Serve(g_s), s	0.4	2.0	6.9	1.9	0.0	3.6	16.8	34.6	35.6	0.7	8.7	8.7
Cycle Q Clear(g_c), s	0.4	2.0	6.9	1.9	0.0	3.6	16.8	34.6	35.6	0.7	8.7	8.7
Prop In Lane	1.00		1.00	1.00		0.34	1.00		0.08	1.00		0.10
Lane Grp Cap(c), veh/h	18	165	490	54	0	209	402	1079	1061	22	656	644
V/C Ratio(X)	0.44	0.22	0.32	0.69	0.00	0.33	0.90	0.87	0.88	0.59	0.40	0.40
Avail Cap(c_a), veh/h	186	483	813	196	0	545	658	1159	1140	163	656	644
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.2	32.3	19.1	39.0	0.0	31.2	30.3	14.8	15.1	39.9	19.9	19.9
Incr Delay (d2), s/veh	5.9	0.7	0.4	5.8	0.0	0.9	6.2	6.9	7.9	8.9	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.6	2.0	0.8	0.0	1.2	6.9	13.1	13.5	0.3	3.4	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.1	33.0	19.5	44.7	0.0	32.2	36.5	21.8	23.0	48.8	20.3	20.3
LnGrp LOS	D	C	B	D	A	C	D	C	C	D	C	C
Approach Vol, veh/h		203			107			2236			534	
Approach Delay, s/veh		22.9			36.5			24.7			21.0	
Approach LOS		C			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.9	52.6	7.4	15.8	23.8	34.7	5.4	17.8				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	9.4	50.2	10.4	29.2	31.4	28.2	8.4	31.2				
Max Q Clear Time (g_c+I1), s	2.7	37.6	3.9	8.9	18.8	10.7	2.4	5.6				
Green Ext Time (p_c), s	0.0	9.2	0.0	0.6	0.4	2.5	0.0	0.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			24.3									
HCM 6th LOS			C									

Timings  
16: Indian Av. & Harley Knox Bl.

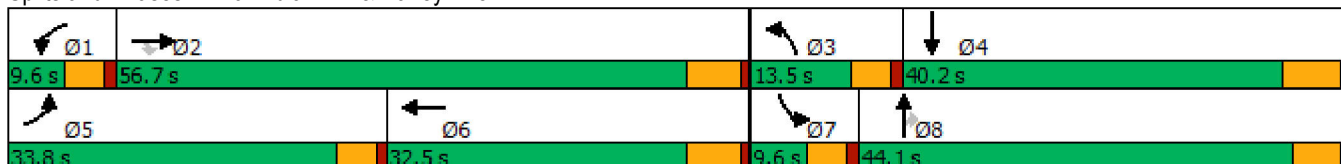


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↘	↑↑↑	↗	↘	↑↑↑	↘↗	↑↑	↗	↘	↑↗
Traffic Volume (vph)	507	445	99	62	787	136	288	41	13	73
Future Volume (vph)	507	445	99	62	787	136	288	41	13	73
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	5	2		1	6	3	8		7	4
Permitted Phases			2					8		
Detector Phase	5	2	2	1	6	3	8	8	7	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	35.8	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2
Total Split (s)	33.8	56.7	56.7	9.6	32.5	13.5	44.1	44.1	9.6	40.2
Total Split (%)	28.2%	47.3%	47.3%	8.0%	27.1%	11.3%	36.8%	36.8%	8.0%	33.5%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.4	4.4	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	5.4	5.4	4.6	6.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	29.6	47.9	47.9	5.1	23.4	8.1	26.1	26.1	5.1	14.1
Actuated g/C Ratio	0.31	0.50	0.50	0.05	0.24	0.08	0.27	0.27	0.05	0.15
v/c Ratio	1.10	0.20	0.14	0.75	0.76	0.55	0.35	0.09	0.16	0.49
Control Delay	103.7	15.0	3.7	91.6	39.2	53.1	30.0	0.3	53.5	15.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	103.7	15.0	3.7	91.6	39.2	53.1	30.0	0.3	53.5	15.3
LOS	F	B	A	F	D	D	C	A	D	B
Approach Delay		56.7			42.8		34.1			17.2
Approach LOS		E			D		C			B

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 96.7  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.10  
 Intersection Signal Delay: 44.3  
 Intersection LOS: D  
 Intersection Capacity Utilization 74.5%  
 ICU Level of Service D  
 Analysis Period (min) 15































Splits and Phases: 16: Indian Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 16: Indian Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

05/09/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 			 	
Traffic Volume (veh/h)	507	445	99	62	787	47	136	288	41	13	73	169
Future Volume (veh/h)	507	445	99	62	787	47	136	288	41	13	73	169
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1767	1811	1737	1856	1856	1870	1767	1796	1752	1781	1722	1500
Adj Flow Rate, veh/h	557	489	100	68	865	32	149	316	38	14	80	137
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	9	6	11	3	3	2	9	7	10	8	12	27
Cap, veh/h	564	2545	758	87	1148	42	217	602	262	28	207	185
Arrive On Green	0.33	0.51	0.51	0.05	0.23	0.23	0.07	0.18	0.18	0.02	0.13	0.13
Sat Flow, veh/h	1682	4944	1472	1767	5014	185	3264	3413	1485	1697	1636	1459
Grp Volume(v), veh/h	557	489	100	68	582	315	149	316	38	14	80	137
Grp Sat Flow(s),veh/h/ln	1682	1648	1472	1767	1689	1822	1632	1706	1485	1697	1636	1459
Q Serve(g_s), s	28.7	4.6	3.1	3.3	14.0	14.0	3.9	7.3	1.9	0.7	3.9	7.9
Cycle Q Clear(g_c), s	28.7	4.6	3.1	3.3	14.0	14.0	3.9	7.3	1.9	0.7	3.9	7.9
Prop In Lane	1.00		1.00	1.00		0.10	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	564	2545	758	87	773	417	217	602	262	28	207	185
V/C Ratio(X)	0.99	0.19	0.13	0.78	0.75	0.75	0.69	0.52	0.15	0.50	0.39	0.74
Avail Cap(c_a), veh/h	564	2887	859	101	1034	558	333	1515	659	97	638	569
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.8	11.4	11.0	41.0	31.3	31.3	39.8	32.6	30.3	42.5	35.0	36.7
Incr Delay (d2), s/veh	34.8	0.0	0.1	23.6	2.2	4.1	1.4	0.7	0.3	5.1	1.2	5.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.7	1.5	0.9	1.9	5.6	6.2	1.5	2.9	0.7	0.3	1.5	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.6	11.4	11.1	64.5	33.5	35.4	41.2	33.3	30.6	47.6	36.2	42.5
LnGrp LOS	E	B	B	E	C	D	D	C	C	D	D	D
Approach Vol, veh/h		1146			965			503			231	
Approach Delay, s/veh		36.8			36.3			35.4			40.6	
Approach LOS		D			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.9	50.7	10.4	17.2	33.8	25.8	6.0	21.6				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	5.0	50.9	8.9	34.0	29.2	26.7	5.0	* 39				
Max Q Clear Time (g_c+I1), s	5.3	6.6	5.9	9.9	30.7	16.0	2.7	9.3				
Green Ext Time (p_c), s	0.0	3.5	0.1	1.1	0.0	3.9	0.0	2.0				

Intersection Summary

HCM 6th Ctrl Delay	36.7
HCM 6th LOS	D

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection						
Int Delay, s/veh	7.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖	↗	↖		↖	↗
Traffic Vol, veh/h	0	61	0	2	134	1
Future Vol, veh/h	0	61	0	2	134	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	115	0	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	6	0	0	8	0
Mvmt Flow	0	65	0	2	143	1

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	288	1	0	0	2	0
Stage 1	1	-	-	-	-	-
Stage 2	287	-	-	-	-	-
Critical Hdwy	6.4	6.26	-	-	4.18	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.354	-	-	2.272	-
Pot Cap-1 Maneuver	707	1072	-	-	1582	-
Stage 1	1028	-	-	-	-	-
Stage 2	766	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	643	1072	-	-	1582	-
Mov Cap-2 Maneuver	643	-	-	-	-	-
Stage 1	1028	-	-	-	-	-
Stage 2	697	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.6	0	7.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	-	1072	1582
HCM Lane V/C Ratio	-	-	-	0.061	0.09
HCM Control Delay (s)	-	-	0	8.6	7.5
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	-	0.2	0.3

Timings  
18: Perris Bl. & San Michele Rd./Driveway

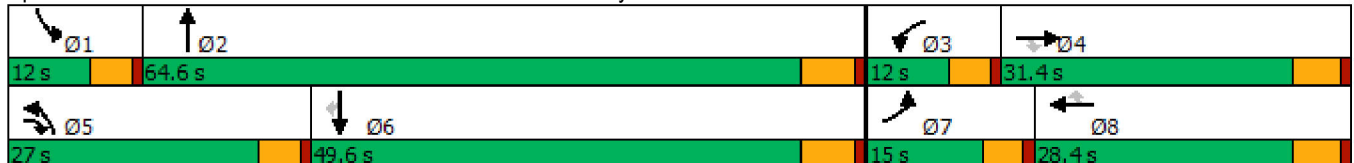


Lane Group	EBL	EBR	WBL	NBL	NBT	SBL	SBT	SBR	Ø4	Ø8
Lane Configurations	↖	↗	↖	↖	↑↑↑	↖	↑↑↑	↖		
Traffic Volume (vph)	35	21	2	111	1573	1	1339	77		
Future Volume (vph)	35	21	2	111	1573	1	1339	77		
Turn Type	Prot	pm+ov	Prot	Prot	NA	Prot	NA	Perm		
Protected Phases	7	5	3	5	2	1	6		4	8
Permitted Phases		4						6		
Detector Phase	7	5	3	5	2	1	6	6		
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	10.0	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	9.6	9.6	9.6	34.8	9.6	34.8	34.8	31.4	26.4
Total Split (s)	15.0	27.0	12.0	27.0	64.6	12.0	49.6	49.6	31.4	28.4
Total Split (%)	12.5%	22.5%	10.0%	22.5%	53.8%	10.0%	41.3%	41.3%	26%	24%
Yellow Time (s)	3.6	3.6	3.6	3.6	4.8	3.6	4.8	4.8	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.6	4.6	4.6	4.6	5.8	4.6	5.8	5.8		
Lead/Lag	Lead	Lead	Lead	Lead	Lag	Lead	Lag	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 61.7  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 18: Perris Bl. & San Michele Rd./Driveway





























HCM 6th Signalized Intersection Summary  
 18: Perris Bl. & San Michele Rd./Driveway

Gateway Aviation (JN 13445)

05/09/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	0	21	2	0	0	111	1573	1	1	1339	77
Future Volume (veh/h)	35	0	21	2	0	0	111	1573	1	1	1339	77
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1767	1900	1737	1159	1900	1900	1826	1870	418	1900	1870	1856
Adj Flow Rate, veh/h	37	0	3	2	0	0	118	1673	1	1	1424	61
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	9	0	11	50	0	0	5	2	100	0	2	3
Cap, veh/h	66	158	251	3	88	75	152	2877	2	3	2347	723
Arrive On Green	0.04	0.00	0.08	0.00	0.00	0.00	0.09	0.55	0.55	0.00	0.46	0.46
Sat Flow, veh/h	1682	1900	1472	1104	1900	1610	1739	5271	3	1810	5106	1572
Grp Volume(v), veh/h	37	0	3	2	0	0	118	1080	594	1	1424	61
Grp Sat Flow(s),veh/h/ln	1682	1900	1472	1104	1900	1610	1739	1702	1870	1810	1702	1572
Q Serve(g_s), s	1.2	0.0	0.1	0.1	0.0	0.0	3.7	11.7	11.7	0.0	11.6	1.2
Cycle Q Clear(g_c), s	1.2	0.0	0.1	0.1	0.0	0.0	3.7	11.7	11.7	0.0	11.6	1.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	66	158	251	3	88	75	152	1858	1020	3	2347	723
V/C Ratio(X)	0.56	0.00	0.01	0.66	0.00	0.00	0.77	0.58	0.58	0.31	0.61	0.08
Avail Cap(c_a), veh/h	315	889	818	147	787	667	701	3603	1979	241	4026	1240
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.2	0.0	19.2	27.7	0.0	0.0	24.8	8.4	8.4	27.7	11.3	8.4
Incr Delay (d2), s/veh	7.3	0.0	0.0	65.6	0.0	0.0	3.2	0.3	0.5	18.5	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.0	0.1	0.0	0.0	1.5	2.8	3.2	0.0	3.2	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.5	0.0	19.2	93.2	0.0	0.0	28.0	8.7	8.9	46.2	11.5	8.5
LnGrp LOS	C	A	B	F	A	A	C	A	A	D	B	A
Approach Vol, veh/h		40			2			1792			1486	
Approach Delay, s/veh		32.4			93.2			10.0			11.4	
Approach LOS		C			F			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.7	36.1	4.8	10.0	9.5	31.3	6.8	8.0				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.4	4.6	5.8	4.6	5.4				
Max Green Setting (Gmax), s	7.4	58.8	7.4	26.0	22.4	43.8	10.4	23.0				
Max Q Clear Time (g_c+I1), s	2.0	13.7	2.1	2.1	5.7	13.6	3.2	0.0				
Green Ext Time (p_c), s	0.0	15.6	0.0	0.0	0.1	11.9	0.0	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				11.0								
HCM 6th LOS				B								

Timings  
19: Perris Bl. & Nandina Av.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↶	↶↷	↶	↷	↷	↶	↶↷↸	↶	↶↷↸	↷
Traffic Volume (vph)	15	2	5	3	10	46	1649	15	1315	21
Future Volume (vph)	15	2	5	3	10	46	1649	15	1315	21
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	pm+ov
Protected Phases	7	4	3	8		5	2	1	6	7
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	7
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	5.0
Minimum Split (s)	9.6	41.4	9.6	28.4	28.4	9.6	39.8	9.6	41.8	9.6
Total Split (s)	11.0	41.4	11.0	41.4	41.4	14.0	55.6	12.0	53.6	11.0
Total Split (%)	9.2%	34.5%	9.2%	34.5%	34.5%	11.7%	46.3%	10.0%	44.7%	9.2%
Yellow Time (s)	3.6	4.4	3.6	4.4	4.4	3.6	4.8	3.6	4.8	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	4.6	5.4	5.4	4.6	5.8	4.6	5.8	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 59.9  
 Natural Cycle: 105  
 Control Type: Actuated-Uncoordinated
























Splits and Phases: 19: Perris Bl. & Nandina Av.

Ø1	Ø2	Ø3	Ø4
12 s	55.6 s	11 s	41.4 s
Ø5	Ø6	Ø7	Ø8
14 s	53.6 s	11 s	41.4 s

HCM 6th Signalized Intersection Summary  
 19: Perris Bl. & Nandina Av.

Gateway Aviation (JN 13445)

05/09/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	2	19	5	3	10	46	1649	19	15	1315	21
Future Volume (veh/h)	15	2	19	5	3	10	46	1649	19	15	1315	21
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1574	1900	1900	1307	1411	1574	1870	1870	1737	1693	1885	1752
Adj Flow Rate, veh/h	16	2	12	5	3	3	50	1792	11	16	1429	18
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	22	0	0	40	33	22	2	2	11	14	1	10
Cap, veh/h	29	139	124	8	91	86	82	2725	17	126	2842	848
Arrive On Green	0.02	0.08	0.08	0.01	0.06	0.06	0.05	0.52	0.52	0.08	0.55	0.55
Sat Flow, veh/h	1499	1805	1607	1245	1411	1334	1781	5236	32	1612	5147	1483
Grp Volume(v), veh/h	16	2	12	5	3	3	50	1165	638	16	1429	18
Grp Sat Flow(s),veh/h/ln	1499	1805	1607	1245	1411	1334	1781	1702	1865	1612	1716	1483
Q Serve(g_s), s	0.7	0.1	0.4	0.3	0.1	0.1	1.8	16.0	16.0	0.6	11.0	0.3
Cycle Q Clear(g_c), s	0.7	0.1	0.4	0.3	0.1	0.1	1.8	16.0	16.0	0.6	11.0	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.02	1.00		1.00
Lane Grp Cap(c), veh/h	29	139	124	8	91	86	82	1771	970	126	2842	848
V/C Ratio(X)	0.55	0.01	0.10	0.60	0.03	0.03	0.61	0.66	0.66	0.13	0.50	0.02
Avail Cap(c_a), veh/h	150	1013	902	124	792	749	261	2644	1448	186	3836	1134
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.2	27.3	27.5	31.8	28.1	28.1	30.0	11.2	11.2	27.5	8.9	6.0
Incr Delay (d2), s/veh	6.0	0.0	0.3	23.6	0.1	0.2	2.7	0.4	0.8	0.2	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.2	0.1	0.0	0.0	0.8	4.5	5.0	0.2	2.9	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.1	27.4	27.9	55.3	28.3	28.3	32.7	11.6	12.0	27.7	9.0	6.0
LnGrp LOS	D	C	C	E	C	C	C	B	B	C	A	A
Approach Vol, veh/h		30			11			1853			1463	
Approach Delay, s/veh		32.8			40.6			12.3			9.2	
Approach LOS		C			D			B			A	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.6	39.2	5.0	10.3	7.5	41.2	5.8	9.5				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.4	4.6	5.8	4.6	5.4				
Max Green Setting (Gmax), s	7.4	49.8	6.4	36.0	9.4	47.8	6.4	36.0				
Max Q Clear Time (g_c+I1), s	2.6	18.0	2.3	2.4	3.8	13.0	2.7	2.1				
Green Ext Time (p_c), s	0.0	15.4	0.0	0.0	0.0	12.3	0.0	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				11.2								
HCM 6th LOS				B								

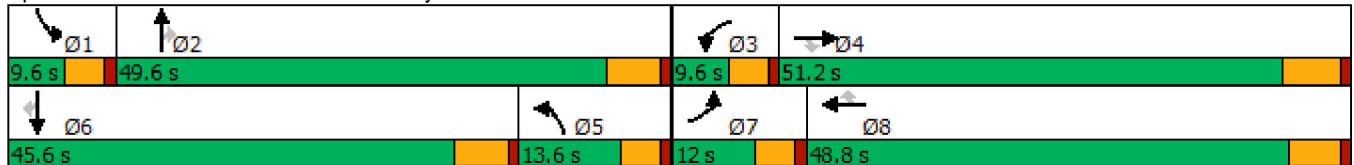
Timings  
20: Perris Bl. & Harley Knox Bl.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	217	279	22	9	374	181	231	1126	14	70	693	278
Future Volume (vph)	217	279	22	9	374	181	231	1126	14	70	693	278
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	47.2	47.2	9.6	48.8	48.8	9.6	48.8	48.8	9.6	43.8	43.8
Total Split (s)	12.0	51.2	51.2	9.6	48.8	48.8	13.6	49.6	49.6	9.6	45.6	45.6
Total Split (%)	10.0%	42.7%	42.7%	8.0%	40.7%	40.7%	11.3%	41.3%	41.3%	8.0%	38.0%	38.0%
Yellow Time (s)	3.6	5.2	5.2	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 79.3  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 20: Perris Bl. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 20: Perris Bl. & Harley Knox Bl.

Gateway Aviation (JN 13445)  
 05/09/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	217	279	22	9	374	181	231	1126	14	70	693	278
Future Volume (veh/h)	217	279	22	9	374	181	231	1126	14	70	693	278
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1767	1856	1530	1544	1856	1885	1796	1856	1574	1826	1870	1796
Adj Flow Rate, veh/h	238	307	19	10	411	106	254	1237	12	77	762	197
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	9	3	25	24	3	1	7	3	22	5	2	7
Cap, veh/h	183	865	318	36	755	238	533	1893	498	190	1286	383
Arrive On Green	0.11	0.25	0.25	0.01	0.15	0.15	0.16	0.37	0.37	0.06	0.25	0.25
Sat Flow, veh/h	1682	3526	1296	2853	5066	1598	3319	5066	1334	3374	5106	1520
Grp Volume(v), veh/h	238	307	19	10	411	106	254	1237	12	77	762	197
Grp Sat Flow(s),veh/h/ln	1682	1763	1296	1427	1689	1598	1659	1689	1334	1687	1702	1520
Q Serve(g_s), s	7.4	4.9	0.4	0.2	5.1	4.1	4.7	13.8	0.4	1.5	8.9	4.9
Cycle Q Clear(g_c), s	7.4	4.9	0.4	0.2	5.1	4.1	4.7	13.8	0.4	1.5	8.9	4.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	183	865	318	36	755	238	533	1893	498	190	1286	383
V/C Ratio(X)	1.30	0.35	0.06	0.28	0.54	0.45	0.48	0.65	0.02	0.40	0.59	0.51
Avail Cap(c_a), veh/h	183	2334	858	210	3205	1011	533	3265	860	248	2990	890
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.3	21.2	6.0	33.2	26.8	26.4	25.9	17.6	13.4	31.0	22.4	9.2
Incr Delay (d2), s/veh	168.7	0.2	0.1	1.5	0.6	1.3	0.2	0.4	0.0	0.5	0.4	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.3	1.8	0.2	0.1	1.9	1.5	1.7	4.6	0.1	0.6	3.2	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	198.9	21.4	6.1	34.8	27.4	27.7	26.2	18.0	13.5	31.5	22.8	10.3
LnGrp LOS	F	C	A	C	C	C	C	B	B	C	C	B
Approach Vol, veh/h		564			527			1503			1036	
Approach Delay, s/veh		95.8			27.6			19.4			21.1	
Approach LOS		F			C			B			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.4	31.2	5.5	22.9	16.7	22.9	12.0	16.3				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	5.8	* 5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	5.0	43.8	5.0	45.0	9.0	* 40	7.4	* 43				
Max Q Clear Time (g_c+I1), s	3.5	15.8	2.2	6.9	6.7	10.9	9.4	7.1				
Green Ext Time (p_c), s	0.0	9.5	0.0	1.9	0.1	6.0	0.0	3.0				

Intersection Summary

HCM 6th Ctrl Delay	32.9
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

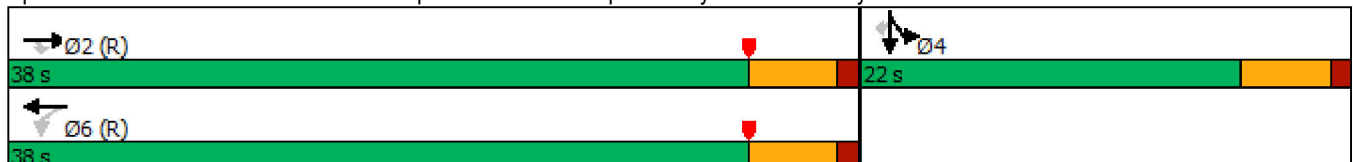


Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↑
Traffic Volume (vph)	575	88	576	245	0	208
Future Volume (vph)	575	88	576	245	0	208
Turn Type	NA	Perm	Perm	NA	NA	Perm
Protected Phases	2			6	4	
Permitted Phases		2	6			4
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	25.0	25.0	10.0	10.0
Total Split (s)	38.0	38.0	38.0	38.0	22.0	22.0
Total Split (%)	63.3%	63.3%	63.3%	63.3%	36.7%	36.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	33.0	33.0	33.0	33.0	17.0	17.0
Actuated g/C Ratio	0.55	0.55	0.55	0.55	0.28	0.28
v/c Ratio	0.35	0.11	1.67	0.15	1.18	0.40
Control Delay	8.2	2.0	332.9	8.4	128.1	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.2	2.0	332.9	8.4	128.1	5.2
LOS	A	A	F	A	F	A
Approach Delay	7.4			236.2	91.0	
Approach LOS	A			F	F	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.67  
 Intersection Signal Delay: 120.4  
 Intersection LOS: F  
 Intersection Capacity Utilization 100.7%  
 ICU Level of Service G  
 Analysis Period (min) 15

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

05/09/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑						↑	↑
Traffic Volume (veh/h)	0	575	88	576	245	0	0	0	0	480	0	208
Future Volume (veh/h)	0	575	88	576	245	0	0	0	0	480	0	208
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1811	1885	1856	1811	0				1737	1900	1767
Adj Flow Rate, veh/h	0	653	100	655	278	0				545	0	174
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88				0.88	0.88	0.88
Percent Heavy Veh, %	0	6	1	3	6	0				11	0	9
Cap, veh/h	0	1893	878	433	1893	0				513	0	424
Arrive On Green	0.00	0.55	0.55	0.92	0.92	0.00				0.28	0.00	0.28
Sat Flow, veh/h	0	3532	1597	704	3532	0				1810	0	1497
Grp Volume(v), veh/h	0	653	100	655	278	0				545	0	174
Grp Sat Flow(s),veh/h/ln	0	1721	1597	704	1721	0				1810	0	1497
Q Serve(g_s), s	0.0	6.3	1.8	26.7	0.5	0.0				17.0	0.0	5.7
Cycle Q Clear(g_c), s	0.0	6.3	1.8	33.0	0.5	0.0				17.0	0.0	5.7
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1893	878	433	1893	0				513	0	424
V/C Ratio(X)	0.00	0.35	0.11	1.51	0.15	0.00				1.06	0.00	0.41
Avail Cap(c_a), veh/h	0	1893	878	433	1893	0				513	0	424
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.69	0.69	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	7.5	6.5	9.3	1.1	0.0				21.5	0.0	17.4
Incr Delay (d2), s/veh	0.0	0.5	0.3	238.6	0.1	0.0				57.5	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.7	0.5	29.2	0.1	0.0				14.2	0.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	8.0	6.7	247.9	1.2	0.0				79.0	0.0	18.1
LnGrp LOS	A	A	A	F	A	A				F	A	B
Approach Vol, veh/h		753			933						719	
Approach Delay, s/veh		7.8			174.4						64.3	
Approach LOS		A			F						E	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		38.0		22.0		38.0						
Change Period (Y+Rc), s		5.0		5.0		5.0						
Max Green Setting (Gmax), s		33.0		17.0		33.0						
Max Q Clear Time (g_c+I1), s		8.3		19.0		35.0						
Green Ext Time (p_c), s		2.8		0.0		0.0						
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				89.3								
HCM 6th LOS				F								

Timings

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

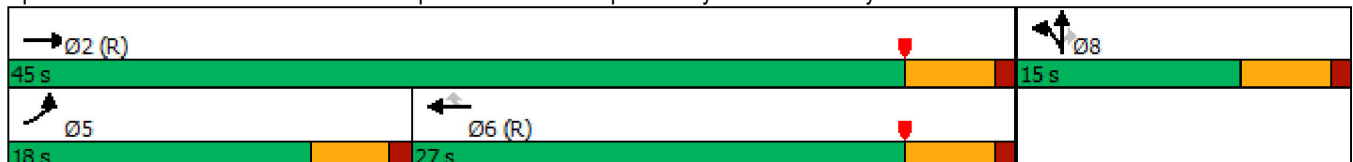


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	385	669	778	1019	3	314
Future Volume (vph)	385	669	778	1019	3	314
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	26.0	24.0	24.0	10.0	10.0
Total Split (s)	18.0	45.0	27.0	27.0	15.0	15.0
Total Split (%)	30.0%	75.0%	45.0%	45.0%	25.0%	25.0%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max
Act Effct Green (s)	13.5	40.0	22.0	22.0	10.0	10.0
Actuated g/C Ratio	0.22	0.67	0.37	0.37	0.17	0.17
v/c Ratio	1.07	0.34	0.67	1.27	0.18	0.74
Control Delay	86.3	3.0	19.0	145.0	23.4	18.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	86.3	3.0	19.0	145.0	23.4	18.8
LOS	F	A	B	F	C	B
Approach Delay		33.4	90.4		19.4	
Approach LOS		C	F		B	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 29 (48%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.27  
 Intersection Signal Delay: 63.8  
 Intersection LOS: E  
 Intersection Capacity Utilization 100.7%  
 ICU Level of Service G  
 Analysis Period (min) 15

Splits and Phases: 2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.





HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

05/09/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗			↗	↘		↗	↘			
Traffic Volume (veh/h)	385	669	0	0	778	1019	44	3	314	0	0	0
Future Volume (veh/h)	385	669	0	0	778	1019	44	3	314	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1841	1737	0	0	1841	1796	1796	1900	1707			
Adj Flow Rate, veh/h	418	727	0	0	846	1044	48	3	276			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	4	11	0	0	4	7	7	0	13			
Cap, veh/h	394	2200	0	0	1282	558	285	18	241			
Arrive On Green	0.07	0.22	0.00	0.00	0.37	0.37	0.17	0.17	0.17			
Sat Flow, veh/h	1753	3387	0	0	3589	1522	1708	107	1447			
Grp Volume(v), veh/h	418	727	0	0	846	1044	51	0	276			
Grp Sat Flow(s),veh/h/ln	1753	1650	0	0	1749	1522	1815	0	1447			
Q Serve(g_s), s	13.5	11.1	0.0	0.0	12.1	22.0	1.4	0.0	10.0			
Cycle Q Clear(g_c), s	13.5	11.1	0.0	0.0	12.1	22.0	1.4	0.0	10.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.94		1.00			
Lane Grp Cap(c), veh/h	394	2200	0	0	1282	558	302	0	241			
V/C Ratio(X)	1.06	0.33	0.00	0.00	0.66	1.87	0.17	0.00	1.14			
Avail Cap(c_a), veh/h	394	2200	0	0	1282	558	302	0	241			
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.95	0.95	0.00	0.00	0.65	0.65	1.00	0.00	1.00			
Uniform Delay (d), s/veh	27.8	12.1	0.0	0.0	15.9	19.0	21.4	0.0	25.0			
Incr Delay (d2), s/veh	60.9	0.4	0.0	0.0	1.7	396.1	1.2	0.0	102.5			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	12.7	3.6	0.0	0.0	4.2	67.6	0.6	0.0	9.9			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	88.6	12.5	0.0	0.0	17.6	415.1	22.6	0.0	127.5			
LnGrp LOS	F	B	A	A	B	F	C	A	F			
Approach Vol, veh/h		1145			1890			327				
Approach Delay, s/veh		40.3			237.2			111.2				
Approach LOS		D			F			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		45.0			18.0	27.0		15.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		40.0			13.5	22.0		10.0				
Max Q Clear Time (g_c+1), s		13.1			15.5	24.0		12.0				
Green Ext Time (p_c), s		3.1			0.0	0.0		0.0				

Intersection Summary

HCM 6th Ctrl Delay	157.9
HCM 6th LOS	F

Timings  
3: Western Way & Harley Knox Bl.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↑↑↑	↗	↖	↑↑↑	↖	↗	↖	↗
Traffic Volume (vph)	32	993	1	2	1686	3	0	14	0
Future Volume (vph)	32	993	1	2	1686	3	0	14	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	NA
Protected Phases	5	2		1	6		8		4
Permitted Phases			2			8		4	
Detector Phase	5	2	2	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	21.8	21.8	9.6	21.8	32.6	32.6	32.6	32.6
Total Split (s)	18.0	71.4	71.4	9.6	63.0	39.0	39.0	39.0	39.0
Total Split (%)	15.0%	59.5%	59.5%	8.0%	52.5%	32.5%	32.5%	32.5%	32.5%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	7.3	50.3	50.3	5.5	45.1	13.4	13.4	13.4	13.4
Actuated g/C Ratio	0.10	0.66	0.66	0.07	0.59	0.18	0.18	0.18	0.18
v/c Ratio	0.29	0.39	0.00	0.02	0.70	0.02	0.01	0.07	0.40
Control Delay	45.9	7.2	0.0	45.5	14.1	32.7	0.0	33.6	10.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.9	7.2	0.0	45.5	14.1	32.7	0.0	33.6	10.3
LOS	D	A	A	D	B	C	A	C	B
Approach Delay		8.4			14.2		14.5		12.6
Approach LOS		A			B		B		B

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 76.4  
 Natural Cycle: 80  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.70  
 Intersection Signal Delay: 12.0  
 Intersection LOS: B  
 Intersection Capacity Utilization 49.8%  
 ICU Level of Service A  
 Analysis Period (min) 15


























Splits and Phases: 3: Western Way & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 3: Western Way & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

05/09/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  							
Traffic Volume (veh/h)	32	993	1	2	1686	10	3	0	4	14	0	129
Future Volume (veh/h)	32	993	1	2	1686	10	3	0	4	14	0	129
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1500	1737	1900	1900	1826	1574	1900	1900	1900	1781	1900	1826
Adj Flow Rate, veh/h	39	1196	1	2	2031	10	4	0	5	17	0	142
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	27	11	0	0	5	22	0	0	0	8	0	5
Cap, veh/h	55	2989	1015	5	3044	15	183	0	230	296	0	230
Arrive On Green	0.04	0.63	0.63	0.00	0.59	0.59	0.14	0.00	0.14	0.14	0.00	0.14
Sat Flow, veh/h	1428	4742	1610	1810	5119	25	1266	0	1610	1344	0	1610
Grp Volume(v), veh/h	39	1196	1	2	1318	723	4	0	5	17	0	142
Grp Sat Flow(s),veh/h/ln	1428	1581	1610	1810	1662	1821	1266	0	1610	1344	0	1610
Q Serve(g_s), s	1.8	8.3	0.0	0.1	17.8	17.9	0.2	0.0	0.2	0.7	0.0	5.5
Cycle Q Clear(g_c), s	1.8	8.3	0.0	0.1	17.8	17.9	5.7	0.0	0.2	0.9	0.0	5.5
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	55	2989	1015	5	1976	1083	183	0	230	296	0	230
V/C Ratio(X)	0.71	0.40	0.00	0.41	0.67	0.67	0.02	0.00	0.02	0.06	0.00	0.62
Avail Cap(c_a), veh/h	286	4647	1578	135	2840	1556	653	0	827	795	0	827
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	31.8	6.1	4.6	33.3	9.1	9.1	29.7	0.0	24.7	25.1	0.0	27.0
Incr Delay (d2), s/veh	6.1	0.1	0.0	18.7	0.4	0.7	0.0	0.0	0.0	0.1	0.0	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	1.8	0.0	0.1	4.4	5.0	0.1	0.0	0.1	0.2	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.9	6.2	4.6	52.0	9.5	9.8	29.7	0.0	24.7	25.1	0.0	29.7
LnGrp LOS	D	A	A	D	A	A	C	A	C	C	A	C
Approach Vol, veh/h		1236			2043			9				159
Approach Delay, s/veh		7.2			9.7			26.9				29.2
Approach LOS		A			A			C				C
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.8	48.0		14.2	7.2	45.6		14.2				
Change Period (Y+Rc), s	4.6	5.8		4.6	4.6	5.8		4.6				
Max Green Setting (Gmax), s	5.0	65.6		34.4	13.4	57.2		34.4				
Max Q Clear Time (g_c+I1), s	2.1	10.3		7.5	3.8	19.9		7.7				
Green Ext Time (p_c), s	0.0	10.4		1.0	0.0	19.9		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					9.7							
HCM 6th LOS					A							

Timings  
4: Patterson Av. & Harley Knox Bl.

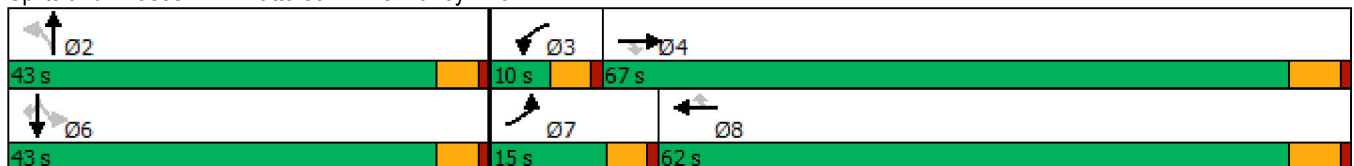


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑	↗	↖	↑↑	↗		↕		↕	↗
Traffic Volume (vph)	21	891	42	42	1555	9	108	2	22	3	27
Future Volume (vph)	21	891	42	42	1555	9	108	2	22	3	27
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	7	4		3	8			2		6	
Permitted Phases			4			8	2		6		6
Detector Phase	7	4	4	3	8	8	2	2	6	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	9.6	31.8	31.8	33.7	33.7	40.7	40.7	40.7
Total Split (s)	15.0	67.0	67.0	10.0	62.0	62.0	43.0	43.0	43.0	43.0	43.0
Total Split (%)	12.5%	55.8%	55.8%	8.3%	51.7%	51.7%	35.8%	35.8%	35.8%	35.8%	35.8%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8		4.7		4.7	4.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	6.9	56.3	56.3	5.4	59.7	59.7		18.6		18.6	18.6
Actuated g/C Ratio	0.07	0.60	0.60	0.06	0.64	0.64		0.20		0.20	0.20
v/c Ratio	0.31	0.38	0.05	0.49	0.87	0.01		0.65		0.13	0.09
Control Delay	54.6	11.7	3.2	63.3	23.0	0.0		42.5		31.3	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	54.6	11.7	3.2	63.3	23.0	0.0		42.5		31.3	0.5
LOS	D	B	A	E	C	A		D		C	A
Approach Delay		12.3			23.9			42.5		15.4	
Approach LOS		B			C			D		B	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 93.7  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.87  
 Intersection Signal Delay: 20.7  
 Intersection Capacity Utilization 72.5%  
 Analysis Period (min) 15  
 Intersection LOS: C  
 ICU Level of Service C



























Splits and Phases: 4: Patterson Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
4: Patterson Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

05/09/2022

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		  			 			 				 	
Traffic Volume (veh/h)	21	891	42	42	1555	9	108	2	40	22	3	27	
Future Volume (veh/h)	21	891	42	42	1555	9	108	2	40	22	3	27	
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No			No			No			No		
Adj Sat Flow, veh/h/ln	1070	1767	1856	1900	1826	1396	1841	1900	1826	1678	1426	1604	
Adj Flow Rate, veh/h	26	1087	51	51	1896	11	132	2	49	27	4	33	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	
Percent Heavy Veh, %	56	9	3	0	5	34	4	0	5	15	32	20	
Cap, veh/h	28	2921	952	75	2151	718	230	11	61	240	29	235	
Arrive On Green	0.03	0.61	0.61	0.04	0.62	0.62	0.17	0.17	0.17	0.17	0.17	0.17	
Sat Flow, veh/h	1019	4823	1572	1810	3469	1159	905	63	354	923	166	1359	
Grp Volume(v), veh/h	26	1087	51	51	1896	11	183	0	0	31	0	33	
Grp Sat Flow(s),veh/h/ln	1019	1608	1572	1810	1735	1159	1322	0	0	1089	0	1359	
Q Serve(g_s), s	2.1	9.6	1.1	2.3	38.4	0.3	9.5	0.0	0.0	0.0	0.0	1.7	
Cycle Q Clear(g_c), s	2.1	9.6	1.1	2.3	38.4	0.3	11.5	0.0	0.0	1.9	0.0	1.7	
Prop In Lane	1.00		1.00	1.00		1.00	0.72		0.27	0.87		1.00	
Lane Grp Cap(c), veh/h	28	2921	952	75	2151	718	302	0	0	269	0	235	
V/C Ratio(X)	0.94	0.37	0.05	0.68	0.88	0.02	0.61	0.00	0.00	0.12	0.00	0.14	
Avail Cap(c_a), veh/h	126	3520	1148	117	2325	777	714	0	0	572	0	621	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	
Uniform Delay (d), s/veh	40.7	8.4	6.7	39.6	13.3	6.1	34.0	0.0	0.0	29.5	0.0	29.4	
Incr Delay (d2), s/veh	35.8	0.1	0.0	4.0	4.1	0.0	2.0	0.0	0.0	0.2	0.0	0.3	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.8	2.6	0.3	1.1	12.3	0.1	3.7	0.0	0.0	0.5	0.0	0.5	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	76.5	8.5	6.8	43.6	17.5	6.1	35.9	0.0	0.0	29.6	0.0	29.7	
LnGrp LOS	E	A	A	D	B	A	D	A	A	C	A	C	
Approach Vol, veh/h		1164			1958			183				64	
Approach Delay, s/veh		9.9			18.1			35.9				29.7	
Approach LOS		A			B			D				C	
Timer - Assigned Phs		2	3	4		6	7	8					
Phs Duration (G+Y+Rc), s		19.2	8.1	56.6		19.2	6.9	57.8					
Change Period (Y+Rc), s		* 4.7	4.6	5.8		* 4.7	4.6	5.8					
Max Green Setting (Gmax), s		* 38	5.4	61.2		* 38	10.4	56.2					
Max Q Clear Time (g_c+I1), s		13.5	4.3	11.6		3.9	4.1	40.4					
Green Ext Time (p_c), s		1.1	0.0	9.2		0.2	0.0	11.6					

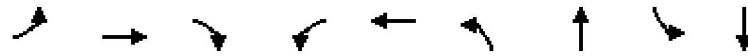
Intersection Summary

HCM 6th Ctrl Delay	16.4
HCM 6th LOS	B

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
5: Heacock Street & Cactus Avenue

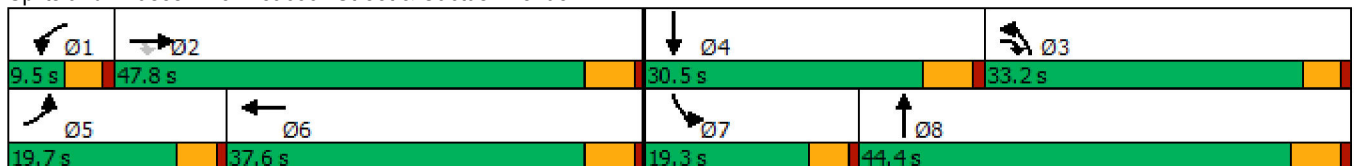


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↙	↕	↘	↙	↕	↘	↕	↙	↕
Traffic Volume (vph)	226	1974	1271	25	881	752	620	169	688
Future Volume (vph)	226	1974	1271	25	881	752	620	169	688
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	3	1	6	3	8	7	4
Permitted Phases			2						
Detector Phase	5	2	3	1	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.5	30.5	9.5	9.5	30.5	9.5	30.5	9.5	30.5
Total Split (s)	19.7	47.8	33.2	9.5	37.6	33.2	44.4	19.3	30.5
Total Split (%)	16.3%	39.5%	27.4%	7.9%	31.1%	27.4%	36.7%	16.0%	25.2%
Yellow Time (s)	3.5	4.5	3.5	3.5	4.5	3.5	4.5	3.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	4.5	4.5	5.5	4.5	5.5	4.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None
Act Effct Green (s)	15.2	46.1	75.8	5.0	32.1	28.7	40.0	13.7	25.0
Actuated g/C Ratio	0.13	0.38	0.63	0.04	0.27	0.24	0.33	0.11	0.21
v/c Ratio	0.99	1.43	1.14	0.35	1.04	0.91	0.57	0.82	1.00
Control Delay	108.3	230.4	93.8	69.2	81.6	60.9	35.4	81.0	80.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	108.3	230.4	93.8	69.2	81.6	60.9	35.4	81.0	80.0
LOS	F	F	F	E	F	E	D	F	F
Approach Delay		172.5			81.3		48.8		80.2
Approach LOS		F			F		D		F

Intersection Summary

Cycle Length: 121  
 Actuated Cycle Length: 121  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.43  
 Intersection Signal Delay: 120.6  
 Intersection LOS: F  
 Intersection Capacity Utilization 117.7%  
 ICU Level of Service H  
 Analysis Period (min) 15























Splits and Phases: 5: Heacock Street & Cactus Avenue



HCM 6th Signalized Intersection Summary  
5: Heacock Street & Cactus Avenue

Gateway Aviation TA (JN:13445)

05/09/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	226	1974	1271	25	881	121	752	620	56	169	688	56
Future Volume (veh/h)	226	1974	1271	25	881	121	752	620	56	169	688	56
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1826	1841	1885	1870	1826	1870	1870	1900	1870	1900
Adj Flow Rate, veh/h	235	2056	1324	26	918	126	783	646	58	176	717	58
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	1	5	4	1	2	5	2	2	0	2	0
Cap, veh/h	225	1371	925	42	854	117	818	1136	102	203	700	57
Arrive On Green	0.12	0.36	0.36	0.02	0.26	0.26	0.24	0.34	0.34	0.11	0.20	0.20
Sat Flow, veh/h	1810	3770	1544	1753	3245	445	3478	3377	303	1810	3414	276
Grp Volume(v), veh/h	235	2056	1324	26	533	511	783	357	347	176	393	382
Grp Sat Flow(s),veh/h/ln	1810	1885	1544	1753	1885	1805	1739	1870	1809	1810	1870	1820
Q Serve(g_s), s	15.2	44.4	27.9	1.8	32.1	32.1	27.1	19.1	19.2	11.7	25.0	25.0
Cycle Q Clear(g_c), s	15.2	44.4	27.9	1.8	32.1	32.1	27.1	19.1	19.2	11.7	25.0	25.0
Prop In Lane	1.00		1.00	1.00		0.25	1.00		0.17	1.00		0.15
Lane Grp Cap(c), veh/h	225	1371	925	42	496	475	818	629	609	203	383	373
V/C Ratio(X)	1.04	1.50	1.43	0.62	1.08	1.08	0.96	0.57	0.57	0.87	1.02	1.03
Avail Cap(c_a), veh/h	225	1371	925	72	496	475	818	629	609	220	383	373
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.4	38.8	11.8	59.0	44.9	45.0	46.0	33.2	33.2	53.3	48.5	48.5
Incr Delay (d2), s/veh	71.5	228.6	200.1	5.4	62.1	63.0	21.4	0.8	0.8	25.9	52.3	53.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.1	62.7	62.7	0.8	23.0	22.1	13.7	8.5	8.2	6.6	16.8	16.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	124.9	267.4	211.8	64.4	107.0	108.0	67.5	34.0	34.0	79.2	100.8	101.8
LnGrp LOS	F	F	F	E	F	F	E	C	C	E	F	F
Approach Vol, veh/h		3615			1070			1487			951	
Approach Delay, s/veh		237.8			106.4			51.6			97.2	
Approach LOS		F			F			D			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.4	49.9	34.2	30.5	19.7	37.6	18.2	46.5				
Change Period (Y+Rc), s	4.5	5.5	5.5	* 5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	5.0	42.3	28.7	* 25	15.2	32.1	14.8	38.9				
Max Q Clear Time (g_c+I1), s	3.8	46.4	29.1	27.0	17.2	34.1	13.7	21.2				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3				

Intersection Summary

HCM 6th Ctrl Delay	160.4
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Timings  
6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

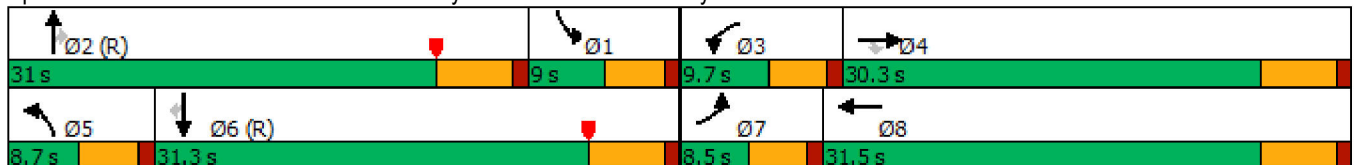
05/09/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	32	202	324	33	92	90	963	80	335	1117	22
Future Volume (vph)	32	202	324	33	92	90	963	80	335	1117	22
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4					2			6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Minimum Split (s)	8.5	23.5	23.5	8.5	31.5	8.5	30.5	30.5	8.5	23.5	23.5
Total Split (s)	8.5	30.3	30.3	9.7	31.5	8.7	31.0	31.0	9.0	31.3	31.3
Total Split (%)	10.6%	37.9%	37.9%	12.1%	39.4%	10.9%	38.8%	38.8%	11.3%	39.1%	39.1%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	5.5	4.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	4.0	15.4	15.4	5.0	16.2	9.0	38.7	38.7	4.5	34.2	34.2
Actuated g/C Ratio	0.05	0.19	0.19	0.06	0.20	0.11	0.48	0.48	0.06	0.43	0.43
v/c Ratio	0.39	0.64	0.67	0.32	0.34	0.48	0.64	0.09	3.77	0.84	0.03
Control Delay	48.9	36.8	16.3	43.1	10.0	45.5	20.9	0.3	1286.4	30.4	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.9	36.8	16.3	43.1	10.0	45.5	20.9	0.3	1286.4	30.4	0.0
LOS	D	D	B	D	A	D	C	A	F	C	A
Approach Delay		25.6			13.6		21.4			315.4	
Approach LOS		C			B		C			F	

Intersection Summary

Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 100  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 3.77  
 Intersection Signal Delay: 146.3  
 Intersection LOS: F  
 Intersection Capacity Utilization 75.8%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 6: Heacock Street & Meyer Drive/John F. Kennedy Drive








































HCM 6th Signalized Intersection Summary  
 6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

05/09/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	202	324	33	92	179	90	963	80	335	1117	22
Future Volume (veh/h)	32	202	324	33	92	179	90	963	80	335	1117	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1900	1900	1885	1885	1900	1811	1900	1841	1811	1900
Adj Flow Rate, veh/h	37	232	372	38	106	206	103	1107	92	385	1284	25
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	1	0	0	1	1	0	6	0	4	6	0
Cap, veh/h	51	486	415	52	487	413	95	1155	513	232	1489	662
Arrive On Green	0.03	0.26	0.26	0.03	0.26	0.26	0.05	0.32	0.32	0.13	0.41	0.41
Sat Flow, veh/h	1810	1885	1610	1810	1885	1598	1810	3622	1610	1753	3622	1610
Grp Volume(v), veh/h	37	232	372	38	106	206	103	1107	92	385	1284	25
Grp Sat Flow(s),veh/h/ln	1810	1885	1610	1810	1885	1598	1810	1811	1610	1753	1811	1610
Q Serve(g_s), s	1.6	8.3	17.8	1.7	3.5	8.8	4.2	24.0	2.6	10.6	25.9	0.7
Cycle Q Clear(g_c), s	1.6	8.3	17.8	1.7	3.5	8.8	4.2	24.0	2.6	10.6	25.9	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	51	486	415	52	487	413	95	1155	513	232	1489	662
V/C Ratio(X)	0.73	0.48	0.90	0.74	0.22	0.50	1.08	0.96	0.18	1.66	0.86	0.04
Avail Cap(c_a), veh/h	90	584	499	118	613	519	95	1155	513	232	1489	662
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.66	0.66	0.66	0.09	0.09	0.09
Uniform Delay (d), s/veh	38.6	25.1	28.6	38.6	23.3	25.2	37.9	26.7	11.8	34.7	21.5	14.1
Incr Delay (d2), s/veh	7.3	0.3	15.0	7.4	0.1	0.3	99.3	13.7	0.5	299.3	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	3.6	8.0	0.8	1.5	3.1	4.4	11.3	1.2	23.4	9.4	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.8	25.4	43.6	45.9	23.4	25.6	137.2	40.5	12.3	334.0	22.2	14.1
LnGrp LOS	D	C	D	D	C	C	F	D	B	F	C	B
Approach Vol, veh/h		641			350			1302			1694	
Approach Delay, s/veh		37.1			27.1			46.1			92.9	
Approach LOS		D			C			D			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.1	31.0	6.8	26.1	8.7	38.4	6.7	26.2				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	4.5	* 26	5.2	24.8	4.2	25.8	4.0	26.0				
Max Q Clear Time (g_c+I1), s	12.6	26.0	3.7	19.8	6.2	27.9	3.6	10.8				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.9				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			62.9									
HCM 6th LOS			E									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings  
7: Heacock Street & Gentian Avenue

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	7	103	1034	13	114	1311
Future Volume (vph)	7	103	1034	13	114	1311
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	27.6	27.6	27.2	27.2	9.6	16.2
Total Split (s)	31.0	31.0	62.0	62.0	27.0	89.0
Total Split (%)	25.8%	25.8%	51.7%	51.7%	22.5%	74.2%
Yellow Time (s)	3.6	3.6	5.2	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	6.2	6.2	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	12.3	12.3	34.3	34.3	10.6	49.7
Actuated g/C Ratio	0.17	0.17	0.47	0.47	0.14	0.68
v/c Ratio	0.03	0.28	0.73	0.02	0.50	0.63
Control Delay	30.7	8.8	19.4	10.2	38.9	8.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.7	8.8	19.4	10.2	38.9	8.2
LOS	C	A	B	B	D	A
Approach Delay	10.2		19.3			10.7
Approach LOS	B		B			B

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 73.3	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 14.1	Intersection LOS: B
Intersection Capacity Utilization 56.1%	ICU Level of Service B
Analysis Period (min) 15	













Splits and Phases: 7: Heacock Street & Gentian Avenue



HCM 6th Signalized Intersection Summary  
 7: Heacock Street & Gentian Avenue

Gateway Aviation TA (JN:13445)

05/09/2022

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	7	103	1034	13	114	1311
Future Volume (veh/h)	7	103	1034	13	114	1311
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1826	1900	1826	1841
Adj Flow Rate, veh/h	8	117	1175	15	130	1490
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	5	0	5	4
Cap, veh/h	277	246	1650	766	167	2288
Arrive On Green	0.15	0.15	0.48	0.48	0.10	0.65
Sat Flow, veh/h	1810	1610	3561	1610	1739	3589
Grp Volume(v), veh/h	8	117	1175	15	130	1490
Grp Sat Flow(s),veh/h/ln	1810	1610	1735	1610	1739	1749
Q Serve(g_s), s	0.2	3.7	15.0	0.3	4.1	14.4
Cycle Q Clear(g_c), s	0.2	3.7	15.0	0.3	4.1	14.4
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	277	246	1650	766	167	2288
V/C Ratio(X)	0.03	0.47	0.71	0.02	0.78	0.65
Avail Cap(c_a), veh/h	853	759	3457	1605	696	5171
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.2	21.7	11.6	7.8	24.7	5.8
Incr Delay (d2), s/veh	0.0	0.5	0.6	0.0	2.9	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	1.3	4.0	0.1	1.6	2.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	20.2	22.2	12.2	7.8	27.6	6.2
LnGrp LOS	C	C	B	A	C	A
Approach Vol, veh/h	125		1190			1620
Approach Delay, s/veh	22.1		12.2			7.9
Approach LOS	C		B			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	10.0	32.8			42.8	13.2
Change Period (Y+Rc), s	4.6	6.2			6.2	4.6
Max Green Setting (Gmax), s	22.4	55.8			82.8	26.4
Max Q Clear Time (g_c+1), s	6.1	17.0			16.4	5.7
Green Ext Time (p_c), s	0.1	9.6			15.4	0.2
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			10.2			
HCM 6th LOS			B			

Timings  
8: Heacock Street & Iris Avenue

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	247	318	781	374	500	879
Future Volume (vph)	247	318	781	374	500	879
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	15.8	15.8	33.2	33.2	9.6	16.2
Total Split (s)	35.0	35.0	47.0	47.0	38.0	85.0
Total Split (%)	29.2%	29.2%	39.2%	39.2%	31.7%	70.8%
Yellow Time (s)	4.8	4.8	5.2	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	6.2	6.2	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	12.8	12.8	29.9	29.9	17.8	52.4
Actuated g/C Ratio	0.16	0.16	0.38	0.38	0.23	0.67
v/c Ratio	0.47	0.59	0.68	0.53	0.69	0.44
Control Delay	34.2	8.4	23.4	8.7	33.4	6.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.2	8.4	23.4	8.7	33.4	6.4
LOS	C	A	C	A	C	A
Approach Delay	19.7		18.6			16.2
Approach LOS	B		B			B

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 77.7	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay: 17.8	Intersection LOS: B
Intersection Capacity Utilization 58.0%	ICU Level of Service B
Analysis Period (min) 15	

















Splits and Phases: 8: Heacock Street & Iris Avenue



HCM 6th Signalized Intersection Summary  
8: Heacock Street & Iris Avenue

Gateway Aviation TA (JN:13445)

05/09/2022

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 		 		 	 
Traffic Volume (veh/h)	247	318	781	374	500	879
Future Volume (veh/h)	247	318	781	374	500	879
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1811	1900	1885	1811
Adj Flow Rate, veh/h	284	366	898	430	575	1010
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	0	6	0	1	6
Cap, veh/h	916	420	1192	558	678	2051
Arrive On Green	0.26	0.26	0.35	0.35	0.19	0.60
Sat Flow, veh/h	3510	1610	3532	1610	3483	3532
Grp Volume(v), veh/h	284	366	898	430	575	1010
Grp Sat Flow(s),veh/h/ln	1755	1610	1721	1610	1742	1721
Q Serve(g_s), s	5.5	18.2	19.3	20.0	13.3	14.1
Cycle Q Clear(g_c), s	5.5	18.2	19.3	20.0	13.3	14.1
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	916	420	1192	558	678	2051
V/C Ratio(X)	0.31	0.87	0.75	0.77	0.85	0.49
Avail Cap(c_a), veh/h	1223	561	1675	784	1388	3235
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.9	29.6	24.2	24.4	32.5	9.7
Incr Delay (d2), s/veh	0.2	11.1	1.2	3.1	1.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	7.8	7.1	7.2	5.3	4.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	25.1	40.7	25.5	27.5	33.7	9.9
LnGrp LOS	C	D	C	C	C	A
Approach Vol, veh/h	650		1328			1585
Approach Delay, s/veh	33.9		26.1			18.5
Approach LOS	C		C			B
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	20.9	35.2			56.2	27.7
Change Period (Y+Rc), s	4.6	6.2			6.2	5.8
Max Green Setting (Gmax), s	33.4	40.8			78.8	29.2
Max Q Clear Time (g_c+I1), s	15.3	22.0			16.1	20.2
Green Ext Time (p_c), s	1.0	7.1			8.0	1.6
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			24.2			
HCM 6th LOS			C			

Timings  
9: Heacock Street & Krameria Avenue-North



Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations	↙	↗	↕	↙	↕
Traffic Volume (vph)	226	250	793	113	753
Future Volume (vph)	226	250	793	113	753
Turn Type	Prot	Perm	NA	Prot	NA
Protected Phases	8		2	1	6
Permitted Phases		8			
Detector Phase	8	8	2	1	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	29.1	29.1	29.2	9.6	16.2
Total Split (s)	35.0	35.0	61.0	24.0	85.0
Total Split (%)	29.2%	29.2%	50.8%	20.0%	70.8%
Yellow Time (s)	4.1	4.1	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	6.2	4.6	6.2
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	Min	Max	Min
Act Effct Green (s)	17.9	17.9	34.1	20.0	58.8
Actuated g/C Ratio	0.20	0.20	0.39	0.23	0.67
v/c Ratio	0.73	0.50	0.82	0.34	0.40
Control Delay	46.1	6.9	30.1	36.1	7.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	46.1	6.9	30.1	36.1	7.8
LOS	D	A	C	D	A
Approach Delay	25.5		30.1		11.5
Approach LOS	C		C		B

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 88.4  
 Natural Cycle: 75  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.82  
 Intersection Signal Delay: 21.9  
 Intersection LOS: C  
 Intersection Capacity Utilization 57.5%  
 ICU Level of Service B  
 Analysis Period (min) 15












Splits and Phases: 9: Heacock Street & Krameria Avenue-North



HCM 6th Signalized Intersection Summary  
 9: Heacock Street & Krameria Avenue-North

Gateway Aviation TA (JN:13445)

05/09/2022

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	226	250	793	110	113	753
Future Volume (veh/h)	226	250	793	110	113	753
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1885	1856	1870	1900	1826	1856
Adj Flow Rate, veh/h	279	309	979	136	140	930
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	1	3	2	0	5	3
Cap, veh/h	402	352	1137	158	395	2270
Arrive On Green	0.22	0.22	0.36	0.36	0.23	0.64
Sat Flow, veh/h	1795	1572	3227	435	1739	3618
Grp Volume(v), veh/h	279	309	555	560	140	930
Grp Sat Flow(s),veh/h/ln	1795	1572	1777	1791	1739	1763
Q Serve(g_s), s	12.2	16.2	24.7	24.7	5.8	10.9
Cycle Q Clear(g_c), s	12.2	16.2	24.7	24.7	5.8	10.9
Prop In Lane	1.00	1.00		0.24	1.00	
Lane Grp Cap(c), veh/h	402	352	645	650	395	2270
V/C Ratio(X)	0.69	0.88	0.86	0.86	0.35	0.41
Avail Cap(c_a), veh/h	629	551	1141	1150	395	3255
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.5	32.0	25.2	25.2	27.7	7.3
Incr Delay (d2), s/veh	0.8	6.4	1.4	1.4	2.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	6.7	9.4	9.5	2.5	2.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	31.3	38.4	26.6	26.6	30.2	7.4
LnGrp LOS	C	D	C	C	C	A
Approach Vol, veh/h	588		1115			1070
Approach Delay, s/veh	35.0		26.6			10.4
Approach LOS	D		C			B
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	24.0	37.2			61.2	24.2
Change Period (Y+Rc), s	4.6	6.2			6.2	5.1
Max Green Setting (Gmax), s	19.4	54.8			78.8	29.9
Max Q Clear Time (g_c+1), s	7.8	26.7			12.9	18.2
Green Ext Time (p_c), s	0.1	4.2			4.1	0.9
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			22.1			
HCM 6th LOS			C			

Intersection						
Int Delay, s/veh	1.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↕	↕	↘	↗
Traffic Vol, veh/h	55	52	973	19	17	1417
Future Vol, veh/h	55	52	973	19	17	1417
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	0	140	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	2	8	5	11	6	7
Mvmt Flow	71	67	1247	24	22	1817

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	2200	624	0	0	1271
Stage 1	1247	-	-	-	-
Stage 2	953	-	-	-	-
Critical Hdwy	6.84	7.06	-	-	4.22
Critical Hdwy Stg 1	5.84	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-
Follow-up Hdwy	3.52	3.38	-	-	2.26
Pot Cap-1 Maneuver	~ 38	414	-	-	521
Stage 1	234	-	-	-	-
Stage 2	335	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	~ 36	414	-	-	521
Mov Cap-2 Maneuver	140	-	-	-	-
Stage 1	234	-	-	-	-
Stage 2	321	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	35.4	0	0.1
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	140	414	521	-
HCM Lane V/C Ratio	-	-	0.504	0.161	0.042	-
HCM Control Delay (s)	-	-	54.3	15.4	12.2	-
HCM Lane LOS	-	-	F	C	B	-
HCM 95th %tile Q(veh)	-	-	2.4	0.6	0.1	-

Notes  
 ~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon



Timings  
12: Heacock Street & San Michele Road

												Ø5
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBL	SBT	SBR	Ø5	
Lane Configurations												
Traffic Volume (vph)	53	316	6	20	93	625	94	812	248	32		
Future Volume (vph)	53	316	6	20	93	625	94	812	248	32		
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	NA	Prot	NA	Perm		
Protected Phases	7	4		3	8	1	2	1	6		5	
Permitted Phases			4			8					6	
Detector Phase	7	4	4	3	8	1	2	1	6	6		
Switch Phase												
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0	
Minimum Split (s)	9.5	30.5	30.5	8.5	30.5	8.5	34.5	8.5	34.5	34.5	8.5	
Total Split (s)	12.0	37.4	37.4	9.6	35.0	36.0	37.0	36.0	64.5	64.5	8.5	
Total Split (%)	10.0%	31.2%	31.2%	8.0%	29.2%	30.0%	30.8%	30.0%	53.8%	53.8%	7%	
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5	5.5		
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	Max	None	Max	Max	None	
Act Effct Green (s)	15.1	29.1	29.1	5.0	17.1	54.4	31.7	31.7	67.9	67.9		
Actuated g/C Ratio	0.13	0.26	0.26	0.04	0.15	0.48	0.28	0.28	0.60	0.60		
v/c Ratio	0.30	0.93	0.02	0.35	0.47	0.77	0.19	2.19	0.33	0.04		
Control Delay	48.5	68.0	0.0	67.2	51.4	15.6	24.9	565.2	13.7	0.1		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay	48.5	68.0	0.0	67.2	51.4	15.6	24.9	565.2	13.7	0.1		
LOS	D	E	A	E	D	B	C	F	B	A		
Approach Delay		64.1			21.5		24.9		423.4			
Approach LOS		E			C		C		F			

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 113.5	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 2.19	
Intersection Signal Delay: 216.3	Intersection LOS: F
Intersection Capacity Utilization 78.8%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 12: Heacock Street & San Michele Road



HCM 6th Signalized Intersection Summary  
 12: Heacock Street & San Michele Road

Gateway Aviation TA (JN:13445)

05/09/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	316	6	20	93	625	0	94	37	812	248	32
Future Volume (veh/h)	53	316	6	20	93	625	0	94	37	812	248	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1870	1900	1885	1900	1900	1826	1900
Adj Flow Rate, veh/h	76	451	9	29	133	893	0	134	53	1160	354	46
Peak Hour Factor	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Percent Heavy Veh, %	0	0	0	0	0	2	0	1	0	0	5	0
Cap, veh/h	97	481	397	84	467	806	2	667	253	475	1043	920
Arrive On Green	0.05	0.25	0.25	0.05	0.25	0.25	0.00	0.26	0.26	0.26	0.57	0.57
Sat Flow, veh/h	1810	1900	1570	1810	1900	1585	1810	2541	962	1810	1826	1610
Grp Volume(v), veh/h	76	451	9	29	133	893	0	93	94	1160	354	46
Grp Sat Flow(s),veh/h/ln	1810	1900	1570	1810	1900	1585	1810	1791	1712	1810	1826	1610
Q Serve(g_s), s	5.0	27.9	0.5	1.9	6.8	29.5	0.0	4.8	5.2	31.5	12.4	1.0
Cycle Q Clear(g_c), s	5.0	27.9	0.5	1.9	6.8	29.5	0.0	4.8	5.2	31.5	12.4	1.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.56	1.00		1.00
Lane Grp Cap(c), veh/h	97	481	397	84	467	806	2	470	450	475	1043	920
V/C Ratio(X)	0.78	0.94	0.02	0.34	0.28	1.11	0.00	0.20	0.21	2.44	0.34	0.05
Avail Cap(c_a), veh/h	113	505	418	84	467	806	60	470	450	475	1043	920
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.1	43.9	29.7	55.4	36.7	29.5	0.0	34.4	34.5	44.2	13.7	5.3
Incr Delay (d2), s/veh	21.8	24.4	0.0	0.9	0.1	65.4	0.0	0.9	1.1	654.6	0.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	16.4	0.2	0.9	3.1	21.8	0.0	2.2	2.2	99.8	4.9	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.9	68.3	29.7	56.3	36.8	94.9	0.0	35.3	35.6	698.8	14.6	5.4
LnGrp LOS	E	E	C	E	D	F	A	D	D	F	B	A
Approach Vol, veh/h		536			1055			187			1560	
Approach Delay, s/veh		69.0			86.5			35.4			523.1	
Approach LOS		E			F			D			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	37.0	37.0	10.1	35.8	0.0	74.0	10.9	35.0				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	31.5	* 32	5.1	31.9	4.0	59.0	7.5	29.5				
Max Q Clear Time (g_c+I1), s	33.5	7.2	3.9	29.9	0.0	14.4	7.0	31.5				
Green Ext Time (p_c), s	0.0	0.5	0.0	0.4	0.0	1.2	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	284.9
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection					
Intersection Delay, s/veh	16.8				
Intersection LOS	C				
Approach	EB	WB	NB		
Entry Lanes	3	2	2		
Conflicting Circle Lanes	2	2	2		
Adj Approach Flow, veh/h	0	1827	141		
Demand Flow Rate, veh/h	0	1937	147		
Vehicles Circulating, veh/h	13	130	1190		
Vehicles Exiting, veh/h	2054	1207	144		
Ped Vol Crossing Leg, #/h	0	0	0		
Ped Cap Adj	1.000	1.000	1.000		
Approach Delay, s/veh	0.0	17.3	10.0		
Approach LOS	-	C	B		
Lane	Left	Right	Left	Right	
Designated Moves	LT	TR	L	LTR	
Assumed Moves	LT	TR	L	LTR	
RT Channelized					
Lane Util	0.470	0.530	0.531	0.469	
Follow-Up Headway, s	2.667	2.535	2.667	2.535	
Critical Headway, s	4.645	4.328	4.645	4.328	
Entry Flow, veh/h	910	1027	78	69	
Cap Entry Lane, veh/h	1198	1272	452	516	
Entry HV Adj Factor	0.944	0.943	0.958	0.960	
Flow Entry, veh/h	859	968	75	66	
Cap Entry, veh/h	1130	1199	433	496	
V/C Ratio	0.760	0.808	0.173	0.134	
Control Delay, s/veh	16.3	18.2	10.9	9.0	
LOS	C	C	B	A	
95th %tile Queue, veh	8	9	1	0	

Timings  
14: Indian Street & San Michele Road

Gateway Aviation TA (JN:13445)

05/09/2022

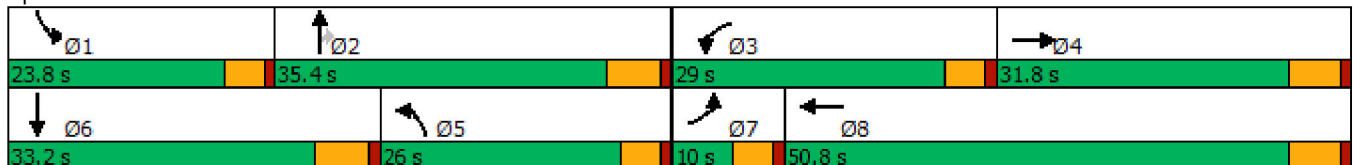


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	21	800	228	465	699	179	205	131	349
Future Volume (vph)	21	800	228	465	699	179	205	131	349
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8	5	2		1	6
Permitted Phases							2		
Detector Phase	7	4	3	8	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	31.8	9.6	31.8	9.6	32.8	32.8	9.6	32.8
Total Split (s)	10.0	31.8	29.0	50.8	26.0	35.4	35.4	23.8	33.2
Total Split (%)	8.3%	26.5%	24.2%	42.3%	21.7%	29.5%	29.5%	19.8%	27.7%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	5.3	26.1	23.0	47.9	21.5	27.8	27.8	15.4	21.8
Actuated g/C Ratio	0.05	0.23	0.20	0.42	0.19	0.25	0.25	0.14	0.19
v/c Ratio	0.38	3.45dr	0.91	0.51	1.53	0.60	0.45	0.77	0.82
Control Delay	67.4	1094.7	72.4	26.3	278.4	45.4	6.3	67.8	53.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.4	1094.7	72.4	26.3	278.4	45.4	6.3	67.8	53.7
LOS	E	F	E	C	F	D	A	E	D
Approach Delay		1084.9		40.4		188.4			57.3
Approach LOS		F		D		F			E

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 113.2  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 3.39  
 Intersection Signal Delay: 585.2  
 Intersection LOS: F  
 Intersection Capacity Utilization 140.6%  
 ICU Level of Service H  
 Analysis Period (min) 15  
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.























Splits and Phases: 14: Indian Street & San Michele Road



HCM 6th Signalized Intersection Summary  
 14: Indian Street & San Michele Road

Gateway Aviation TA (JN:13445)

05/09/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	800	1392	228	465	54	699	179	205	131	349	30
Future Volume (veh/h)	21	800	1392	228	465	54	699	179	205	131	349	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		1.00	1.00		0.67
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1885	1870	1885	1870	1900	1841	1841	1870	1885	1870	1796
Adj Flow Rate, veh/h	32	1212	2109	345	705	82	1059	271	311	198	529	45
Peak Hour Factor	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66
Percent Heavy Veh, %	5	1	2	1	2	0	4	4	2	1	2	7
Cap, veh/h	47	386	334	363	1279	149	621	524	451	225	727	61
Arrive On Green	0.03	0.22	0.22	0.20	0.39	0.39	0.18	0.28	0.28	0.13	0.22	0.22
Sat Flow, veh/h	1739	1791	1553	1795	3279	381	3506	1841	1583	1795	3256	274
Grp Volume(v), veh/h	32	1212	2109	345	402	385	1059	271	311	198	301	273
Grp Sat Flow(s),veh/h/ln	1739	1791	1553	1795	1870	1790	1753	1841	1583	1795	1870	1659
Q Serve(g_s), s	2.2	26.0	26.0	22.9	20.2	20.2	21.4	14.9	21.1	13.1	18.0	18.4
Cycle Q Clear(g_c), s	2.2	26.0	26.0	22.9	20.2	20.2	21.4	14.9	21.1	13.1	18.0	18.4
Prop In Lane	1.00		1.00	1.00		0.21	1.00		1.00	1.00		0.17
Lane Grp Cap(c), veh/h	47	386	334	363	730	698	621	524	451	225	418	371
V/C Ratio(X)	0.68	3.14	6.31	0.95	0.55	0.55	1.70	0.52	0.69	0.88	0.72	0.74
Avail Cap(c_a), veh/h	78	386	334	363	730	698	621	524	451	285	424	376
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.2	47.4	47.4	47.6	28.6	28.6	49.7	36.2	38.4	51.9	43.4	43.6
Incr Delay (d2), s/veh	6.1	971.5	2395.0	34.3	0.5	0.6	324.0	0.4	3.7	18.7	5.0	6.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	115.2	232.1	13.4	8.8	8.4	36.9	6.5	8.4	6.9	8.6	7.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.3	1018.9	2442.4	81.9	29.1	29.2	373.7	36.6	42.1	70.6	48.4	49.9
LnGrp LOS	E	F	F	F	C	C	F	D	D	E	D	D
Approach Vol, veh/h		3353			1132			1641			772	
Approach Delay, s/veh		1905.2			45.2			255.2			54.6	
Approach LOS		F			D			F			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.8	40.2	29.0	31.8	27.2	32.8	7.9	52.9				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	5.8	* 5.8	4.6	5.8				
Max Green Setting (Gmax), s	19.2	29.6	24.4	26.0	21.4	* 27	5.4	45.0				
Max Q Clear Time (g_c+I1), s	15.1	23.1	24.9	28.0	23.4	20.4	4.2	22.2				
Green Ext Time (p_c), s	0.1	0.9	0.0	0.0	0.0	1.2	0.0	2.8				

Intersection Summary

HCM 6th Ctrl Delay	1000.3
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
15: Indian Street & Nandina Avenue

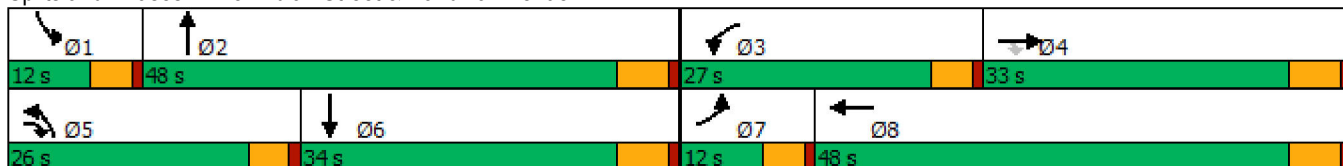


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	44	103	495	171	43	136	674	19	1434
Future Volume (vph)	44	103	495	171	43	136	674	19	1434
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	5	3	8	5	2	1	6
Permitted Phases	4								
Detector Phase	7	4	5	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	29.8	9.6	9.6	29.8	9.6	26.8	9.6	26.8
Total Split (s)	12.0	33.0	26.0	27.0	48.0	26.0	48.0	12.0	34.0
Total Split (%)	10.0%	27.5%	21.7%	22.5%	40.0%	21.7%	40.0%	10.0%	28.3%
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	6.7	14.7	39.9	17.9	28.3	19.3	46.3	6.0	28.6
Actuated g/C Ratio	0.07	0.14	0.39	0.18	0.28	0.19	0.46	0.06	0.28
v/c Ratio	0.49	0.57	0.89	0.82	0.28	0.59	0.60	0.25	1.93
Control Delay	63.1	51.2	38.9	63.8	19.2	47.4	25.1	55.4	444.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.1	51.2	38.9	63.8	19.2	47.4	25.1	55.4	444.7
LOS	E	D	D	E	B	D	C	E	F
Approach Delay	42.5		47.7			28.6		439.8	
Approach LOS	D		D			C		F	

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 101.6	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.93	
Intersection Signal Delay: 219.5	Intersection LOS: F
Intersection Capacity Utilization 93.3%	ICU Level of Service F
Analysis Period (min) 15	
























Splits and Phases: 15: Indian Street & Nandina Avenue



HCM 6th Signalized Intersection Summary  
 15: Indian Street & Nandina Avenue

Gateway Aviation TA (JN:13445)

05/09/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	103	495	171	43	53	136	674	69	19	1434	34
Future Volume (veh/h)	44	103	495	171	43	53	136	674	69	19	1434	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1752	1826	1678	1559	1870	1722	1885	1856	1811	1885	1856
Adj Flow Rate, veh/h	61	143	688	238	60	74	189	936	96	26	1992	47
Peak Hour Factor	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72
Percent Heavy Veh, %	0	10	5	15	23	2	12	1	3	6	1	3
Cap, veh/h	79	439	592	265	237	292	217	1235	127	43	953	22
Arrive On Green	0.04	0.25	0.25	0.17	0.37	0.37	0.13	0.37	0.37	0.03	0.26	0.26
Sat Flow, veh/h	1810	1752	1547	1598	635	783	1640	3363	345	1725	3668	86
Grp Volume(v), veh/h	61	143	688	238	0	134	189	525	507	26	1020	1020
Grp Sat Flow(s),veh/h/ln	1810	1752	1547	1598	0	1418	1640	1885	1823	1725	1885	1869
Q Serve(g_s), s	3.6	7.2	27.2	15.8	0.0	7.1	12.3	26.5	26.5	1.6	28.2	28.2
Cycle Q Clear(g_c), s	3.6	7.2	27.2	15.8	0.0	7.1	12.3	26.5	26.5	1.6	28.2	28.2
Prop In Lane	1.00		1.00	1.00		0.55	1.00		0.19	1.00		0.05
Lane Grp Cap(c), veh/h	79	439	592	265	0	528	217	692	669	43	490	486
V/C Ratio(X)	0.77	0.33	1.16	0.90	0.00	0.25	0.87	0.76	0.76	0.60	2.08	2.10
Avail Cap(c_a), veh/h	123	439	592	330	0	551	323	733	709	118	490	486
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.4	33.2	33.5	44.4	0.0	23.6	46.2	30.1	30.1	52.4	40.2	40.2
Incr Delay (d2), s/veh	5.9	0.4	90.2	20.4	0.0	0.2	11.1	4.3	4.5	4.9	493.6	501.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	3.0	29.3	7.5	0.0	2.3	5.4	11.9	11.6	0.7	79.4	79.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.3	33.6	123.7	64.8	0.0	23.8	57.3	34.5	34.6	57.3	533.8	541.7
LnGrp LOS	E	C	F	E	A	C	E	C	C	E	F	F
Approach Vol, veh/h		892			372			1221			2065	
Approach Delay, s/veh		104.7			50.0			38.1			531.7	
Approach LOS		F			D			D			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.3	45.6	22.6	33.0	19.0	34.0	9.3	46.2				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	7.4	42.2	22.4	27.2	21.4	28.2	7.4	42.2				
Max Q Clear Time (g_c+I1), s	3.6	28.5	17.8	29.2	14.3	30.2	5.6	9.1				
Green Ext Time (p_c), s	0.0	5.0	0.1	0.0	0.1	0.0	0.0	0.7				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			276.1									
HCM 6th LOS			F									



Timings  
16: Indian Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

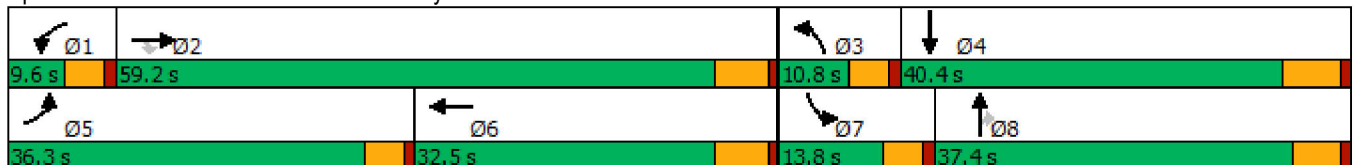
05/09/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	300	502	73	40	488	109	196	76	51	274
Future Volume (vph)	300	502	73	40	488	109	196	76	51	274
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	5	2		1	6	3	8		7	4
Permitted Phases			2					8		
Detector Phase	5	2	2	1	6	3	8	8	7	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	35.8	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2
Total Split (s)	36.3	59.2	59.2	9.6	32.5	10.8	37.4	37.4	13.8	40.4
Total Split (%)	30.3%	49.3%	49.3%	8.0%	27.1%	9.0%	31.2%	31.2%	11.5%	33.7%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.4	4.4	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	5.4	5.4	4.6	6.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	28.7	46.3	46.3	5.1	20.2	6.3	32.6	32.6	7.7	30.6
Actuated g/C Ratio	0.27	0.43	0.43	0.05	0.19	0.06	0.30	0.30	0.07	0.28
v/c Ratio	0.89	0.29	0.14	0.62	0.69	0.74	0.26	0.17	0.50	0.97dr
Control Delay	63.8	21.0	2.6	85.5	45.5	76.0	32.1	1.5	65.2	32.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.8	21.0	2.6	85.5	45.5	76.0	32.1	1.5	65.2	32.1
LOS	E	C	A	F	D	E	C	A	E	C
Approach Delay		34.2			48.5		38.5			34.0
Approach LOS		C			D		D			C

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 107.4  
 Natural Cycle: 110  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.90  
 Intersection Signal Delay: 37.6  
 Intersection LOS: D  
 Intersection Capacity Utilization 75.1%  
 ICU Level of Service D  
 Analysis Period (min) 15  
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 16: Indian Av. & Harley Knox Bl.





HCM 6th Signalized Intersection Summary  
 16: Indian Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

05/09/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	300	502	73	40	488	14	109	196	76	51	274	598
Future Volume (veh/h)	300	502	73	40	488	14	109	196	76	51	274	598
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1678	1841	1678	1826	1796	1781	1737	1648	1841	1900	1841	1841
Adj Flow Rate, veh/h	375	628	81	50	610	-4	136	245	88	64	342	692
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	15	4	15	5	7	8	11	17	4	0	4	4
Cap, veh/h	402	1909	540	63	809	0	189	1055	519	83	567	505
Arrive On Green	0.25	0.38	0.38	0.04	0.16	0.00	0.06	0.34	0.34	0.05	0.32	0.32
Sat Flow, veh/h	1598	5025	1422	1739	5065	0	3209	3131	1540	1810	1749	1560
Grp Volume(v), veh/h	375	628	81	50	606	0	136	245	88	64	342	692
Grp Sat Flow(s),veh/h/ln	1598	1675	1422	1739	1635	0	1605	1566	1540	1810	1749	1560
Q Serve(g_s), s	24.2	9.3	4.0	3.0	12.4	0.0	4.4	5.9	4.2	3.7	17.3	34.2
Cycle Q Clear(g_c), s	24.2	9.3	4.0	3.0	12.4	0.0	4.4	5.9	4.2	3.7	17.3	34.2
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	402	1909	540	63	809	0	189	1055	519	83	567	505
V/C Ratio(X)	0.93	0.33	0.15	0.79	0.75	0.00	0.72	0.23	0.17	0.77	0.60	1.37
Avail Cap(c_a), veh/h	480	2542	719	82	1240	0	189	1055	519	158	567	505
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.6	23.2	21.5	50.4	42.0	0.0	48.8	25.2	24.6	49.8	30.0	35.7
Incr Delay (d2), s/veh	21.8	0.1	0.1	23.4	1.4	0.0	11.1	0.1	0.2	5.6	1.8	178.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.3	3.5	1.3	1.7	4.9	0.0	2.0	2.1	1.5	1.7	7.2	37.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.4	23.3	21.6	73.8	43.4	0.0	59.9	25.3	24.8	55.4	31.8	214.1
LnGrp LOS	E	C	C	E	D	A	E	C	C	E	C	F
Approach Vol, veh/h		1084			656			469			1098	
Approach Delay, s/veh		36.0			45.7			35.2			148.0	
Approach LOS		D			D			D			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.5	45.9	10.8	40.4	31.1	23.2	9.4	41.8				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	*6.2				
Max Green Setting (Gmax), s	5.0	53.4	6.2	34.2	31.7	26.7	9.2	*32				
Max Q Clear Time (g_c+I1), s	5.0	11.3	6.4	36.2	26.2	14.4	5.7	7.9				
Green Ext Time (p_c), s	0.0	4.5	0.0	0.0	0.3	3.0	0.0	1.7				

Intersection Summary

HCM 6th Ctrl Delay	75.0
HCM 6th LOS	E

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection						
Int Delay, s/veh	7.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖	↗	↖		↖	↗
Traffic Vol, veh/h	0	128	2	10	247	12
Future Vol, veh/h	0	128	2	10	247	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	115	0	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	0	0	0	0	8	0
Mvmt Flow	0	171	3	13	329	16

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	684	10	0	0	16	0
Stage 1	10	-	-	-	-	-
Stage 2	674	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.18	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.272	-
Pot Cap-1 Maneuver	417	1077	-	-	1563	-
Stage 1	1018	-	-	-	-	-
Stage 2	510	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	329	1077	-	-	1563	-
Mov Cap-2 Maneuver	329	-	-	-	-	-
Stage 1	1018	-	-	-	-	-
Stage 2	403	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9	0	7.6
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT
Capacity (veh/h)	-	-	1077	1563
HCM Lane V/C Ratio	-	-	0.158	0.211
HCM Control Delay (s)	-	-	0	9
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.6	0.8

Timings  
18: Perris Bl. & San Michele Rd./Driveway

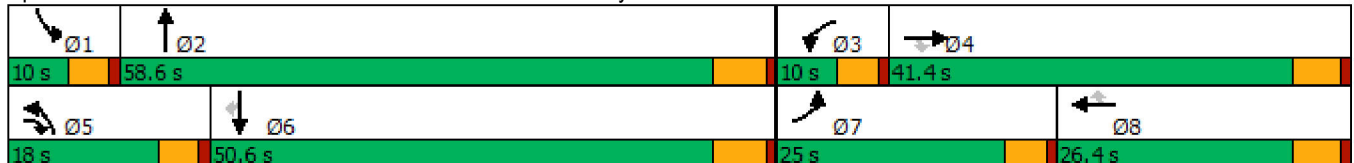


Lane Group	EBL	EBR	WBL	NBL	NBT	SBL	SBT	SBR	Ø4	Ø8
Lane Configurations	↖	↗	↖	↖	↑↑↑	↖	↑↑↑	↖		
Traffic Volume (vph)	141	160	1	67	1698	4	1791	88		
Future Volume (vph)	141	160	1	67	1698	4	1791	88		
Turn Type	Prot	pm+ov	Prot	Prot	NA	Prot	NA	Perm		
Protected Phases	7	5	3	5	2	1	6		4	8
Permitted Phases		4								6
Detector Phase	7	5	3	5	2	1	6	6		
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	10.0	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	9.6	9.6	9.6	34.8	9.6	34.8	34.8	31.4	26.4
Total Split (s)	25.0	18.0	10.0	18.0	58.6	10.0	50.6	50.6	41.4	26.4
Total Split (%)	20.8%	15.0%	8.3%	15.0%	48.8%	8.3%	42.2%	42.2%	35%	22%
Yellow Time (s)	3.6	3.6	3.6	3.6	4.8	3.6	4.8	4.8	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.6	4.6	4.6	4.6	5.8	4.6	5.8	5.8		
Lead/Lag	Lead	Lead	Lead	Lead	Lag	Lead	Lag	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 87.4  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated

























Splits and Phases: 18: Perris Bl. & San Michele Rd./Driveway



HCM 6th Signalized Intersection Summary  
 18: Perris Bl. & San Michele Rd./Driveway

Gateway Aviation (JN 13445)

05/09/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	141	0	160	1	0	0	67	1698	0	4	1791	88
Future Volume (veh/h)	141	0	160	1	0	0	67	1698	0	4	1791	88
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1900	1811	1900	1900	1900	1826	1885	1900	1900	1856	1826
Adj Flow Rate, veh/h	158	0	90	1	0	0	75	1908	0	4	2012	80
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	0	6	0	0	0	5	1	0	0	3	5
Cap, veh/h	201	268	300	2	56	47	96	2970	0	10	2671	815
Arrive On Green	0.11	0.00	0.14	0.00	0.00	0.00	0.06	0.58	0.00	0.01	0.53	0.53
Sat Flow, veh/h	1781	1900	1532	1810	1900	1610	1739	5316	0	1810	5066	1546
Grp Volume(v), veh/h	158	0	90	1	0	0	75	1908	0	4	2012	80
Grp Sat Flow(s),veh/h/ln	1781	1900	1532	1810	1900	1610	1739	1716	0	1810	1689	1546
Q Serve(g_s), s	6.4	0.0	3.7	0.0	0.0	0.0	3.2	18.5	0.0	0.2	23.1	1.9
Cycle Q Clear(g_c), s	6.4	0.0	3.7	0.0	0.0	0.0	3.2	18.5	0.0	0.2	23.1	1.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	201	268	300	2	56	47	96	2970	0	10	2671	815
V/C Ratio(X)	0.79	0.00	0.30	0.40	0.00	0.00	0.78	0.64	0.00	0.41	0.75	0.10
Avail Cap(c_a), veh/h	491	923	829	132	539	456	315	3668	0	132	3064	935
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.0	0.0	25.4	37.0	0.0	0.0	34.6	10.5	0.0	36.7	13.7	8.7
Incr Delay (d2), s/veh	6.7	0.0	0.6	34.6	0.0	0.0	5.1	0.3	0.0	10.2	0.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	0.0	1.3	0.0	0.0	0.0	1.4	5.3	0.0	0.1	7.1	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.7	0.0	26.0	71.5	0.0	0.0	39.7	10.8	0.0	46.9	14.7	8.8
LnGrp LOS	D	A	C	E	A	A	D	B	A	D	B	A
Approach Vol, veh/h		248			1			1983			2096	
Approach Delay, s/veh		34.1			71.5			11.9			14.5	
Approach LOS		C			E			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.0	48.5	4.7	15.8	8.7	44.9	13.0	7.6				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.4	4.6	5.8	4.6	5.4				
Max Green Setting (Gmax), s	5.4	52.8	5.4	36.0	13.4	44.8	20.4	21.0				
Max Q Clear Time (g_c+I1), s	2.2	20.5	2.0	5.7	5.2	25.1	8.4	0.0				
Green Ext Time (p_c), s	0.0	17.8	0.0	0.3	0.0	14.0	0.3	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			14.4									
HCM 6th LOS			B									

Timings  
19: Perris Bl. & Nandina Av.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	48	2	24	5	11	47	1699	15	1861	48
Future Volume (vph)	48	2	24	5	11	47	1699	15	1861	48
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	pm+ov
Protected Phases	7	4	3	8		5	2	1	6	7
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	7
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	5.0
Minimum Split (s)	9.6	41.4	9.6	28.4	28.4	9.6	39.8	9.6	41.8	9.6
Total Split (s)	12.0	41.4	12.0	41.4	41.4	15.0	55.6	11.0	51.6	12.0
Total Split (%)	10.0%	34.5%	10.0%	34.5%	34.5%	12.5%	46.3%	9.2%	43.0%	10.0%
Yellow Time (s)	3.6	4.4	3.6	4.4	4.4	3.6	4.8	3.6	4.8	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	4.6	5.4	5.4	4.6	5.8	4.6	5.8	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 83.2  
 Natural Cycle: 105  
 Control Type: Actuated-Uncoordinated
























Splits and Phases: 19: Perris Bl. & Nandina Av.

Ø1	Ø2	Ø3	Ø4
11 s	55.6 s	12 s	41.4 s
Ø5	Ø6	Ø7	Ø8
15 s	51.6 s	12 s	41.4 s

HCM 6th Signalized Intersection Summary  
 19: Perris Bl. & Nandina Av.

Gateway Aviation (JN 13445)

05/09/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	2	120	24	5	11	47	1699	14	15	1861	48
Future Volume (veh/h)	48	2	120	24	5	11	47	1699	14	15	1861	48
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1159	1841	1693	1307	1752	1796	1885	1218	1900	1870	1366
Adj Flow Rate, veh/h	53	2	64	26	5	1	52	1867	6	16	2045	23
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	50	4	14	40	10	7	1	46	0	2	36
Cap, veh/h	80	149	133	45	155	175	75	2671	9	119	2686	659
Arrive On Green	0.04	0.14	0.14	0.03	0.12	0.12	0.04	0.50	0.50	0.07	0.53	0.53
Sat Flow, veh/h	1810	1101	982	1612	1307	1478	1711	5296	17	1810	5106	1156
Grp Volume(v), veh/h	53	2	64	26	5	1	52	1209	664	16	2045	23
Grp Sat Flow(s),veh/h/ln	1810	1101	982	1612	1307	1478	1711	1716	1882	1810	1702	1156
Q Serve(g_s), s	2.2	0.1	4.6	1.2	0.3	0.0	2.3	20.6	20.6	0.6	24.2	0.7
Cycle Q Clear(g_c), s	2.2	0.1	4.6	1.2	0.3	0.0	2.3	20.6	20.6	0.6	24.2	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	80	149	133	45	155	175	75	1730	949	119	2686	659
V/C Ratio(X)	0.66	0.01	0.48	0.58	0.03	0.01	0.69	0.70	0.70	0.13	0.76	0.03
Avail Cap(c_a), veh/h	175	519	463	156	617	697	233	2239	1228	152	3065	745
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.9	28.6	30.5	36.7	29.8	29.7	36.0	14.5	14.5	33.6	14.3	7.2
Incr Delay (d2), s/veh	3.5	0.0	2.7	4.4	0.1	0.0	4.3	0.7	1.2	0.2	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	1.1	0.5	0.1	0.0	1.0	6.6	7.4	0.3	7.6	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.4	28.6	33.2	41.0	29.8	29.7	40.2	15.2	15.7	33.8	15.3	7.2
LnGrp LOS	D	C	C	D	C	C	D	B	B	C	B	A
Approach Vol, veh/h		119			32			1925			2084	
Approach Delay, s/veh		35.9			38.9			16.0			15.4	
Approach LOS		D			D			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.6	44.3	6.7	15.7	7.9	45.9	8.0	14.5				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.4	4.6	5.8	4.6	5.4				
Max Green Setting (Gmax), s	6.4	49.8	7.4	36.0	10.4	45.8	7.4	36.0				
Max Q Clear Time (g_c+I1), s	2.6	22.6	3.2	6.6	4.3	26.2	4.2	2.3				
Green Ext Time (p_c), s	0.0	14.9	0.0	0.3	0.0	14.0	0.0	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			16.4									
HCM 6th LOS			B									

Timings

20: Perris Bl. & Harley Knox Bl.

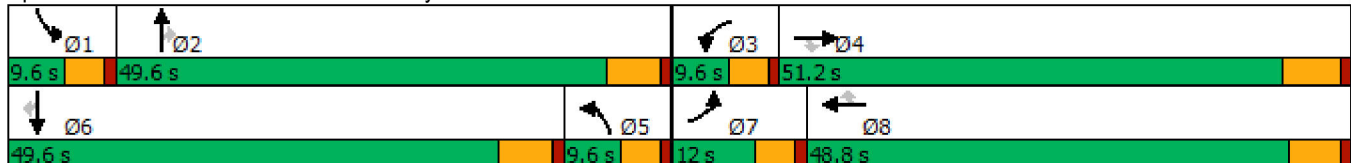
05/09/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	308	217	103	8	238	104	46	840	11	135	1082	290
Future Volume (vph)	308	217	103	8	238	104	46	840	11	135	1082	290
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	47.2	47.2	9.6	48.8	48.8	9.6	48.8	48.8	9.6	43.8	43.8
Total Split (s)	12.0	51.2	51.2	9.6	48.8	48.8	9.6	49.6	49.6	9.6	49.6	49.6
Total Split (%)	10.0%	42.7%	42.7%	8.0%	40.7%	40.7%	8.0%	41.3%	41.3%	8.0%	41.3%	41.3%
Yellow Time (s)	3.6	5.2	5.2	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 76.6  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

























Splits and Phases: 20: Perris Bl. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 20: Perris Bl. & Harley Knox Bl.

Gateway Aviation (JN 13445)

05/09/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	308	217	103	8	238	104	46	840	11	135	1082	290
Future Volume (veh/h)	308	217	103	8	238	104	46	840	11	135	1082	290
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1841	1811	1500	1841	1856	1589	1856	1604	1885	1856	1796
Adj Flow Rate, veh/h	338	238	71	9	262	66	51	923	8	148	1189	263
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	6	4	6	27	4	3	21	3	20	1	3	7
Cap, veh/h	186	849	372	32	734	227	133	1862	500	239	1892	568
Arrive On Green	0.11	0.24	0.24	0.01	0.15	0.15	0.05	0.37	0.37	0.07	0.37	0.37
Sat Flow, veh/h	1725	3497	1535	2771	5025	1551	2935	5066	1359	3483	5066	1521
Grp Volume(v), veh/h	338	238	71	9	262	66	51	923	8	148	1189	263
Grp Sat Flow(s),veh/h/ln	1725	1749	1535	1386	1675	1551	1468	1689	1359	1742	1689	1521
Q Serve(g_s), s	7.4	3.8	1.8	0.2	3.2	2.6	1.2	9.6	0.3	2.8	13.2	5.2
Cycle Q Clear(g_c), s	7.4	3.8	1.8	0.2	3.2	2.6	1.2	9.6	0.3	2.8	13.2	5.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	186	849	372	32	734	227	133	1862	500	239	1892	568
V/C Ratio(X)	1.81	0.28	0.19	0.28	0.36	0.29	0.38	0.50	0.02	0.62	0.63	0.46
Avail Cap(c_a), veh/h	186	2298	1009	202	3156	974	214	3240	869	254	3240	973
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.5	21.1	10.3	33.6	26.3	26.1	31.8	16.7	13.8	31.0	17.6	5.6
Incr Delay (d2), s/veh	386.4	0.2	0.2	1.8	0.3	0.7	0.7	0.2	0.0	2.8	0.3	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	22.8	1.4	0.8	0.1	1.2	0.9	0.4	3.2	0.1	1.2	4.4	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	416.9	21.3	10.6	35.3	26.6	26.8	32.4	16.9	13.8	33.8	17.9	6.2
LnGrp LOS	F	C	B	D	C	C	C	B	B	C	B	A
Approach Vol, veh/h		647			337			982			1600	
Approach Delay, s/veh		226.8			26.9			17.7			17.4	
Approach LOS		F			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.3	31.0	5.4	22.8	8.9	31.4	12.0	16.2				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	5.8	* 5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	5.0	43.8	5.0	45.0	5.0	* 44	7.4	* 43				
Max Q Clear Time (g_c+I1), s	4.8	11.6	2.2	5.8	3.2	15.2	9.4	5.2				
Green Ext Time (p_c), s	0.0	6.8	0.0	1.6	0.0	10.3	0.0	1.9				

Intersection Summary

HCM 6th Ctrl Delay	56.4
HCM 6th LOS	E

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



**APPENDIX 6.2:**

**OPENING YEAR CUMULATIVE (2026) WITH PROJECT (NON-PEAK) CONDITIONS  
INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**

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Timings

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

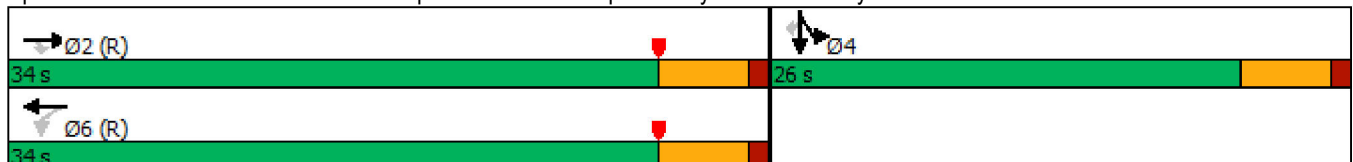


Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↑
Traffic Volume (vph)	804	26	187	278	1	290
Future Volume (vph)	804	26	187	278	1	290
Turn Type	NA	Perm	Perm	NA	NA	Perm
Protected Phases	2			6	4	
Permitted Phases		2	6			4
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	25.0	25.0	10.0	10.0
Total Split (s)	34.0	34.0	34.0	34.0	26.0	26.0
Total Split (%)	56.7%	56.7%	56.7%	56.7%	43.3%	43.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	29.0	29.0	29.0	29.0	21.0	21.0
Actuated g/C Ratio	0.48	0.48	0.48	0.48	0.35	0.35
v/c Ratio	0.53	0.04	1.00	0.18	1.59	0.43
Control Delay	12.2	3.0	93.8	15.7	297.6	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.2	3.0	93.8	15.7	297.6	4.1
LOS	B	A	F	B	F	A
Approach Delay	11.9			47.1	221.1	
Approach LOS	B			D	F	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection  
 Natural Cycle: 110  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.59  
 Intersection Signal Delay: 115.3  
 Intersection LOS: F  
 Intersection Capacity Utilization 157.7%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

05/10/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑						↑	↑
Traffic Volume (veh/h)	0	804	26	187	278	0	0	0	0	821	1	290
Future Volume (veh/h)	0	804	26	187	278	0	0	0	0	821	1	290
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1826	1841	1633	1856	0				1707	1900	1796
Adj Flow Rate, veh/h	0	874	28	203	302	0				892	1	255
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	5	4	18	3	0				13	0	7
Cap, veh/h	0	1677	754	287	1704	0				633	1	533
Arrive On Green	0.00	0.48	0.48	0.97	0.97	0.00				0.35	0.35	0.35
Sat Flow, veh/h	0	3561	1560	539	3618	0				1808	2	1522
Grp Volume(v), veh/h	0	874	28	203	302	0				893	0	255
Grp Sat Flow(s),veh/h/ln	0	1735	1560	539	1763	0				1810	0	1522
Q Serve(g_s), s	0.0	10.4	0.6	18.6	0.2	0.0				21.0	0.0	7.8
Cycle Q Clear(g_c), s	0.0	10.4	0.6	29.0	0.2	0.0				21.0	0.0	7.8
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1677	754	287	1704	0				633	0	533
V/C Ratio(X)	0.00	0.52	0.04	0.71	0.18	0.00				1.41	0.00	0.48
Avail Cap(c_a), veh/h	0	1677	754	287	1704	0				633	0	533
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.96	0.96	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	10.7	8.2	7.9	0.5	0.0				19.5	0.0	15.2
Incr Delay (d2), s/veh	0.0	1.2	0.1	13.2	0.2	0.0				193.8	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.2	0.2	1.2	0.1	0.0				41.2	0.0	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	11.9	8.2	21.1	0.7	0.0				213.3	0.0	15.9
LnGrp LOS	A	B	A	C	A	A				F	A	B
Approach Vol, veh/h		902			505						1148	
Approach Delay, s/veh		11.8			8.9						169.4	
Approach LOS		B			A						F	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		34.0		26.0		34.0						
Change Period (Y+Rc), s		5.0		5.0		5.0						
Max Green Setting (Gmax), s		29.0		21.0		29.0						
Max Q Clear Time (g_c+I1), s		12.4		23.0		31.0						
Green Ext Time (p_c), s		3.5		0.0		0.0						
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				82.0								
HCM 6th LOS				F								

Timings

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

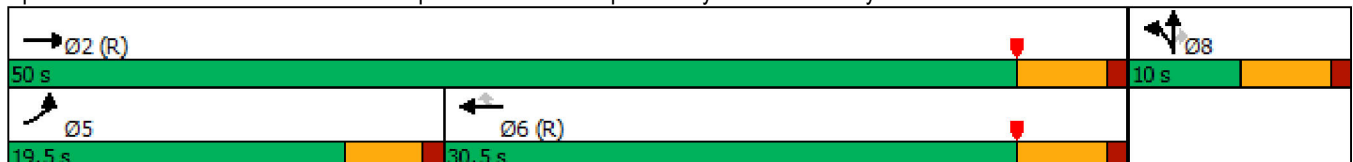


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	486	1025	411	1054	3	275
Future Volume (vph)	486	1025	411	1054	3	275
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	26.0	24.0	24.0	10.0	10.0
Total Split (s)	19.5	50.0	30.5	30.5	10.0	10.0
Total Split (%)	32.5%	83.3%	50.8%	50.8%	16.7%	16.7%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max
Act Effct Green (s)	15.0	45.0	25.5	25.5	5.0	5.0
Actuated g/C Ratio	0.25	0.75	0.42	0.42	0.08	0.08
v/c Ratio	1.23	0.46	0.32	1.43	0.41	1.11
Control Delay	138.8	2.4	12.3	220.4	35.0	105.5
Queue Delay	0.0	0.3	0.0	0.0	0.0	0.0
Total Delay	138.8	2.8	12.3	220.4	35.0	105.5
LOS	F	A	B	F	C	F
Approach Delay		46.5	162.0		93.6	
Approach LOS		D	F		F	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 29 (48%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.43  
 Intersection Signal Delay: 102.4  
 Intersection Capacity Utilization 157.7%  
 Analysis Period (min) 15  
 Intersection LOS: F  
 ICU Level of Service H

Splits and Phases: 2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

05/10/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↗↗			↗↗	↗		↗	↗			
Traffic Volume (veh/h)	486	1025	0	0	411	1054	53	3	275	0	0	0
Future Volume (veh/h)	486	1025	0	0	411	1054	53	3	275	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1826	1722	0	0	1752	1767	1870	1900	1826			
Adj Flow Rate, veh/h	528	1114	0	0	447	1082	58	3	234			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	5	12	0	0	10	9	2	0	5			
Cap, veh/h	435	2454	0	0	1415	636	144	7	129			
Arrive On Green	0.50	1.00	0.00	0.00	0.43	0.43	0.08	0.08	0.08			
Sat Flow, veh/h	1739	3358	0	0	3416	1496	1725	89	1547			
Grp Volume(v), veh/h	528	1114	0	0	447	1082	61	0	234			
Grp Sat Flow(s),veh/h/ln	1739	1636	0	0	1664	1496	1814	0	1547			
Q Serve(g_s), s	15.0	0.0	0.0	0.0	5.4	25.5	1.9	0.0	5.0			
Cycle Q Clear(g_c), s	15.0	0.0	0.0	0.0	5.4	25.5	1.9	0.0	5.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.95		1.00			
Lane Grp Cap(c), veh/h	435	2454	0	0	1415	636	151	0	129			
V/C Ratio(X)	1.21	0.45	0.00	0.00	0.32	1.70	0.40	0.00	1.81			
Avail Cap(c_a), veh/h	435	2454	0	0	1415	636	151	0	129			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.84	0.84	0.00	0.00	0.83	0.83	1.00	0.00	1.00			
Uniform Delay (d), s/veh	15.0	0.0	0.0	0.0	11.5	17.2	26.1	0.0	27.5			
Incr Delay (d2), s/veh	113.3	0.5	0.0	0.0	0.5	321.4	7.8	0.0	395.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	16.8	0.2	0.0	0.0	1.6	63.4	1.1	0.0	15.8			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	128.3	0.5	0.0	0.0	11.9	338.6	33.9	0.0	422.9			
LnGrp LOS	F	A	A	A	B	F	C	A	F			
Approach Vol, veh/h		1642			1529			295				
Approach Delay, s/veh		41.6			243.1			342.5				
Approach LOS		D			F			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		50.0			19.5	30.5		10.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		45.0			15.0	25.5		5.0				
Max Q Clear Time (g_c+I1), s		2.0			17.0	27.5		7.0				
Green Ext Time (p_c), s		5.6			0.0	0.0		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					156.1							
HCM 6th LOS					F							

Timings  
3: Western Way & Harley Knox Bl.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↶	↷↷↷	↷	↶	↷↷↷	↶	↷	↶	↷
Traffic Volume (vph)	97	1327	9	12	1443	1	0	7	0
Future Volume (vph)	97	1327	9	12	1443	1	0	7	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	NA
Protected Phases	5	2		1	6		8		4
Permitted Phases			2			8		4	
Detector Phase	5	2	2	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	21.8	21.8	9.6	21.8	32.6	32.6	32.6	32.6
Total Split (s)	22.0	75.4	75.4	9.6	63.0	35.0	35.0	35.0	35.0
Total Split (%)	18.3%	62.8%	62.8%	8.0%	52.5%	29.2%	29.2%	29.2%	29.2%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	10.9	53.6	53.6	6.5	41.5	15.1	15.1	15.1	15.1
Actuated g/C Ratio	0.16	0.80	0.80	0.10	0.62	0.23	0.23	0.23	0.23
v/c Ratio	0.39	0.37	0.01	0.07	0.53	0.00	0.00	0.03	0.11
Control Delay	38.6	5.8	0.0	44.3	13.5	31.0	0.0	31.7	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.6	5.8	0.0	44.3	13.5	31.0	0.0	31.7	0.5
LOS	D	A	A	D	B	C	A	C	A
Approach Delay		8.0			13.7		10.3		5.0
Approach LOS		A			B		B		A

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 66.6	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.53	
Intersection Signal Delay: 10.8	Intersection LOS: B
Intersection Capacity Utilization 55.4%	ICU Level of Service B
Analysis Period (min) 15	


























Splits and Phases: 3: Western Way & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 3: Western Way & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  							
Traffic Volume (veh/h)	97	1327	9	12	1443	39	1	0	2	7	0	45
Future Volume (veh/h)	97	1327	9	12	1443	39	1	0	2	7	0	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1767	1900	1900	1781	1693	1900	1900	1900	1411	1900	1337
Adj Flow Rate, veh/h	104	1427	10	13	1552	40	1	0	2	8	0	36
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	10	9	0	0	8	14	0	0	0	33	0	38
Cap, veh/h	131	2877	961	30	2605	67	247	0	158	242	0	158
Arrive On Green	0.08	0.60	0.60	0.02	0.53	0.53	0.10	0.00	0.10	0.10	0.00	0.10
Sat Flow, veh/h	1668	4823	1610	1810	4875	126	1394	0	1608	1064	0	1610
Grp Volume(v), veh/h	104	1427	10	13	1032	560	1	0	2	8	0	36
Grp Sat Flow(s),veh/h/ln	1668	1608	1610	1810	1621	1759	1394	0	1608	1064	0	1610
Q Serve(g_s), s	3.2	8.8	0.1	0.4	11.3	11.3	0.0	0.0	0.1	0.4	0.0	1.1
Cycle Q Clear(g_c), s	3.2	8.8	0.1	0.4	11.3	11.3	1.1	0.0	0.1	0.4	0.0	1.1
Prop In Lane	1.00		1.00	1.00		0.07	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	131	2877	961	30	1732	940	247	0	158	242	0	158
V/C Ratio(X)	0.79	0.50	0.01	0.44	0.60	0.60	0.00	0.00	0.01	0.03	0.00	0.23
Avail Cap(c_a), veh/h	559	6466	2159	174	3572	1938	926	0	941	761	0	943
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.5	6.0	4.3	25.3	8.3	8.3	22.1	0.0	21.1	21.3	0.0	21.6
Incr Delay (d2), s/veh	4.0	0.1	0.0	3.7	0.3	0.6	0.0	0.0	0.0	0.1	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	1.6	0.0	0.2	2.5	2.7	0.0	0.0	0.0	0.1	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.5	6.1	4.3	29.0	8.6	8.9	22.1	0.0	21.2	21.4	0.0	22.3
LnGrp LOS	C	A	A	C	A	A	C	A	C	C	A	C
Approach Vol, veh/h		1541			1605			3				44
Approach Delay, s/veh		7.6			8.9			21.5				22.2
Approach LOS		A			A			C				C
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.5	36.8		9.7	8.7	33.5		9.7				
Change Period (Y+Rc), s	4.6	5.8		4.6	4.6	5.8		4.6				
Max Green Setting (Gmax), s	5.0	69.6		30.4	17.4	57.2		30.4				
Max Q Clear Time (g_c+I1), s	2.4	10.8		3.1	5.2	13.3		3.1				
Green Ext Time (p_c), s	0.0	13.9		0.2	0.1	14.4		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				8.4								
HCM 6th LOS				A								



Timings  
4: Patterson Av. & Harley Knox Bl.

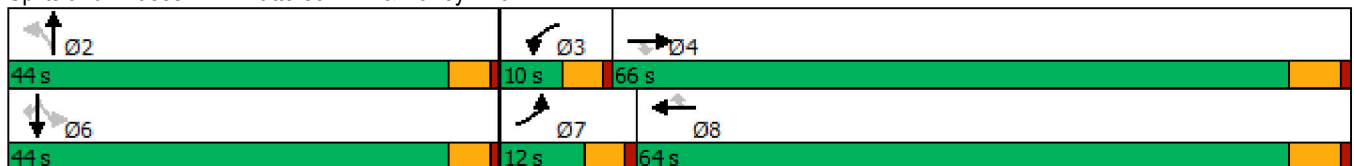


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑	↗	↖	↑↑	↗		↕		↕	↗
Traffic Volume (vph)	22	1202	76	45	1390	16	75	7	13	3	18
Future Volume (vph)	22	1202	76	45	1390	16	75	7	13	3	18
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	7	4		3	8			2		6	
Permitted Phases			4			8	2		6		6
Detector Phase	7	4	4	3	8	8	2	2	6	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	9.6	31.8	31.8	33.7	33.7	40.7	40.7	40.7
Total Split (s)	12.0	66.0	66.0	10.0	64.0	64.0	44.0	44.0	44.0	44.0	44.0
Total Split (%)	10.0%	55.0%	55.0%	8.3%	53.3%	53.3%	36.7%	36.7%	36.7%	36.7%	36.7%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8		4.7		4.7	4.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	6.3	43.4	43.4	5.8	48.1	48.1		16.3		16.3	16.3
Actuated g/C Ratio	0.08	0.55	0.55	0.07	0.61	0.61		0.21		0.21	0.21
v/c Ratio	0.22	0.49	0.09	0.43	0.74	0.03		0.49		0.09	0.07
Control Delay	49.0	12.9	3.1	56.7	16.8	0.1		30.8		30.6	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	49.0	12.9	3.1	56.7	16.8	0.1		30.8		30.6	0.4
LOS	D	B	A	E	B	A		C		C	A
Approach Delay		12.9			17.8			30.8		14.3	
Approach LOS		B			B			C		B	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 79.4  
 Natural Cycle: 95  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.74  
 Intersection Signal Delay: 16.2  
 Intersection LOS: B  
 Intersection Capacity Utilization 67.8%  
 ICU Level of Service C  
 Analysis Period (min) 15


























Splits and Phases: 4: Patterson Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
4: Patterson Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			 			 				
Traffic Volume (veh/h)	22	1202	76	45	1390	16	75	7	48	13	3	18
Future Volume (veh/h)	22	1202	76	45	1390	16	75	7	48	13	3	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1470	1796	1885	1663	1796	1070	1648	1426	1841	937	952	1278
Adj Flow Rate, veh/h	24	1307	83	49	1511	17	82	8	52	14	3	20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	29	7	1	16	7	56	17	32	4	65	64	42
Cap, veh/h	38	2771	903	72	1991	529	175	26	66	189	25	168
Arrive On Green	0.03	0.57	0.57	0.05	0.58	0.58	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1400	4904	1598	1584	3413	907	563	169	423	560	161	1083
Grp Volume(v), veh/h	24	1307	83	49	1511	17	142	0	0	17	0	20
Grp Sat Flow(s),veh/h/ln	1400	1635	1598	1584	1706	907	1154	0	0	721	0	1083
Q Serve(g_s), s	1.1	10.2	1.5	2.0	21.3	0.5	6.2	0.0	0.0	0.0	0.0	1.0
Cycle Q Clear(g_c), s	1.1	10.2	1.5	2.0	21.3	0.5	7.6	0.0	0.0	1.2	0.0	1.0
Prop In Lane	1.00		1.00	1.00		1.00	0.58		0.37	0.82		1.00
Lane Grp Cap(c), veh/h	38	2771	903	72	1991	529	267	0	0	214	0	168
V/C Ratio(X)	0.63	0.47	0.09	0.68	0.76	0.03	0.53	0.00	0.00	0.08	0.00	0.12
Avail Cap(c_a), veh/h	161	4580	1492	133	3081	819	779	0	0	540	0	660
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	31.0	8.3	6.4	30.3	10.0	5.7	26.1	0.0	0.0	23.5	0.0	23.4
Incr Delay (d2), s/veh	6.3	0.1	0.0	4.2	0.6	0.0	1.6	0.0	0.0	0.2	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	2.5	0.4	0.8	5.5	0.1	2.1	0.0	0.0	0.2	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.4	8.4	6.5	34.5	10.6	5.7	27.7	0.0	0.0	23.6	0.0	23.7
LnGrp LOS	D	A	A	C	B	A	C	A	A	C	A	C
Approach Vol, veh/h		1414			1577			142				37
Approach Delay, s/veh		8.8			11.3			27.7				23.7
Approach LOS		A			B			C				C
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		14.7	7.5	42.2		14.7	6.3	43.4				
Change Period (Y+Rc), s		* 4.7	4.6	5.8		* 4.7	4.6	5.8				
Max Green Setting (Gmax), s		* 39	5.4	60.2		* 39	7.4	58.2				
Max Q Clear Time (g_c+I1), s		9.6	4.0	12.2		3.2	3.1	23.3				
Green Ext Time (p_c), s		0.9	0.0	12.2		0.1	0.0	14.3				

Intersection Summary

HCM 6th Ctrl Delay	11.1
HCM 6th LOS	B

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
5: Heacock Street & Cactus Avenue

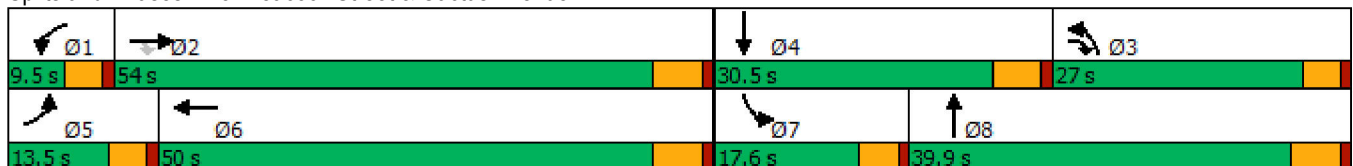


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↗	↘	↖	↗	↖	↗	↖	↗
Traffic Volume (vph)	162	981	722	75	1904	800	665	129	347
Future Volume (vph)	162	981	722	75	1904	800	665	129	347
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	3	1	6	3	8	7	4
Permitted Phases			2						
Detector Phase	5	2	3	1	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.5	30.5	9.5	9.5	30.5	9.5	30.5	9.5	30.5
Total Split (s)	13.5	54.0	27.0	9.5	50.0	27.0	39.9	17.6	30.5
Total Split (%)	11.2%	44.6%	22.3%	7.9%	41.3%	22.3%	33.0%	14.5%	25.2%
Yellow Time (s)	3.5	4.5	3.5	3.5	4.5	3.5	4.5	3.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	4.5	4.5	5.5	4.5	5.5	4.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None
Act Effct Green (s)	9.0	48.6	72.3	5.0	44.6	22.7	29.4	11.4	18.1
Actuated g/C Ratio	0.08	0.42	0.63	0.04	0.39	0.20	0.26	0.10	0.16
v/c Ratio	1.15	0.65	0.65	0.94	1.46	1.16	0.77	0.72	0.76
Control Delay	166.4	29.0	10.5	140.0	237.9	128.8	45.4	72.7	51.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	166.4	29.0	10.5	140.0	237.9	128.8	45.4	72.7	51.8
LOS	F	C	B	F	F	F	D	E	D
Approach Delay		33.8			234.4		90.1		56.5
Approach LOS		C			F		F		E

Intersection Summary

Cycle Length: 121  
 Actuated Cycle Length: 114.4  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.46  
 Intersection Signal Delay: 120.2  
 Intersection LOS: F  
 Intersection Capacity Utilization 118.5%  
 ICU Level of Service H  
 Analysis Period (min) 15























Splits and Phases: 5: Heacock Street & Cactus Avenue



HCM 6th Signalized Intersection Summary  
5: Heacock Street & Cactus Avenue

Gateway Aviation TA (JN:13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	162	981	722	75	1904	147	800	665	28	129	347	97
Future Volume (veh/h)	162	981	722	75	1904	147	800	665	28	129	347	97
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1870	1781	1900	1885	1856	1826	1841	1841	1870	1841	1885
Adj Flow Rate, veh/h	169	1022	752	78	1983	153	833	693	29	134	361	101
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	2	8	0	1	3	5	4	4	2	4	1
Cap, veh/h	141	1581	934	79	1341	102	682	944	39	161	430	119
Arrive On Green	0.08	0.42	0.42	0.04	0.39	0.39	0.20	0.27	0.27	0.09	0.15	0.15
Sat Flow, veh/h	1795	3741	1510	1810	3460	263	3478	3508	147	1781	2777	766
Grp Volume(v), veh/h	169	1022	752	78	1068	1068	833	363	359	134	238	224
Grp Sat Flow(s),veh/h/ln	1795	1870	1510	1810	1885	1838	1739	1841	1814	1781	1841	1703
Q Serve(g_s), s	9.0	24.9	10.0	4.9	44.5	44.5	22.5	20.6	20.7	8.5	14.4	14.7
Cycle Q Clear(g_c), s	9.0	24.9	10.0	4.9	44.5	44.5	22.5	20.6	20.7	8.5	14.4	14.7
Prop In Lane	1.00		1.00	1.00		0.14	1.00		0.08	1.00		0.45
Lane Grp Cap(c), veh/h	141	1581	934	79	731	713	682	495	488	161	285	264
V/C Ratio(X)	1.20	0.65	0.81	0.99	1.46	1.50	1.22	0.73	0.73	0.83	0.83	0.85
Avail Cap(c_a), veh/h	141	1581	934	79	731	713	682	552	544	203	401	371
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.9	26.3	5.6	54.9	35.1	35.1	46.1	38.2	38.2	51.3	47.1	47.2
Incr Delay (d2), s/veh	139.7	0.7	4.8	97.5	215.1	231.9	112.7	3.6	3.7	16.8	7.2	9.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.4	10.4	5.6	4.3	62.7	64.5	20.0	9.4	9.3	4.4	6.9	6.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	192.5	27.1	10.4	152.4	250.2	267.0	158.8	41.8	41.9	68.2	54.3	56.6
LnGrp LOS	F	C	B	F	F	F	F	D	D	E	D	E
Approach Vol, veh/h		1943			2214			1555			596	
Approach Delay, s/veh		35.0			254.9			104.5			58.3	
Approach LOS		D			F			F			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.5	54.0	28.0	23.3	13.5	50.0	14.9	36.4				
Change Period (Y+Rc), s	4.5	5.5	5.5	* 5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	5.0	48.5	22.5	* 25	9.0	44.5	13.1	34.4				
Max Q Clear Time (g_c+I1), s	6.9	26.9	24.5	16.7	11.0	46.5	10.5	22.7				
Green Ext Time (p_c), s	0.0	6.1	0.0	1.1	0.0	0.0	0.0	2.1				

Intersection Summary

HCM 6th Ctrl Delay	131.5
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

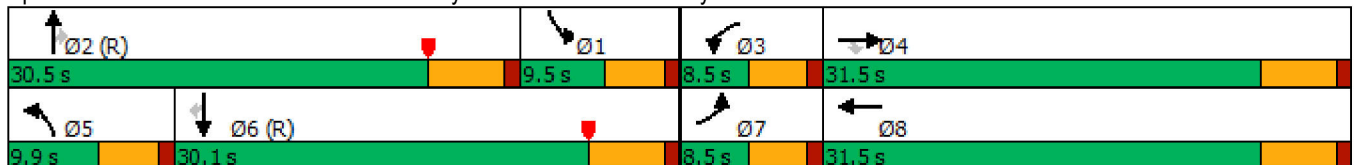
Timings  
6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	38	42	111	33	220	34	976	54	117	779	20
Future Volume (vph)	38	42	111	33	220	34	976	54	117	779	20
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4					2			6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Minimum Split (s)	8.5	23.5	23.5	8.5	31.5	8.5	30.5	30.5	8.5	23.5	23.5
Total Split (s)	8.5	31.5	31.5	8.5	31.5	9.9	30.5	30.5	9.5	30.1	30.1
Total Split (%)	10.6%	39.4%	39.4%	10.6%	39.4%	12.4%	38.1%	38.1%	11.9%	37.6%	37.6%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	5.5	4.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	4.0	12.2	12.2	4.0	12.2	5.6	42.2	42.2	5.0	45.3	45.3
Actuated g/C Ratio	0.05	0.15	0.15	0.05	0.15	0.07	0.53	0.53	0.06	0.57	0.57
v/c Ratio	0.49	0.16	0.24	0.38	0.60	0.28	0.53	0.06	1.06	0.41	0.02
Control Delay	58.8	27.3	1.2	49.4	18.6	41.1	17.0	0.1	141.8	14.5	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.8	27.3	1.2	49.4	18.6	41.1	17.0	0.1	141.8	14.5	0.1
LOS	E	C	A	D	B	D	B	A	F	B	A
Approach Delay		18.5			20.7		16.9			30.5	
Approach LOS		B			C		B			C	

Intersection Summary

Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 80  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.06  
 Intersection Signal Delay: 22.4  
 Intersection LOS: C  
 Intersection Capacity Utilization 67.9%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 6: Heacock Street & Meyer Drive/John F. Kennedy Drive



HCM 6th Signalized Intersection Summary  
 6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

05/10/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↕		↖	↕	↗	↖	↕	↗
Traffic Volume (veh/h)	38	42	111	33	220	213	34	976	54	117	779	20
Future Volume (veh/h)	38	42	111	33	220	213	34	976	54	117	779	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.95	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1648	1781	1841	1811	1856	1885	1811	1826	1781	1856	1781	1663
Adj Flow Rate, veh/h	40	44	116	34	229	222	35	1017	56	122	811	21
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	17	8	4	6	3	1	6	5	8	3	8	16
Cap, veh/h	47	335	294	46	343	289	47	1141	446	372	1811	707
Arrive On Green	0.03	0.19	0.19	0.03	0.19	0.19	0.03	0.31	0.31	0.21	0.51	0.51
Sat Flow, veh/h	1570	1781	1560	1725	1856	1560	1725	3652	1429	1767	3563	1391
Grp Volume(v), veh/h	40	44	116	34	229	222	35	1017	56	122	811	21
Grp Sat Flow(s),veh/h/ln	1570	1781	1560	1725	1856	1560	1725	1826	1429	1767	1781	1391
Q Serve(g_s), s	2.0	1.6	5.2	1.6	9.2	10.8	1.6	21.2	1.7	4.7	11.6	0.6
Cycle Q Clear(g_c), s	2.0	1.6	5.2	1.6	9.2	10.8	1.6	21.2	1.7	4.7	11.6	0.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	47	335	294	46	343	289	47	1141	446	372	1811	707
V/C Ratio(X)	0.86	0.13	0.39	0.74	0.67	0.77	0.75	0.89	0.13	0.33	0.45	0.03
Avail Cap(c_a), veh/h	78	579	507	86	603	507	116	1141	446	372	1811	707
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.88	0.88	0.88	0.64	0.64	0.64
Uniform Delay (d), s/veh	38.6	27.0	28.5	38.7	30.3	31.0	38.7	26.2	12.0	26.8	12.5	9.8
Incr Delay (d2), s/veh	18.0	0.1	0.3	8.5	0.8	1.6	7.7	9.5	0.5	0.1	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.7	1.8	0.7	3.9	3.9	0.7	9.6	0.7	1.8	3.9	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.6	27.1	28.8	47.2	31.1	32.6	46.3	35.7	12.5	26.9	13.0	9.9
LnGrp LOS	E	C	C	D	C	C	D	D	B	C	B	A
Approach Vol, veh/h		200			485			1108			954	
Approach Delay, s/veh		34.0			32.9			34.9			14.7	
Approach LOS		C			C			C			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	22.3	30.5	6.6	20.6	6.7	46.2	6.9	20.3				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	5.0	* 25	4.0	26.0	5.4	24.6	4.0	26.0				
Max Q Clear Time (g_c+I1), s	6.7	23.2	3.6	7.2	3.6	13.6	4.0	12.8				
Green Ext Time (p_c), s	0.0	0.9	0.0	0.3	0.0	2.6	0.0	1.3				













Intersection Summary

HCM 6th Ctrl Delay	27.5
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

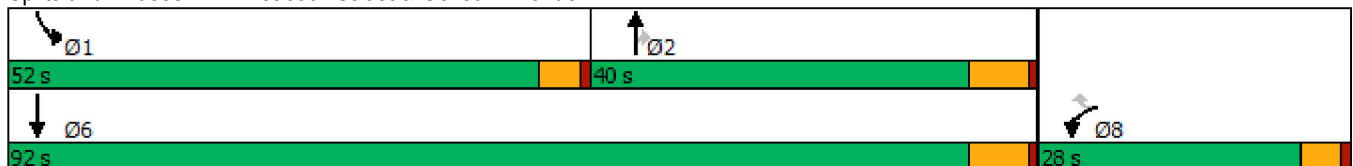
Timings  
7: Heacock Street & Gentian Avenue

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	14	22	896	9	94	854
Future Volume (vph)	14	22	896	9	94	854
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	27.6	27.6	27.2	27.2	9.6	16.2
Total Split (s)	28.0	28.0	40.0	40.0	52.0	92.0
Total Split (%)	23.3%	23.3%	33.3%	33.3%	43.3%	76.7%
Yellow Time (s)	3.6	3.6	5.2	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	6.2	6.2	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	12.5	12.5	35.9	35.9	8.1	47.3
Actuated g/C Ratio	0.21	0.21	0.60	0.60	0.13	0.78
v/c Ratio	0.04	0.06	0.47	0.01	0.40	0.35
Control Delay	22.6	10.5	13.4	11.0	32.6	5.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.6	10.5	13.4	11.0	32.6	5.3
LOS	C	B	B	B	C	A
Approach Delay	15.3		13.4			8.0
Approach LOS	B		B			A

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 60.3	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.47	
Intersection Signal Delay: 10.7	Intersection LOS: B
Intersection Capacity Utilization 51.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 7: Heacock Street & Gentian Avenue

















HCM 6th Signalized Intersection Summary  
7: Heacock Street & Gentian Avenue

Gateway Aviation TA (JN:13445)

05/10/2022

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	14	22	896	9	94	854
Future Volume (veh/h)	14	22	896	9	94	854
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	0.97	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1826	1811	1900	1870	1796
Adj Flow Rate, veh/h	15	23	943	9	99	899
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	5	6	0	2	7
Cap, veh/h	157	130	1479	692	151	2162
Arrive On Green	0.09	0.09	0.43	0.43	0.08	0.63
Sat Flow, veh/h	1810	1498	3532	1610	1781	3503
Grp Volume(v), veh/h	15	23	943	9	99	899
Grp Sat Flow(s),veh/h/ln	1810	1498	1721	1610	1781	1706
Q Serve(g_s), s	0.3	0.5	8.3	0.1	2.1	5.1
Cycle Q Clear(g_c), s	0.3	0.5	8.3	0.1	2.1	5.1
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	157	130	1479	692	151	2162
V/C Ratio(X)	0.10	0.18	0.64	0.01	0.66	0.42
Avail Cap(c_a), veh/h	1097	908	3013	1410	2187	7585
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.2	16.4	8.6	6.3	17.1	3.5
Incr Delay (d2), s/veh	0.1	0.2	0.5	0.0	1.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.2	1.6	0.0	0.7	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	16.3	16.6	9.1	6.3	18.9	3.6
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	38		952			998
Approach Delay, s/veh	16.5		9.1			5.2
Approach LOS	B		A			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	7.9	22.8			30.7	7.9
Change Period (Y+Rc), s	4.6	6.2			6.2	4.6
Max Green Setting (Gmax), s	47.4	33.8			85.8	23.4
Max Q Clear Time (g_c+I1), s	4.1	10.3			7.1	2.5
Green Ext Time (p_c), s	0.1	6.3			6.8	0.0
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			7.3			
HCM 6th LOS			A			



Timings  
8: Heacock Street & Iris Avenue

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	358	447	503	229	303	623
Future Volume (vph)	358	447	503	229	303	623
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	15.8	15.8	33.2	33.2	9.6	16.2
Total Split (s)	48.0	48.0	46.0	46.0	26.0	72.0
Total Split (%)	40.0%	40.0%	38.3%	38.3%	21.7%	60.0%
Yellow Time (s)	4.8	4.8	5.2	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	6.2	6.2	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effect Green (s)	15.1	15.1	19.2	19.2	11.5	35.4
Actuated g/C Ratio	0.24	0.24	0.30	0.30	0.18	0.56
v/c Ratio	0.48	0.67	0.59	0.40	0.54	0.39
Control Delay	23.7	9.3	21.8	4.7	28.3	8.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.7	9.3	21.8	4.7	28.3	8.6
LOS	C	A	C	A	C	A
Approach Delay	15.7		16.5			15.0
Approach LOS	B		B			B

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 63	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 15.7	Intersection LOS: B
Intersection Capacity Utilization 51.6%	ICU Level of Service A
Analysis Period (min) 15	













Splits and Phases: 8: Heacock Street & Iris Avenue



HCM 6th Signalized Intersection Summary  
8: Heacock Street & Iris Avenue

Gateway Aviation TA (JN:13445)

05/10/2022

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	358	447	503	229	303	623
Future Volume (veh/h)	358	447	503	229	303	623
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1885	1885	1767	1900	1870	1781
Adj Flow Rate, veh/h	421	526	592	269	356	733
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	1	1	9	0	2	8
Cap, veh/h	1322	606	850	408	465	1531
Arrive On Green	0.38	0.38	0.25	0.25	0.13	0.45
Sat Flow, veh/h	3483	1598	3445	1610	3456	3474
Grp Volume(v), veh/h	421	526	592	269	356	733
Grp Sat Flow(s),veh/h/ln	1742	1598	1678	1610	1728	1692
Q Serve(g_s), s	6.1	21.7	11.4	10.7	7.1	10.8
Cycle Q Clear(g_c), s	6.1	21.7	11.4	10.7	7.1	10.8
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	1322	606	850	408	465	1531
V/C Ratio(X)	0.32	0.87	0.70	0.66	0.77	0.48
Avail Cap(c_a), veh/h	2061	945	1873	899	1037	3123
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.6	20.5	24.1	23.9	29.8	13.7
Incr Delay (d2), s/veh	0.1	5.4	1.0	1.8	1.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	7.8	4.1	3.8	2.7	3.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	15.8	25.9	25.2	25.7	30.8	13.9
LnGrp LOS	B	C	C	C	C	B
Approach Vol, veh/h	947		861			1089
Approach Delay, s/veh	21.4		25.3			19.4
Approach LOS	C		C			B
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	14.2	24.3			38.5	32.9
Change Period (Y+Rc), s	4.6	6.2			6.2	5.8
Max Green Setting (Gmax), s	21.4	39.8			65.8	42.2
Max Q Clear Time (g_c+I1), s	9.1	13.4			12.8	23.7
Green Ext Time (p_c), s	0.5	4.7			5.1	3.3
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			21.8			
HCM 6th LOS			C			

Timings  
9: Heacock Street & Krameria Avenue-North

	↙	↖	↑	↘	↓
Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations	↙	↖	↑↔	↘	↑↑
Traffic Volume (vph)	104	125	508	216	678
Future Volume (vph)	104	125	508	216	678
Turn Type	Prot	Perm	NA	Prot	NA
Protected Phases	8		2	1	6
Permitted Phases		8			
Detector Phase	8	8	2	1	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	29.1	29.1	29.2	9.6	16.2
Total Split (s)	39.0	39.0	56.0	25.0	81.0
Total Split (%)	32.5%	32.5%	46.7%	20.8%	67.5%
Yellow Time (s)	4.1	4.1	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	6.2	4.6	6.2
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	Min	Max	Min
Act Effct Green (s)	12.6	12.6	22.7	20.9	48.3
Actuated g/C Ratio	0.17	0.17	0.31	0.29	0.67
v/c Ratio	0.40	0.34	0.80	0.51	0.36
Control Delay	31.4	7.4	27.3	28.5	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	31.4	7.4	27.3	28.5	6.2
LOS	C	A	C	C	A
Approach Delay	18.3		27.3		11.6
Approach LOS	B		C		B

Intersection Summary














Cycle Length: 120	
Actuated Cycle Length: 72.5	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay: 18.5	Intersection LOS: B
Intersection Capacity Utilization 54.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 9: Heacock Street & Krameria Avenue-North



HCM 6th Signalized Intersection Summary  
 9: Heacock Street & Krameria Avenue-North

Gateway Aviation TA (JN:13445)  
 05/10/2022

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			 			 
Traffic Volume (veh/h)	104	125	508	202	216	678
Future Volume (veh/h)	104	125	508	202	216	678
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1856	1885	1841	1856
Adj Flow Rate, veh/h	128	154	627	249	267	837
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	3	1	4	3
Cap, veh/h	264	234	770	305	532	2412
Arrive On Green	0.15	0.15	0.31	0.31	0.30	0.68
Sat Flow, veh/h	1781	1585	2557	978	1753	3618
Grp Volume(v), veh/h	128	154	448	428	267	837
Grp Sat Flow(s),veh/h/ln	1781	1585	1763	1680	1753	1763
Q Serve(g_s), s	4.4	6.2	15.8	15.8	8.4	6.6
Cycle Q Clear(g_c), s	4.4	6.2	15.8	15.8	8.4	6.6
Prop In Lane	1.00	1.00		0.58	1.00	
Lane Grp Cap(c), veh/h	264	234	550	524	532	2412
V/C Ratio(X)	0.49	0.66	0.81	0.82	0.50	0.35
Avail Cap(c_a), veh/h	898	799	1305	1244	532	3921
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.3	27.0	21.3	21.3	19.3	4.4
Incr Delay (d2), s/veh	0.5	1.2	1.1	1.2	3.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	2.3	5.6	5.4	3.4	1.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	26.8	28.2	22.5	22.5	22.6	4.4
LnGrp LOS	C	C	C	C	C	A
Approach Vol, veh/h	282		876			1104
Approach Delay, s/veh	27.6		22.5			8.8
Approach LOS	C		C			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	25.0	27.2			52.2	15.0
Change Period (Y+Rc), s	4.6	6.2			6.2	5.1
Max Green Setting (Gmax), s	20.4	49.8			74.8	33.9
Max Q Clear Time (g_c+I1), s	10.4	17.8			8.6	8.2
Green Ext Time (p_c), s	0.3	3.2			3.6	0.4
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			16.5			
HCM 6th LOS			B			

Timings  
10: Heacock Street & Driveway 1



Lane Group	EBL	EBT	NBL	NBT	SBT	SBR	Ø1	Ø8
Lane Configurations								
Traffic Volume (vph)	31	0	56	751	672	57		
Future Volume (vph)	31	0	56	751	672	57		
Turn Type	Perm	NA	Prot	NA	NA	Perm		
Protected Phases		4	5	2	6		1	8
Permitted Phases	4					6		
Detector Phase	4	4	5	2	6	6		
Switch Phase								
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	26.6	26.6	9.6	23.2	23.2	23.2	9.6	26.6
Total Split (s)	26.6	26.6	9.6	83.8	83.8	83.8	9.6	26.6
Total Split (%)	22.2%	22.2%	8.0%	69.8%	69.8%	69.8%	8%	22%
Yellow Time (s)	3.6	3.6	3.6	5.2	5.2	5.2	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.6	4.6	4.6	6.2	6.2	6.2		
Lead/Lag			Lead	Lag	Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	Min	Min	Min	None	None
Act Effct Green (s)	12.0	12.0	5.1	35.8	23.0	23.0		
Actuated g/C Ratio	0.24	0.24	0.10	0.73	0.47	0.47		
v/c Ratio	0.10	0.07	0.38	0.32	0.45	0.08		
Control Delay	16.1	0.2	32.7	6.1	12.6	4.5		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay	16.1	0.2	32.7	6.1	12.6	4.5		
LOS	B	A	C	A	B	A		
Approach Delay		7.8		8.0	12.0			
Approach LOS		A		A	B			

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 49.3	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.45	
Intersection Signal Delay: 9.8	Intersection LOS: A
Intersection Capacity Utilization 46.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 10: Heacock Street & Driveway 1

Ø1	Ø2	Ø4
9.6 s	83.8 s	26.6 s
Ø5	Ø6	Ø8
9.6 s	83.8 s	26.6 s

HCM 6th Signalized Intersection Summary  
 10: Heacock Street & Driveway 1

Gateway Aviation TA (JN:13445)

05/10/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	0	34	0	0	0	56	751	0	0	672	57
Future Volume (veh/h)	31	0	34	0	0	0	56	751	0	0	672	57
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1515	1900	1900	1900	1663	1870	1900	1900	1841	1900
Adj Flow Rate, veh/h	34	0	37	0	0	0	61	816	0	0	730	62
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	26	0	0	0	16	2	0	0	4	0
Cap, veh/h	455	0	227	0	268	0	100	1989	0	5	1290	594
Arrive On Green	0.14	0.00	0.14	0.00	0.00	0.00	0.06	0.56	0.00	0.00	0.37	0.37
Sat Flow, veh/h	1810	0	1610	0	1900	0	1584	3647	0	1810	3497	1610
Grp Volume(v), veh/h	34	0	37	0	0	0	61	816	0	0	730	62
Grp Sat Flow(s),veh/h/ln	1810	0	1610	0	1900	0	1584	1777	0	1810	1749	1610
Q Serve(g_s), s	0.6	0.0	0.7	0.0	0.0	0.0	1.4	4.7	0.0	0.0	6.0	0.9
Cycle Q Clear(g_c), s	0.6	0.0	0.7	0.0	0.0	0.0	1.4	4.7	0.0	0.0	6.0	0.9
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	455	0	227	0	268	0	100	1989	0	5	1290	594
V/C Ratio(X)	0.07	0.00	0.16	0.00	0.00	0.00	0.61	0.41	0.00	0.00	0.57	0.10
Avail Cap(c_a), veh/h	1302	0	981	0	1158	0	219	7640	0	251	7519	3462
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	13.6	0.0	13.6	0.0	0.0	0.0	16.5	4.5	0.0	0.0	9.1	7.5
Incr Delay (d2), s/veh	0.1	0.0	0.3	0.0	0.0	0.0	2.2	0.1	0.0	0.0	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.2	0.0	0.0	0.0	0.4	0.4	0.0	0.0	1.2	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.6	0.0	14.0	0.0	0.0	0.0	18.7	4.7	0.0	0.0	9.5	7.6
LnGrp LOS	B	A	B	A	A	A	B	A	A	A	A	A
Approach Vol, veh/h		71			0			877			792	
Approach Delay, s/veh		13.8			0.0			5.7			9.3	
Approach LOS		B						A			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	26.4		9.7	6.9	19.5		9.7				
Change Period (Y+Rc), s	4.6	6.2		4.6	4.6	6.2		4.6				
Max Green Setting (Gmax), s	5.0	77.6		22.0	5.0	77.6		22.0				
Max Q Clear Time (g_c+I1), s	0.0	6.7		2.7	3.4	8.0		0.0				
Green Ext Time (p_c), s	0.0	5.9		0.2	0.0	5.3		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				7.7								
HCM 6th LOS				A								

Intersection						
Int Delay, s/veh	0.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↕	↗	↘	↕
Traffic Vol, veh/h	11	12	1037	56	47	883
Future Vol, veh/h	11	12	1037	56	47	883
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	0	140	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	19	26	7	2	7	12
Mvmt Flow	13	14	1178	64	53	1003

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1786	589	0	0	1242
Stage 1	1178	-	-	-	-
Stage 2	608	-	-	-	-
Critical Hdwy	7.18	7.42	-	-	4.24
Critical Hdwy Stg 1	6.18	-	-	-	-
Critical Hdwy Stg 2	6.18	-	-	-	-
Follow-up Hdwy	3.69	3.56	-	-	2.27
Pot Cap-1 Maneuver	60	396	-	-	530
Stage 1	222	-	-	-	-
Stage 2	462	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	54	396	-	-	530
Mov Cap-2 Maneuver	154	-	-	-	-
Stage 1	222	-	-	-	-
Stage 2	416	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	22.1	0	0.6
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	154	396	530	-
HCM Lane V/C Ratio	-	-	0.081	0.034	0.101	-
HCM Control Delay (s)	-	-	30.4	14.4	12.6	-
HCM Lane LOS	-	-	D	B	B	-
HCM 95th %tile Q(veh)	-	-	0.3	0.1	0.3	-

Timings  
12: Heacock Street & San Michele Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	28	74	4	36	310	734	1	60	461	107	47	
Future Volume (vph)	28	74	4	36	310	734	1	60	461	107	47	
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Prot	NA	Perm	
Protected Phases	7	4		3	8	1	5	2	1	6		
Permitted Phases			4			8					6	
Detector Phase	7	4	4	3	8	1	5	2	1	6	6	
Switch Phase												
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	4.0	5.0	4.0	5.0	5.0	
Minimum Split (s)	9.5	30.5	30.5	8.5	30.5	8.5	8.5	34.5	8.5	34.5	34.5	
Total Split (s)	13.0	41.0	41.0	13.0	41.0	28.0	12.0	38.0	28.0	54.0	54.0	
Total Split (%)	10.8%	34.2%	34.2%	10.8%	34.2%	23.3%	10.0%	31.7%	23.3%	45.0%	45.0%	
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	3.5	4.5	3.5	4.5	4.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	4.5	5.5	4.5	5.5	5.5	
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	Max	None	Max	Max	
Act Effct Green (s)	6.5	17.5	17.5	15.5	26.5	55.9	4.7	33.0	23.9	59.8	59.8	
Actuated g/C Ratio	0.06	0.17	0.17	0.15	0.25	0.53	0.04	0.31	0.23	0.57	0.57	
v/c Ratio	0.32	0.32	0.01	0.18	0.87	0.74	0.01	0.10	1.45	0.16	0.06	
Control Delay	58.8	45.6	0.0	41.1	57.4	8.8	55.0	26.3	247.2	15.5	1.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	58.8	45.6	0.0	41.1	57.4	8.8	55.0	26.3	247.2	15.5	1.0	
LOS	E	D	A	D	E	A	D	C	F	B	A	
Approach Delay		47.4			23.8			26.6		188.0		
Approach LOS		D			C			C		F		

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 105.7  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.45  
 Intersection Signal Delay: 79.3  
 Intersection Capacity Utilization 65.0%  
 Analysis Period (min) 15

Intersection LOS: E  
 ICU Level of Service C

Splits and Phases: 12: Heacock Street & San Michele Road

























Ø2 38 s	Ø1 28 s	Ø4 41 s	Ø3 13 s
Ø5 12 s	Ø6 54 s	Ø8 41 s	Ø7 13 s



HCM 6th Signalized Intersection Summary  
 12: Heacock Street & San Michele Road

Gateway Aviation TA (JN:13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	74	4	36	310	734	1	60	9	461	107	47
Future Volume (veh/h)	28	74	4	36	310	734	1	60	9	461	107	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1856	1455	1811	1900	1885	1900	1544	1737	1885	1633	1870
Adj Flow Rate, veh/h	37	99	5	48	413	979	1	80	12	615	143	63
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh, %	0	3	30	6	0	1	0	24	11	1	18	2
Cap, veh/h	47	135	89	450	584	816	2	722	106	365	804	780
Arrive On Green	0.03	0.07	0.07	0.26	0.31	0.31	0.00	0.28	0.28	0.20	0.49	0.49
Sat Flow, veh/h	1810	1856	1233	1725	1900	1598	1810	2567	377	1795	1633	1585
Grp Volume(v), veh/h	37	99	5	48	413	979	1	45	47	615	143	63
Grp Sat Flow(s),veh/h/ln	1810	1856	1233	1725	1900	1598	1810	1467	1476	1795	1633	1585
Q Serve(g_s), s	2.3	6.0	0.4	2.4	22.2	35.5	0.1	2.6	2.7	23.5	5.6	1.9
Cycle Q Clear(g_c), s	2.3	6.0	0.4	2.4	22.2	35.5	0.1	2.6	2.7	23.5	5.6	1.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	47	135	89	450	584	816	2	413	415	365	804	780
V/C Ratio(X)	0.78	0.74	0.06	0.11	0.71	1.20	0.51	0.11	0.11	1.68	0.18	0.08
Avail Cap(c_a), veh/h	133	570	379	450	584	816	117	413	415	365	804	780
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.9	52.5	40.9	32.5	35.4	28.3	57.7	30.8	30.8	46.0	16.3	9.4
Incr Delay (d2), s/veh	9.8	2.9	0.1	0.0	3.4	101.7	59.0	0.5	0.6	319.5	0.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	2.9	0.1	1.0	10.4	32.9	0.1	1.0	1.0	42.4	2.1	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.8	55.4	41.0	32.5	38.8	129.9	116.6	31.3	31.4	365.5	16.8	9.6
LnGrp LOS	E	E	D	C	D	F	F	C	C	F	B	A
Approach Vol, veh/h		141			1440			93			821	
Approach Delay, s/veh		57.6			100.5			32.3			277.4	
Approach LOS		E			F			C			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	29.0	38.0	34.6	13.9	4.6	62.4	7.5	41.0				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	23.5	* 33	8.5	35.5	7.5	48.5	8.5	35.5				
Max Q Clear Time (g_c+I1), s	25.5	4.7	4.4	8.0	2.1	7.6	4.3	37.5				
Green Ext Time (p_c), s	0.0	0.2	0.0	0.3	0.0	0.5	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	153.8
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection					
Intersection Delay, s/veh 11.3					
Intersection LOS B					
Approach	EB	WB	NB		
Entry Lanes	3	2	2		
Conflicting Circle Lanes	2	2	2		
Adj Approach Flow, veh/h	0	1538	81		
Demand Flow Rate, veh/h	0	1660	86		
Vehicles Circulating, veh/h	14	72	1324		
Vehicles Exiting, veh/h	1718	1338	194		
Ped Vol Crossing Leg, #/h	0	0	0		
Ped Cap Adj	1.000	1.000	1.000		
Approach Delay, s/veh	0.0	11.3	10.5		
Approach LOS	-	B	B		
Lane	Left	Right	Left	Right	
Designated Moves	LT	TR	L	LTR	
Assumed Moves	LT	TR	L	LTR	
RT Channelized					
Lane Util	0.470	0.530	0.535	0.465	
Follow-Up Headway, s	2.667	2.535	2.667	2.535	
Critical Headway, s	4.645	4.328	4.645	4.328	
Entry Flow, veh/h	780	880	46	40	
Cap Entry Lane, veh/h	1263	1336	399	461	
Entry HV Adj Factor	0.927	0.926	0.933	0.952	
Flow Entry, veh/h	723	815	43	38	
Cap Entry, veh/h	1171	1237	373	439	
V/C Ratio	0.617	0.659	0.115	0.087	
Control Delay, s/veh	11.0	11.6	11.5	9.4	
LOS	B	B	B	A	
95th %tile Queue, veh	4	5	0	0	

Timings  
14: Indian Street & San Michele Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↖	↗	↖	↗	↖	↗	↗	↖	↗
Traffic Volume (vph)	14	194	170	827	1447	198	216	5	128
Future Volume (vph)	14	194	170	827	1447	198	216	5	128
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8	5	2		1	6
Permitted Phases							2		
Detector Phase	7	4	3	8	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	31.8	9.6	31.8	9.6	32.8	32.8	9.6	32.8
Total Split (s)	12.0	33.0	19.0	40.0	32.0	57.0	57.0	11.0	36.0
Total Split (%)	10.0%	27.5%	15.8%	33.3%	26.7%	47.5%	47.5%	9.2%	30.0%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	5.8	20.0	14.6	35.1	27.7	43.6	43.6	5.3	13.0
Actuated g/C Ratio	0.06	0.21	0.15	0.36	0.29	0.45	0.45	0.06	0.13
v/c Ratio	0.19	0.79	0.84	0.84	1.83	0.32	0.30	0.07	0.38
Control Delay	51.7	25.7	67.3	36.3	402.1	19.6	3.2	50.0	38.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.7	25.7	67.3	36.3	402.1	19.6	3.2	50.0	38.7
LOS	D	C	E	D	F	B	A	D	D
Approach Delay		26.4		41.5		315.1			39.1
Approach LOS		C		D		F			D

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 96.3  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.83  
 Intersection Signal Delay: 181.6  
 Intersection LOS: F  
 Intersection Capacity Utilization 103.3%  
 ICU Level of Service G  
 Analysis Period (min) 15

Splits and Phases: 14: Indian Street & San Michele Road



HCM 6th Signalized Intersection Summary  
 14: Indian Street & San Michele Road

Gateway Aviation TA (JN:13445)

05/10/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	194	351	170	827	10	1447	198	216	5	128	12
Future Volume (veh/h)	14	194	351	170	827	10	1447	198	216	5	128	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		0.94
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1663	1856	1885	1856	1885	1900	1885	1885	1856	1900	1870	1900
Adj Flow Rate, veh/h	19	266	481	233	1133	14	1982	271	296	7	175	16
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Percent Heavy Veh, %	16	3	1	3	1	0	1	1	3	0	2	0
Cap, veh/h	32	447	399	237	1367	17	918	772	635	16	508	46
Arrive On Green	0.02	0.25	0.25	0.13	0.37	0.37	0.26	0.41	0.41	0.01	0.15	0.15
Sat Flow, veh/h	1584	1763	1572	1767	3716	46	3591	1885	1552	1810	3361	303
Grp Volume(v), veh/h	19	266	481	233	575	572	1982	271	296	7	96	95
Grp Sat Flow(s),veh/h/ln	1584	1763	1572	1767	1885	1876	1795	1885	1552	1810	1870	1793
Q Serve(g_s), s	1.3	14.2	27.2	14.1	29.7	29.7	27.4	10.6	14.9	0.4	4.9	5.1
Cycle Q Clear(g_c), s	1.3	14.2	27.2	14.1	29.7	29.7	27.4	10.6	14.9	0.4	4.9	5.1
Prop In Lane	1.00		1.00	1.00		0.02	1.00		1.00	1.00		0.17
Lane Grp Cap(c), veh/h	32	447	399	237	693	690	918	772	635	16	283	271
V/C Ratio(X)	0.60	0.59	1.21	0.98	0.83	0.83	2.16	0.35	0.47	0.44	0.34	0.35
Avail Cap(c_a), veh/h	109	447	399	237	693	690	918	900	741	108	527	505
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.1	35.2	40.0	46.3	30.8	30.8	39.9	21.9	23.1	52.9	40.7	40.8
Incr Delay (d2), s/veh	6.4	1.5	114.1	52.9	7.8	7.9	525.6	0.1	0.2	7.0	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	6.0	22.6	9.5	14.1	14.1	78.3	4.4	5.2	0.2	2.2	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.5	36.7	154.1	99.2	38.7	38.7	565.5	22.0	23.3	59.9	41.0	41.1
LnGrp LOS	E	D	F	F	D	D	F	C	C	E	D	D
Approach Vol, veh/h		766			1380			2549			198	
Approach Delay, s/veh		110.9			48.9			444.8			41.7	
Approach LOS		F			D			F			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.5	49.7	19.0	33.0	33.2	22.0	6.8	45.2				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	5.8	* 5.8	4.6	5.8				
Max Green Setting (Gmax), s	6.4	51.2	14.4	27.2	27.4	* 30	7.4	34.2				
Max Q Clear Time (g_c+I1), s	2.4	16.9	16.1	29.2	29.4	7.1	3.3	31.7				
Green Ext Time (p_c), s	0.0	1.3	0.0	0.0	0.0	0.5	0.0	1.2				

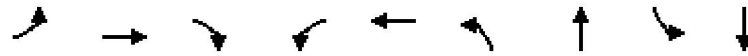
Intersection Summary

HCM 6th Ctrl Delay	264.5
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
15: Indian Street & Nandina Avenue



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↑	↗	↖	↗	↖	↕	↖	↕
Traffic Volume (vph)	7	32	152	33	41	335	1652	12	465
Future Volume (vph)	7	32	152	33	41	335	1652	12	465
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	5	3	8	5	2	1	6
Permitted Phases	4								
Detector Phase	7	4	5	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	29.8	9.6	9.6	29.8	9.6	26.8	9.6	26.8
Total Split (s)	13.0	35.0	36.0	15.0	37.0	36.0	56.0	14.0	34.0
Total Split (%)	10.8%	29.2%	30.0%	12.5%	30.8%	30.0%	46.7%	11.7%	28.3%
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	5.5	12.6	35.6	6.9	17.7	21.5	55.4	5.8	29.1
Actuated g/C Ratio	0.07	0.15	0.43	0.08	0.22	0.26	0.67	0.07	0.35
v/c Ratio	0.06	0.17	0.22	0.28	0.22	0.82	0.76	0.12	0.42
Control Delay	46.1	36.9	2.8	47.1	23.6	46.3	18.2	47.0	27.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.1	36.9	2.8	47.1	23.6	46.3	18.2	47.0	27.1
LOS	D	D	A	D	C	D	B	D	C
Approach Delay	10.2		31.7			22.7		27.6	
Approach LOS	B		C			C		C	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 82.3  
 Natural Cycle: 110  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.82  
 Intersection Signal Delay: 23.1  
 Intersection LOS: C  
 Intersection Capacity Utilization 74.1%  
 ICU Level of Service D  
 Analysis Period (min) 15























Splits and Phases: 15: Indian Street & Nandina Avenue



HCM 6th Signalized Intersection Summary  
 15: Indian Street & Nandina Avenue

Gateway Aviation TA (JN:13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	32	152	33	41	22	335	1652	70	12	465	24
Future Volume (veh/h)	7	32	152	33	41	22	335	1652	70	12	465	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1352	1544	1618	1515	1530	1752	1885	1737	1485	1856	1900
Adj Flow Rate, veh/h	8	36	169	37	46	24	372	1836	78	13	517	27
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	37	24	19	26	25	10	1	11	28	3	0
Cap, veh/h	18	169	485	53	140	73	410	2061	87	22	1204	63
Arrive On Green	0.01	0.12	0.12	0.03	0.15	0.15	0.25	0.57	0.57	0.02	0.34	0.34
Sat Flow, veh/h	1810	1352	1309	1541	938	489	1668	3588	151	1414	3496	182
Grp Volume(v), veh/h	8	36	169	37	0	70	372	958	956	13	274	270
Grp Sat Flow(s),veh/h/ln	1810	1352	1309	1541	0	1427	1668	1885	1854	1414	1856	1823
Q Serve(g_s), s	0.4	2.0	7.8	2.0	0.0	3.6	18.0	36.5	37.7	0.8	9.4	9.5
Cycle Q Clear(g_c), s	0.4	2.0	7.8	2.0	0.0	3.6	18.0	36.5	37.7	0.8	9.4	9.5
Prop In Lane	1.00		1.00	1.00		0.34	1.00		0.08	1.00		0.10
Lane Grp Cap(c), veh/h	18	169	485	53	0	213	410	1083	1065	22	639	628
V/C Ratio(X)	0.44	0.21	0.35	0.69	0.00	0.33	0.91	0.88	0.90	0.59	0.43	0.43
Avail Cap(c_a), veh/h	183	475	781	193	0	536	630	1139	1120	160	639	628
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.9	32.7	18.9	39.7	0.0	31.6	30.4	15.3	15.5	40.6	20.9	21.0
Incr Delay (d2), s/veh	5.9	0.6	0.4	5.9	0.0	0.9	8.8	8.2	9.5	9.0	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.6	2.2	0.8	0.0	1.2	7.5	14.3	14.8	0.3	3.7	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.8	33.3	19.3	45.6	0.0	32.5	39.2	23.5	25.0	49.6	21.4	21.4
LnGrp LOS	D	C	B	D	A	C	D	C	C	D	C	C
Approach Vol, veh/h		213			107			2286			557	
Approach Delay, s/veh		22.7			37.0			26.7			22.1	
Approach LOS		C			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.9	53.5	7.5	16.2	25.0	34.4	5.4	18.2				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	9.4	50.2	10.4	29.2	31.4	28.2	8.4	31.2				
Max Q Clear Time (g_c+I1), s	2.8	39.7	4.0	9.8	20.0	11.5	2.4	5.6				
Green Ext Time (p_c), s	0.0	8.1	0.0	0.6	0.4	2.6	0.0	0.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			26.0									
HCM 6th LOS			C									

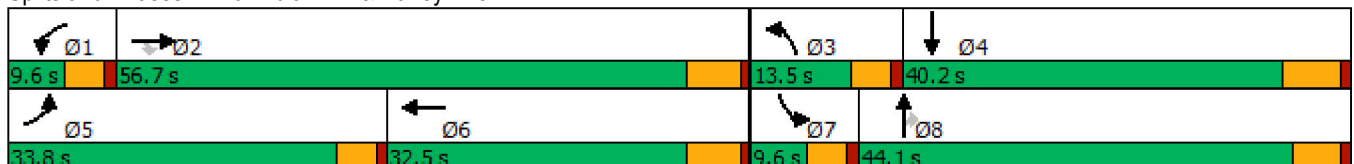
Timings  
16: Indian Av. & Harley Knox Bl.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	547	445	99	62	787	136	293	41	13	76
Future Volume (vph)	547	445	99	62	787	136	293	41	13	76
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	5	2		1	6	3	8		7	4
Permitted Phases			2					8		
Detector Phase	5	2	2	1	6	3	8	8	7	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	35.8	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2
Total Split (s)	33.8	56.7	56.7	9.6	32.5	13.5	44.1	44.1	9.6	40.2
Total Split (%)	28.2%	47.3%	47.3%	8.0%	27.1%	11.3%	36.8%	36.8%	8.0%	33.5%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.4	4.4	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	5.4	5.4	4.6	6.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	29.6	47.9	47.9	5.1	23.4	8.1	26.2	26.2	5.1	14.2
Actuated g/C Ratio	0.31	0.49	0.49	0.05	0.24	0.08	0.27	0.27	0.05	0.15
v/c Ratio	1.20	0.20	0.14	0.75	0.76	0.55	0.35	0.09	0.16	0.53
Control Delay	139.1	15.0	3.7	91.7	39.3	53.1	30.0	0.3	53.5	14.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	139.1	15.0	3.7	91.7	39.3	53.1	30.0	0.3	53.5	14.9
LOS	F	B	A	F	D	D	C	A	D	B
Approach Delay		76.2			42.9		34.1			16.7
Approach LOS		E			D		C			B

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 96.8  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.20  
 Intersection Signal Delay: 51.9  
 Intersection LOS: D  
 Intersection Capacity Utilization 76.8%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 16: Indian Av. & Harley Knox Bl.



































HCM 6th Signalized Intersection Summary  
 16: Indian Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 			 	
Traffic Volume (veh/h)	547	445	99	62	787	47	136	293	41	13	76	195
Future Volume (veh/h)	547	445	99	62	787	47	136	293	41	13	76	195
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1811	1737	1856	1856	1870	1767	1796	1752	1781	1737	1485
Adj Flow Rate, veh/h	601	489	100	68	865	32	149	322	38	14	84	165
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	10	6	11	3	3	2	9	7	10	8	11	28
Cap, veh/h	544	2488	741	87	1136	42	216	664	289	28	239	213
Arrive On Green	0.33	0.50	0.50	0.05	0.23	0.23	0.07	0.19	0.19	0.02	0.14	0.14
Sat Flow, veh/h	1668	4944	1472	1767	5014	185	3264	3413	1485	1697	1650	1472
Grp Volume(v), veh/h	601	489	100	68	582	315	149	322	38	14	84	165
Grp Sat Flow(s),veh/h/ln	1668	1648	1472	1767	1689	1822	1632	1706	1485	1697	1650	1472
Q Serve(g_s), s	29.2	4.9	3.2	3.4	14.4	14.5	4.0	7.5	1.9	0.7	4.1	9.7
Cycle Q Clear(g_c), s	29.2	4.9	3.2	3.4	14.4	14.5	4.0	7.5	1.9	0.7	4.1	9.7
Prop In Lane	1.00		1.00	1.00		0.10	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	544	2488	741	87	765	413	216	664	289	28	239	213
V/C Ratio(X)	1.11	0.20	0.13	0.78	0.76	0.76	0.69	0.49	0.13	0.50	0.35	0.77
Avail Cap(c_a), veh/h	544	2809	836	99	1006	543	324	1474	641	95	626	559
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.2	12.3	11.9	42.1	32.4	32.4	40.9	32.1	29.8	43.7	34.5	36.9
Incr Delay (d2), s/veh	70.7	0.0	0.1	25.2	2.5	4.6	1.5	0.6	0.2	5.1	0.9	5.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	21.2	1.6	1.0	2.0	5.8	6.5	1.6	3.0	0.7	0.3	1.6	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	100.9	12.3	11.9	67.3	34.9	37.0	42.4	32.6	30.0	48.8	35.4	42.8
LnGrp LOS	F	B	B	E	C	D	D	C	C	D	D	D
Approach Vol, veh/h		1190			965			509			263	
Approach Delay, s/veh		57.0			37.8			35.3			40.8	
Approach LOS		E			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.0	50.9	10.5	19.2	33.8	26.1	6.1	23.6				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	5.0	50.9	8.9	34.0	29.2	26.7	5.0	* 39				
Max Q Clear Time (g_c+I1), s	5.4	6.9	6.0	11.7	31.2	16.5	2.7	9.5				
Green Ext Time (p_c), s	0.0	3.5	0.1	1.3	0.0	3.8	0.0	2.1				

Intersection Summary

HCM 6th Ctrl Delay	45.5
HCM 6th LOS	D

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Intersection						
Int Delay, s/veh	7.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↔		↔	↔
Traffic Vol, veh/h	0	70	0	2	143	1
Future Vol, veh/h	0	70	0	2	143	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	115	0	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	18	0	0	14	0
Mvmt Flow	0	74	0	2	152	1

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	306	1	0	0	2
Stage 1	1	-	-	-	-
Stage 2	305	-	-	-	-
Critical Hdwy	6.4	6.38	-	-	4.24
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.462	-	-	2.326
Pot Cap-1 Maneuver	690	1039	-	-	1545
Stage 1	1028	-	-	-	-
Stage 2	752	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	622	1039	-	-	1545
Mov Cap-2 Maneuver	622	-	-	-	-
Stage 1	1028	-	-	-	-
Stage 2	678	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.7	0	7.5
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT
Capacity (veh/h)	-	-	1039	1545
HCM Lane V/C Ratio	-	-	0.072	0.098
HCM Control Delay (s)	-	-	0	8.7
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.3

Timings  
18: Perris Bl. & San Michele Rd./Driveway

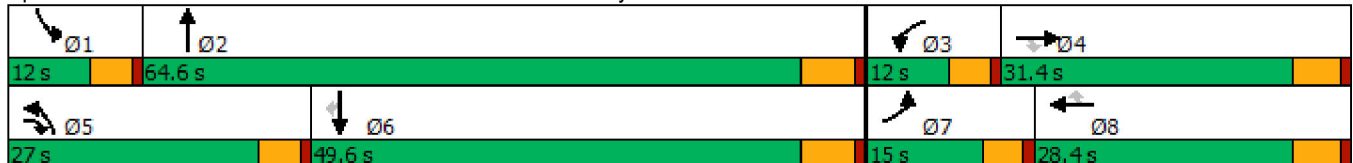


Lane Group	EBL	EBR	WBL	NBL	NBT	SBL	SBT	SBR	Ø4	Ø8
Lane Configurations	↖	↗	↖	↖	↑↑↑	↖	↑↑↑	↖		
Traffic Volume (vph)	36	25	2	119	1573	1	1339	79		
Future Volume (vph)	36	25	2	119	1573	1	1339	79		
Turn Type	Prot	pm+ov	Prot	Prot	NA	Prot	NA	Perm		
Protected Phases	7	5	3	5	2	1	6		4	8
Permitted Phases		4						6		
Detector Phase	7	5	3	5	2	1	6	6		
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	10.0	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	9.6	9.6	9.6	34.8	9.6	34.8	34.8	31.4	26.4
Total Split (s)	15.0	27.0	12.0	27.0	64.6	12.0	49.6	49.6	31.4	28.4
Total Split (%)	12.5%	22.5%	10.0%	22.5%	53.8%	10.0%	41.3%	41.3%	26%	24%
Yellow Time (s)	3.6	3.6	3.6	3.6	4.8	3.6	4.8	4.8	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.6	4.6	4.6	4.6	5.8	4.6	5.8	5.8		
Lead/Lag	Lead	Lead	Lead	Lead	Lag	Lead	Lag	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 62.1  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated

























Splits and Phases: 18: Perris Bl. & San Michele Rd./Driveway























HCM 6th Signalized Intersection Summary  
 18: Perris Bl. & San Michele Rd./Driveway

Gateway Aviation (JN 13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	0	25	2	0	0	119	1573	1	1	1339	79
Future Volume (veh/h)	36	0	25	2	0	0	119	1573	1	1	1339	79
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1767	1900	1767	1159	1900	1900	1826	1870	418	1900	1870	1856
Adj Flow Rate, veh/h	38	0	8	2	0	0	127	1673	1	1	1424	63
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	9	0	9	50	0	0	5	2	100	0	2	3
Cap, veh/h	67	172	277	3	102	87	164	2884	2	3	2320	714
Arrive On Green	0.04	0.00	0.09	0.00	0.00	0.00	0.09	0.55	0.55	0.00	0.45	0.45
Sat Flow, veh/h	1682	1900	1497	1104	1900	1610	1739	5271	3	1810	5106	1572
Grp Volume(v), veh/h	38	0	8	2	0	0	127	1080	594	1	1424	63
Grp Sat Flow(s),veh/h/ln	1682	1900	1497	1104	1900	1610	1739	1702	1870	1810	1702	1572
Q Serve(g_s), s	1.3	0.0	0.2	0.1	0.0	0.0	4.1	12.0	12.0	0.0	12.0	1.3
Cycle Q Clear(g_c), s	1.3	0.0	0.2	0.1	0.0	0.0	4.1	12.0	12.0	0.0	12.0	1.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	67	172	277	3	102	87	164	1862	1023	3	2320	714
V/C Ratio(X)	0.57	0.00	0.03	0.66	0.00	0.00	0.78	0.58	0.58	0.31	0.61	0.09
Avail Cap(c_a), veh/h	307	867	824	143	767	650	684	3513	1930	235	3925	1209
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.9	0.0	19.0	28.4	0.0	0.0	25.2	8.6	8.6	28.4	11.8	8.8
Incr Delay (d2), s/veh	7.4	0.0	0.0	65.6	0.0	0.0	3.0	0.3	0.5	19.6	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.1	0.1	0.0	0.0	1.6	2.9	3.3	0.0	3.4	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.3	0.0	19.1	94.0	0.0	0.0	28.2	8.8	9.1	48.1	12.0	8.9
LnGrp LOS	C	A	B	F	A	A	C	A	A	D	B	A
Approach Vol, veh/h		46			2			1801			1488	
Approach Delay, s/veh		31.7			94.0			10.3			11.9	
Approach LOS		C			F			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.7	37.0	4.8	10.6	10.0	31.7	6.9	8.5				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.4	4.6	5.8	4.6	5.4				
Max Green Setting (Gmax), s	7.4	58.8	7.4	26.0	22.4	43.8	10.4	23.0				
Max Q Clear Time (g_c+I1), s	2.0	14.0	2.1	2.2	6.1	14.0	3.3	0.0				
Green Ext Time (p_c), s	0.0	15.6	0.0	0.0	0.1	11.9	0.0	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				11.4								
HCM 6th LOS				B								









Timings  
19: Perris Bl. & Nandina Av.

										
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	15	2	5	3	10	46	1657	15	1319	21
Future Volume (vph)	15	2	5	3	10	46	1657	15	1319	21
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	pm+ov
Protected Phases	7	4	3	8		5	2	1	6	7
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	7
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	5.0
Minimum Split (s)	9.6	41.4	9.6	28.4	28.4	9.6	39.8	9.6	41.8	9.6
Total Split (s)	11.0	41.4	11.0	41.4	41.4	14.0	55.6	12.0	53.6	11.0
Total Split (%)	9.2%	34.5%	9.2%	34.5%	34.5%	11.7%	46.3%	10.0%	44.7%	9.2%
Yellow Time (s)	3.6	4.4	3.6	4.4	4.4	3.6	4.8	3.6	4.8	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	4.6	5.4	5.4	4.6	5.8	4.6	5.8	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 60.2  
 Natural Cycle: 105  
 Control Type: Actuated-Uncoordinated
























Splits and Phases: 19: Perris Bl. & Nandina Av.

 Ø1	 Ø2	 Ø3	 Ø4
12 s	55.6 s	11 s	41.4 s
 Ø5	 Ø6	 Ø7	 Ø8
14 s	53.6 s	11 s	41.4 s

HCM 6th Signalized Intersection Summary  
 19: Perris Bl. & Nandina Av.

Gateway Aviation (JN 13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	2	19	5	3	10	46	1657	19	15	1319	21
Future Volume (veh/h)	15	2	19	5	3	10	46	1657	19	15	1319	21
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1574	1900	1900	1307	1411	1574	1870	1870	1737	1693	1885	1752
Adj Flow Rate, veh/h	16	2	12	5	3	3	50	1801	11	16	1434	18
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	22	0	0	40	33	22	2	2	11	14	1	10
Cap, veh/h	29	139	124	8	91	86	82	2732	17	125	2849	850
Arrive On Green	0.02	0.08	0.08	0.01	0.06	0.06	0.05	0.52	0.52	0.08	0.55	0.55
Sat Flow, veh/h	1499	1805	1607	1245	1411	1334	1781	5237	32	1612	5147	1483
Grp Volume(v), veh/h	16	2	12	5	3	3	50	1171	641	16	1434	18
Grp Sat Flow(s),veh/h/ln	1499	1805	1607	1245	1411	1334	1781	1702	1865	1612	1716	1483
Q Serve(g_s), s	0.7	0.1	0.4	0.3	0.1	0.1	1.8	16.1	16.1	0.6	11.1	0.3
Cycle Q Clear(g_c), s	0.7	0.1	0.4	0.3	0.1	0.1	1.8	16.1	16.1	0.6	11.1	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.02	1.00		1.00
Lane Grp Cap(c), veh/h	29	139	124	8	91	86	82	1776	973	125	2849	850
V/C Ratio(X)	0.55	0.01	0.10	0.60	0.03	0.04	0.61	0.66	0.66	0.13	0.50	0.02
Avail Cap(c_a), veh/h	149	1010	899	124	789	746	260	2635	1443	185	3823	1131
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.3	27.4	27.6	31.9	28.2	28.2	30.1	11.2	11.2	27.6	8.9	5.9
Incr Delay (d2), s/veh	6.0	0.0	0.3	23.6	0.1	0.2	2.7	0.4	0.8	0.2	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.2	0.1	0.0	0.0	0.8	4.5	5.1	0.2	3.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.2	27.5	28.0	55.5	28.4	28.4	32.9	11.6	12.0	27.8	9.0	6.0
LnGrp LOS	D	C	C	E	C	C	C	B	B	C	A	A
Approach Vol, veh/h		30			11			1862			1468	
Approach Delay, s/veh		32.9			40.7			12.3			9.2	
Approach LOS		C			D			B			A	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.6	39.4	5.0	10.3	7.6	41.4	5.8	9.5				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.4	4.6	5.8	4.6	5.4				
Max Green Setting (Gmax), s	7.4	49.8	6.4	36.0	9.4	47.8	6.4	36.0				
Max Q Clear Time (g_c+I1), s	2.6	18.1	2.3	2.4	3.8	13.1	2.7	2.1				
Green Ext Time (p_c), s	0.0	15.4	0.0	0.0	0.0	12.4	0.0	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				11.2								
HCM 6th LOS				B								

Timings

20: Perris Bl. & Harley Knox Bl.

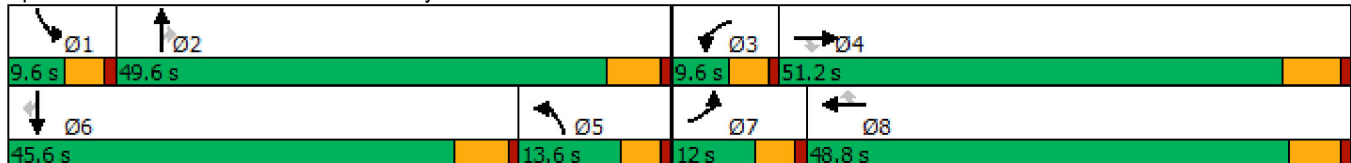
05/10/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	217	279	22	9	374	181	231	1134	14	70	697	278
Future Volume (vph)	217	279	22	9	374	181	231	1134	14	70	697	278
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	47.2	47.2	9.6	48.8	48.8	9.6	48.8	48.8	9.6	43.8	43.8
Total Split (s)	12.0	51.2	51.2	9.6	48.8	48.8	13.6	49.6	49.6	9.6	45.6	45.6
Total Split (%)	10.0%	42.7%	42.7%	8.0%	40.7%	40.7%	11.3%	41.3%	41.3%	8.0%	38.0%	38.0%
Yellow Time (s)	3.6	5.2	5.2	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 79.6  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 20: Perris Bl. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 20: Perris Bl. & Harley Knox Bl.

Gateway Aviation (JN 13445)  
 05/10/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	217	279	22	9	374	181	231	1134	14	70	697	278
Future Volume (veh/h)	217	279	22	9	374	181	231	1134	14	70	697	278
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1767	1856	1530	1544	1856	1885	1796	1856	1574	1826	1870	1796
Adj Flow Rate, veh/h	238	307	19	10	411	106	254	1246	12	77	766	197
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	9	3	25	24	3	1	7	3	22	5	2	7
Cap, veh/h	183	863	317	36	754	238	536	1902	501	190	1290	384
Arrive On Green	0.11	0.24	0.24	0.01	0.15	0.15	0.16	0.38	0.38	0.06	0.25	0.25
Sat Flow, veh/h	1682	3526	1296	2853	5066	1598	3319	5066	1334	3374	5106	1520
Grp Volume(v), veh/h	238	307	19	10	411	106	254	1246	12	77	766	197
Grp Sat Flow(s),veh/h/ln	1682	1763	1296	1427	1689	1598	1659	1689	1334	1687	1702	1520
Q Serve(g_s), s	7.4	4.9	0.4	0.2	5.1	4.1	4.7	13.9	0.4	1.5	9.0	4.9
Cycle Q Clear(g_c), s	7.4	4.9	0.4	0.2	5.1	4.1	4.7	13.9	0.4	1.5	9.0	4.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	183	863	317	36	754	238	536	1902	501	190	1290	384
V/C Ratio(X)	1.30	0.36	0.06	0.28	0.55	0.45	0.47	0.66	0.02	0.41	0.59	0.51
Avail Cap(c_a), veh/h	183	2326	855	209	3194	1007	536	3253	857	247	2980	887
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.4	21.3	6.0	33.4	26.9	26.5	26.0	17.6	13.4	31.1	22.4	9.3
Incr Delay (d2), s/veh	170.6	0.2	0.1	1.5	0.6	1.3	0.2	0.4	0.0	0.5	0.4	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.3	1.8	0.2	0.1	1.9	1.5	1.7	4.6	0.1	0.6	3.2	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	201.0	21.6	6.1	34.9	27.5	27.8	26.2	18.0	13.4	31.6	22.9	10.3
LnGrp LOS	F	C	A	C	C	C	C	B	B	C	C	B
Approach Vol, veh/h		564			527			1512			1040	
Approach Delay, s/veh		96.7			27.7			19.4			21.1	
Approach LOS		F			C			B			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.4	31.4	5.5	22.9	16.8	23.0	12.0	16.4				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	5.8	* 5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	5.0	43.8	5.0	45.0	9.0	* 40	7.4	* 43				
Max Q Clear Time (g_c+I1), s	3.5	15.9	2.2	6.9	6.7	11.0	9.4	7.1				
Green Ext Time (p_c), s	0.0	9.5	0.0	1.9	0.1	6.0	0.0	3.0				

Intersection Summary

HCM 6th Ctrl Delay	33.1
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

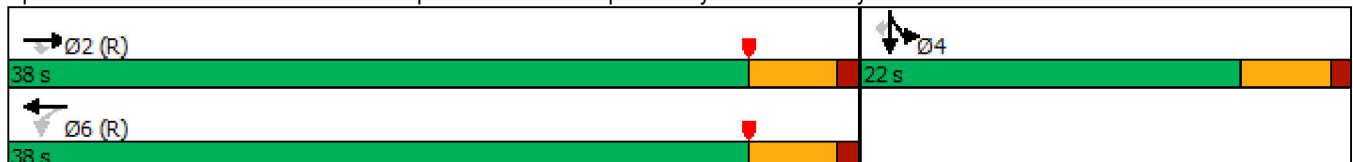


Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations	↑↑	↑	↘	↑↑	↘	↘
Traffic Volume (vph)	575	88	588	245	0	208
Future Volume (vph)	575	88	588	245	0	208
Turn Type	NA	Perm	Perm	NA	NA	Perm
Protected Phases	2			6	4	
Permitted Phases		2	6			4
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	25.0	25.0	10.0	10.0
Total Split (s)	38.0	38.0	38.0	38.0	22.0	22.0
Total Split (%)	63.3%	63.3%	63.3%	63.3%	36.7%	36.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	33.0	33.0	33.0	33.0	17.0	17.0
Actuated g/C Ratio	0.55	0.55	0.55	0.55	0.28	0.28
v/c Ratio	0.35	0.11	1.70	0.15	1.26	0.40
Control Delay	8.2	2.0	347.3	8.3	157.1	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.2	2.0	347.3	8.3	157.1	5.2
LOS	A	A	F	A	F	A
Approach Delay	7.4			247.7	112.2	
Approach LOS	A			F	F	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection  
 Natural Cycle: 110  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.70  
 Intersection Signal Delay: 131.9  
 Intersection LOS: F  
 Intersection Capacity Utilization 102.2%  
 ICU Level of Service G  
 Analysis Period (min) 15

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

















HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑						↑	↑
Traffic Volume (veh/h)	0	575	88	588	245	0	0	0	0	495	0	208
Future Volume (veh/h)	0	575	88	588	245	0	0	0	0	495	0	208
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1811	1885	1856	1811	0				1693	1900	1767
Adj Flow Rate, veh/h	0	653	100	668	278	0				562	0	174
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88				0.88	0.88	0.88
Percent Heavy Veh, %	0	6	1	3	6	0				14	0	9
Cap, veh/h	0	1893	878	433	1893	0				513	0	424
Arrive On Green	0.00	0.55	0.55	0.92	0.92	0.00				0.28	0.00	0.28
Sat Flow, veh/h	0	3532	1597	704	3532	0				1810	0	1497
Grp Volume(v), veh/h	0	653	100	668	278	0				562	0	174
Grp Sat Flow(s),veh/h/ln	0	1721	1597	704	1721	0				1810	0	1497
Q Serve(g_s), s	0.0	6.3	1.8	26.7	0.5	0.0				17.0	0.0	5.7
Cycle Q Clear(g_c), s	0.0	6.3	1.8	33.0	0.5	0.0				17.0	0.0	5.7
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1893	878	433	1893	0				513	0	424
V/C Ratio(X)	0.00	0.35	0.11	1.54	0.15	0.00				1.10	0.00	0.41
Avail Cap(c_a), veh/h	0	1893	878	433	1893	0				513	0	424
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.68	0.68	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	7.5	6.5	9.3	1.1	0.0				21.5	0.0	17.4
Incr Delay (d2), s/veh	0.0	0.5	0.3	251.7	0.1	0.0				68.5	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.7	0.5	30.8	0.1	0.0				15.8	0.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	8.0	6.7	261.0	1.2	0.0				90.0	0.0	18.1
LnGrp LOS	A	A	A	F	A	A				F	A	B
Approach Vol, veh/h		753			946						736	
Approach Delay, s/veh		7.8			184.7						73.0	
Approach LOS		A			F						E	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		38.0		22.0		38.0						
Change Period (Y+Rc), s		5.0		5.0		5.0						
Max Green Setting (Gmax), s		33.0		17.0		33.0						
Max Q Clear Time (g_c+I1), s		8.3		19.0		35.0						
Green Ext Time (p_c), s		2.8		0.0		0.0						
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				96.2								
HCM 6th LOS				F								

Timings

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

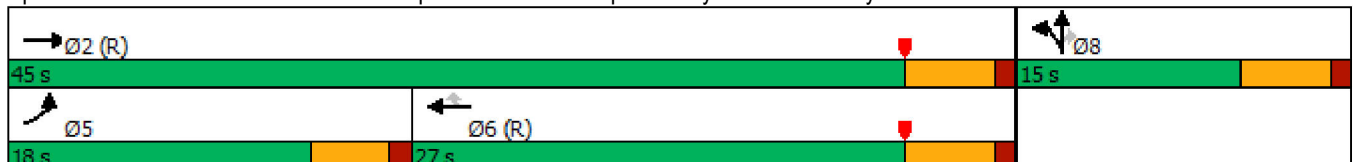


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations	↘	↑↑	↑↑	↗	↙	↗
Traffic Volume (vph)	385	684	790	1043	3	317
Future Volume (vph)	385	684	790	1043	3	317
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	26.0	24.0	24.0	10.0	10.0
Total Split (s)	18.0	45.0	27.0	27.0	15.0	15.0
Total Split (%)	30.0%	75.0%	45.0%	45.0%	25.0%	25.0%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max
Act Effct Green (s)	13.5	40.0	22.0	22.0	10.0	10.0
Actuated g/C Ratio	0.22	0.67	0.37	0.37	0.17	0.17
v/c Ratio	1.07	0.35	0.68	1.31	0.18	0.77
Control Delay	86.3	2.9	19.2	164.6	23.4	21.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	86.3	2.9	19.2	164.6	23.4	21.3
LOS	F	A	B	F	C	C
Approach Delay		32.9	102.0		21.6	
Approach LOS		C	F		C	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 29 (48%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.31  
 Intersection Signal Delay: 70.4  
 Intersection Capacity Utilization 102.2%  
 Analysis Period (min) 15  
 Intersection LOS: E  
 ICU Level of Service G

Splits and Phases: 2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

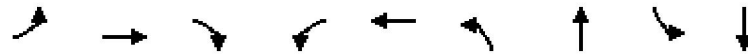
2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

05/10/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗			↗	↘		↗	↘			
Traffic Volume (veh/h)	385	684	0	0	790	1043	44	3	317	0	0	0
Future Volume (veh/h)	385	684	0	0	790	1043	44	3	317	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1841	1707	0	0	1841	1767	1796	1900	1693			
Adj Flow Rate, veh/h	418	743	0	0	859	1070	48	3	280			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	4	13	0	0	4	9	7	0	14			
Cap, veh/h	394	2163	0	0	1282	549	285	18	239			
Arrive On Green	0.07	0.22	0.00	0.00	0.37	0.37	0.17	0.17	0.17			
Sat Flow, veh/h	1753	3329	0	0	3589	1497	1708	107	1434			
Grp Volume(v), veh/h	418	743	0	0	859	1070	51	0	280			
Grp Sat Flow(s),veh/h/ln	1753	1622	0	0	1749	1497	1815	0	1434			
Q Serve(g_s), s	13.5	11.6	0.0	0.0	12.4	22.0	1.4	0.0	10.0			
Cycle Q Clear(g_c), s	13.5	11.6	0.0	0.0	12.4	22.0	1.4	0.0	10.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.94		1.00			
Lane Grp Cap(c), veh/h	394	2163	0	0	1282	549	302	0	239			
V/C Ratio(X)	1.06	0.34	0.00	0.00	0.67	1.95	0.17	0.00	1.17			
Avail Cap(c_a), veh/h	394	2163	0	0	1282	549	302	0	239			
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.95	0.95	0.00	0.00	0.63	0.63	1.00	0.00	1.00			
Uniform Delay (d), s/veh	27.8	12.3	0.0	0.0	16.0	19.0	21.4	0.0	25.0			
Incr Delay (d2), s/veh	60.9	0.4	0.0	0.0	1.8	431.3	1.2	0.0	112.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	12.7	3.9	0.0	0.0	4.3	71.8	0.6	0.0	10.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	88.6	12.7	0.0	0.0	17.7	450.3	22.6	0.0	137.4			
LnGrp LOS	F	B	A	A	B	F	C	A	F			
Approach Vol, veh/h		1161			1929			331				
Approach Delay, s/veh		40.1			257.7			119.7				
Approach LOS		D			F			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		45.0			18.0	27.0		15.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		40.0			13.5	22.0		10.0				
Max Q Clear Time (g_c+1), s		13.6			15.5	24.0		12.0				
Green Ext Time (p_c), s		3.2			0.0	0.0		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					170.5							
HCM 6th LOS					F							

Timings  
3: Western Way & Harley Knox Bl.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↗↗↗	↖	↖	↗↗↗	↖	↖	↖	↖
Traffic Volume (vph)	32	1011	1	2	1721	3	0	14	0
Future Volume (vph)	32	1011	1	2	1721	3	0	14	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	NA
Protected Phases	5	2		1	6		8		4
Permitted Phases			2			8		4	
Detector Phase	5	2	2	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	21.8	21.8	9.6	21.8	32.6	32.6	32.6	32.6
Total Split (s)	18.0	71.4	71.4	9.6	63.0	39.0	39.0	39.0	39.0
Total Split (%)	15.0%	59.5%	59.5%	8.0%	52.5%	32.5%	32.5%	32.5%	32.5%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	7.3	52.7	52.7	5.4	47.5	13.4	13.4	13.4	13.4
Actuated g/C Ratio	0.09	0.67	0.67	0.07	0.60	0.17	0.17	0.17	0.17
v/c Ratio	0.30	0.39	0.00	0.02	0.71	0.02	0.01	0.08	0.40
Control Delay	47.0	7.1	0.0	46.5	14.3	33.3	0.0	34.3	10.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.0	7.1	0.0	46.5	14.3	33.3	0.0	34.3	10.4
LOS	D	A	A	D	B	C	A	C	B
Approach Delay		8.3			14.4		14.8		12.8
Approach LOS		A			B		B		B

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 78.7	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 12.1	Intersection LOS: B
Intersection Capacity Utilization 50.5%	ICU Level of Service A
Analysis Period (min) 15	


























Splits and Phases: 3: Western Way & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 3: Western Way & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  							
Traffic Volume (veh/h)	32	1011	1	2	1721	10	3	0	4	14	0	129
Future Volume (veh/h)	32	1011	1	2	1721	10	3	0	4	14	0	129
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1500	1722	1900	1900	1796	1574	1900	1900	1900	1781	1900	1826
Adj Flow Rate, veh/h	39	1218	1	2	2073	10	4	0	5	17	0	142
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	27	12	0	0	7	22	0	0	0	8	0	5
Cap, veh/h	55	3001	1028	5	3036	15	177	0	225	290	0	225
Arrive On Green	0.04	0.64	0.64	0.00	0.60	0.60	0.14	0.00	0.14	0.14	0.00	0.14
Sat Flow, veh/h	1428	4701	1610	1810	5037	24	1266	0	1610	1344	0	1610
Grp Volume(v), veh/h	39	1218	1	2	1345	738	4	0	5	17	0	142
Grp Sat Flow(s),veh/h/ln	1428	1567	1610	1810	1635	1792	1266	0	1610	1344	0	1610
Q Serve(g_s), s	1.8	8.7	0.0	0.1	19.0	19.0	0.2	0.0	0.2	0.8	0.0	5.7
Cycle Q Clear(g_c), s	1.8	8.7	0.0	0.1	19.0	19.0	5.9	0.0	0.2	0.9	0.0	5.7
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	55	3001	1028	5	1970	1080	177	0	225	290	0	225
V/C Ratio(X)	0.71	0.41	0.00	0.41	0.68	0.68	0.02	0.00	0.02	0.06	0.00	0.63
Avail Cap(c_a), veh/h	279	4503	1542	132	2730	1496	636	0	809	777	0	809
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.6	6.0	4.5	34.1	9.2	9.2	30.6	0.0	25.4	25.8	0.0	27.8
Incr Delay (d2), s/veh	6.3	0.1	0.0	18.7	0.4	0.8	0.1	0.0	0.0	0.1	0.0	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	1.8	0.0	0.1	4.7	5.3	0.1	0.0	0.1	0.2	0.0	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.9	6.1	4.5	52.8	9.6	10.0	30.6	0.0	25.4	25.9	0.0	30.7
LnGrp LOS	D	A	A	D	A	A	C	A	C	C	A	C
Approach Vol, veh/h		1258			2085			9				159
Approach Delay, s/veh		7.2			9.8			27.7				30.2
Approach LOS		A			A			C				C
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.8	49.5		14.2	7.2	47.1		14.2				
Change Period (Y+Rc), s	4.6	5.8		4.6	4.6	5.8		4.6				
Max Green Setting (Gmax), s	5.0	65.6		34.4	13.4	57.2		34.4				
Max Q Clear Time (g_c+I1), s	2.1	10.7		7.7	3.8	21.0		7.9				
Green Ext Time (p_c), s	0.0	10.7		1.0	0.0	20.2		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			9.8									
HCM 6th LOS			A									

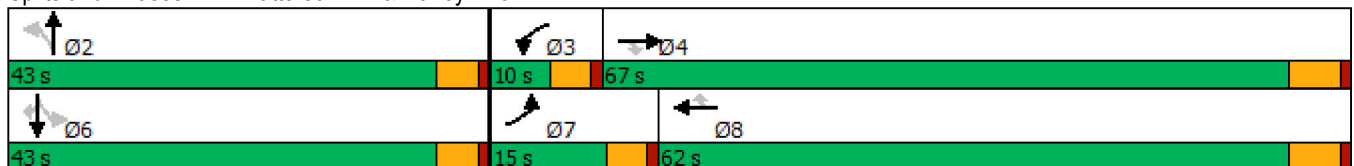
Timings  
4: Patterson Av. & Harley Knox Bl.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	21	909	42	45	1590	9	108	2	22	3	27
Future Volume (vph)	21	909	42	45	1590	9	108	2	22	3	27
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	7	4		3	8			2		6	
Permitted Phases			4			8	2		6		6
Detector Phase	7	4	4	3	8	8	2	2	6	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	9.6	31.8	31.8	33.7	33.7	40.7	40.7	40.7
Total Split (s)	15.0	67.0	67.0	10.0	62.0	62.0	43.0	43.0	43.0	43.0	43.0
Total Split (%)	12.5%	55.8%	55.8%	8.3%	51.7%	51.7%	35.8%	35.8%	35.8%	35.8%	35.8%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8		4.7		4.7	4.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	6.9	56.3	56.3	5.4	59.6	59.6		18.5		18.5	18.5
Actuated g/C Ratio	0.07	0.60	0.60	0.06	0.64	0.64		0.20		0.20	0.20
v/c Ratio	0.31	0.39	0.05	0.53	0.90	0.01		0.66		0.13	0.09
Control Delay	54.6	11.8	3.2	65.4	25.5	0.0		42.5		31.3	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	54.6	11.8	3.2	65.4	25.5	0.0		42.5		31.3	0.5
LOS	D	B	A	E	C	A		D		C	A
Approach Delay		12.4			26.4			42.5		15.4	
Approach LOS		B			C			D		B	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 93.6  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.90  
 Intersection Signal Delay: 22.2  
 Intersection LOS: C  
 Intersection Capacity Utilization 73.5%  
 ICU Level of Service D  
 Analysis Period (min) 15



























Splits and Phases: 4: Patterson Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
4: Patterson Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

05/10/2022

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		  			 			 				 	
Traffic Volume (veh/h)	21	909	42	45	1590	9	108	2	40	22	3	27	
Future Volume (veh/h)	21	909	42	45	1590	9	108	2	40	22	3	27	
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No			No			No			No		
Adj Sat Flow, veh/h/ln	1070	1752	1856	1900	1796	1396	1841	1900	1826	1678	1426	1604	
Adj Flow Rate, veh/h	26	1109	51	55	1939	11	132	2	49	27	4	33	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	
Percent Heavy Veh, %	56	10	3	0	7	34	4	0	5	15	32	20	
Cap, veh/h	27	2914	958	77	2133	724	228	10	61	237	28	234	
Arrive On Green	0.03	0.61	0.61	0.04	0.62	0.62	0.17	0.17	0.17	0.17	0.17	0.17	
Sat Flow, veh/h	1019	4782	1572	1810	3413	1159	904	61	353	922	165	1359	
Grp Volume(v), veh/h	26	1109	51	55	1939	11	183	0	0	31	0	33	
Grp Sat Flow(s),veh/h/ln	1019	1594	1572	1810	1706	1159	1318	0	0	1087	0	1359	
Q Serve(g_s), s	2.2	10.1	1.1	2.6	42.4	0.3	9.8	0.0	0.0	0.0	0.0	1.8	
Cycle Q Clear(g_c), s	2.2	10.1	1.1	2.6	42.4	0.3	11.8	0.0	0.0	2.0	0.0	1.8	
Prop In Lane	1.00		1.00	1.00		1.00	0.72		0.27	0.87		1.00	
Lane Grp Cap(c), veh/h	27	2914	958	77	2133	724	299	0	0	266	0	234	
V/C Ratio(X)	0.95	0.38	0.05	0.71	0.91	0.02	0.61	0.00	0.00	0.12	0.00	0.14	
Avail Cap(c_a), veh/h	123	3406	1120	114	2232	758	695	0	0	558	0	606	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	
Uniform Delay (d), s/veh	41.8	8.5	6.8	40.6	14.0	6.1	34.9	0.0	0.0	30.2	0.0	30.2	
Incr Delay (d2), s/veh	37.2	0.1	0.0	4.5	5.9	0.0	2.0	0.0	0.0	0.2	0.0	0.3	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.8	2.8	0.3	1.2	13.9	0.1	3.8	0.0	0.0	0.6	0.0	0.6	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	78.9	8.6	6.8	45.2	19.9	6.1	36.9	0.0	0.0	30.4	0.0	30.4	
LnGrp LOS	E	A	A	D	B	A	D	A	A	C	A	C	
Approach Vol, veh/h		1186			2005			183				64	
Approach Delay, s/veh		10.1			20.5			36.9				30.4	
Approach LOS		B			C			D				C	
Timer - Assigned Phs		2	3	4		6	7	8					
Phs Duration (G+Y+Rc), s		19.5	8.3	58.2		19.5	6.9	59.5					
Change Period (Y+Rc), s		* 4.7	4.6	5.8		* 4.7	4.6	5.8					
Max Green Setting (Gmax), s		* 38	5.4	61.2		* 38	10.4	56.2					
Max Q Clear Time (g_c+I1), s		13.8	4.6	12.1		4.0	4.2	44.4					
Green Ext Time (p_c), s		1.0	0.0	9.5		0.2	0.0	9.3					

Intersection Summary

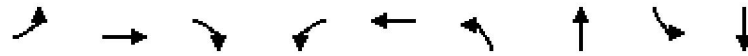
HCM 6th Ctrl Delay	18.0
HCM 6th LOS	B

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Timings  
5: Heacock Street & Cactus Avenue

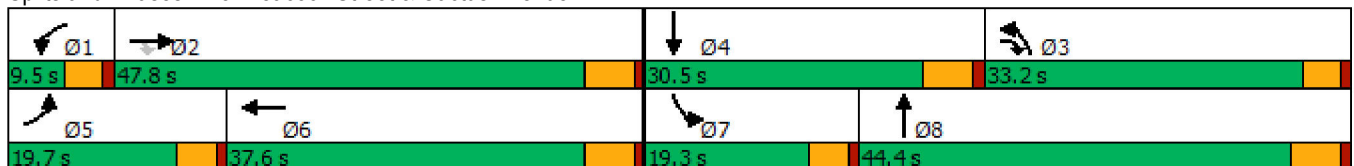


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↙	↑↑	↗	↙	↑↑	↗	↑↑	↙	↑↑
Traffic Volume (vph)	226	1974	1272	25	881	763	622	169	688
Future Volume (vph)	226	1974	1272	25	881	763	622	169	688
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	3	1	6	3	8	7	4
Permitted Phases			2						
Detector Phase	5	2	3	1	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.5	30.5	9.5	9.5	30.5	9.5	30.5	9.5	30.5
Total Split (s)	19.7	47.8	33.2	9.5	37.6	33.2	44.4	19.3	30.5
Total Split (%)	16.3%	39.5%	27.4%	7.9%	31.1%	27.4%	36.7%	16.0%	25.2%
Yellow Time (s)	3.5	4.5	3.5	3.5	4.5	3.5	4.5	3.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	4.5	4.5	5.5	4.5	5.5	4.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None
Act Effct Green (s)	15.2	46.1	75.8	5.0	32.1	28.7	40.0	13.7	25.0
Actuated g/C Ratio	0.13	0.38	0.63	0.04	0.27	0.24	0.33	0.11	0.21
v/c Ratio	0.99	1.43	1.14	0.35	1.04	0.93	0.58	0.82	1.00
Control Delay	108.3	230.4	94.2	69.2	81.6	62.8	35.5	81.0	80.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	108.3	230.4	94.2	69.2	81.6	62.8	35.5	81.0	80.0
LOS	F	F	F	E	F	E	D	F	F
Approach Delay		172.6			81.3		49.9		80.2
Approach LOS		F			F		D		F

Intersection Summary

Cycle Length: 121  
 Actuated Cycle Length: 121  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.43  
 Intersection Signal Delay: 120.7  
 Intersection LOS: F  
 Intersection Capacity Utilization 118.0%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 5: Heacock Street & Cactus Avenue



























HCM 6th Signalized Intersection Summary  
5: Heacock Street & Cactus Avenue

Gateway Aviation TA (JN:13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	226	1974	1272	25	881	121	763	622	63	169	688	56
Future Volume (veh/h)	226	1974	1272	25	881	121	763	622	63	169	688	56
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1826	1841	1885	1870	1826	1870	1870	1900	1870	1900
Adj Flow Rate, veh/h	235	2056	1325	26	918	126	795	648	66	176	717	58
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	1	5	4	1	2	5	2	2	0	2	0
Cap, veh/h	225	1371	925	42	854	117	818	1121	114	203	700	57
Arrive On Green	0.12	0.36	0.36	0.02	0.26	0.26	0.24	0.34	0.34	0.11	0.20	0.20
Sat Flow, veh/h	1810	3770	1544	1753	3245	445	3478	3333	339	1810	3414	276
Grp Volume(v), veh/h	235	2056	1325	26	533	511	795	363	351	176	393	382
Grp Sat Flow(s),veh/h/ln	1810	1885	1544	1753	1885	1805	1739	1870	1802	1810	1870	1820
Q Serve(g_s), s	15.2	44.4	27.9	1.8	32.1	32.1	27.6	19.5	19.6	11.7	25.0	25.0
Cycle Q Clear(g_c), s	15.2	44.4	27.9	1.8	32.1	32.1	27.6	19.5	19.6	11.7	25.0	25.0
Prop In Lane	1.00		1.00	1.00		0.25	1.00		0.19	1.00		0.15
Lane Grp Cap(c), veh/h	225	1371	925	42	496	475	818	629	606	203	383	373
V/C Ratio(X)	1.04	1.50	1.43	0.62	1.08	1.08	0.97	0.58	0.58	0.87	1.02	1.03
Avail Cap(c_a), veh/h	225	1371	925	72	496	475	818	629	606	220	383	373
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.4	38.8	11.8	59.0	44.9	45.0	46.2	33.3	33.4	53.3	48.5	48.5
Incr Delay (d2), s/veh	71.5	228.6	200.6	5.4	62.1	63.0	24.5	0.9	0.9	25.9	52.3	53.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.1	62.7	62.9	0.8	23.0	22.1	14.3	8.7	8.4	6.6	16.8	16.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	124.9	267.4	212.3	64.4	107.0	108.0	70.7	34.2	34.3	79.2	100.8	101.8
LnGrp LOS	F	F	F	E	F	F	E	C	C	E	F	F
Approach Vol, veh/h		3616			1070			1509			951	
Approach Delay, s/veh		237.9			106.4			53.5			97.2	
Approach LOS		F			F			D			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.4	49.9	34.2	30.5	19.7	37.6	18.2	46.5				
Change Period (Y+Rc), s	4.5	5.5	5.5	* 5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	5.0	42.3	28.7	* 25	15.2	32.1	14.8	38.9				
Max Q Clear Time (g_c+I1), s	3.8	46.4	29.6	27.0	17.2	34.1	13.7	21.6				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3				

Intersection Summary

HCM 6th Ctrl Delay	160.6
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

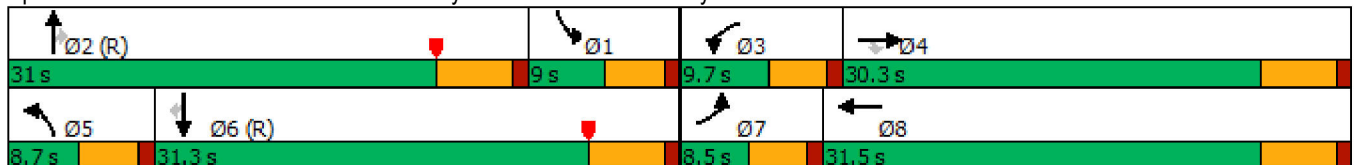
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Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	32	202	324	33	92	90	984	82	335	1118	22
Future Volume (vph)	32	202	324	33	92	90	984	82	335	1118	22
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4					2			6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Minimum Split (s)	8.5	23.5	23.5	8.5	31.5	8.5	30.5	30.5	8.5	23.5	23.5
Total Split (s)	8.5	30.3	30.3	9.7	31.5	8.7	31.0	31.0	9.0	31.3	31.3
Total Split (%)	10.6%	37.9%	37.9%	12.1%	39.4%	10.9%	38.8%	38.8%	11.3%	39.1%	39.1%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	5.5	4.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	4.0	15.4	15.4	5.0	16.2	9.0	38.7	38.7	4.5	34.2	34.2
Actuated g/C Ratio	0.05	0.19	0.19	0.06	0.20	0.11	0.48	0.48	0.06	0.43	0.43
v/c Ratio	0.39	0.64	0.67	0.32	0.34	0.48	0.65	0.09	3.77	0.84	0.03
Control Delay	48.9	36.8	16.3	43.1	10.0	45.5	21.0	0.5	1286.4	30.4	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.9	36.8	16.3	43.1	10.0	45.5	21.0	0.5	1286.4	30.4	0.0
LOS	D	D	B	D	B	D	C	A	F	C	A
Approach Delay		25.6			13.6		21.5			315.2	
Approach LOS		C			B		C			F	

Intersection Summary

Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 100  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 3.77  
 Intersection Signal Delay: 145.5  
 Intersection LOS: F  
 Intersection Capacity Utilization 76.4%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 6: Heacock Street & Meyer Drive/John F. Kennedy Drive



HCM 6th Signalized Intersection Summary  
6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

05/10/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↕		↖	↕	↗	↖	↕	↗
Traffic Volume (veh/h)	32	202	324	33	92	179	90	984	82	335	1118	22
Future Volume (veh/h)	32	202	324	33	92	179	90	984	82	335	1118	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1900	1900	1885	1885	1900	1826	1900	1841	1811	1900
Adj Flow Rate, veh/h	37	232	372	38	106	206	103	1131	94	385	1285	25
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	1	0	0	1	1	0	5	0	4	6	0
Cap, veh/h	51	486	415	52	487	413	95	1164	513	232	1489	662
Arrive On Green	0.03	0.26	0.26	0.03	0.26	0.26	0.05	0.32	0.32	0.13	0.41	0.41
Sat Flow, veh/h	1810	1885	1610	1810	1885	1598	1810	3652	1610	1753	3622	1610
Grp Volume(v), veh/h	37	232	372	38	106	206	103	1131	94	385	1285	25
Grp Sat Flow(s),veh/h/ln	1810	1885	1610	1810	1885	1598	1810	1826	1610	1753	1811	1610
Q Serve(g_s), s	1.6	8.3	17.8	1.7	3.5	8.8	4.2	24.5	2.6	10.6	25.9	0.7
Cycle Q Clear(g_c), s	1.6	8.3	17.8	1.7	3.5	8.8	4.2	24.5	2.6	10.6	25.9	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	51	486	415	52	487	413	95	1164	513	232	1489	662
V/C Ratio(X)	0.73	0.48	0.90	0.74	0.22	0.50	1.08	0.97	0.18	1.66	0.86	0.04
Avail Cap(c_a), veh/h	90	584	499	118	613	519	95	1164	513	232	1489	662
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.66	0.66	0.66	0.09	0.09	0.09
Uniform Delay (d), s/veh	38.6	25.1	28.6	38.6	23.3	25.2	37.9	26.9	11.8	34.7	21.5	14.1
Incr Delay (d2), s/veh	7.3	0.3	15.0	7.4	0.1	0.3	99.3	15.7	0.5	299.3	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	3.6	8.0	0.8	1.5	3.1	4.4	11.8	1.2	23.4	9.4	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.8	25.4	43.6	45.9	23.4	25.6	137.2	42.6	12.3	334.0	22.2	14.1
LnGrp LOS	D	C	D	D	C	C	F	D	B	F	C	B
Approach Vol, veh/h		641			350			1328			1695	
Approach Delay, s/veh		37.1			27.1			47.8			92.9	
Approach LOS		D			C			D			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.1	31.0	6.8	26.1	8.7	38.4	6.7	26.2				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	4.5	* 26	5.2	24.8	4.2	25.8	4.0	26.0				
Max Q Clear Time (g_c+I1), s	12.6	26.5	3.7	19.8	6.2	27.9	3.6	10.8				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.9				













Intersection Summary

HCM 6th Ctrl Delay	63.3
HCM 6th LOS	E

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
7: Heacock Street & Gentian Avenue

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	7	103	1057	13	114	1312
Future Volume (vph)	7	103	1057	13	114	1312
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	27.6	27.6	27.2	27.2	9.6	16.2
Total Split (s)	31.0	31.0	62.0	62.0	27.0	89.0
Total Split (%)	25.8%	25.8%	51.7%	51.7%	22.5%	74.2%
Yellow Time (s)	3.6	3.6	5.2	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	6.2	6.2	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	12.3	12.3	35.5	35.5	10.6	51.0
Actuated g/C Ratio	0.16	0.16	0.48	0.48	0.14	0.68
v/c Ratio	0.03	0.29	0.73	0.02	0.50	0.63
Control Delay	31.3	8.9	19.4	10.0	39.6	8.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.3	8.9	19.4	10.0	39.6	8.0
LOS	C	A	B	A	D	A
Approach Delay	10.4		19.3			10.6
Approach LOS	B		B			B

Intersection Summary













Cycle Length: 120	
Actuated Cycle Length: 74.6	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 14.1	Intersection LOS: B
Intersection Capacity Utilization 56.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 7: Heacock Street & Gentian Avenue



HCM 6th Signalized Intersection Summary  
7: Heacock Street & Gentian Avenue

Gateway Aviation TA (JN:13445)  
05/10/2022

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	7	103	1057	13	114	1312
Future Volume (veh/h)	7	103	1057	13	114	1312
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1826	1900	1826	1841
Adj Flow Rate, veh/h	8	117	1201	15	130	1491
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	5	0	5	4
Cap, veh/h	274	243	1674	777	167	2306
Arrive On Green	0.15	0.15	0.48	0.48	0.10	0.66
Sat Flow, veh/h	1810	1610	3561	1610	1739	3589
Grp Volume(v), veh/h	8	117	1201	15	130	1491
Grp Sat Flow(s),veh/h/ln	1810	1610	1735	1610	1739	1749
Q Serve(g_s), s	0.2	3.8	15.6	0.3	4.2	14.4
Cycle Q Clear(g_c), s	0.2	3.8	15.6	0.3	4.2	14.4
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	274	243	1674	777	167	2306
V/C Ratio(X)	0.03	0.48	0.72	0.02	0.78	0.65
Avail Cap(c_a), veh/h	838	746	3395	1576	683	5079
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.6	22.1	11.7	7.7	25.2	5.8
Incr Delay (d2), s/veh	0.0	0.5	0.6	0.0	2.9	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	1.3	4.2	0.1	1.6	2.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	20.6	22.7	12.3	7.7	28.1	6.1
LnGrp LOS	C	C	B	A	C	A
Approach Vol, veh/h	125		1216			1621
Approach Delay, s/veh	22.6		12.2			7.8
Approach LOS	C		B			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	10.1	33.7			43.8	13.2
Change Period (Y+Rc), s	4.6	6.2			6.2	4.6
Max Green Setting (Gmax), s	22.4	55.8			82.8	26.4
Max Q Clear Time (g_c+11), s	6.2	17.6			16.4	5.8
Green Ext Time (p_c), s	0.1	9.9			15.4	0.2
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			10.3			
HCM 6th LOS			B			

Timings  
8: Heacock Street & Iris Avenue

	↙	↖	↑	↗	↘	↓
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖↖	↖	↖↖	↖	↖↖	↖↖
Traffic Volume (vph)	247	318	804	380	500	880
Future Volume (vph)	247	318	804	380	500	880
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	15.8	15.8	33.2	33.2	9.6	16.2
Total Split (s)	35.0	35.0	47.0	47.0	38.0	85.0
Total Split (%)	29.2%	29.2%	39.2%	39.2%	31.7%	70.8%
Yellow Time (s)	4.8	4.8	5.2	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	6.2	6.2	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	12.9	12.9	30.6	30.6	17.8	53.2
Actuated g/C Ratio	0.16	0.16	0.39	0.39	0.23	0.68
v/c Ratio	0.47	0.59	0.70	0.54	0.69	0.44
Control Delay	34.7	8.4	23.6	9.0	34.0	6.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.7	8.4	23.6	9.0	34.0	6.4
LOS	C	A	C	A	C	A
Approach Delay	19.9		18.9			16.4
Approach LOS	B		B			B

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 78.5	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.70	
Intersection Signal Delay: 18.0	Intersection LOS: B
Intersection Capacity Utilization 58.7%	ICU Level of Service B
Analysis Period (min) 15	

















Splits and Phases: 8: Heacock Street & Iris Avenue



HCM 6th Signalized Intersection Summary  
8: Heacock Street & Iris Avenue

Gateway Aviation TA (JN:13445)

05/10/2022

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 		 		 	 
Traffic Volume (veh/h)	247	318	804	380	500	880
Future Volume (veh/h)	247	318	804	380	500	880
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1811	1900	1885	1811
Adj Flow Rate, veh/h	284	366	924	437	575	1011
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	0	6	0	1	6
Cap, veh/h	913	419	1205	564	677	2060
Arrive On Green	0.26	0.26	0.35	0.35	0.19	0.60
Sat Flow, veh/h	3510	1610	3532	1610	3483	3532
Grp Volume(v), veh/h	284	366	924	437	575	1011
Grp Sat Flow(s),veh/h/ln	1755	1610	1721	1610	1742	1721
Q Serve(g_s), s	5.5	18.5	20.3	20.6	13.5	14.2
Cycle Q Clear(g_c), s	5.5	18.5	20.3	20.6	13.5	14.2
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	913	419	1205	564	677	2060
V/C Ratio(X)	0.31	0.87	0.77	0.78	0.85	0.49
Avail Cap(c_a), veh/h	1206	553	1652	773	1369	3191
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.3	30.1	24.5	24.6	33.0	9.7
Incr Delay (d2), s/veh	0.2	11.6	1.5	3.4	1.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	7.9	7.6	7.5	5.4	4.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	25.5	41.7	26.0	28.0	34.2	9.9
LnGrp LOS	C	D	C	C	C	A
Approach Vol, veh/h	650		1361			1586
Approach Delay, s/veh	34.6		26.7			18.7
Approach LOS	C		C			B
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	21.1	36.0			57.1	27.9
Change Period (Y+Rc), s	4.6	6.2			6.2	5.8
Max Green Setting (Gmax), s	33.4	40.8			78.8	29.2
Max Q Clear Time (g_c+1), s	15.5	22.6			16.2	20.5
Green Ext Time (p_c), s	1.0	7.2			8.0	1.6
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			24.6			
HCM 6th LOS			C			



Timings  
9: Heacock Street & Krameria Avenue-North

	↙	↖	↑	↘	↓
Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations	↙	↖	↑↓	↘	↑↑
Traffic Volume (vph)	226	250	822	113	755
Future Volume (vph)	226	250	822	113	755
Turn Type	Prot	Perm	NA	Prot	NA
Protected Phases	8		2	1	6
Permitted Phases		8			
Detector Phase	8	8	2	1	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	29.1	29.1	29.2	9.6	16.2
Total Split (s)	35.0	35.0	61.0	24.0	85.0
Total Split (%)	29.2%	29.2%	50.8%	20.0%	70.8%
Yellow Time (s)	4.1	4.1	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	6.2	4.6	6.2
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	Min	Max	Min
Act Effct Green (s)	18.2	18.2	35.7	20.0	60.4
Actuated g/C Ratio	0.20	0.20	0.40	0.22	0.67
v/c Ratio	0.73	0.50	0.84	0.35	0.40
Control Delay	47.1	7.0	30.5	37.4	7.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	47.1	7.0	30.5	37.4	7.8
LOS	D	A	C	D	A
Approach Delay	26.0		30.5		11.6
Approach LOS	C		C		B

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 90.3  
 Natural Cycle: 75  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.84  
 Intersection Signal Delay: 22.4  
 Intersection LOS: C  
 Intersection Capacity Utilization 58.4%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 9: Heacock Street & Krameria Avenue-North
















HCM 6th Signalized Intersection Summary  
 9: Heacock Street & Krameria Avenue-North

Gateway Aviation TA (JN:13445)

05/10/2022

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	226	250	822	113	113	755
Future Volume (veh/h)	226	250	822	113	113	755
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1885	1856	1870	1900	1826	1856
Adj Flow Rate, veh/h	279	309	1015	140	140	932
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	1	3	2	0	5	3
Cap, veh/h	400	351	1171	161	386	2284
Arrive On Green	0.22	0.22	0.37	0.37	0.22	0.65
Sat Flow, veh/h	1795	1572	3230	432	1739	3618
Grp Volume(v), veh/h	279	309	575	580	140	932
Grp Sat Flow(s),veh/h/ln	1795	1572	1777	1792	1739	1763
Q Serve(g_s), s	12.5	16.6	26.2	26.3	6.0	11.1
Cycle Q Clear(g_c), s	12.5	16.6	26.2	26.3	6.0	11.1
Prop In Lane	1.00	1.00		0.24	1.00	
Lane Grp Cap(c), veh/h	400	351	664	669	386	2284
V/C Ratio(X)	0.70	0.88	0.87	0.87	0.36	0.41
Avail Cap(c_a), veh/h	614	538	1113	1123	386	3176
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.3	32.9	25.4	25.4	28.8	7.4
Incr Delay (d2), s/veh	0.8	7.3	1.9	1.9	2.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	6.9	10.0	10.2	2.6	3.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	32.1	40.2	27.2	27.3	31.4	7.4
LnGrp LOS	C	D	C	C	C	A
Approach Vol, veh/h	588		1155			1072
Approach Delay, s/veh	36.3		27.3			10.6
Approach LOS	D		C			B
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	24.0	38.9			62.9	24.6
Change Period (Y+Rc), s	4.6	6.2			6.2	5.1
Max Green Setting (Gmax), s	19.4	54.8			78.8	29.9
Max Q Clear Time (g_c+11), s	8.0	28.3			13.1	18.6
Green Ext Time (p_c), s	0.1	4.4			4.1	0.9
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			22.8			
HCM 6th LOS			C			

Timings  
10: Heacock Street & Driveway 1



Lane Group	EBL	EBT	NBL	NBT	SBT	SBR	Ø1	Ø8
Lane Configurations								
Traffic Volume (vph)	31	0	18	837	1038	2		
Future Volume (vph)	31	0	18	837	1038	2		
Turn Type	Perm	NA	Prot	NA	NA	Perm		
Protected Phases		4	5	2	6		1	8
Permitted Phases	4					6		
Detector Phase	4	4	5	2	6	6		
Switch Phase								
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	26.6	26.6	9.6	23.2	23.2	23.2	9.6	26.6
Total Split (s)	26.6	26.6	9.6	83.8	83.8	83.8	9.6	26.6
Total Split (%)	22.2%	22.2%	8.0%	69.8%	69.8%	69.8%	8%	22%
Yellow Time (s)	3.6	3.6	3.6	5.2	5.2	5.2	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.6	4.6	4.6	6.2	6.2	6.2		
Lead/Lag			Lead	Lag	Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	Min	Min	Min	None	None
Act Effct Green (s)	12.5	12.5	5.5	37.2	36.0	36.0		
Actuated g/C Ratio	0.23	0.23	0.10	0.68	0.66	0.66		
v/c Ratio	0.10	0.13	0.22	0.38	0.49	0.00		
Control Delay	20.7	0.7	35.6	6.4	9.2	0.0		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay	20.7	0.7	35.6	6.4	9.2	0.0		
LOS	C	A	D	A	A	A		
Approach Delay		8.7		7.1	9.2			
Approach LOS		A		A	A			

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 54.5	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.49	
Intersection Signal Delay: 8.2	Intersection LOS: A
Intersection Capacity Utilization 46.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 10: Heacock Street & Driveway 1

Ø1	Ø2	Ø4
9.6 s	83.8 s	26.6 s
Ø5	Ø6	Ø8
9.6 s	83.8 s	26.6 s

HCM 6th Signalized Intersection Summary  
 10: Heacock Street & Driveway 1

Gateway Aviation TA (JN:13445)

05/10/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	0	47	0	0	0	18	837	0	0	1038	2
Future Volume (veh/h)	31	0	47	0	0	0	18	837	0	0	1038	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1233	1900	1900	1900	507	1870	1900	1900	1856	1900
Adj Flow Rate, veh/h	34	0	51	0	0	0	20	910	0	0	1128	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	45	0	0	0	94	2	0	0	3	0
Cap, veh/h	421	0	233	0	275	0	12	2193	0	4	1731	791
Arrive On Green	0.14	0.00	0.14	0.00	0.00	0.00	0.02	0.62	0.00	0.00	0.49	0.49
Sat Flow, veh/h	1810	0	1610	0	1900	0	483	3647	0	1810	3526	1610
Grp Volume(v), veh/h	34	0	51	0	0	0	20	910	0	0	1128	2
Grp Sat Flow(s),veh/h/ln	1810	0	1610	0	1900	0	483	1777	0	1810	1763	1610
Q Serve(g_s), s	0.7	0.0	1.3	0.0	0.0	0.0	1.1	6.0	0.0	0.0	10.9	0.0
Cycle Q Clear(g_c), s	0.7	0.0	1.3	0.0	0.0	0.0	1.1	6.0	0.0	0.0	10.9	0.0
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	421	0	233	0	275	0	12	2193	0	4	1731	791
V/C Ratio(X)	0.08	0.00	0.22	0.00	0.00	0.00	1.69	0.42	0.00	0.00	0.65	0.00
Avail Cap(c_a), veh/h	1036	0	781	0	921	0	53	6079	0	199	6031	2754
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	16.9	0.0	17.1	0.0	0.0	0.0	22.1	4.5	0.0	0.0	8.6	5.9
Incr Delay (d2), s/veh	0.1	0.0	0.5	0.0	0.0	0.0	336.7	0.1	0.0	0.0	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.5	0.0	0.0	0.0	1.2	0.7	0.0	0.0	2.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.0	0.0	17.6	0.0	0.0	0.0	358.8	4.6	0.0	0.0	9.1	5.9
LnGrp LOS	B	A	B	A	A	A	F	A	A	A	A	A
Approach Vol, veh/h		85			0			930			1130	
Approach Delay, s/veh		17.3			0.0			12.2			9.1	
Approach LOS		B						B			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	34.2		11.2	5.7	28.5		11.2				
Change Period (Y+Rc), s	4.6	6.2		4.6	4.6	6.2		4.6				
Max Green Setting (Gmax), s	5.0	77.6		22.0	5.0	77.6		22.0				
Max Q Clear Time (g_c+1), s	0.0	8.0		3.3	3.1	12.9		0.0				
Green Ext Time (p_c), s	0.0	6.8		0.3	0.0	9.4		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				10.8								
HCM 6th LOS				B								

Intersection						
Int Delay, s/veh	1.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↑↑	↗	↘	↑↑
Traffic Vol, veh/h	55	52	991	19	17	1464
Future Vol, veh/h	55	52	991	19	17	1464
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	0	140	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	2	8	6	11	6	8
Mvmt Flow	71	67	1271	24	22	1877

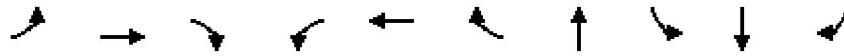
Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	2254	636	0	0	1295
Stage 1	1271	-	-	-	-
Stage 2	983	-	-	-	-
Critical Hdwy	6.84	7.06	-	-	4.22
Critical Hdwy Stg 1	5.84	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-
Follow-up Hdwy	3.52	3.38	-	-	2.26
Pot Cap-1 Maneuver	~ 35	406	-	-	510
Stage 1	227	-	-	-	-
Stage 2	323	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	~ 33	406	-	-	510
Mov Cap-2 Maneuver	134	-	-	-	-
Stage 1	227	-	-	-	-
Stage 2	309	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	37.6	0	0.1
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	134	406	510	-
HCM Lane V/C Ratio	-	-	0.526	0.164	0.043	-
HCM Control Delay (s)	-	-	58.4	15.6	12.4	-
HCM Lane LOS	-	-	F	C	B	-
HCM 95th %tile Q(veh)	-	-	2.5	0.6	0.1	-

Notes  
 ~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Timings  
12: Heacock Street & San Michele Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBL	SBT	SBR	Ø5
Lane Configurations	↖	↗	↘	↖	↗	↘	↕	↖	↗	↘	
Traffic Volume (vph)	53	316	6	20	93	626	111	838	269	32	
Future Volume (vph)	53	316	6	20	93	626	111	838	269	32	
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	NA	Prot	NA	Perm	
Protected Phases	7	4		3	8	1	2	1	6		5
Permitted Phases			4			8				6	
Detector Phase	7	4	4	3	8	1	2	1	6	6	
Switch Phase											
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0
Minimum Split (s)	9.5	30.5	30.5	8.5	30.5	8.5	34.5	8.5	34.5	34.5	8.5
Total Split (s)	12.0	37.4	37.4	9.6	35.0	36.0	37.0	36.0	64.5	64.5	8.5
Total Split (%)	10.0%	31.2%	31.2%	8.0%	29.2%	30.0%	30.8%	30.0%	53.8%	53.8%	7%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5	5.5	
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	None	Max	Max	None
Act Effct Green (s)	15.1	29.1	29.1	5.0	17.1	54.4	31.7	31.7	67.9	67.9	
Actuated g/C Ratio	0.13	0.26	0.26	0.04	0.15	0.48	0.28	0.28	0.60	0.60	
v/c Ratio	0.30	0.93	0.02	0.35	0.47	0.79	0.24	2.26	0.38	0.04	
Control Delay	48.5	68.0	0.0	67.2	51.4	18.3	28.1	595.9	14.6	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	48.5	68.0	0.0	67.2	51.4	18.3	28.1	595.9	14.6	0.1	
LOS	D	E	A	E	D	B	C	F	B	A	
Approach Delay		64.1			23.8		28.1		441.8		
Approach LOS		E			C		C		F		

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 113.5  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 2.26  
 Intersection Signal Delay: 228.6  
 Intersection LOS: F  
 Intersection Capacity Utilization 80.4%  
 ICU Level of Service D  
 Analysis Period (min) 15

























Splits and Phases: 12: Heacock Street & San Michele Road



HCM 6th Signalized Intersection Summary  
 12: Heacock Street & San Michele Road

Gateway Aviation TA (JN:13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	316	6	20	93	626	0	111	37	838	269	32
Future Volume (veh/h)	53	316	6	20	93	626	0	111	37	838	269	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1870	1900	1648	1900	1900	1707	1900
Adj Flow Rate, veh/h	76	451	9	29	133	894	0	159	53	1197	384	46
Peak Hour Factor	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Percent Heavy Veh, %	0	0	0	0	0	2	0	17	0	0	13	0
Cap, veh/h	97	481	397	84	467	806	2	612	197	475	975	920
Arrive On Green	0.05	0.25	0.25	0.05	0.25	0.25	0.00	0.26	0.26	0.26	0.57	0.57
Sat Flow, veh/h	1810	1900	1570	1810	1900	1585	1810	2329	750	1810	1707	1610
Grp Volume(v), veh/h	76	451	9	29	133	894	0	105	107	1197	384	46
Grp Sat Flow(s),veh/h/ln	1810	1900	1570	1810	1900	1585	1810	1566	1513	1810	1707	1610
Q Serve(g_s), s	5.0	27.9	0.5	1.9	6.8	29.5	0.0	6.4	6.7	31.5	14.9	1.0
Cycle Q Clear(g_c), s	5.0	27.9	0.5	1.9	6.8	29.5	0.0	6.4	6.7	31.5	14.9	1.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.50	1.00		1.00
Lane Grp Cap(c), veh/h	97	481	397	84	467	806	2	411	397	475	975	920
V/C Ratio(X)	0.78	0.94	0.02	0.34	0.28	1.11	0.00	0.26	0.27	2.52	0.39	0.05
Avail Cap(c_a), veh/h	113	505	418	84	467	806	60	411	397	475	975	920
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.1	43.9	29.7	55.4	36.7	29.5	0.0	34.9	35.1	44.2	14.2	5.3
Incr Delay (d2), s/veh	21.8	24.4	0.0	0.9	0.1	65.9	0.0	1.5	1.7	689.5	1.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	16.4	0.2	0.9	3.1	21.9	0.0	2.5	2.6	104.4	5.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.9	68.3	29.7	56.3	36.8	95.4	0.0	36.4	36.7	733.7	15.4	5.4
LnGrp LOS	E	E	C	E	D	F	A	D	D	F	B	A
Approach Vol, veh/h		536			1056			212			1627	
Approach Delay, s/veh		69.0			86.9			36.6			543.6	
Approach LOS		E			F			D			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	37.0	37.0	10.1	35.8	0.0	74.0	10.9	35.0				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	31.5	* 32	5.1	31.9	4.0	59.0	7.5	29.5				
Max Q Clear Time (g_c+I1), s	33.5	8.7	3.9	29.9	0.0	16.9	7.0	31.5				
Green Ext Time (p_c), s	0.0	0.6	0.0	0.4	0.0	1.3	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	297.6
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection					
Intersection Delay, s/veh 18.6					
Intersection LOS C					
Approach	EB	WB		NB	
Entry Lanes	3	2		2	
Conflicting Circle Lanes	2	2		2	
Adj Approach Flow, veh/h	0	1876		141	
Demand Flow Rate, veh/h	0	2007		147	
Vehicles Circulating, veh/h	13	130		1238	
Vehicles Exiting, veh/h	2124	1255		144	
Ped Vol Crossing Leg, #/h	0	0		0	
Ped Cap Adj	1.000	1.000		1.000	
Approach Delay, s/veh	0.0	19.2		10.5	
Approach LOS	-	C		B	
Lane	Left		Right		
Designated Moves	LT		TR		L LTR
Assumed Moves	LT		TR		L LTR
RT Channelized					
Lane Util	0.470	0.530	0.531	0.469	
Follow-Up Headway, s	2.667	2.535	2.667	2.535	
Critical Headway, s	4.645	4.328	4.645	4.328	
Entry Flow, veh/h	943	1064	78	69	
Cap Entry Lane, veh/h	1198	1272	432	496	
Entry HV Adj Factor	0.935	0.934	0.958	0.960	
Flow Entry, veh/h	882	994	75	66	
Cap Entry, veh/h	1120	1188	414	476	
V/C Ratio	0.787	0.837	0.180	0.139	
Control Delay, s/veh	17.9	20.4	11.5	9.5	
LOS	C		C		B A
95th %tile Queue, veh	9	11	1	0	

Timings  
14: Indian Street & San Michele Road

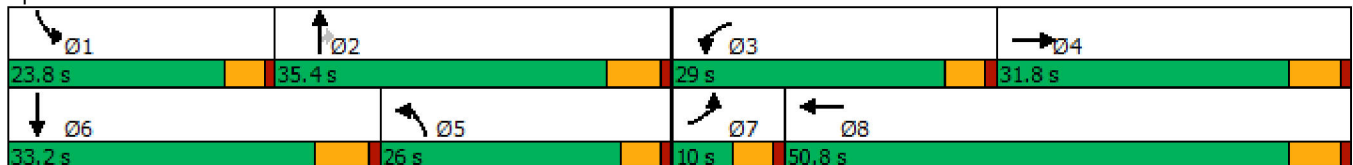


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↘	↗	↗	↗	↗	↘	↗
Traffic Volume (vph)	21	806	228	465	700	179	205	131	349
Future Volume (vph)	21	806	228	465	700	179	205	131	349
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8	5	2		1	6
Permitted Phases							2		
Detector Phase	7	4	3	8	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	31.8	9.6	31.8	9.6	32.8	32.8	9.6	32.8
Total Split (s)	10.0	31.8	29.0	50.8	26.0	35.4	35.4	23.8	33.2
Total Split (%)	8.3%	26.5%	24.2%	42.3%	21.7%	29.5%	29.5%	19.8%	27.7%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	5.3	26.1	23.0	47.9	21.5	27.8	27.8	15.4	21.8
Actuated g/C Ratio	0.05	0.23	0.20	0.42	0.19	0.25	0.25	0.14	0.19
v/c Ratio	0.38	3.48dr	0.91	0.51	1.53	0.60	0.45	0.77	0.82
Control Delay	67.4	1110.3	72.4	26.3	279.7	45.4	6.3	67.8	53.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.4	1110.3	72.4	26.3	279.7	45.4	6.3	67.8	53.7
LOS	E	F	E	C	F	D	A	E	D
Approach Delay		1100.4		40.4		189.3			57.3
Approach LOS		F		D		F			E

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 113.2  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 3.43  
 Intersection Signal Delay: 595.7  
 Intersection LOS: F  
 Intersection Capacity Utilization 141.4%  
 ICU Level of Service H  
 Analysis Period (min) 15  
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 14: Indian Street & San Michele Road



























HCM 6th Signalized Intersection Summary  
 14: Indian Street & San Michele Road

Gateway Aviation TA (JN:13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	806	1412	228	465	54	700	179	205	131	349	30
Future Volume (veh/h)	21	806	1412	228	465	54	700	179	205	131	349	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		1.00	1.00		0.67
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1885	1870	1885	1870	1900	1841	1841	1870	1885	1870	1796
Adj Flow Rate, veh/h	32	1221	2139	345	705	82	1061	271	311	198	529	45
Peak Hour Factor	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66
Percent Heavy Veh, %	5	1	2	1	2	0	4	4	2	1	2	7
Cap, veh/h	47	386	334	363	1279	149	621	524	451	225	727	61
Arrive On Green	0.03	0.22	0.22	0.20	0.39	0.39	0.18	0.28	0.28	0.13	0.22	0.22
Sat Flow, veh/h	1739	1791	1553	1795	3279	381	3506	1841	1583	1795	3256	274
Grp Volume(v), veh/h	32	1221	2139	345	402	385	1061	271	311	198	301	273
Grp Sat Flow(s),veh/h/ln	1739	1791	1553	1795	1870	1790	1753	1841	1583	1795	1870	1659
Q Serve(g_s), s	2.2	26.0	26.0	22.9	20.2	20.2	21.4	14.9	21.1	13.1	18.0	18.4
Cycle Q Clear(g_c), s	2.2	26.0	26.0	22.9	20.2	20.2	21.4	14.9	21.1	13.1	18.0	18.4
Prop In Lane	1.00		1.00	1.00		0.21	1.00		1.00	1.00		0.17
Lane Grp Cap(c), veh/h	47	386	334	363	730	698	621	524	451	225	418	371
V/C Ratio(X)	0.68	3.17	6.40	0.95	0.55	0.55	1.71	0.52	0.69	0.88	0.72	0.74
Avail Cap(c_a), veh/h	78	386	334	363	730	698	621	524	451	285	424	376
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.2	47.4	47.4	47.6	28.6	28.6	49.7	36.2	38.4	51.9	43.4	43.6
Incr Delay (d2), s/veh	6.1	982.0	2435.4	34.3	0.5	0.6	325.4	0.4	3.7	18.7	5.0	6.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	116.3	235.9	13.4	8.8	8.4	37.1	6.5	8.4	6.9	8.6	7.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.3	1029.4	2482.8	81.9	29.1	29.2	375.1	36.6	42.1	70.6	48.4	49.9
LnGrp LOS	E	F	F	F	C	C	F	D	D	E	D	D
Approach Vol, veh/h		3392			1132			1643			772	
Approach Delay, s/veh		1936.8			45.2			256.2			54.6	
Approach LOS		F			D			F			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.8	40.2	29.0	31.8	27.2	32.8	7.9	52.9				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	5.8	* 5.8	4.6	5.8				
Max Green Setting (Gmax), s	19.2	29.6	24.4	26.0	21.4	* 27	5.4	45.0				
Max Q Clear Time (g_c+I1), s	15.1	23.1	24.9	28.0	23.4	20.4	4.2	22.2				
Green Ext Time (p_c), s	0.1	0.9	0.0	0.0	0.0	1.2	0.0	2.8				

Intersection Summary

HCM 6th Ctrl Delay	1020.9
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
15: Indian Street & Nandina Avenue

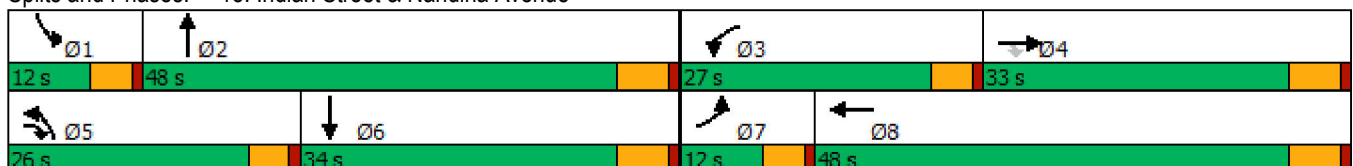


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↑	↗	↖	↗	↖	↑↓	↖	↑↓
Traffic Volume (vph)	44	103	516	171	43	153	675	19	1454
Future Volume (vph)	44	103	516	171	43	153	675	19	1454
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	5	3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	5	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	29.8	9.6	9.6	29.8	9.6	26.8	9.6	26.8
Total Split (s)	12.0	33.0	26.0	27.0	48.0	26.0	48.0	12.0	34.0
Total Split (%)	10.0%	27.5%	21.7%	22.5%	40.0%	21.7%	40.0%	10.0%	28.3%
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	6.7	14.8	41.1	18.2	28.7	20.4	47.2	6.0	28.5
Actuated g/C Ratio	0.07	0.14	0.40	0.18	0.28	0.20	0.46	0.06	0.28
v/c Ratio	0.50	0.58	0.93	0.82	0.28	0.69	0.60	0.25	1.98
Control Delay	63.8	51.5	46.0	63.7	19.1	53.0	25.3	55.7	470.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.8	51.5	46.0	63.7	19.1	53.0	25.3	55.7	470.8
LOS	E	D	D	E	B	D	C	E	F
Approach Delay		48.0			47.7		30.0		465.7
Approach LOS		D			D		C		F

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 103  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.98  
 Intersection Signal Delay: 231.8  
 Intersection LOS: F  
 Intersection Capacity Utilization 95.2%  
 ICU Level of Service F  
 Analysis Period (min) 15
























Splits and Phases: 15: Indian Street & Nandina Avenue



HCM 6th Signalized Intersection Summary  
 15: Indian Street & Nandina Avenue

Gateway Aviation TA (JN:13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	103	516	171	43	53	153	675	69	19	1454	34
Future Volume (veh/h)	44	103	516	171	43	53	153	675	69	19	1454	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1752	1781	1678	1559	1870	1574	1885	1856	1811	1885	1856
Adj Flow Rate, veh/h	61	143	717	238	60	74	212	938	96	26	2019	47
Peak Hour Factor	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72
Percent Heavy Veh, %	0	10	8	15	23	2	22	1	3	6	1	3
Cap, veh/h	79	424	603	264	231	285	236	1290	132	43	920	21
Arrive On Green	0.04	0.24	0.24	0.16	0.36	0.36	0.16	0.38	0.38	0.02	0.25	0.25
Sat Flow, veh/h	1810	1752	1510	1598	635	783	1499	3364	344	1725	3670	85
Grp Volume(v), veh/h	61	143	717	238	0	134	212	526	508	26	1033	1033
Grp Sat Flow(s),veh/h/ln	1810	1752	1510	1598	0	1418	1499	1885	1823	1725	1885	1870
Q Serve(g_s), s	3.8	7.6	27.2	16.4	0.0	7.5	15.6	26.8	26.8	1.7	28.2	28.2
Cycle Q Clear(g_c), s	3.8	7.6	27.2	16.4	0.0	7.5	15.6	26.8	26.8	1.7	28.2	28.2
Prop In Lane	1.00		1.00	1.00		0.55	1.00		0.19	1.00		0.05
Lane Grp Cap(c), veh/h	79	424	603	264	0	515	236	723	699	43	473	469
V/C Ratio(X)	0.77	0.34	1.19	0.90	0.00	0.26	0.90	0.73	0.73	0.61	2.18	2.20
Avail Cap(c_a), veh/h	119	424	603	318	0	532	285	723	699	114	473	469
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.2	35.2	33.8	46.1	0.0	25.2	46.5	29.6	29.6	54.3	42.1	42.1
Incr Delay (d2), s/veh	7.5	0.5	101.1	22.5	0.0	0.3	23.6	3.7	3.8	5.1	540.1	548.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	3.2	32.2	7.9	0.0	2.4	7.1	12.0	11.6	0.8	83.3	83.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.7	35.7	134.9	68.5	0.0	25.4	70.1	33.3	33.5	59.4	582.3	590.4
LnGrp LOS	E	D	F	E	A	C	E	C	C	E	F	F
Approach Vol, veh/h		921			372			1246			2092	
Approach Delay, s/veh		114.6			53.0			39.6			579.8	
Approach LOS		F			D			D			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.4	48.9	23.2	33.0	22.3	34.0	9.5	46.7				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	7.4	42.2	22.4	27.2	21.4	28.2	7.4	42.2				
Max Q Clear Time (g_c+I1), s	3.7	28.8	18.4	29.2	17.6	30.2	5.8	9.5				
Green Ext Time (p_c), s	0.0	5.0	0.1	0.0	0.1	0.0	0.0	0.7				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			299.6									
HCM 6th LOS			F									

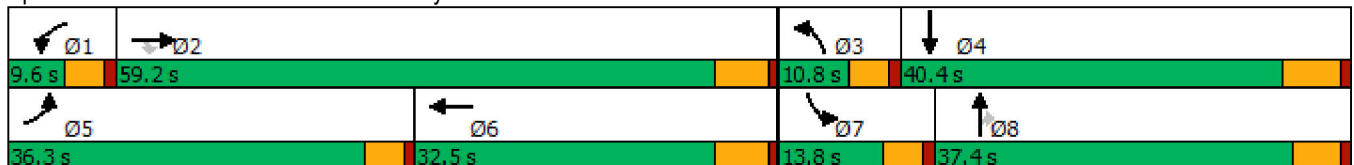
Timings  
16: Indian Av. & Harley Knox Bl.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	318	502	73	40	488	109	196	76	51	277
Future Volume (vph)	318	502	73	40	488	109	196	76	51	277
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	5	2		1	6	3	8		7	4
Permitted Phases			2					8		
Detector Phase	5	2	2	1	6	3	8	8	7	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	35.8	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2
Total Split (s)	36.3	59.2	59.2	9.6	32.5	10.8	37.4	37.4	13.8	40.4
Total Split (%)	30.3%	49.3%	49.3%	8.0%	27.1%	9.0%	31.2%	31.2%	11.5%	33.7%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.4	4.4	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	5.4	5.4	4.6	6.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	31.8	49.5	49.5	5.0	20.5	6.2	34.0	34.0	7.7	32.5
Actuated g/C Ratio	0.28	0.44	0.44	0.04	0.18	0.06	0.30	0.30	0.07	0.29
v/c Ratio	0.93	0.29	0.13	0.66	0.71	0.78	0.26	0.17	0.52	1.02dr
Control Delay	69.7	21.2	2.6	91.9	47.8	82.8	32.5	1.5	67.2	36.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.7	21.2	2.6	91.9	47.8	82.8	32.5	1.5	67.2	36.6
LOS	E	C	A	F	D	F	C	A	E	D
Approach Delay		37.0			51.1		40.7			38.2
Approach LOS		D			D		D			D

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 112.4  
 Natural Cycle: 110  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.93  
 Intersection Signal Delay: 40.7  
 Intersection LOS: D  
 Intersection Capacity Utilization 77.4%  
 ICU Level of Service D  
 Analysis Period (min) 15  
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.































Splits and Phases: 16: Indian Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 16: Indian Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 			 	
Traffic Volume (veh/h)	318	502	73	40	488	14	109	196	76	51	277	636
Future Volume (veh/h)	318	502	73	40	488	14	109	196	76	51	277	636
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1618	1841	1678	1826	1796	1781	1737	1648	1841	1900	1841	1796
Adj Flow Rate, veh/h	398	628	81	50	610	-4	136	245	88	64	346	739
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	19	4	15	5	7	8	11	17	4	0	4	7
Cap, veh/h	421	2007	568	64	800	0	182	1015	499	83	548	488
Arrive On Green	0.27	0.40	0.40	0.04	0.16	0.00	0.06	0.32	0.32	0.05	0.31	0.31
Sat Flow, veh/h	1541	5025	1422	1739	5065	0	3209	3131	1540	1810	1749	1560
Grp Volume(v), veh/h	398	628	81	50	606	0	136	245	88	64	346	739
Grp Sat Flow(s),veh/h/ln	1541	1675	1422	1739	1635	0	1605	1566	1540	1810	1749	1560
Q Serve(g_s), s	27.6	9.4	4.0	3.1	12.9	0.0	4.6	6.3	4.5	3.8	18.5	34.2
Cycle Q Clear(g_c), s	27.6	9.4	4.0	3.1	12.9	0.0	4.6	6.3	4.5	3.8	18.5	34.2
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	421	2007	568	64	800	0	182	1015	499	83	548	488
V/C Ratio(X)	0.95	0.31	0.14	0.79	0.76	0.00	0.75	0.24	0.18	0.77	0.63	1.51
Avail Cap(c_a), veh/h	447	2457	695	80	1199	0	182	1015	499	152	548	488
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.9	22.5	20.9	52.2	43.6	0.0	50.7	27.1	26.5	51.5	32.1	37.5
Incr Delay (d2), s/veh	27.9	0.1	0.1	25.9	1.6	0.0	13.9	0.1	0.2	5.6	2.4	241.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.1	3.5	1.3	1.8	5.1	0.0	2.1	2.3	1.6	1.8	7.8	45.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.8	22.6	21.0	78.1	45.2	0.0	64.6	27.2	26.6	57.2	34.5	278.7
LnGrp LOS	E	C	C	E	D	A	E	C	C	E	C	F
Approach Vol, veh/h		1107			656			469			1149	
Approach Delay, s/veh		38.4			47.7			37.9			192.8	
Approach LOS		D			D			D			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.6	49.4	10.8	40.4	34.4	23.6	9.6	41.6				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	*6.2				
Max Green Setting (Gmax), s	5.0	53.4	6.2	34.2	31.7	26.7	9.2	*32				
Max Q Clear Time (g_c+I1), s	5.1	11.4	6.6	36.2	29.6	14.9	5.8	8.3				
Green Ext Time (p_c), s	0.0	4.5	0.0	0.0	0.2	2.9	0.0	1.7				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					92.6							
HCM 6th LOS					F							
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Intersection						
Int Delay, s/veh	8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↶	↷	↶		↶	↷
Traffic Vol, veh/h	0	145	2	10	268	12
Future Vol, veh/h	0	145	2	10	268	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	115	0	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	0	12	0	0	15	0
Mvmt Flow	0	193	3	13	357	16

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	740	10	0	0	16	0
Stage 1	10	-	-	-	-	-
Stage 2	730	-	-	-	-	-
Critical Hdwy	6.4	6.32	-	-	4.25	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.408	-	-	2.335	-
Pot Cap-1 Maneuver	387	1043	-	-	1521	-
Stage 1	1018	-	-	-	-	-
Stage 2	481	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	296	1043	-	-	1521	-
Mov Cap-2 Maneuver	296	-	-	-	-	-
Stage 1	1018	-	-	-	-	-
Stage 2	368	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.2	0	7.7
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	-	1043	1521
HCM Lane V/C Ratio	-	-	-	0.185	0.235
HCM Control Delay (s)	-	-	0	9.2	8.1
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	-	0.7	0.9

Timings  
18: Perris Bl. & San Michele Rd./Driveway



Lane Group	EBL	EBR	WBL	NBL	NBT	SBL	SBT	SBR	Ø4	Ø8
Lane Configurations	↖	↗	↖	↖	↑↑↑	↖	↑↑↑	↖		
Traffic Volume (vph)	142	165	1	67	1698	4	1791	88		
Future Volume (vph)	142	165	1	67	1698	4	1791	88		
Turn Type	Prot	pm+ov	Prot	Prot	NA	Prot	NA	Perm		
Protected Phases	7	5	3	5	2	1	6		4	8
Permitted Phases		4								6
Detector Phase	7	5	3	5	2	1	6	6		
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	10.0	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	9.6	9.6	9.6	34.8	9.6	34.8	34.8	31.4	26.4
Total Split (s)	25.0	18.0	10.0	18.0	58.6	10.0	50.6	50.6	41.4	26.4
Total Split (%)	20.8%	15.0%	8.3%	15.0%	48.8%	8.3%	42.2%	42.2%	35%	22%
Yellow Time (s)	3.6	3.6	3.6	3.6	4.8	3.6	4.8	4.8	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.6	4.6	4.6	4.6	5.8	4.6	5.8	5.8		
Lead/Lag	Lead	Lead	Lead	Lead	Lag	Lead	Lag	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 87.4  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 18: Perris Bl. & San Michele Rd./Driveway





























HCM 6th Signalized Intersection Summary  
 18: Perris Bl. & San Michele Rd./Driveway

Gateway Aviation (JN 13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	142	0	165	1	0	0	67	1698	0	4	1791	88
Future Volume (veh/h)	142	0	165	1	0	0	67	1698	0	4	1791	88
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1900	1811	1900	1900	1900	1826	1885	1900	1900	1856	1826
Adj Flow Rate, veh/h	160	0	95	1	0	0	75	1908	0	4	2012	80
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	0	6	0	0	0	5	1	0	0	3	5
Cap, veh/h	203	268	301	2	54	46	96	2969	0	10	2670	815
Arrive On Green	0.11	0.00	0.14	0.00	0.00	0.00	0.06	0.58	0.00	0.01	0.53	0.53
Sat Flow, veh/h	1781	1900	1532	1810	1900	1610	1739	5316	0	1810	5066	1546
Grp Volume(v), veh/h	160	0	95	1	0	0	75	1908	0	4	2012	80
Grp Sat Flow(s),veh/h/ln	1781	1900	1532	1810	1900	1610	1739	1716	0	1810	1689	1546
Q Serve(g_s), s	6.5	0.0	3.9	0.0	0.0	0.0	3.2	18.5	0.0	0.2	23.1	1.9
Cycle Q Clear(g_c), s	6.5	0.0	3.9	0.0	0.0	0.0	3.2	18.5	0.0	0.2	23.1	1.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	203	268	301	2	54	46	96	2969	0	10	2670	815
V/C Ratio(X)	0.79	0.00	0.32	0.40	0.00	0.00	0.78	0.64	0.00	0.41	0.75	0.10
Avail Cap(c_a), veh/h	490	923	829	132	539	456	315	3668	0	132	3063	935
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.9	0.0	25.5	37.0	0.0	0.0	34.6	10.5	0.0	36.7	13.7	8.7
Incr Delay (d2), s/veh	6.6	0.0	0.6	34.6	0.0	0.0	5.1	0.3	0.0	10.2	0.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	0.0	1.4	0.0	0.0	0.0	1.4	5.3	0.0	0.1	7.1	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.6	0.0	26.1	71.5	0.0	0.0	39.7	10.8	0.0	46.9	14.7	8.8
LnGrp LOS	D	A	C	E	A	A	D	B	A	D	B	A
Approach Vol, veh/h		255			1			1983			2096	
Approach Delay, s/veh		33.9			71.5			11.9			14.5	
Approach LOS		C			E			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.0	48.5	4.7	15.8	8.7	44.9	13.1	7.5				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.4	4.6	5.8	4.6	5.4				
Max Green Setting (Gmax), s	5.4	52.8	5.4	36.0	13.4	44.8	20.4	21.0				
Max Q Clear Time (g_c+I1), s	2.2	20.5	2.0	5.9	5.2	25.1	8.5	0.0				
Green Ext Time (p_c), s	0.0	17.8	0.0	0.3	0.0	14.0	0.3	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			14.5									
HCM 6th LOS			B									



Timings  
19: Perris Bl. & Nandina Av.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	48	2	24	5	11	47	1699	15	1866	48
Future Volume (vph)	48	2	24	5	11	47	1699	15	1866	48
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	pm+ov
Protected Phases	7	4	3	8		5	2	1	6	7
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	7
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	5.0
Minimum Split (s)	9.6	41.4	9.6	28.4	28.4	9.6	39.8	9.6	41.8	9.6
Total Split (s)	12.0	41.4	12.0	41.4	41.4	15.0	55.6	11.0	51.6	12.0
Total Split (%)	10.0%	34.5%	10.0%	34.5%	34.5%	12.5%	46.3%	9.2%	43.0%	10.0%
Yellow Time (s)	3.6	4.4	3.6	4.4	4.4	3.6	4.8	3.6	4.8	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	4.6	5.4	5.4	4.6	5.8	4.6	5.8	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 83.2  
 Natural Cycle: 105  
 Control Type: Actuated-Uncoordinated
























Splits and Phases: 19: Perris Bl. & Nandina Av.

Ø1	Ø2	Ø3	Ø4
11 s	55.6 s	12 s	41.4 s
Ø5	Ø6	Ø7	Ø8
15 s	51.6 s	12 s	41.4 s

HCM 6th Signalized Intersection Summary  
 19: Perris Bl. & Nandina Av.

Gateway Aviation (JN 13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	2	120	24	5	11	47	1699	14	15	1866	48
Future Volume (veh/h)	48	2	120	24	5	11	47	1699	14	15	1866	48
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1159	1841	1693	1307	1752	1796	1885	1218	1900	1870	1366
Adj Flow Rate, veh/h	53	2	64	26	5	1	52	1867	6	16	2051	23
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	50	4	14	40	10	7	1	46	0	2	36
Cap, veh/h	80	149	133	45	155	175	75	2674	9	118	2689	660
Arrive On Green	0.04	0.13	0.13	0.03	0.12	0.12	0.04	0.50	0.50	0.07	0.53	0.53
Sat Flow, veh/h	1810	1101	982	1612	1307	1478	1711	5296	17	1810	5106	1156
Grp Volume(v), veh/h	53	2	64	26	5	1	52	1209	664	16	2051	23
Grp Sat Flow(s),veh/h/ln	1810	1101	982	1612	1307	1478	1711	1716	1882	1810	1702	1156
Q Serve(g_s), s	2.2	0.1	4.6	1.2	0.3	0.0	2.3	20.6	20.6	0.6	24.3	0.7
Cycle Q Clear(g_c), s	2.2	0.1	4.6	1.2	0.3	0.0	2.3	20.6	20.6	0.6	24.3	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	80	149	133	45	155	175	75	1732	950	118	2689	660
V/C Ratio(X)	0.66	0.01	0.48	0.58	0.03	0.01	0.70	0.70	0.70	0.14	0.76	0.03
Avail Cap(c_a), veh/h	175	519	463	156	616	696	233	2236	1227	152	3061	744
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.0	28.6	30.6	36.7	29.8	29.7	36.0	14.5	14.5	33.7	14.3	7.2
Incr Delay (d2), s/veh	3.5	0.0	2.7	4.4	0.1	0.0	4.3	0.7	1.2	0.2	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	1.1	0.5	0.1	0.0	1.0	6.6	7.4	0.3	7.7	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.4	28.7	33.3	41.1	29.9	29.7	40.3	15.1	15.7	33.9	15.3	7.2
LnGrp LOS	D	C	C	D	C	C	D	B	B	C	B	A
Approach Vol, veh/h		119			32			1925			2090	
Approach Delay, s/veh		35.9			39.0			16.0			15.4	
Approach LOS		D			D			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.6	44.4	6.7	15.7	7.9	46.0	8.0	14.5				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.4	4.6	5.8	4.6	5.4				
Max Green Setting (Gmax), s	6.4	49.8	7.4	36.0	10.4	45.8	7.4	36.0				
Max Q Clear Time (g_c+I1), s	2.6	22.6	3.2	6.6	4.3	26.3	4.2	2.3				
Green Ext Time (p_c), s	0.0	14.9	0.0	0.3	0.0	14.0	0.0	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			16.4									
HCM 6th LOS			B									

Timings

20: Perris Bl. & Harley Knox Bl.

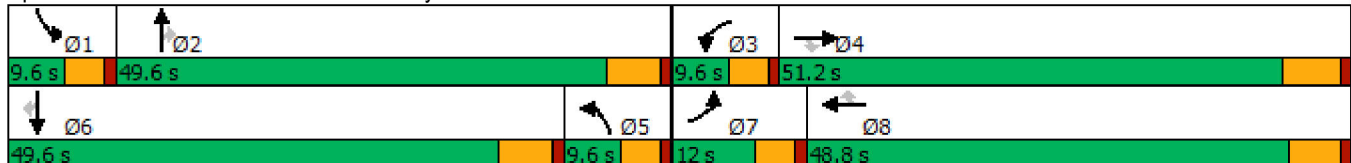
05/10/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	308	217	103	8	238	104	46	840	11	135	1087	290
Future Volume (vph)	308	217	103	8	238	104	46	840	11	135	1087	290
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	47.2	47.2	9.6	48.8	48.8	9.6	48.8	48.8	9.6	43.8	43.8
Total Split (s)	12.0	51.2	51.2	9.6	48.8	48.8	9.6	49.6	49.6	9.6	49.6	49.6
Total Split (%)	10.0%	42.7%	42.7%	8.0%	40.7%	40.7%	8.0%	41.3%	41.3%	8.0%	41.3%	41.3%
Yellow Time (s)	3.6	5.2	5.2	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 76.6  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

























Splits and Phases: 20: Perris Bl. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 20: Perris Bl. & Harley Knox Bl.

Gateway Aviation (JN 13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	308	217	103	8	238	104	46	840	11	135	1087	290
Future Volume (veh/h)	308	217	103	8	238	104	46	840	11	135	1087	290
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1841	1811	1500	1841	1856	1589	1856	1604	1885	1856	1796
Adj Flow Rate, veh/h	338	238	71	9	262	66	51	923	8	148	1195	263
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	6	4	6	27	4	3	21	3	20	1	3	7
Cap, veh/h	186	847	372	32	732	226	133	1869	501	239	1898	570
Arrive On Green	0.11	0.24	0.24	0.01	0.15	0.15	0.05	0.37	0.37	0.07	0.37	0.37
Sat Flow, veh/h	1725	3497	1535	2771	5025	1551	2935	5066	1359	3483	5066	1521
Grp Volume(v), veh/h	338	238	71	9	262	66	51	923	8	148	1195	263
Grp Sat Flow(s),veh/h/ln	1725	1749	1535	1386	1675	1551	1468	1689	1359	1742	1689	1521
Q Serve(g_s), s	7.4	3.8	1.8	0.2	3.2	2.6	1.2	9.6	0.3	2.8	13.2	5.2
Cycle Q Clear(g_c), s	7.4	3.8	1.8	0.2	3.2	2.6	1.2	9.6	0.3	2.8	13.2	5.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	186	847	372	32	732	226	133	1869	501	239	1898	570
V/C Ratio(X)	1.82	0.28	0.19	0.28	0.36	0.29	0.38	0.49	0.02	0.62	0.63	0.46
Avail Cap(c_a), veh/h	186	2294	1007	202	3149	972	214	3234	868	254	3234	971
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.6	21.1	10.4	33.6	26.4	26.1	31.8	16.7	13.7	31.1	17.6	5.6
Incr Delay (d2), s/veh	388.0	0.2	0.2	1.8	0.3	0.7	0.7	0.2	0.0	2.8	0.3	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	22.8	1.4	0.8	0.1	1.2	0.9	0.4	3.2	0.1	1.2	4.4	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	418.6	21.3	10.6	35.4	26.7	26.9	32.5	16.9	13.8	33.9	17.9	6.1
LnGrp LOS	F	C	B	D	C	C	C	B	B	C	B	A
Approach Vol, veh/h		647			337			982			1606	
Approach Delay, s/veh		227.7			27.0			17.7			17.5	
Approach LOS		F			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.3	31.1	5.4	22.8	8.9	31.5	12.0	16.2				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	5.8	* 5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	5.0	43.8	5.0	45.0	5.0	* 44	7.4	* 43				
Max Q Clear Time (g_c+I1), s	4.8	11.6	2.2	5.8	3.2	15.2	9.4	5.2				
Green Ext Time (p_c), s	0.0	6.8	0.0	1.6	0.0	10.3	0.0	1.9				

Intersection Summary

HCM 6th Ctrl Delay	56.5
HCM 6th LOS	E

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

**APPENDIX 6.3:**

**OPENING YEAR CUMULATIVE (2026) WITH PROJECT (PEAK) CONDITIONS  
INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**

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Timings

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

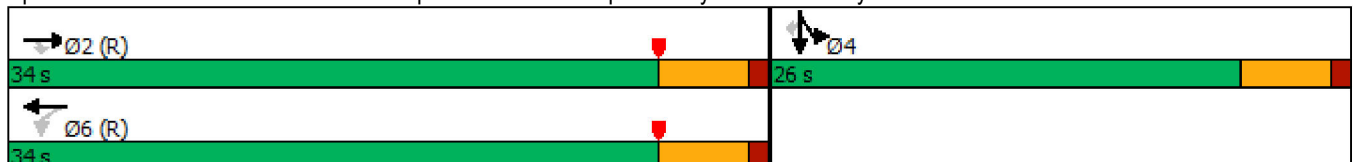


Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations	↑↑	↑	↵	↑↑	↵	↵
Traffic Volume (vph)	804	26	191	278	1	290
Future Volume (vph)	804	26	191	278	1	290
Turn Type	NA	Perm	Perm	NA	NA	Perm
Protected Phases	2			6	4	
Permitted Phases		2	6			4
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	25.0	25.0	10.0	10.0
Total Split (s)	34.0	34.0	34.0	34.0	26.0	26.0
Total Split (%)	56.7%	56.7%	56.7%	56.7%	43.3%	43.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	29.0	29.0	29.0	29.0	21.0	21.0
Actuated g/C Ratio	0.48	0.48	0.48	0.48	0.35	0.35
v/c Ratio	0.53	0.04	1.02	0.18	1.61	0.43
Control Delay	12.2	3.0	100.0	15.7	304.7	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.2	3.0	100.0	15.7	304.7	4.1
LOS	B	A	F	B	F	A
Approach Delay	11.9			50.1	226.9	
Approach LOS	B			D	F	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection  
 Natural Cycle: 100  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.61  
 Intersection Signal Delay: 118.8  
 Intersection LOS: F  
 Intersection Capacity Utilization 159.0%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

05/10/2022

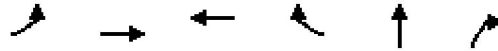


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑						↑	↑
Traffic Volume (veh/h)	0	804	26	191	278	0	0	0	0	829	1	290
Future Volume (veh/h)	0	804	26	191	278	0	0	0	0	829	1	290
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1826	1841	1633	1856	0				1707	1900	1796
Adj Flow Rate, veh/h	0	874	28	208	302	0				901	1	255
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	5	4	18	3	0				13	0	7
Cap, veh/h	0	1677	754	287	1704	0				633	1	533
Arrive On Green	0.00	0.48	0.48	0.97	0.97	0.00				0.35	0.35	0.35
Sat Flow, veh/h	0	3561	1560	539	3618	0				1808	2	1522
Grp Volume(v), veh/h	0	874	28	208	302	0				902	0	255
Grp Sat Flow(s),veh/h/ln	0	1735	1560	539	1763	0				1810	0	1522
Q Serve(g_s), s	0.0	10.4	0.6	18.6	0.2	0.0				21.0	0.0	7.8
Cycle Q Clear(g_c), s	0.0	10.4	0.6	29.0	0.2	0.0				21.0	0.0	7.8
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1677	754	287	1704	0				633	0	533
V/C Ratio(X)	0.00	0.52	0.04	0.73	0.18	0.00				1.42	0.00	0.48
Avail Cap(c_a), veh/h	0	1677	754	287	1704	0				633	0	533
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.96	0.96	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	10.7	8.2	8.1	0.5	0.0				19.5	0.0	15.2
Incr Delay (d2), s/veh	0.0	1.2	0.1	14.2	0.2	0.0				200.0	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.2	0.2	1.2	0.1	0.0				42.3	0.0	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	11.9	8.2	22.3	0.7	0.0				219.5	0.0	15.9
LnGrp LOS	A	B	A	C	A	A				F	A	B
Approach Vol, veh/h		902			510						1157	
Approach Delay, s/veh		11.8			9.5						174.6	
Approach LOS		B			A						F	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		34.0		26.0		34.0						
Change Period (Y+Rc), s		5.0		5.0		5.0						
Max Green Setting (Gmax), s		29.0		21.0		29.0						
Max Q Clear Time (g_c+I1), s		12.4		23.0		31.0						
Green Ext Time (p_c), s		3.5		0.0		0.0						
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				84.7								
HCM 6th LOS				F								



Timings

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

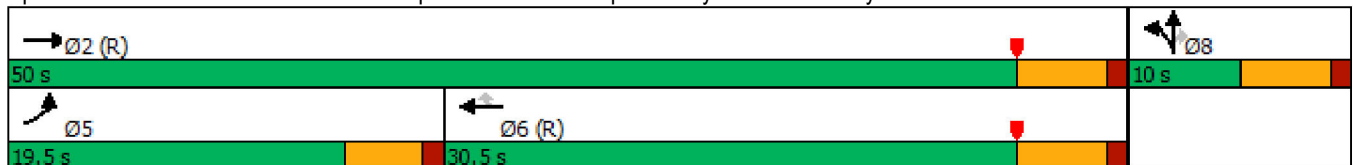


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	486	1033	415	1060	3	283
Future Volume (vph)	486	1033	415	1060	3	283
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	26.0	24.0	24.0	10.0	10.0
Total Split (s)	19.5	50.0	30.5	30.5	10.0	10.0
Total Split (%)	32.5%	83.3%	50.8%	50.8%	16.7%	16.7%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max
Act Effct Green (s)	15.0	45.0	25.5	25.5	5.0	5.0
Actuated g/C Ratio	0.25	0.75	0.42	0.42	0.08	0.08
v/c Ratio	1.23	0.46	0.32	1.44	0.41	1.15
Control Delay	138.8	2.4	12.3	223.7	35.0	122.1
Queue Delay	0.0	0.3	0.0	0.0	0.0	0.0
Total Delay	138.8	2.8	12.3	223.7	35.0	122.1
LOS	F	A	B	F	C	F
Approach Delay		46.3	164.3		107.7	
Approach LOS		D	F		F	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 29 (48%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.44  
 Intersection Signal Delay: 104.7  
 Intersection LOS: F  
 Intersection Capacity Utilization 159.0%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

05/10/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↗↗			↗↗	↗		↗	↗			
Traffic Volume (veh/h)	486	1033	0	0	415	1060	53	3	283	0	0	0
Future Volume (veh/h)	486	1033	0	0	415	1060	53	3	283	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1826	1722	0	0	1752	1767	1870	1900	1826			
Adj Flow Rate, veh/h	528	1123	0	0	451	1088	58	3	243			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	5	12	0	0	10	9	2	0	5			
Cap, veh/h	435	2454	0	0	1415	636	144	7	129			
Arrive On Green	0.50	1.00	0.00	0.00	0.43	0.43	0.08	0.08	0.08			
Sat Flow, veh/h	1739	3358	0	0	3416	1496	1725	89	1547			
Grp Volume(v), veh/h	528	1123	0	0	451	1088	61	0	243			
Grp Sat Flow(s),veh/h/ln	1739	1636	0	0	1664	1496	1814	0	1547			
Q Serve(g_s), s	15.0	0.0	0.0	0.0	5.4	25.5	1.9	0.0	5.0			
Cycle Q Clear(g_c), s	15.0	0.0	0.0	0.0	5.4	25.5	1.9	0.0	5.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.95		1.00			
Lane Grp Cap(c), veh/h	435	2454	0	0	1415	636	151	0	129			
V/C Ratio(X)	1.21	0.46	0.00	0.00	0.32	1.71	0.40	0.00	1.88			
Avail Cap(c_a), veh/h	435	2454	0	0	1415	636	151	0	129			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.84	0.84	0.00	0.00	0.83	0.83	1.00	0.00	1.00			
Uniform Delay (d), s/veh	15.0	0.0	0.0	0.0	11.5	17.2	26.1	0.0	27.5			
Incr Delay (d2), s/veh	113.3	0.5	0.0	0.0	0.5	325.6	7.8	0.0	425.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	16.8	0.2	0.0	0.0	1.7	64.2	1.1	0.0	16.9			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	128.3	0.5	0.0	0.0	12.0	342.8	33.9	0.0	453.3			
LnGrp LOS	F	A	A	A	B	F	C	A	F			
Approach Vol, veh/h		1651			1539			304				
Approach Delay, s/veh		41.4			245.9			369.2				
Approach LOS		D			F			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		50.0			19.5	30.5		10.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		45.0			15.0	25.5		5.0				
Max Q Clear Time (g_c+1), s		2.0			17.0	27.5		7.0				
Green Ext Time (p_c), s		5.7			0.0	0.0		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					160.0							
HCM 6th LOS					F							

Timings  
3: Western Way & Harley Knox Bl.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↗↗↗	↖	↖	↗↗↗	↖	↗	↖	↗
Traffic Volume (vph)	97	1343	9	12	1454	1	0	7	0
Future Volume (vph)	97	1343	9	12	1454	1	0	7	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	NA
Protected Phases	5	2		1	6		8		4
Permitted Phases			2			8		4	
Detector Phase	5	2	2	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	21.8	21.8	9.6	21.8	32.6	32.6	32.6	32.6
Total Split (s)	22.0	75.4	75.4	9.6	63.0	35.0	35.0	35.0	35.0
Total Split (%)	18.3%	62.8%	62.8%	8.0%	52.5%	29.2%	29.2%	29.2%	29.2%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	10.9	53.9	53.9	6.5	41.9	15.1	15.1	15.1	15.1
Actuated g/C Ratio	0.16	0.80	0.80	0.10	0.63	0.23	0.23	0.23	0.23
v/c Ratio	0.39	0.38	0.01	0.07	0.54	0.00	0.00	0.03	0.11
Control Delay	38.8	5.9	0.0	44.4	13.5	32.0	0.0	31.7	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.8	5.9	0.0	44.4	13.5	32.0	0.0	31.7	0.5
LOS	D	A	A	D	B	C	A	C	A
Approach Delay		8.1			13.7		10.7		5.0
Approach LOS		A			B		B		A

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 67	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.54	
Intersection Signal Delay: 10.8	Intersection LOS: B
Intersection Capacity Utilization 55.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 3: Western Way & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 3: Western Way & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

05/10/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	97	1343	9	12	1454	39	1	0	2	7	0	45
Future Volume (veh/h)	97	1343	9	12	1454	39	1	0	2	7	0	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1752	1900	1900	1781	1693	1900	1900	1900	1411	1900	1337
Adj Flow Rate, veh/h	104	1444	10	13	1563	40	1	0	2	8	0	36
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	10	10	0	0	8	14	0	0	0	33	0	38
Cap, veh/h	131	2863	964	30	2615	67	245	0	157	241	0	158
Arrive On Green	0.08	0.60	0.60	0.02	0.54	0.54	0.10	0.00	0.10	0.10	0.00	0.10
Sat Flow, veh/h	1668	4782	1610	1810	4876	125	1394	0	1608	1064	0	1610
Grp Volume(v), veh/h	104	1444	10	13	1039	564	1	0	2	8	0	36
Grp Sat Flow(s),veh/h/ln	1668	1594	1610	1810	1621	1759	1394	0	1608	1064	0	1610
Q Serve(g_s), s	3.2	9.1	0.1	0.4	11.4	11.4	0.0	0.0	0.1	0.4	0.0	1.1
Cycle Q Clear(g_c), s	3.2	9.1	0.1	0.4	11.4	11.4	1.1	0.0	0.1	0.4	0.0	1.1
Prop In Lane	1.00		1.00	1.00		0.07	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	131	2863	964	30	1739	943	245	0	157	241	0	158
V/C Ratio(X)	0.79	0.50	0.01	0.44	0.60	0.60	0.00	0.00	0.01	0.03	0.00	0.23
Avail Cap(c_a), veh/h	556	6370	2145	173	3549	1925	920	0	935	756	0	937
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.6	6.0	4.2	25.5	8.3	8.3	22.3	0.0	21.3	21.5	0.0	21.7
Incr Delay (d2), s/veh	4.0	0.1	0.0	3.7	0.3	0.6	0.0	0.0	0.0	0.1	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	1.6	0.0	0.2	2.5	2.8	0.0	0.0	0.0	0.1	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.6	6.2	4.2	29.2	8.6	8.9	22.3	0.0	21.3	21.5	0.0	22.5
LnGrp LOS	C	A	A	C	A	A	C	A	C	C	A	C
Approach Vol, veh/h		1558			1616			3				44
Approach Delay, s/veh		7.6			8.9			21.6				22.3
Approach LOS		A			A			C				C
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.5	37.1		9.7	8.7	33.8		9.7				
Change Period (Y+Rc), s	4.6	5.8		4.6	4.6	5.8		4.6				
Max Green Setting (Gmax), s	5.0	69.6		30.4	17.4	57.2		30.4				
Max Q Clear Time (g_c+I1), s	2.4	11.1		3.1	5.2	13.4		3.1				
Green Ext Time (p_c), s	0.0	14.2		0.2	0.1	14.6		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				8.4								
HCM 6th LOS				A								

Timings

4: Patterson Av. & Harley Knox Bl.

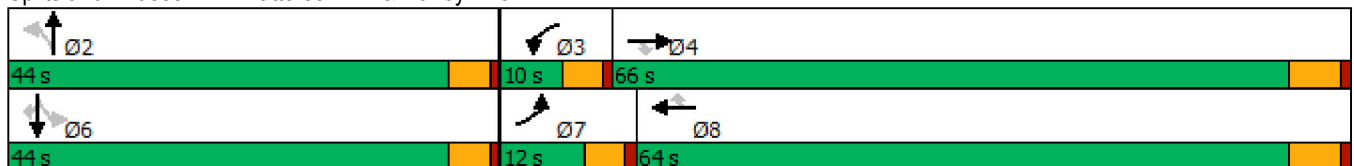


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑	↗	↖	↑↑	↗		↕		↕	↗
Traffic Volume (vph)	22	1218	76	46	1401	16	75	7	13	3	18
Future Volume (vph)	22	1218	76	46	1401	16	75	7	13	3	18
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	7	4		3	8			2		6	
Permitted Phases			4			8	2		6		6
Detector Phase	7	4	4	3	8	8	2	2	6	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	9.6	31.8	31.8	33.7	33.7	40.7	40.7	40.7
Total Split (s)	12.0	66.0	66.0	10.0	64.0	64.0	44.0	44.0	44.0	44.0	44.0
Total Split (%)	10.0%	55.0%	55.0%	8.3%	53.3%	53.3%	36.7%	36.7%	36.7%	36.7%	36.7%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8		4.7		4.7	4.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	6.3	45.1	45.1	5.8	49.7	49.7		16.4		16.4	16.4
Actuated g/C Ratio	0.08	0.56	0.56	0.07	0.61	0.61		0.20		0.20	0.20
v/c Ratio	0.22	0.50	0.09	0.45	0.74	0.03		0.51		0.09	0.07
Control Delay	49.9	12.8	3.1	58.4	16.9	0.1		31.6		31.1	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	49.9	12.8	3.1	58.4	16.9	0.1		31.6		31.1	0.5
LOS	D	B	A	E	B	A		C		C	A
Approach Delay		12.9			18.0			31.6		14.6	
Approach LOS		B			B			C		B	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 81  
 Natural Cycle: 95  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.74  
 Intersection Signal Delay: 16.3  
 Intersection LOS: B  
 Intersection Capacity Utilization 68.1%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 4: Patterson Av. & Harley Knox Bl.



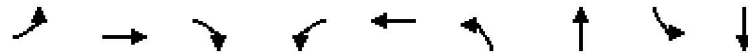
HCM 6th Signalized Intersection Summary  
 4: Patterson Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

05/10/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	1218	76	46	1401	16	75	7	51	13	3	18
Future Volume (veh/h)	22	1218	76	46	1401	16	75	7	51	13	3	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1470	1781	1885	1663	1781	1070	1648	1426	1841	937	952	1278
Adj Flow Rate, veh/h	24	1324	83	50	1523	17	82	8	55	14	3	20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	29	8	1	16	8	56	17	32	4	65	64	42
Cap, veh/h	38	2760	907	72	1984	531	172	26	69	187	25	171
Arrive On Green	0.03	0.57	0.57	0.05	0.59	0.59	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1400	4863	1598	1584	3385	907	550	167	438	552	157	1083
Grp Volume(v), veh/h	24	1324	83	50	1523	17	145	0	0	17	0	20
Grp Sat Flow(s),veh/h/ln	1400	1621	1598	1584	1692	907	1156	0	0	709	0	1083
Q Serve(g_s), s	1.1	10.7	1.6	2.0	22.3	0.5	6.5	0.0	0.0	0.0	0.0	1.0
Cycle Q Clear(g_c), s	1.1	10.7	1.6	2.0	22.3	0.5	7.9	0.0	0.0	1.2	0.0	1.0
Prop In Lane	1.00		1.00	1.00		1.00	0.57		0.38	0.82		1.00
Lane Grp Cap(c), veh/h	38	2760	907	72	1984	531	268	0	0	211	0	171
V/C Ratio(X)	0.64	0.48	0.09	0.69	0.77	0.03	0.54	0.00	0.00	0.08	0.00	0.12
Avail Cap(c_a), veh/h	157	4445	1460	130	2991	801	763	0	0	526	0	646
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	31.7	8.5	6.5	31.0	10.3	5.7	26.6	0.0	0.0	23.8	0.0	23.8
Incr Delay (d2), s/veh	6.4	0.1	0.0	4.4	0.7	0.0	1.7	0.0	0.0	0.2	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	2.7	0.4	0.8	5.7	0.1	2.2	0.0	0.0	0.2	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.1	8.6	6.5	35.4	10.9	5.8	28.3	0.0	0.0	24.0	0.0	24.1
LnGrp LOS	D	A	A	D	B	A	C	A	A	C	A	C
Approach Vol, veh/h		1431			1590			145				37
Approach Delay, s/veh		9.0			11.7			28.3				24.1
Approach LOS		A			B			C				C
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		15.1	7.6	43.2		15.1	6.4	44.4				
Change Period (Y+Rc), s		* 4.7	4.6	5.8		* 4.7	4.6	5.8				
Max Green Setting (Gmax), s		* 39	5.4	60.2		* 39	7.4	58.2				
Max Q Clear Time (g_c+I1), s		9.9	4.0	12.7		3.2	3.1	24.3				
Green Ext Time (p_c), s		0.9	0.0	12.4		0.1	0.0	14.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				11.4								
HCM 6th LOS				B								
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings  
5: Heacock Street & Cactus Avenue

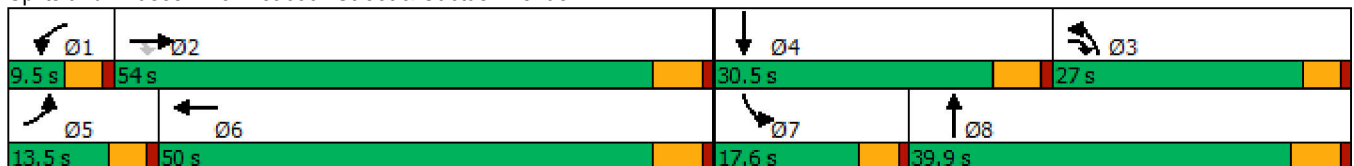


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	162	981	732	81	1904	805	666	129	349
Future Volume (vph)	162	981	732	81	1904	805	666	129	349
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	3	1	6	3	8	7	4
Permitted Phases			2						
Detector Phase	5	2	3	1	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.5	30.5	9.5	9.5	30.5	9.5	30.5	9.5	30.5
Total Split (s)	13.5	54.0	27.0	9.5	50.0	27.0	39.9	17.6	30.5
Total Split (%)	11.2%	44.6%	22.3%	7.9%	41.3%	22.3%	33.0%	14.5%	25.2%
Yellow Time (s)	3.5	4.5	3.5	3.5	4.5	3.5	4.5	3.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	4.5	4.5	5.5	4.5	5.5	4.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None
Act Effct Green (s)	9.0	48.6	72.3	5.0	44.6	22.7	29.5	11.4	18.2
Actuated g/C Ratio	0.08	0.42	0.63	0.04	0.39	0.20	0.26	0.10	0.16
v/c Ratio	1.15	0.65	0.66	1.01	1.46	1.17	0.77	0.72	0.76
Control Delay	166.4	29.1	10.9	158.4	238.6	132.2	45.5	72.8	51.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	166.4	29.1	10.9	158.4	238.6	132.2	45.5	72.8	51.9
LOS	F	C	B	F	F	F	D	E	D
Approach Delay		33.9			235.5		91.9		56.6
Approach LOS		C			F		F		E

Intersection Summary

Cycle Length: 121  
 Actuated Cycle Length: 114.5  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.46  
 Intersection Signal Delay: 121.0  
 Intersection LOS: F  
 Intersection Capacity Utilization 118.7%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 5: Heacock Street & Cactus Avenue





HCM 6th Signalized Intersection Summary  
5: Heacock Street & Cactus Avenue

Gateway Aviation TA (JN:13445)

05/10/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	162	981	732	81	1904	147	805	666	32	129	349	97
Future Volume (veh/h)	162	981	732	81	1904	147	805	666	32	129	349	97
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1870	1781	1900	1885	1856	1826	1841	1856	1870	1841	1885
Adj Flow Rate, veh/h	169	1022	762	84	1983	153	839	694	33	134	364	101
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	2	8	0	1	3	5	4	3	2	4	1
Cap, veh/h	141	1579	933	79	1340	102	681	940	45	161	433	119
Arrive On Green	0.08	0.42	0.42	0.04	0.39	0.39	0.20	0.27	0.27	0.09	0.16	0.16
Sat Flow, veh/h	1795	3741	1510	1810	3460	263	3478	3486	166	1781	2783	762
Grp Volume(v), veh/h	169	1022	762	84	1068	1068	839	366	361	134	239	226
Grp Sat Flow(s),veh/h/ln	1795	1870	1510	1810	1885	1838	1739	1841	1811	1781	1841	1704
Q Serve(g_s), s	9.0	25.0	11.0	5.0	44.5	44.5	22.5	20.8	20.9	8.5	14.5	14.8
Cycle Q Clear(g_c), s	9.0	25.0	11.0	5.0	44.5	44.5	22.5	20.8	20.9	8.5	14.5	14.8
Prop In Lane	1.00		1.00	1.00		0.14	1.00		0.09	1.00		0.45
Lane Grp Cap(c), veh/h	141	1579	933	79	730	712	681	497	489	161	287	265
V/C Ratio(X)	1.20	0.65	0.82	1.07	1.46	1.50	1.23	0.74	0.74	0.83	0.83	0.85
Avail Cap(c_a), veh/h	141	1579	933	79	730	712	681	551	542	203	401	371
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.9	26.4	5.8	54.9	35.2	35.2	46.2	38.2	38.2	51.4	47.1	47.2
Incr Delay (d2), s/veh	140.1	0.7	5.3	120.8	215.7	232.5	116.8	3.8	3.9	16.9	7.5	9.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.4	10.5	5.9	4.9	62.8	64.6	20.4	9.5	9.4	4.4	7.0	6.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	193.0	27.1	11.2	175.7	250.9	267.6	163.0	42.0	42.1	68.3	54.5	56.8
LnGrp LOS	F	C	B	F	F	F	F	D	D	E	D	E
Approach Vol, veh/h		1953			2220			1566			599	
Approach Delay, s/veh		35.2			256.1			106.9			58.5	
Approach LOS		D			F			F			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.5	54.0	28.0	23.4	13.5	50.0	14.9	36.5				
Change Period (Y+Rc), s	4.5	5.5	5.5	* 5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	5.0	48.5	22.5	* 25	9.0	44.5	13.1	34.4				
Max Q Clear Time (g_c+I1), s	7.0	27.0	24.5	16.8	11.0	46.5	10.5	22.9				
Green Ext Time (p_c), s	0.0	6.2	0.0	1.1	0.0	0.0	0.0	2.1				

Intersection Summary

HCM 6th Ctrl Delay	132.5
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Timings  
6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

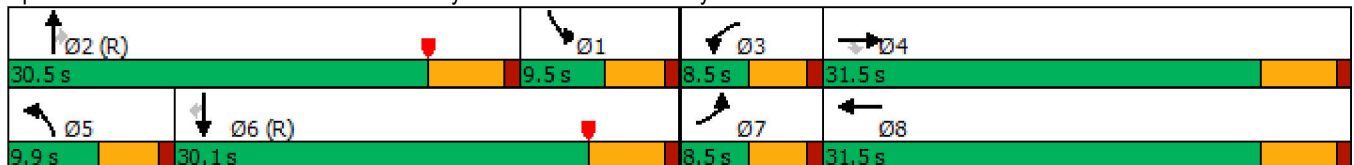
05/10/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	38	42	111	35	220	34	985	54	117	798	20	
Future Volume (vph)	38	42	111	35	220	34	985	54	117	798	20	
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	7	4		3	8	5	2		1	6		
Permitted Phases			4					2			6	
Detector Phase	7	4	4	3	8	5	2	2	1	6	6	
Switch Phase												
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	
Minimum Split (s)	8.5	23.5	23.5	8.5	31.5	8.5	30.5	30.5	8.5	23.5	23.5	
Total Split (s)	8.5	31.5	31.5	8.5	31.5	9.9	30.5	30.5	9.5	30.1	30.1	
Total Split (%)	10.6%	39.4%	39.4%	10.6%	39.4%	12.4%	38.1%	38.1%	11.9%	37.6%	37.6%	
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5	4.5	4.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	5.5	4.5	5.5	5.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max	
Act Effct Green (s)	4.0	12.2	12.2	4.0	12.2	5.6	42.2	42.2	5.0	45.3	45.3	
Actuated g/C Ratio	0.05	0.15	0.15	0.05	0.15	0.07	0.53	0.53	0.06	0.57	0.57	
v/c Ratio	0.49	0.16	0.24	0.40	0.60	0.28	0.54	0.06	1.06	0.41	0.02	
Control Delay	58.8	27.3	1.2	50.5	18.6	41.1	17.1	0.1	141.8	14.6	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	58.8	27.3	1.2	50.5	18.6	41.1	17.1	0.1	141.8	14.6	0.1	
LOS	E	C	A	D	B	D	B	A	F	B	A	
Approach Delay		18.5			20.9		17.0			30.2		
Approach LOS		B			C		B			C		

Intersection Summary

Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 80  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.06  
 Intersection Signal Delay: 22.4  
 Intersection LOS: C  
 Intersection Capacity Utilization 68.2%  
 ICU Level of Service C  
 Analysis Period (min) 15

























Splits and Phases: 6: Heacock Street & Meyer Drive/John F. Kennedy Drive



HCM 6th Signalized Intersection Summary  
 6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	42	111	35	220	213	34	985	54	117	798	20
Future Volume (veh/h)	38	42	111	35	220	213	34	985	54	117	798	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.95	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1648	1781	1841	1811	1856	1885	1811	1826	1781	1856	1796	1663
Adj Flow Rate, veh/h	40	44	116	36	229	222	35	1026	56	122	831	21
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	17	8	4	6	3	1	6	5	8	3	7	16
Cap, veh/h	47	334	292	47	343	289	47	1141	446	372	1826	707
Arrive On Green	0.03	0.19	0.19	0.03	0.19	0.19	0.03	0.31	0.31	0.21	0.51	0.51
Sat Flow, veh/h	1570	1781	1560	1725	1856	1560	1725	3652	1429	1767	3593	1391
Grp Volume(v), veh/h	40	44	116	36	229	222	35	1026	56	122	831	21
Grp Sat Flow(s),veh/h/ln	1570	1781	1560	1725	1856	1560	1725	1826	1429	1767	1796	1391
Q Serve(g_s), s	2.0	1.6	5.2	1.7	9.2	10.8	1.6	21.5	1.7	4.7	11.8	0.6
Cycle Q Clear(g_c), s	2.0	1.6	5.2	1.7	9.2	10.8	1.6	21.5	1.7	4.7	11.8	0.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	47	334	292	47	343	289	47	1141	446	372	1826	707
V/C Ratio(X)	0.86	0.13	0.40	0.76	0.67	0.77	0.75	0.90	0.13	0.33	0.46	0.03
Avail Cap(c_a), veh/h	78	579	507	86	603	507	116	1141	446	372	1826	707
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.90	0.90	0.90	0.62	0.62	0.62
Uniform Delay (d), s/veh	38.6	27.1	28.5	38.6	30.3	31.0	38.7	26.3	11.9	26.8	12.6	9.8
Incr Delay (d2), s/veh	18.0	0.1	0.3	8.8	0.8	1.6	7.8	10.3	0.5	0.1	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.7	1.8	0.8	3.9	3.9	0.7	9.8	0.7	1.8	4.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.6	27.2	28.9	47.4	31.1	32.6	46.5	36.6	12.4	26.9	13.1	9.9
LnGrp LOS	E	C	C	D	C	C	D	D	B	C	B	A
Approach Vol, veh/h		200			487			1117			974	
Approach Delay, s/veh		34.0			33.0			35.7			14.8	
Approach LOS		C			C			D			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	22.3	30.5	6.7	20.5	6.7	46.2	6.9	20.3				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	5.0	* 25	4.0	26.0	5.4	24.6	4.0	26.0				
Max Q Clear Time (g_c+I1), s	6.7	23.5	3.7	7.2	3.6	13.8	4.0	12.8				
Green Ext Time (p_c), s	0.0	0.8	0.0	0.3	0.0	2.6	0.0	1.3				















Intersection Summary

HCM 6th Ctrl Delay	27.8
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

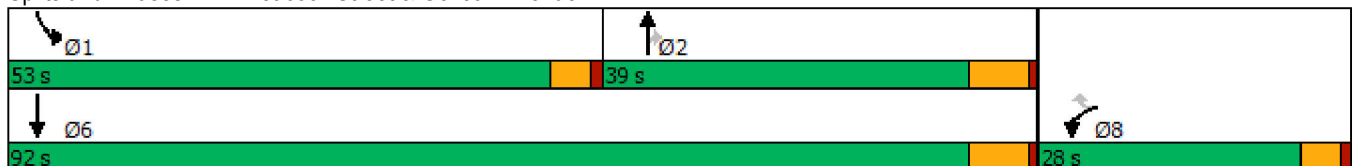
Timings  
7: Heacock Street & Gentian Avenue

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			 			 
Traffic Volume (vph)	14	22	907	9	94	873
Future Volume (vph)	14	22	907	9	94	873
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	27.6	27.6	27.2	27.2	9.6	16.2
Total Split (s)	28.0	28.0	39.0	39.0	53.0	92.0
Total Split (%)	23.3%	23.3%	32.5%	32.5%	44.2%	76.7%
Yellow Time (s)	3.6	3.6	5.2	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	6.2	6.2	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	12.3	12.3	37.8	37.8	8.1	51.1
Actuated g/C Ratio	0.21	0.21	0.63	0.63	0.14	0.85
v/c Ratio	0.04	0.06	0.45	0.01	0.40	0.33
Control Delay	21.6	10.4	11.7	10.4	31.4	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.6	10.4	11.7	10.4	31.4	4.2
LOS	C	B	B	B	C	A
Approach Delay	14.8		11.7			6.9
Approach LOS	B		B			A

Intersection Summary













Cycle Length: 120	
Actuated Cycle Length: 59.9	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.45	
Intersection Signal Delay: 9.3	Intersection LOS: A
Intersection Capacity Utilization 51.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 7: Heacock Street & Gentian Avenue



















HCM 6th Signalized Intersection Summary  
7: Heacock Street & Gentian Avenue

Gateway Aviation TA (JN:13445)  
05/10/2022

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	14	22	907	9	94	873
Future Volume (veh/h)	14	22	907	9	94	873
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	0.97	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1826	1811	1900	1870	1796
Adj Flow Rate, veh/h	15	23	955	9	99	919
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	5	6	0	2	7
Cap, veh/h	157	130	1485	695	151	2167
Arrive On Green	0.09	0.09	0.43	0.43	0.08	0.63
Sat Flow, veh/h	1810	1498	3532	1610	1781	3503
Grp Volume(v), veh/h	15	23	955	9	99	919
Grp Sat Flow(s),veh/h/ln	1810	1498	1721	1610	1781	1706
Q Serve(g_s), s	0.3	0.6	8.5	0.1	2.1	5.2
Cycle Q Clear(g_c), s	0.3	0.6	8.5	0.1	2.1	5.2
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	157	130	1485	695	151	2167
V/C Ratio(X)	0.10	0.18	0.64	0.01	0.66	0.42
Avail Cap(c_a), veh/h	1092	904	2911	1362	2223	7552
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.3	16.4	8.7	6.3	17.2	3.5
Incr Delay (d2), s/veh	0.1	0.2	0.5	0.0	1.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.2	1.6	0.0	0.7	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	16.4	16.7	9.1	6.3	19.0	3.7
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	38		964			1018
Approach Delay, s/veh	16.6		9.1			5.2
Approach LOS	B		A			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	7.9	22.9			30.8	8.0
Change Period (Y+Rc), s	4.6	6.2			6.2	4.6
Max Green Setting (Gmax), s	48.4	32.8			85.8	23.4
Max Q Clear Time (g_c+I1), s	4.1	10.5			7.2	2.6
Green Ext Time (p_c), s	0.1	6.3			7.0	0.0
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			7.3			
HCM 6th LOS			A			

Timings  
8: Heacock Street & Iris Avenue

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 		 		 	 
Traffic Volume (vph)	363	447	514	231	303	642
Future Volume (vph)	363	447	514	231	303	642
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	15.8	15.8	33.2	33.2	9.6	16.2
Total Split (s)	48.0	48.0	46.0	46.0	26.0	72.0
Total Split (%)	40.0%	40.0%	38.3%	38.3%	21.7%	60.0%
Yellow Time (s)	4.8	4.8	5.2	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	6.2	6.2	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	15.2	15.2	19.5	19.5	11.6	35.9
Actuated g/C Ratio	0.24	0.24	0.31	0.31	0.18	0.56
v/c Ratio	0.49	0.67	0.59	0.40	0.54	0.40
Control Delay	24.0	9.5	22.0	4.7	28.6	8.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.0	9.5	22.0	4.7	28.6	8.7
LOS	C	A	C	A	C	A
Approach Delay	16.0		16.7			15.1
Approach LOS	B		B			B

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 63.6	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 15.8	Intersection LOS: B
Intersection Capacity Utilization 51.9%	ICU Level of Service A
Analysis Period (min) 15	

















Splits and Phases: 8: Heacock Street & Iris Avenue



HCM 6th Signalized Intersection Summary  
8: Heacock Street & Iris Avenue

Gateway Aviation TA (JN:13445)

05/10/2022

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 		 		 	 
Traffic Volume (veh/h)	363	447	514	231	303	642
Future Volume (veh/h)	363	447	514	231	303	642
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1885	1885	1767	1900	1870	1781
Adj Flow Rate, veh/h	427	526	605	272	356	755
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	1	1	9	0	2	8
Cap, veh/h	1320	605	863	414	464	1540
Arrive On Green	0.38	0.38	0.26	0.26	0.13	0.45
Sat Flow, veh/h	3483	1598	3445	1610	3456	3474
Grp Volume(v), veh/h	427	526	605	272	356	755
Grp Sat Flow(s),veh/h/ln	1742	1598	1678	1610	1728	1692
Q Serve(g_s), s	6.3	22.0	11.8	10.9	7.2	11.3
Cycle Q Clear(g_c), s	6.3	22.0	11.8	10.9	7.2	11.3
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	1320	605	863	414	464	1540
V/C Ratio(X)	0.32	0.87	0.70	0.66	0.77	0.49
Avail Cap(c_a), veh/h	2036	934	1851	888	1024	3085
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.9	20.8	24.3	24.0	30.2	13.8
Incr Delay (d2), s/veh	0.1	5.7	1.1	1.8	1.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	7.9	4.2	3.8	2.8	3.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	16.0	26.4	25.4	25.8	31.2	14.1
LnGrp LOS	B	C	C	C	C	B
Approach Vol, veh/h	953		877			1111
Approach Delay, s/veh	21.8		25.5			19.5
Approach LOS	C		C			B
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	14.3	24.8			39.0	33.2
Change Period (Y+Rc), s	4.6	6.2			6.2	5.8
Max Green Setting (Gmax), s	21.4	39.8			65.8	42.2
Max Q Clear Time (g_c+I1), s	9.2	13.8			13.3	24.0
Green Ext Time (p_c), s	0.5	4.8			5.3	3.3
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			22.0			
HCM 6th LOS			C			

Timings  
9: Heacock Street & Krameria Avenue-North

	↙	↖	↑	↘	↓
Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations	↙	↖	↑↓	↘	↑↑
Traffic Volume (vph)	107	125	521	216	703
Future Volume (vph)	107	125	521	216	703
Turn Type	Prot	Perm	NA	Prot	NA
Protected Phases	8		2	1	6
Permitted Phases		8			
Detector Phase	8	8	2	1	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	29.1	29.1	29.2	9.6	16.2
Total Split (s)	39.0	39.0	55.0	26.0	81.0
Total Split (%)	32.5%	32.5%	45.8%	21.7%	67.5%
Yellow Time (s)	4.1	4.1	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	6.2	4.6	6.2
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	Min	Max	Min
Act Effct Green (s)	12.7	12.7	23.7	21.9	50.2
Actuated g/C Ratio	0.17	0.17	0.32	0.29	0.67
v/c Ratio	0.42	0.35	0.80	0.50	0.37
Control Delay	32.9	7.6	28.1	28.5	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	32.9	7.6	28.1	28.5	6.2
LOS	C	A	C	C	A
Approach Delay	19.3		28.1		11.4
Approach LOS	B		C		B

Intersection Summary














Cycle Length: 120	
Actuated Cycle Length: 74.5	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay: 18.8	Intersection LOS: B
Intersection Capacity Utilization 54.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 9: Heacock Street & Krameria Avenue-North



HCM 6th Signalized Intersection Summary  
 9: Heacock Street & Krameria Avenue-North

Gateway Aviation TA (JN:13445)  
 05/10/2022

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			 			 
Traffic Volume (veh/h)	107	125	521	203	216	703
Future Volume (veh/h)	107	125	521	203	216	703
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1856	1885	1841	1856
Adj Flow Rate, veh/h	132	154	643	251	267	868
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	3	1	4	3
Cap, veh/h	257	228	783	306	543	2441
Arrive On Green	0.14	0.14	0.32	0.32	0.31	0.69
Sat Flow, veh/h	1781	1585	2570	967	1753	3618
Grp Volume(v), veh/h	132	154	457	437	267	868
Grp Sat Flow(s),veh/h/ln	1781	1585	1763	1682	1753	1763
Q Serve(g_s), s	4.7	6.4	16.6	16.6	8.6	6.9
Cycle Q Clear(g_c), s	4.7	6.4	16.6	16.6	8.6	6.9
Prop In Lane	1.00	1.00		0.57	1.00	
Lane Grp Cap(c), veh/h	257	228	557	532	543	2441
V/C Ratio(X)	0.51	0.67	0.82	0.82	0.49	0.36
Avail Cap(c_a), veh/h	874	778	1245	1187	543	3816
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.3	28.0	21.8	21.8	19.4	4.3
Incr Delay (d2), s/veh	0.6	1.3	1.2	1.2	3.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	2.4	5.9	5.7	3.5	1.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	27.9	29.3	23.0	23.1	22.6	4.4
LnGrp LOS	C	C	C	C	C	A
Approach Vol, veh/h	286		894			1135
Approach Delay, s/veh	28.7		23.0			8.7
Approach LOS	C		C			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	26.0	28.0			54.0	15.1
Change Period (Y+Rc), s	4.6	6.2			6.2	5.1
Max Green Setting (Gmax), s	21.4	48.8			74.8	33.9
Max Q Clear Time (g_c+I1), s	10.6	18.6			8.9	8.4
Green Ext Time (p_c), s	0.3	3.3			3.7	0.5
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			16.7			
HCM 6th LOS			B			



Timings  
10: Heacock Street & Driveway 1



Lane Group	EBL	EBT	NBL	NBT	SBT	SBR	Ø1	Ø8
Lane Configurations								
Traffic Volume (vph)	45	0	82	751	672	84		
Future Volume (vph)	45	0	82	751	672	84		
Turn Type	Perm	NA	Prot	NA	NA	Perm		
Protected Phases		4	5	2	6		1	8
Permitted Phases	4					6		
Detector Phase	4	4	5	2	6	6		
Switch Phase								
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	26.6	26.6	9.6	23.2	23.2	23.2	9.6	26.6
Total Split (s)	26.6	26.6	9.6	83.8	83.8	83.8	9.6	26.6
Total Split (%)	22.2%	22.2%	8.0%	69.8%	69.8%	69.8%	8%	22%
Yellow Time (s)	3.6	3.6	3.6	5.2	5.2	5.2	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.6	4.6	4.6	6.2	6.2	6.2		
Lead/Lag			Lead	Lag	Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	Min	Min	Min	None	None
Act Effct Green (s)	12.3	12.3	5.3	34.0	20.6	20.6		
Actuated g/C Ratio	0.26	0.26	0.11	0.73	0.44	0.44		
v/c Ratio	0.13	0.10	0.51	0.32	0.48	0.12		
Control Delay	16.2	0.3	38.0	6.1	13.0	4.1		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay	16.2	0.3	38.0	6.1	13.0	4.1		
LOS	B	A	D	A	B	A		
Approach Delay		7.9		9.3	12.0			
Approach LOS		A		A	B			

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 46.8	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.51	
Intersection Signal Delay: 10.4	Intersection LOS: B
Intersection Capacity Utilization 46.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 10: Heacock Street & Driveway 1

Ø1	Ø2	Ø4
9.6 s	83.8 s	26.6 s
Ø5	Ø6	Ø8
9.6 s	83.8 s	26.6 s

HCM 6th Signalized Intersection Summary  
 10: Heacock Street & Driveway 1

Gateway Aviation TA (JN:13445)

05/10/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	0	50	0	0	0	82	751	0	0	672	84
Future Volume (veh/h)	45	0	50	0	0	0	82	751	0	0	672	84
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1515	1900	1900	1900	1663	1870	1900	1900	1841	1900
Adj Flow Rate, veh/h	49	0	54	0	0	0	89	816	0	0	730	91
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	26	0	0	0	16	2	0	0	4	0
Cap, veh/h	494	0	276	0	326	0	125	1968	0	5	1252	576
Arrive On Green	0.17	0.00	0.17	0.00	0.00	0.00	0.08	0.55	0.00	0.00	0.36	0.36
Sat Flow, veh/h	1810	0	1610	0	1900	0	1584	3647	0	1810	3497	1610
Grp Volume(v), veh/h	49	0	54	0	0	0	89	816	0	0	730	91
Grp Sat Flow(s),veh/h/ln	1810	0	1610	0	1900	0	1584	1777	0	1810	1749	1610
Q Serve(g_s), s	0.9	0.0	1.1	0.0	0.0	0.0	2.2	5.2	0.0	0.0	6.7	1.5
Cycle Q Clear(g_c), s	0.9	0.0	1.1	0.0	0.0	0.0	2.2	5.2	0.0	0.0	6.7	1.5
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	494	0	276	0	326	0	125	1968	0	5	1252	576
V/C Ratio(X)	0.10	0.00	0.20	0.00	0.00	0.00	0.71	0.41	0.00	0.00	0.58	0.16
Avail Cap(c_a), veh/h	1195	0	900	0	1062	0	201	7009	0	230	6898	3176
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	13.9	0.0	14.0	0.0	0.0	0.0	17.7	5.1	0.0	0.0	10.3	8.6
Incr Delay (d2), s/veh	0.1	0.0	0.3	0.0	0.0	0.0	2.8	0.1	0.0	0.0	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.4	0.0	0.0	0.0	0.7	0.6	0.0	0.0	1.6	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.0	0.0	14.3	0.0	0.0	0.0	20.5	5.2	0.0	0.0	10.7	8.7
LnGrp LOS	B	A	B	A	A	A	C	A	A	A	B	A
Approach Vol, veh/h		103			0			905			821	
Approach Delay, s/veh		14.1			0.0			6.7			10.5	
Approach LOS		B						A			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	28.0		11.4	7.7	20.3		11.4				
Change Period (Y+Rc), s	4.6	6.2		4.6	4.6	6.2		4.6				
Max Green Setting (Gmax), s	5.0	77.6		22.0	5.0	77.6		22.0				
Max Q Clear Time (g_c+I1), s	0.0	7.2		3.1	4.2	8.7		0.0				
Green Ext Time (p_c), s	0.0	5.9		0.4	0.0	5.4		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			8.8									
HCM 6th LOS			A									

Intersection						
Int Delay, s/veh	0.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↕	↗	↘	↕
Traffic Vol, veh/h	11	12	1063	56	47	899
Future Vol, veh/h	11	12	1063	56	47	899
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	0	140	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	19	26	7	2	7	12
Mvmt Flow	13	14	1208	64	53	1022

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1825	604	0	0	1272
Stage 1	1208	-	-	-	-
Stage 2	617	-	-	-	-
Critical Hdwy	7.18	7.42	-	-	4.24
Critical Hdwy Stg 1	6.18	-	-	-	-
Critical Hdwy Stg 2	6.18	-	-	-	-
Follow-up Hdwy	3.69	3.56	-	-	2.27
Pot Cap-1 Maneuver	57	387	-	-	516
Stage 1	214	-	-	-	-
Stage 2	456	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	51	387	-	-	516
Mov Cap-2 Maneuver	149	-	-	-	-
Stage 1	214	-	-	-	-
Stage 2	409	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	22.6	0	0.6
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	149	387	516	-
HCM Lane V/C Ratio	-	-	0.084	0.035	0.104	-
HCM Control Delay (s)	-	-	31.4	14.6	12.8	-
HCM Lane LOS	-	-	D	B	B	-
HCM 95th %tile Q(veh)	-	-	0.3	0.1	0.3	-

Timings  
12: Heacock Street & San Michele Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	28	74	4	36	310	756	1	64	473	111	47	
Future Volume (vph)	28	74	4	36	310	756	1	64	473	111	47	
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Prot	NA	Perm	
Protected Phases	7	4		3	8	1	5	2	1	6		
Permitted Phases			4			8					6	
Detector Phase	7	4	4	3	8	1	5	2	1	6	6	
Switch Phase												
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	4.0	5.0	4.0	5.0	5.0	
Minimum Split (s)	9.5	30.5	30.5	8.5	30.5	8.5	8.5	34.5	8.5	34.5	34.5	
Total Split (s)	13.0	41.0	41.0	13.0	41.0	28.0	12.0	38.0	28.0	54.0	54.0	
Total Split (%)	10.8%	34.2%	34.2%	10.8%	34.2%	23.3%	10.0%	31.7%	23.3%	45.0%	45.0%	
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	3.5	4.5	3.5	4.5	4.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	4.5	5.5	4.5	5.5	5.5	
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	Max	None	Max	Max	
Act Effct Green (s)	6.5	17.5	17.5	15.5	26.5	55.9	4.7	33.0	23.9	59.8	59.8	
Actuated g/C Ratio	0.06	0.17	0.17	0.15	0.25	0.53	0.04	0.31	0.23	0.57	0.57	
v/c Ratio	0.32	0.32	0.01	0.18	0.87	0.76	0.01	0.11	1.49	0.17	0.06	
Control Delay	58.8	45.6	0.0	41.1	57.4	10.2	55.0	26.5	262.9	15.6	1.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	58.8	45.6	0.0	41.1	57.4	10.2	55.0	26.5	262.9	15.6	1.0	
LOS	E	D	A	D	E	B	D	C	F	B	A	
Approach Delay		47.4			24.5			26.8		199.9		
Approach LOS		D			C			C		F		

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 105.7  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.49  
 Intersection Signal Delay: 83.7  
 Intersection LOS: F  
 Intersection Capacity Utilization 66.4%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 12: Heacock Street & San Michele Road

Ø2 38 s	Ø1 28 s	Ø4 41 s	Ø3 13 s
Ø5 12 s	Ø6 54 s	Ø8 41 s	Ø7 13 s

HCM 6th Signalized Intersection Summary  
 12: Heacock Street & San Michele Road

Gateway Aviation TA (JN:13445)

05/10/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗↘		↖	↗	↘
Traffic Volume (veh/h)	28	74	4	36	310	756	1	64	9	473	111	47
Future Volume (veh/h)	28	74	4	36	310	756	1	64	9	473	111	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1856	1455	1811	1900	1885	1900	1470	1737	1885	1589	1870
Adj Flow Rate, veh/h	37	99	5	48	413	1008	1	85	12	631	148	63
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh, %	0	3	30	6	0	1	0	29	11	1	21	2
Cap, veh/h	47	135	89	450	584	816	2	693	96	365	782	780
Arrive On Green	0.03	0.07	0.07	0.26	0.31	0.31	0.00	0.28	0.28	0.20	0.49	0.49
Sat Flow, veh/h	1810	1856	1233	1725	1900	1598	1810	2464	341	1795	1589	1585
Grp Volume(v), veh/h	37	99	5	48	413	1008	1	47	50	631	148	63
Grp Sat Flow(s),veh/h/ln	1810	1856	1233	1725	1900	1598	1810	1397	1409	1795	1589	1585
Q Serve(g_s), s	2.3	6.0	0.4	2.4	22.2	35.5	0.1	2.9	3.0	23.5	6.0	1.9
Cycle Q Clear(g_c), s	2.3	6.0	0.4	2.4	22.2	35.5	0.1	2.9	3.0	23.5	6.0	1.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.24	1.00		1.00
Lane Grp Cap(c), veh/h	47	135	89	450	584	816	2	393	396	365	782	780
V/C Ratio(X)	0.78	0.74	0.06	0.11	0.71	1.24	0.51	0.12	0.13	1.73	0.19	0.08
Avail Cap(c_a), veh/h	133	570	379	450	584	816	117	393	396	365	782	780
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.9	52.5	40.9	32.5	35.4	28.3	57.7	30.9	30.9	46.0	16.4	9.4
Incr Delay (d2), s/veh	9.8	2.9	0.1	0.0	3.4	116.5	59.0	0.6	0.6	338.8	0.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	2.9	0.1	1.0	10.4	36.2	0.1	1.0	1.1	44.4	2.2	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.8	55.4	41.0	32.5	38.8	144.7	116.6	31.5	31.6	384.8	17.0	9.6
LnGrp LOS	E	E	D	C	D	F	F	C	C	F	B	A
Approach Vol, veh/h		141			1469			98			842	
Approach Delay, s/veh		57.6			111.3			32.4			292.1	
Approach LOS		E			F			C			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	29.0	38.0	34.6	13.9	4.6	62.4	7.5	41.0				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	23.5	* 33	8.5	35.5	7.5	48.5	8.5	35.5				
Max Q Clear Time (g_c+I1), s	25.5	5.0	4.4	8.0	2.1	8.0	4.3	37.5				
Green Ext Time (p_c), s	0.0	0.3	0.0	0.3	0.0	0.5	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	165.0
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection				
Intersection Delay, s/veh 11.7				
Intersection LOS B				
Approach	EB	WB	NB	
Entry Lanes	3	2	2	
Conflicting Circle Lanes	2	2	2	
Adj Approach Flow, veh/h	0	1551	81	
Demand Flow Rate, veh/h	0	1689	86	
Vehicles Circulating, veh/h	14	72	1347	
Vehicles Exiting, veh/h	1747	1361	194	
Ped Vol Crossing Leg, #/h	0	0	0	
Ped Cap Adj	1.000	1.000	1.000	
Approach Delay, s/veh	0.0	11.7	10.8	
Approach LOS	-	B	B	
Lane	Left	Right	Left	Right
Designated Moves	LT	TR	L	LTR
Assumed Moves	LT	TR	L	LTR
RT Channelized				
Lane Util	0.470	0.530	0.535	0.465
Follow-Up Headway, s	2.667	2.535	2.667	2.535
Critical Headway, s	4.645	4.328	4.645	4.328
Entry Flow, veh/h	794	895	46	40
Cap Entry Lane, veh/h	1263	1336	391	452
Entry HV Adj Factor	0.918	0.918	0.933	0.952
Flow Entry, veh/h	729	822	43	38
Cap Entry, veh/h	1160	1227	365	430
V/C Ratio	0.628	0.670	0.118	0.089
Control Delay, s/veh	11.3	12.0	11.8	9.6
LOS	B	B	B	A
95th %tile Queue, veh	5	5	0	0

Timings  
14: Indian Street & San Michele Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↖	↗	↖	↗	↖	↗	↗	↖	↗
Traffic Volume (vph)	14	196	170	832	1465	198	216	5	128
Future Volume (vph)	14	196	170	832	1465	198	216	5	128
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8	5	2		1	6
Permitted Phases							2		
Detector Phase	7	4	3	8	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	31.8	9.6	31.8	9.6	32.8	32.8	9.6	32.8
Total Split (s)	12.0	33.0	19.0	40.0	32.0	57.0	57.0	11.0	36.0
Total Split (%)	10.0%	27.5%	15.8%	33.3%	26.7%	47.5%	47.5%	9.2%	30.0%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	5.8	20.0	14.6	35.1	27.7	43.6	43.6	5.3	13.0
Actuated g/C Ratio	0.06	0.21	0.15	0.36	0.29	0.45	0.45	0.06	0.13
v/c Ratio	0.19	0.80	0.84	0.84	1.85	0.32	0.30	0.07	0.38
Control Delay	51.7	25.9	67.3	36.5	412.7	19.6	3.2	50.0	38.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.7	25.9	67.3	36.5	412.7	19.6	3.2	50.0	38.7
LOS	D	C	E	D	F	B	A	D	D
Approach Delay		26.5		41.7		324.2			39.1
Approach LOS		C		D		F			D

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 96.3  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.85  
 Intersection Signal Delay: 186.4  
 Intersection LOS: F  
 Intersection Capacity Utilization 103.9%  
 ICU Level of Service G  
 Analysis Period (min) 15

Splits and Phases: 14: Indian Street & San Michele Road



HCM 6th Signalized Intersection Summary  
 14: Indian Street & San Michele Road

Gateway Aviation TA (JN:13445)  
 05/10/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	196	360	170	832	10	1465	198	216	5	128	12
Future Volume (veh/h)	14	196	360	170	832	10	1465	198	216	5	128	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		0.94
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1663	1856	1885	1856	1885	1900	1885	1885	1856	1900	1870	1900
Adj Flow Rate, veh/h	19	268	493	233	1140	14	2007	271	296	7	175	16
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Percent Heavy Veh, %	16	3	1	3	1	0	1	1	3	0	2	0
Cap, veh/h	32	447	399	237	1367	17	918	772	635	16	508	46
Arrive On Green	0.02	0.25	0.25	0.13	0.37	0.37	0.26	0.41	0.41	0.01	0.15	0.15
Sat Flow, veh/h	1584	1763	1572	1767	3716	46	3591	1885	1552	1810	3361	303
Grp Volume(v), veh/h	19	268	493	233	578	576	2007	271	296	7	96	95
Grp Sat Flow(s),veh/h/ln	1584	1763	1572	1767	1885	1876	1795	1885	1552	1810	1870	1793
Q Serve(g_s), s	1.3	14.3	27.2	14.1	30.0	30.0	27.4	10.6	14.9	0.4	4.9	5.1
Cycle Q Clear(g_c), s	1.3	14.3	27.2	14.1	30.0	30.0	27.4	10.6	14.9	0.4	4.9	5.1
Prop In Lane	1.00		1.00	1.00		0.02	1.00		1.00	1.00		0.17
Lane Grp Cap(c), veh/h	32	447	399	237	693	690	918	772	635	16	283	271
V/C Ratio(X)	0.60	0.60	1.24	0.98	0.83	0.83	2.19	0.35	0.47	0.44	0.34	0.35
Avail Cap(c_a), veh/h	109	447	399	237	693	690	918	900	741	108	527	505
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.1	35.2	40.0	46.3	30.9	30.9	39.9	21.9	23.1	52.9	40.7	40.8
Incr Delay (d2), s/veh	6.4	1.6	126.1	52.9	8.2	8.2	537.8	0.1	0.2	7.0	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	6.1	23.9	9.5	14.3	14.2	79.9	4.4	5.2	0.2	2.2	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.5	36.8	166.1	99.2	39.1	39.1	577.7	22.0	23.3	59.9	41.0	41.1
LnGrp LOS	E	D	F	F	D	D	F	C	C	E	D	D
Approach Vol, veh/h		780			1387			2574			198	
Approach Delay, s/veh		119.0			49.2			455.5			41.7	
Approach LOS		F			D			F			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.5	49.7	19.0	33.0	33.2	22.0	6.8	45.2				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	5.8	* 5.8	4.6	5.8				
Max Green Setting (Gmax), s	6.4	51.2	14.4	27.2	27.4	* 30	7.4	34.2				
Max Q Clear Time (g_c+I1), s	2.4	16.9	16.1	29.2	29.4	7.1	3.3	32.0				
Green Ext Time (p_c), s	0.0	1.3	0.0	0.0	0.0	0.5	0.0	1.1				

Intersection Summary

HCM 6th Ctrl Delay	271.7
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Timings  
15: Indian Street & Nandina Avenue

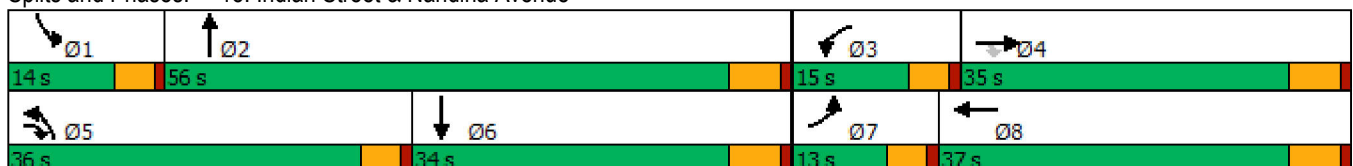


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↑	↗	↖	↗	↖	↕	↖	↕
Traffic Volume (vph)	7	32	156	33	41	339	1670	12	474
Future Volume (vph)	7	32	156	33	41	339	1670	12	474
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	5	3	8	5	2	1	6
Permitted Phases	4								
Detector Phase	7	4	5	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	29.8	9.6	9.6	29.8	9.6	26.8	9.6	26.8
Total Split (s)	13.0	35.0	36.0	15.0	37.0	36.0	56.0	14.0	34.0
Total Split (%)	10.8%	29.2%	30.0%	12.5%	30.8%	30.0%	46.7%	11.7%	28.3%
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	5.5	12.6	36.1	6.9	17.7	22.1	55.7	5.8	28.8
Actuated g/C Ratio	0.07	0.15	0.44	0.08	0.21	0.27	0.68	0.07	0.35
v/c Ratio	0.06	0.17	0.23	0.28	0.22	0.82	0.77	0.12	0.43
Control Delay	46.4	37.1	2.8	47.4	23.7	46.0	18.3	47.2	27.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.4	37.1	2.8	47.4	23.7	46.0	18.3	47.2	27.5
LOS	D	D	A	D	C	D	B	D	C
Approach Delay	10.1		31.9			22.8		28.0	
Approach LOS	B		C			C		C	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 82.5  
 Natural Cycle: 110  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.82  
 Intersection Signal Delay: 23.2  
 Intersection LOS: C  
 Intersection Capacity Utilization 74.6%  
 ICU Level of Service D  
 Analysis Period (min) 15























Splits and Phases: 15: Indian Street & Nandina Avenue



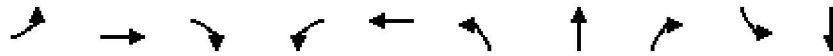
HCM 6th Signalized Intersection Summary  
 15: Indian Street & Nandina Avenue

Gateway Aviation TA (JN:13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	32	156	33	41	22	339	1670	70	12	474	24
Future Volume (veh/h)	7	32	156	33	41	22	339	1670	70	12	474	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1352	1515	1618	1515	1530	1737	1885	1737	1485	1870	1900
Adj Flow Rate, veh/h	8	36	173	37	46	24	377	1856	78	13	527	27
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	37	26	19	26	25	11	1	11	28	2	0
Cap, veh/h	18	173	486	53	143	75	414	2061	86	22	1198	61
Arrive On Green	0.01	0.13	0.13	0.03	0.15	0.15	0.25	0.57	0.57	0.02	0.34	0.34
Sat Flow, veh/h	1810	1352	1284	1541	938	489	1654	3590	150	1414	3528	180
Grp Volume(v), veh/h	8	36	173	37	0	70	377	967	967	13	279	275
Grp Sat Flow(s),veh/h/ln	1810	1352	1284	1541	0	1427	1654	1885	1854	1414	1870	1838
Q Serve(g_s), s	0.4	2.0	8.1	2.0	0.0	3.7	18.6	37.7	39.0	0.8	9.7	9.8
Cycle Q Clear(g_c), s	0.4	2.0	8.1	2.0	0.0	3.7	18.6	37.7	39.0	0.8	9.7	9.8
Prop In Lane	1.00		1.00	1.00		0.34	1.00		0.08	1.00		0.10
Lane Grp Cap(c), veh/h	18	173	486	53	0	218	414	1082	1065	22	635	624
V/C Ratio(X)	0.44	0.21	0.36	0.70	0.00	0.32	0.91	0.89	0.91	0.59	0.44	0.44
Avail Cap(c_a), veh/h	181	470	767	191	0	530	618	1126	1108	158	635	624
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.3	32.8	18.8	40.1	0.0	31.7	30.6	15.6	15.9	41.1	21.5	21.5
Incr Delay (d2), s/veh	6.0	0.6	0.4	6.0	0.0	0.8	10.1	9.1	10.6	9.0	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.6	2.2	0.8	0.0	1.2	7.9	14.9	15.6	0.3	3.9	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.3	33.4	19.2	46.1	0.0	32.6	40.7	24.8	26.5	50.1	22.0	22.0
LnGrp LOS	D	C	B	D	A	C	D	C	C	D	C	C
Approach Vol, veh/h		217			107			2311			567	
Approach Delay, s/veh		22.6			37.3			28.1			22.7	
Approach LOS		C			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.9	54.0	7.5	16.6	25.6	34.3	5.5	18.6				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	9.4	50.2	10.4	29.2	31.4	28.2	8.4	31.2				
Max Q Clear Time (g_c+I1), s	2.8	41.0	4.0	10.1	20.6	11.8	2.4	5.7				
Green Ext Time (p_c), s	0.0	7.3	0.0	0.7	0.4	2.6	0.0	0.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			27.1									
HCM 6th LOS			C									

Timings  
16: Indian Av. & Harley Knox Bl.

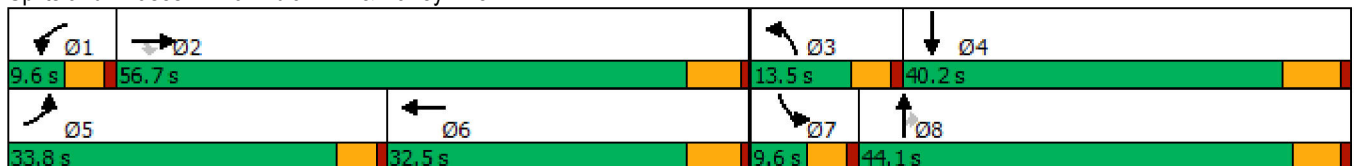


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↖	↑↑↑	↗	↖	↑↑↑	↖↗	↑↑	↗	↖	↑↗
Traffic Volume (vph)	566	445	99	62	787	136	296	41	13	77
Future Volume (vph)	566	445	99	62	787	136	296	41	13	77
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	5	2		1	6	3	8		7	4
Permitted Phases			2					8		
Detector Phase	5	2	2	1	6	3	8	8	7	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	35.8	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2
Total Split (s)	33.8	56.7	56.7	9.6	32.5	13.5	44.1	44.1	9.6	40.2
Total Split (%)	28.2%	47.3%	47.3%	8.0%	27.1%	11.3%	36.8%	36.8%	8.0%	33.5%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.4	4.4	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	5.4	5.4	4.6	6.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	29.6	47.9	47.9	5.1	23.4	8.1	26.2	26.2	5.1	14.2
Actuated g/C Ratio	0.31	0.49	0.49	0.05	0.24	0.08	0.27	0.27	0.05	0.15
v/c Ratio	1.24	0.20	0.14	0.75	0.76	0.55	0.36	0.09	0.16	0.54
Control Delay	155.3	15.0	3.7	91.7	39.3	53.1	30.1	0.3	53.6	14.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	155.3	15.0	3.7	91.7	39.3	53.1	30.1	0.3	53.6	14.7
LOS	F	B	A	F	D	D	C	A	D	B
Approach Delay		85.6			42.9		34.1			16.4
Approach LOS		F			D		C			B

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 96.8  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.24  
 Intersection Signal Delay: 55.6  
 Intersection LOS: E  
 Intersection Capacity Utilization 78.3%  
 ICU Level of Service D  
 Analysis Period (min) 15































Splits and Phases: 16: Indian Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 16: Indian Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 			 	
Traffic Volume (veh/h)	566	445	99	62	787	47	136	296	41	13	77	207
Future Volume (veh/h)	566	445	99	62	787	47	136	296	41	13	77	207
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1811	1737	1856	1856	1870	1767	1796	1752	1781	1737	1485
Adj Flow Rate, veh/h	622	489	100	68	865	32	149	325	38	14	85	178
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	10	6	11	3	3	2	9	7	10	8	11	28
Cap, veh/h	537	2461	733	87	1130	42	215	693	301	28	253	226
Arrive On Green	0.32	0.50	0.50	0.05	0.23	0.23	0.07	0.20	0.20	0.02	0.15	0.15
Sat Flow, veh/h	1668	4944	1472	1767	5014	185	3264	3413	1485	1697	1650	1472
Grp Volume(v), veh/h	622	489	100	68	582	315	149	325	38	14	85	178
Grp Sat Flow(s),veh/h/ln	1668	1648	1472	1767	1689	1822	1632	1706	1485	1697	1650	1472
Q Serve(g_s), s	29.2	5.0	3.3	3.5	14.6	14.7	4.1	7.6	1.9	0.7	4.2	10.6
Cycle Q Clear(g_c), s	29.2	5.0	3.3	3.5	14.6	14.7	4.1	7.6	1.9	0.7	4.2	10.6
Prop In Lane	1.00		1.00	1.00		0.10	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	537	2461	733	87	761	411	215	693	301	28	253	226
V/C Ratio(X)	1.16	0.20	0.14	0.78	0.76	0.77	0.69	0.47	0.13	0.50	0.34	0.79
Avail Cap(c_a), veh/h	537	2772	825	97	993	536	320	1455	633	93	618	551
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.8	12.7	12.3	42.7	32.9	32.9	41.5	31.9	29.6	44.3	34.3	37.0
Incr Delay (d2), s/veh	90.9	0.0	0.1	26.0	2.6	4.9	1.5	0.5	0.2	5.2	0.8	6.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	24.1	1.6	1.0	2.1	5.9	6.6	1.6	3.0	0.7	0.3	1.6	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	121.7	12.7	12.4	68.7	35.5	37.8	43.0	32.4	29.8	49.4	35.1	43.0
LnGrp LOS	F	B	B	E	D	D	D	C	C	D	D	D
Approach Vol, veh/h		1211			965			512			277	
Approach Delay, s/veh		68.7			38.6			35.3			40.9	
Approach LOS		E			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.1	51.0	10.6	20.1	33.8	26.3	6.1	24.6				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	5.0	50.9	8.9	34.0	29.2	26.7	5.0	* 39				
Max Q Clear Time (g_c+I1), s	5.5	7.0	6.1	12.6	31.2	16.7	2.7	9.6				
Green Ext Time (p_c), s	0.0	3.5	0.1	1.4	0.0	3.8	0.0	2.1				

Intersection Summary

HCM 6th Ctrl Delay	50.5
HCM 6th LOS	D

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection						
Int Delay, s/veh	7.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↶	↷	↶		↶	↷
Traffic Vol, veh/h	0	74	0	2	147	1
Future Vol, veh/h	0	74	0	2	147	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	115	0	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	23	0	0	16	0
Mvmt Flow	0	79	0	2	156	1

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	314	1	0	0	2
Stage 1	1	-	-	-	-
Stage 2	313	-	-	-	-
Critical Hdwy	6.4	6.43	-	-	4.26
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.507	-	-	2.344
Pot Cap-1 Maneuver	683	1025	-	-	1533
Stage 1	1028	-	-	-	-
Stage 2	746	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	613	1025	-	-	1533
Mov Cap-2 Maneuver	613	-	-	-	-
Stage 1	1028	-	-	-	-
Stage 2	670	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.8	0	7.6
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT
Capacity (veh/h)	-	-	1025	1533
HCM Lane V/C Ratio	-	-	0.077	0.102
HCM Control Delay (s)	-	-	0	8.8
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.3

Timings  
18: Perris Bl. & San Michele Rd./Driveway

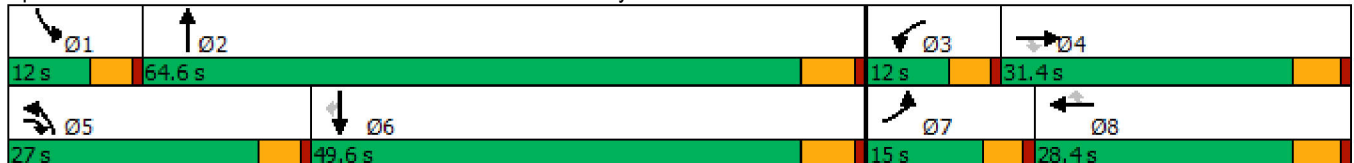


Lane Group	EBL	EBR	WBL	NBL	NBT	SBL	SBT	SBR	Ø4	Ø8
Lane Configurations	↖	↗	↖	↖	↑↑↑	↖	↑↑↑	↖		
Traffic Volume (vph)	37	28	2	123	1573	1	1339	80		
Future Volume (vph)	37	28	2	123	1573	1	1339	80		
Turn Type	Prot	pm+ov	Prot	Prot	NA	Prot	NA	Perm		
Protected Phases	7	5	3	5	2	1	6		4	8
Permitted Phases		4						6		
Detector Phase	7	5	3	5	2	1	6	6		
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	10.0	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	9.6	9.6	9.6	34.8	9.6	34.8	34.8	31.4	26.4
Total Split (s)	15.0	27.0	12.0	27.0	64.6	12.0	49.6	49.6	31.4	28.4
Total Split (%)	12.5%	22.5%	10.0%	22.5%	53.8%	10.0%	41.3%	41.3%	26%	24%
Yellow Time (s)	3.6	3.6	3.6	3.6	4.8	3.6	4.8	4.8	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.6	4.6	4.6	4.6	5.8	4.6	5.8	5.8		
Lead/Lag	Lead	Lead	Lead	Lead	Lag	Lead	Lag	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 62.2  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated

























Splits and Phases: 18: Perris Bl. & San Michele Rd./Driveway



HCM 6th Signalized Intersection Summary  
 18: Perris Bl. & San Michele Rd./Driveway

Gateway Aviation (JN 13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	0	28	2	0	0	123	1573	1	1	1339	80
Future Volume (veh/h)	37	0	28	2	0	0	123	1573	1	1	1339	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1767	1900	1781	1159	1900	1900	1841	1870	418	1900	1870	1856
Adj Flow Rate, veh/h	39	0	11	2	0	0	131	1673	1	1	1424	64
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	9	0	8	50	0	0	4	2	100	0	2	3
Cap, veh/h	68	182	290	3	110	93	169	2882	2	3	2307	710
Arrive On Green	0.04	0.00	0.10	0.00	0.00	0.00	0.10	0.55	0.55	0.00	0.45	0.45
Sat Flow, veh/h	1682	1900	1510	1104	1900	1610	1753	5271	3	1810	5106	1572
Grp Volume(v), veh/h	39	0	11	2	0	0	131	1080	594	1	1424	64
Grp Sat Flow(s),veh/h/ln	1682	1900	1510	1104	1900	1610	1753	1702	1870	1810	1702	1572
Q Serve(g_s), s	1.3	0.0	0.3	0.1	0.0	0.0	4.2	12.2	12.2	0.0	12.2	1.3
Cycle Q Clear(g_c), s	1.3	0.0	0.3	0.1	0.0	0.0	4.2	12.2	12.2	0.0	12.2	1.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	68	182	290	3	110	93	169	1861	1022	3	2307	710
V/C Ratio(X)	0.58	0.00	0.04	0.66	0.00	0.00	0.77	0.58	0.58	0.32	0.62	0.09
Avail Cap(c_a), veh/h	303	856	826	142	757	642	680	3468	1905	232	3876	1194
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.2	0.0	19.0	28.7	0.0	0.0	25.5	8.7	8.7	28.8	12.0	9.0
Incr Delay (d2), s/veh	7.5	0.0	0.1	65.7	0.0	0.0	2.9	0.3	0.5	20.2	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.1	0.1	0.0	0.0	1.7	3.0	3.4	0.0	3.5	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.7	0.0	19.0	94.4	0.0	0.0	28.3	9.0	9.2	49.0	12.3	9.1
LnGrp LOS	C	A	B	F	A	A	C	A	A	D	B	A
Approach Vol, veh/h		50			2			1805			1489	
Approach Delay, s/veh		31.2			94.4			10.5			12.2	
Approach LOS		C			F			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.7	37.4	4.8	10.9	10.2	31.9	6.9	8.7				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.4	4.6	5.8	4.6	5.4				
Max Green Setting (Gmax), s	7.4	58.8	7.4	26.0	22.4	43.8	10.4	23.0				
Max Q Clear Time (g_c+I1), s	2.0	14.2	2.1	2.3	6.2	14.2	3.3	0.0				
Green Ext Time (p_c), s	0.0	15.5	0.0	0.0	0.1	11.8	0.0	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				11.6								
HCM 6th LOS				B								

Timings  
19: Perris Bl. & Nandina Av.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	15	2	5	3	10	46	1661	15	1322	21
Future Volume (vph)	15	2	5	3	10	46	1661	15	1322	21
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	pm+ov
Protected Phases	7	4	3	8		5	2	1	6	7
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	7
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	5.0
Minimum Split (s)	9.6	41.4	9.6	28.4	28.4	9.6	39.8	9.6	41.8	9.6
Total Split (s)	11.0	41.4	11.0	41.4	41.4	14.0	55.6	12.0	53.6	11.0
Total Split (%)	9.2%	34.5%	9.2%	34.5%	34.5%	11.7%	46.3%	10.0%	44.7%	9.2%
Yellow Time (s)	3.6	4.4	3.6	4.4	4.4	3.6	4.8	3.6	4.8	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	4.6	5.4	5.4	4.6	5.8	4.6	5.8	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 60.2  
 Natural Cycle: 105  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 19: Perris Bl. & Nandina Av.
























Ø1	Ø2	Ø3	Ø4
12 s	55.6 s	11 s	41.4 s
Ø5	Ø6	Ø7	Ø8
14 s	53.6 s	11 s	41.4 s



HCM 6th Signalized Intersection Summary  
 19: Perris Bl. & Nandina Av.

Gateway Aviation (JN 13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	2	19	5	3	10	46	1661	19	15	1322	21
Future Volume (veh/h)	15	2	19	5	3	10	46	1661	19	15	1322	21
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1574	1900	1900	1307	1411	1574	1870	1870	1737	1693	1885	1752
Adj Flow Rate, veh/h	16	2	12	5	3	3	50	1805	11	16	1437	18
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	22	0	0	40	33	22	2	2	11	14	1	10
Cap, veh/h	29	139	124	8	91	86	82	2735	17	125	2851	850
Arrive On Green	0.02	0.08	0.08	0.01	0.06	0.06	0.05	0.52	0.52	0.08	0.55	0.55
Sat Flow, veh/h	1499	1805	1607	1245	1411	1334	1781	5237	32	1612	5147	1483
Grp Volume(v), veh/h	16	2	12	5	3	3	50	1173	643	16	1437	18
Grp Sat Flow(s),veh/h/ln	1499	1805	1607	1245	1411	1334	1781	1702	1865	1612	1716	1483
Q Serve(g_s), s	0.7	0.1	0.4	0.3	0.1	0.1	1.8	16.2	16.2	0.6	11.1	0.3
Cycle Q Clear(g_c), s	0.7	0.1	0.4	0.3	0.1	0.1	1.8	16.2	16.2	0.6	11.1	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.02	1.00		1.00
Lane Grp Cap(c), veh/h	29	139	124	8	91	86	82	1778	974	125	2851	850
V/C Ratio(X)	0.55	0.01	0.10	0.60	0.03	0.04	0.61	0.66	0.66	0.13	0.50	0.02
Avail Cap(c_a), veh/h	149	1008	898	124	788	745	260	2631	1441	185	3817	1129
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.3	27.5	27.7	31.9	28.3	28.3	30.2	11.2	11.2	27.7	8.9	5.9
Incr Delay (d2), s/veh	6.0	0.0	0.3	23.6	0.1	0.2	2.7	0.4	0.8	0.2	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.2	0.1	0.0	0.0	0.8	4.6	5.1	0.2	3.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.3	27.5	28.0	55.5	28.4	28.4	32.9	11.6	12.0	27.9	9.0	5.9
LnGrp LOS	D	C	C	E	C	C	C	B	B	C	A	A
Approach Vol, veh/h		30			11			1866			1471	
Approach Delay, s/veh		32.9			40.7			12.3			9.2	
Approach LOS		C			D			B			A	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.6	39.5	5.0	10.4	7.6	41.5	5.8	9.5				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.4	4.6	5.8	4.6	5.4				
Max Green Setting (Gmax), s	7.4	49.8	6.4	36.0	9.4	47.8	6.4	36.0				
Max Q Clear Time (g_c+I1), s	2.6	18.2	2.3	2.4	3.8	13.1	2.7	2.1				
Green Ext Time (p_c), s	0.0	15.5	0.0	0.0	0.0	12.4	0.0	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				11.2								
HCM 6th LOS				B								

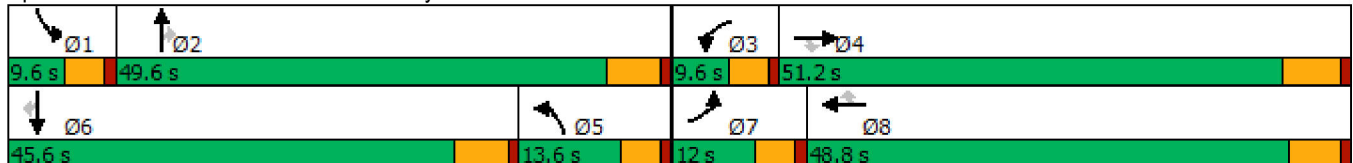
Timings  
20: Perris Bl. & Harley Knox Bl.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	217	279	22	9	374	181	231	1138	14	70	700	278
Future Volume (vph)	217	279	22	9	374	181	231	1138	14	70	700	278
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	47.2	47.2	9.6	48.8	48.8	9.6	48.8	48.8	9.6	43.8	43.8
Total Split (s)	12.0	51.2	51.2	9.6	48.8	48.8	13.6	49.6	49.6	9.6	45.6	45.6
Total Split (%)	10.0%	42.7%	42.7%	8.0%	40.7%	40.7%	11.3%	41.3%	41.3%	8.0%	38.0%	38.0%
Yellow Time (s)	3.6	5.2	5.2	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 79.7  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 20: Perris Bl. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 20: Perris Bl. & Harley Knox Bl.

Gateway Aviation (JN 13445)  
 05/10/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	217	279	22	9	374	181	231	1138	14	70	700	278
Future Volume (veh/h)	217	279	22	9	374	181	231	1138	14	70	700	278
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1767	1856	1530	1544	1856	1885	1796	1856	1574	1826	1870	1796
Adj Flow Rate, veh/h	238	307	19	10	411	106	254	1251	12	77	769	197
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	9	3	25	24	3	1	7	3	22	5	2	7
Cap, veh/h	182	862	317	36	753	238	538	1907	502	190	1293	385
Arrive On Green	0.11	0.24	0.24	0.01	0.15	0.15	0.16	0.38	0.38	0.06	0.25	0.25
Sat Flow, veh/h	1682	3526	1296	2853	5066	1598	3319	5066	1334	3374	5106	1520
Grp Volume(v), veh/h	238	307	19	10	411	106	254	1251	12	77	769	197
Grp Sat Flow(s),veh/h/ln	1682	1763	1296	1427	1689	1598	1659	1689	1334	1687	1702	1520
Q Serve(g_s), s	7.4	4.9	0.4	0.2	5.1	4.1	4.7	14.0	0.4	1.5	9.0	4.9
Cycle Q Clear(g_c), s	7.4	4.9	0.4	0.2	5.1	4.1	4.7	14.0	0.4	1.5	9.0	4.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	182	862	317	36	753	238	538	1907	502	190	1293	385
V/C Ratio(X)	1.31	0.36	0.06	0.28	0.55	0.45	0.47	0.66	0.02	0.41	0.59	0.51
Avail Cap(c_a), veh/h	182	2322	854	209	3188	1005	538	3247	855	247	2974	886
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.5	21.4	6.1	33.4	26.9	26.5	26.0	17.6	13.4	31.1	22.4	9.3
Incr Delay (d2), s/veh	171.6	0.2	0.1	1.5	0.6	1.3	0.2	0.4	0.0	0.5	0.4	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.4	1.8	0.2	0.1	1.9	1.5	1.7	4.7	0.1	0.6	3.2	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	202.1	21.6	6.1	34.9	27.6	27.8	26.2	18.0	13.4	31.7	22.9	10.3
LnGrp LOS	F	C	A	C	C	C	C	B	B	C	C	B
Approach Vol, veh/h		564			527			1517			1043	
Approach Delay, s/veh		97.2			27.8			19.4			21.2	
Approach LOS		F			C			B			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.4	31.5	5.5	22.9	16.9	23.1	12.0	16.4				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	5.8	* 5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	5.0	43.8	5.0	45.0	9.0	* 40	7.4	* 43				
Max Q Clear Time (g_c+I1), s	3.5	16.0	2.2	6.9	6.7	11.0	9.4	7.1				
Green Ext Time (p_c), s	0.0	9.6	0.0	1.9	0.1	6.0	0.0	3.0				

Intersection Summary												
HCM 6th Ctrl Delay				33.1								
HCM 6th LOS				C								

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

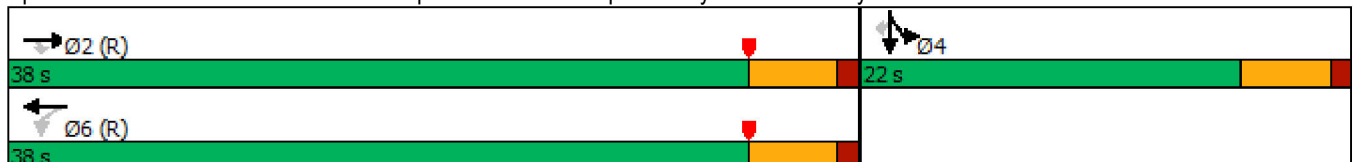


Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↑
Traffic Volume (vph)	575	88	593	245	0	208
Future Volume (vph)	575	88	593	245	0	208
Turn Type	NA	Perm	Perm	NA	NA	Perm
Protected Phases	2			6	4	
Permitted Phases		2	6			4
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	25.0	25.0	10.0	10.0
Total Split (s)	38.0	38.0	38.0	38.0	22.0	22.0
Total Split (%)	63.3%	63.3%	63.3%	63.3%	36.7%	36.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	33.0	33.0	33.0	33.0	17.0	17.0
Actuated g/C Ratio	0.55	0.55	0.55	0.55	0.28	0.28
v/c Ratio	0.35	0.11	1.74	0.15	1.28	0.40
Control Delay	8.2	2.0	361.8	8.3	168.3	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.2	2.0	361.8	8.3	168.3	5.2
LOS	A	A	F	A	F	A
Approach Delay	7.4			258.6	120.5	
Approach LOS	A			F	F	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.74  
 Intersection Signal Delay: 138.9  
 Intersection LOS: F  
 Intersection Capacity Utilization 102.8%  
 ICU Level of Service G  
 Analysis Period (min) 15

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

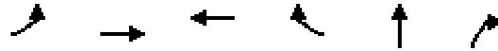
1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

05/10/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑						↑	↑
Traffic Volume (veh/h)	0	575	88	593	245	0	0	0	0	502	0	208
Future Volume (veh/h)	0	575	88	593	245	0	0	0	0	502	0	208
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1811	1885	1841	1811	0				1678	1900	1767
Adj Flow Rate, veh/h	0	653	100	674	278	0				570	0	174
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88				0.88	0.88	0.88
Percent Heavy Veh, %	0	6	1	4	6	0				15	0	9
Cap, veh/h	0	1893	878	431	1893	0				513	0	424
Arrive On Green	0.00	0.55	0.55	0.92	0.92	0.00				0.28	0.00	0.28
Sat Flow, veh/h	0	3532	1597	699	3532	0				1810	0	1497
Grp Volume(v), veh/h	0	653	100	674	278	0				570	0	174
Grp Sat Flow(s),veh/h/ln	0	1721	1597	699	1721	0				1810	0	1497
Q Serve(g_s), s	0.0	6.3	1.8	26.7	0.5	0.0				17.0	0.0	5.7
Cycle Q Clear(g_c), s	0.0	6.3	1.8	33.0	0.5	0.0				17.0	0.0	5.7
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1893	878	431	1893	0				513	0	424
V/C Ratio(X)	0.00	0.35	0.11	1.56	0.15	0.00				1.11	0.00	0.41
Avail Cap(c_a), veh/h	0	1893	878	431	1893	0				513	0	424
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.68	0.68	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	7.5	6.5	9.3	1.1	0.0				21.5	0.0	17.4
Incr Delay (d2), s/veh	0.0	0.5	0.3	261.8	0.1	0.0				74.0	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.7	0.5	31.8	0.1	0.0				16.5	0.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	8.0	6.7	271.2	1.2	0.0				95.5	0.0	18.1
LnGrp LOS	A	A	A	F	A	A				F	A	B
Approach Vol, veh/h		753			952						744	
Approach Delay, s/veh		7.8			192.3						77.4	
Approach LOS		A			F						E	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		38.0		22.0		38.0						
Change Period (Y+Rc), s		5.0		5.0		5.0						
Max Green Setting (Gmax), s		33.0		17.0		33.0						
Max Q Clear Time (g_c+1), s		8.3		19.0		35.0						
Green Ext Time (p_c), s		2.8		0.0		0.0						
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				100.7								
HCM 6th LOS				F								

Timings

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

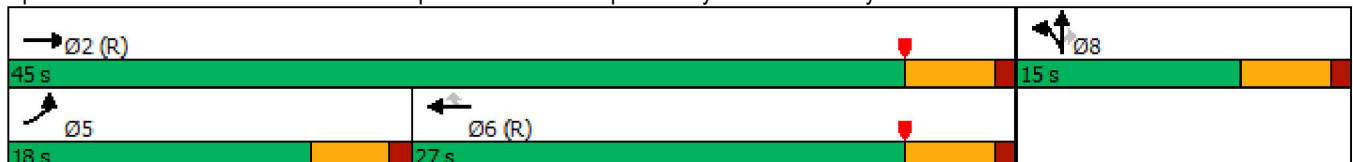


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	385	691	795	1054	3	318
Future Volume (vph)	385	691	795	1054	3	318
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	26.0	24.0	24.0	10.0	10.0
Total Split (s)	18.0	45.0	27.0	27.0	15.0	15.0
Total Split (%)	30.0%	75.0%	45.0%	45.0%	25.0%	25.0%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max
Act Effct Green (s)	13.5	40.0	22.0	22.0	10.0	10.0
Actuated g/C Ratio	0.22	0.67	0.37	0.37	0.17	0.17
v/c Ratio	1.07	0.36	0.68	1.33	0.18	0.78
Control Delay	86.3	2.8	19.3	170.7	23.4	22.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	86.3	2.8	19.3	170.7	23.4	22.2
LOS	F	A	B	F	C	C
Approach Delay		32.7	105.6		22.4	
Approach LOS		C	F		C	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 29 (48%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.33  
 Intersection Signal Delay: 72.5  
 Intersection LOS: E  
 Intersection Capacity Utilization 102.8%  
 ICU Level of Service G  
 Analysis Period (min) 15

Splits and Phases: 2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

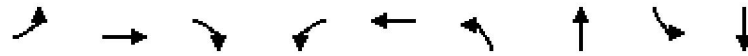
05/10/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑			↑↑	↗		↘	↗			
Traffic Volume (veh/h)	385	691	0	0	795	1054	44	3	318	0	0	0
Future Volume (veh/h)	385	691	0	0	795	1054	44	3	318	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1841	1693	0	0	1841	1767	1796	1900	1693			
Adj Flow Rate, veh/h	418	751	0	0	864	1082	48	3	281			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	4	14	0	0	4	9	7	0	14			
Cap, veh/h	394	2144	0	0	1282	549	285	18	239			
Arrive On Green	0.07	0.22	0.00	0.00	0.37	0.37	0.17	0.17	0.17			
Sat Flow, veh/h	1753	3300	0	0	3589	1497	1708	107	1434			
Grp Volume(v), veh/h	418	751	0	0	864	1082	51	0	281			
Grp Sat Flow(s),veh/h/ln	1753	1608	0	0	1749	1497	1815	0	1434			
Q Serve(g_s), s	13.5	11.8	0.0	0.0	12.5	22.0	1.4	0.0	10.0			
Cycle Q Clear(g_c), s	13.5	11.8	0.0	0.0	12.5	22.0	1.4	0.0	10.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.94		1.00			
Lane Grp Cap(c), veh/h	394	2144	0	0	1282	549	302	0	239			
V/C Ratio(X)	1.06	0.35	0.00	0.00	0.67	1.97	0.17	0.00	1.18			
Avail Cap(c_a), veh/h	394	2144	0	0	1282	549	302	0	239			
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.95	0.95	0.00	0.00	0.63	0.63	1.00	0.00	1.00			
Uniform Delay (d), s/veh	27.8	12.4	0.0	0.0	16.0	19.0	21.4	0.0	25.0			
Incr Delay (d2), s/veh	60.9	0.4	0.0	0.0	1.8	441.1	1.2	0.0	113.9			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	12.7	4.0	0.0	0.0	4.3	73.3	0.6	0.0	10.5			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	88.6	12.8	0.0	0.0	17.8	460.1	22.6	0.0	138.9			
LnGrp LOS	F	B	A	A	B	F	C	A	F			
Approach Vol, veh/h		1169			1946			332				
Approach Delay, s/veh		39.9			263.7			121.1				
Approach LOS		D			F			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		45.0			18.0	27.0		15.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		40.0			13.5	22.0		10.0				
Max Q Clear Time (g_c+1), s		13.8			15.5	24.0		12.0				
Green Ext Time (p_c), s		3.2			0.0	0.0		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					174.1							
HCM 6th LOS					F							



Timings  
3: Western Way & Harley Knox Bl.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↑↑↑	↗	↖	↑↑↑	↖	↗	↖	↗
Traffic Volume (vph)	32	1019	1	2	1738	3	0	14	0
Future Volume (vph)	32	1019	1	2	1738	3	0	14	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	NA
Protected Phases	5	2		1	6		8		4
Permitted Phases			2			8		4	
Detector Phase	5	2	2	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	21.8	21.8	9.6	21.8	32.6	32.6	32.6	32.6
Total Split (s)	18.0	71.4	71.4	9.6	63.0	39.0	39.0	39.0	39.0
Total Split (%)	15.0%	59.5%	59.5%	8.0%	52.5%	32.5%	32.5%	32.5%	32.5%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	7.3	53.4	53.4	5.4	48.2	13.4	13.4	13.4	13.4
Actuated g/C Ratio	0.09	0.67	0.67	0.07	0.61	0.17	0.17	0.17	0.17
v/c Ratio	0.30	0.40	0.00	0.02	0.72	0.02	0.01	0.08	0.41
Control Delay	47.4	7.1	0.0	46.5	14.4	33.3	0.0	34.4	10.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.4	7.1	0.0	46.5	14.4	33.3	0.0	34.4	10.6
LOS	D	A	A	D	B	C	A	C	B
Approach Delay		8.4			14.4		14.8		13.0
Approach LOS		A			B		B		B

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 79.4	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 12.2	Intersection LOS: B
Intersection Capacity Utilization 50.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 3: Western Way & Harley Knox Bl.





HCM 6th Signalized Intersection Summary  
 3: Western Way & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

05/10/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	1019	1	2	1738	10	3	0	4	14	0	129
Future Volume (veh/h)	32	1019	1	2	1738	10	3	0	4	14	0	129
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1500	1707	1900	1900	1796	1574	1900	1900	1900	1781	1900	1826
Adj Flow Rate, veh/h	39	1228	1	2	2094	10	4	0	5	17	0	142
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	27	13	0	0	7	22	0	0	0	8	0	5
Cap, veh/h	54	2988	1032	5	3050	15	175	0	224	288	0	224
Arrive On Green	0.04	0.64	0.64	0.00	0.61	0.61	0.14	0.00	0.14	0.14	0.00	0.14
Sat Flow, veh/h	1428	4661	1610	1810	5037	24	1266	0	1610	1344	0	1610
Grp Volume(v), veh/h	39	1228	1	2	1359	745	4	0	5	17	0	142
Grp Sat Flow(s),veh/h/ln	1428	1554	1610	1810	1635	1792	1266	0	1610	1344	0	1610
Q Serve(g_s), s	1.9	8.9	0.0	0.1	19.4	19.4	0.2	0.0	0.2	0.8	0.0	5.7
Cycle Q Clear(g_c), s	1.9	8.9	0.0	0.1	19.4	19.4	6.0	0.0	0.2	0.9	0.0	5.7
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	54	2988	1032	5	1980	1085	175	0	224	288	0	224
V/C Ratio(X)	0.72	0.41	0.00	0.41	0.69	0.69	0.02	0.00	0.02	0.06	0.00	0.63
Avail Cap(c_a), veh/h	277	4429	1530	131	2708	1485	630	0	802	770	0	802
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.8	6.0	4.5	34.4	9.2	9.2	30.9	0.0	25.7	26.1	0.0	28.1
Incr Delay (d2), s/veh	6.4	0.1	0.0	18.7	0.4	0.8	0.1	0.0	0.0	0.1	0.0	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	1.9	0.0	0.1	4.8	5.4	0.1	0.0	0.1	0.2	0.0	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.2	6.1	4.5	53.1	9.6	10.0	30.9	0.0	25.7	26.2	0.0	31.0
LnGrp LOS	D	A	A	D	A	A	C	A	C	C	A	C
Approach Vol, veh/h		1268			2106			9				159
Approach Delay, s/veh		7.1			9.8			28.0				30.5
Approach LOS		A			A			C				C
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.8	50.1		14.2	7.2	47.6		14.2				
Change Period (Y+Rc), s	4.6	5.8		4.6	4.6	5.8		4.6				
Max Green Setting (Gmax), s	5.0	65.6		34.4	13.4	57.2		34.4				
Max Q Clear Time (g_c+I1), s	2.1	10.9		7.7	3.9	21.4		8.0				
Green Ext Time (p_c), s	0.0	10.9		1.0	0.0	20.4		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					9.8							
HCM 6th LOS					A							

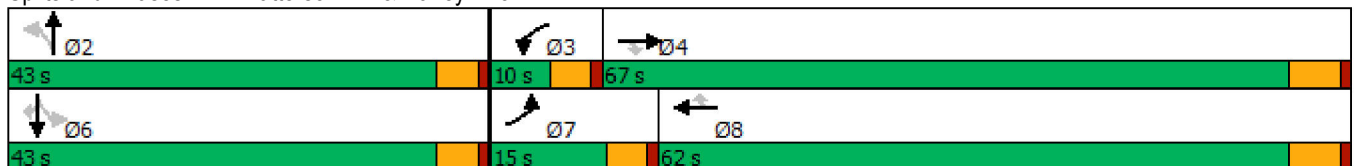
Timings  
4: Patterson Av. & Harley Knox Bl.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	21	917	42	46	1607	9	108	2	22	3	27
Future Volume (vph)	21	917	42	46	1607	9	108	2	22	3	27
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	7	4		3	8			2		6	
Permitted Phases			4			8	2		6		6
Detector Phase	7	4	4	3	8	8	2	2	6	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	9.6	31.8	31.8	33.7	33.7	40.7	40.7	40.7
Total Split (s)	15.0	67.0	67.0	10.0	62.0	62.0	43.0	43.0	43.0	43.0	43.0
Total Split (%)	12.5%	55.8%	55.8%	8.3%	51.7%	51.7%	35.8%	35.8%	35.8%	35.8%	35.8%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8		4.7		4.7	4.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	6.9	56.3	56.3	5.4	59.6	59.6		18.6		18.6	18.6
Actuated g/C Ratio	0.07	0.60	0.60	0.06	0.64	0.64		0.20		0.20	0.20
v/c Ratio	0.31	0.40	0.05	0.54	0.91	0.01		0.65		0.13	0.09
Control Delay	54.6	11.9	3.2	66.1	26.3	0.0		42.5		31.3	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	54.6	11.9	3.2	66.1	26.3	0.0		42.5		31.3	0.5
LOS	D	B	A	E	C	A		D		C	A
Approach Delay		12.5			27.3			42.5		15.4	
Approach LOS		B			C			D		B	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 93.6  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.91  
 Intersection Signal Delay: 22.8  
 Intersection LOS: C  
 Intersection Capacity Utilization 74.0%  
 ICU Level of Service D  
 Analysis Period (min) 15



























Splits and Phases: 4: Patterson Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 4: Patterson Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

05/10/2022

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		  			 			 				 	
Traffic Volume (veh/h)	21	917	42	46	1607	9	108	2	40	22	3	27	
Future Volume (veh/h)	21	917	42	46	1607	9	108	2	40	22	3	27	
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No			No			No			No		
Adj Sat Flow, veh/h/ln	1070	1737	1856	1900	1796	1396	1841	1900	1826	1678	1426	1604	
Adj Flow Rate, veh/h	26	1118	51	56	1960	11	132	2	49	27	4	33	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	
Percent Heavy Veh, %	56	11	3	0	7	34	4	0	5	15	32	20	
Cap, veh/h	27	2894	960	77	2137	726	228	10	61	237	28	234	
Arrive On Green	0.03	0.61	0.61	0.04	0.63	0.63	0.17	0.17	0.17	0.17	0.17	0.17	
Sat Flow, veh/h	1019	4742	1572	1810	3413	1159	904	60	353	922	165	1359	
Grp Volume(v), veh/h	26	1118	51	56	1960	11	183	0	0	31	0	33	
Grp Sat Flow(s),veh/h/ln	1019	1581	1572	1810	1706	1159	1317	0	0	1087	0	1359	
Q Serve(g_s), s	2.2	10.4	1.1	2.6	43.6	0.3	9.9	0.0	0.0	0.0	0.0	1.8	
Cycle Q Clear(g_c), s	2.2	10.4	1.1	2.6	43.6	0.3	11.9	0.0	0.0	2.0	0.0	1.8	
Prop In Lane	1.00		1.00	1.00		1.00	0.72		0.27	0.87		1.00	
Lane Grp Cap(c), veh/h	27	2894	960	77	2137	726	299	0	0	265	0	234	
V/C Ratio(X)	0.95	0.39	0.05	0.72	0.92	0.02	0.61	0.00	0.00	0.12	0.00	0.14	
Avail Cap(c_a), veh/h	123	3355	1113	113	2218	753	691	0	0	555	0	602	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	
Uniform Delay (d), s/veh	42.0	8.6	6.8	40.9	14.2	6.1	35.1	0.0	0.0	30.4	0.0	30.4	
Incr Delay (d2), s/veh	37.6	0.1	0.0	4.7	6.5	0.0	2.0	0.0	0.0	0.2	0.0	0.3	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.8	2.9	0.3	1.2	14.4	0.1	3.8	0.0	0.0	0.6	0.0	0.6	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	79.6	8.7	6.8	45.6	20.7	6.1	37.2	0.0	0.0	30.6	0.0	30.6	
LnGrp LOS	E	A	A	D	C	A	D	A	A	C	A	C	
Approach Vol, veh/h		1195			2027			183				64	
Approach Delay, s/veh		10.1			21.3			37.2				30.6	
Approach LOS		B			C			D				C	
Timer - Assigned Phs		2	3	4		6	7	8					
Phs Duration (G+Y+Rc), s		19.6	8.3	58.6		19.6	6.9	60.0					
Change Period (Y+Rc), s		* 4.7	4.6	5.8		* 4.7	4.6	5.8					
Max Green Setting (Gmax), s		* 38	5.4	61.2		* 38	10.4	56.2					
Max Q Clear Time (g_c+I1), s		13.9	4.6	12.4		4.0	4.2	45.6					
Green Ext Time (p_c), s		1.0	0.0	9.6		0.2	0.0	8.5					

Intersection Summary

HCM 6th Ctrl Delay	18.5
HCM 6th LOS	B

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
5: Heacock Street & Cactus Avenue

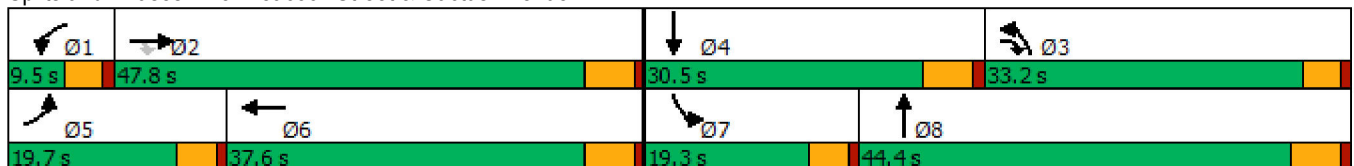


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↙	↕	↘	↙	↕	↘	↕	↙	↕
Traffic Volume (vph)	226	1974	1272	26	881	769	623	169	688
Future Volume (vph)	226	1974	1272	26	881	769	623	169	688
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	3	1	6	3	8	7	4
Permitted Phases			2						
Detector Phase	5	2	3	1	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.5	30.5	9.5	9.5	30.5	9.5	30.5	9.5	30.5
Total Split (s)	19.7	47.8	33.2	9.5	37.6	33.2	44.4	19.3	30.5
Total Split (%)	16.3%	39.5%	27.4%	7.9%	31.1%	27.4%	36.7%	16.0%	25.2%
Yellow Time (s)	3.5	4.5	3.5	3.5	4.5	3.5	4.5	3.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	4.5	4.5	5.5	4.5	5.5	4.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None
Act Effct Green (s)	15.2	46.1	75.8	5.0	32.1	28.7	40.0	13.7	25.0
Actuated g/C Ratio	0.13	0.38	0.63	0.04	0.27	0.24	0.33	0.11	0.21
v/c Ratio	0.99	1.43	1.14	0.36	1.04	0.93	0.58	0.82	1.00
Control Delay	108.3	230.4	94.2	69.9	81.6	63.8	35.6	81.0	80.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	108.3	230.4	94.2	69.9	81.6	63.8	35.6	81.0	80.0
LOS	F	F	F	E	F	E	D	F	F
Approach Delay		172.6			81.3		50.4		80.2
Approach LOS		F			F		D		F

Intersection Summary

Cycle Length: 121	
Actuated Cycle Length: 121	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.43	
Intersection Signal Delay: 120.7	Intersection LOS: F
Intersection Capacity Utilization 118.2%	ICU Level of Service H
Analysis Period (min) 15	




























Splits and Phases: 5: Heacock Street & Cactus Avenue



HCM 6th Signalized Intersection Summary  
5: Heacock Street & Cactus Avenue

Gateway Aviation TA (JN:13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 		 	 			 	
Traffic Volume (veh/h)	226	1974	1272	26	881	121	769	623	67	169	688	56
Future Volume (veh/h)	226	1974	1272	26	881	121	769	623	67	169	688	56
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1826	1841	1885	1870	1826	1870	1870	1900	1870	1900
Adj Flow Rate, veh/h	235	2056	1325	27	918	126	801	649	70	176	717	58
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	1	5	4	1	2	5	2	2	0	2	0
Cap, veh/h	225	1369	925	43	854	117	818	1114	120	203	700	57
Arrive On Green	0.12	0.36	0.36	0.02	0.26	0.26	0.24	0.34	0.34	0.11	0.20	0.20
Sat Flow, veh/h	1810	3770	1544	1753	3245	445	3478	3312	357	1810	3414	276
Grp Volume(v), veh/h	235	2056	1325	27	533	511	801	366	353	176	393	382
Grp Sat Flow(s),veh/h/ln	1810	1885	1544	1753	1885	1805	1739	1870	1798	1810	1870	1820
Q Serve(g_s), s	15.2	44.3	27.9	1.9	32.1	32.1	27.9	19.7	19.8	11.7	25.0	25.0
Cycle Q Clear(g_c), s	15.2	44.3	27.9	1.9	32.1	32.1	27.9	19.7	19.8	11.7	25.0	25.0
Prop In Lane	1.00		1.00	1.00		0.25	1.00		0.20	1.00		0.15
Lane Grp Cap(c), veh/h	225	1369	925	43	496	475	818	629	605	203	383	373
V/C Ratio(X)	1.04	1.50	1.43	0.63	1.08	1.08	0.98	0.58	0.58	0.87	1.02	1.03
Avail Cap(c_a), veh/h	225	1369	925	72	496	475	818	629	605	220	383	373
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.4	38.8	11.8	58.9	44.9	45.0	46.4	33.4	33.4	53.3	48.5	48.5
Incr Delay (d2), s/veh	71.5	229.6	201.2	5.5	62.1	63.0	26.2	0.9	1.0	25.9	52.3	53.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.1	62.8	62.9	0.9	23.0	22.1	14.6	8.8	8.5	6.6	16.8	16.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	124.9	268.5	212.9	64.4	107.0	108.0	72.5	34.3	34.4	79.2	100.8	101.8
LnGrp LOS	F	F	F	E	F	F	E	C	C	E	F	F
Approach Vol, veh/h		3616			1071			1520			951	
Approach Delay, s/veh		238.8			106.4			54.5			97.2	
Approach LOS		F			F			D			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.5	49.8	34.2	30.5	19.7	37.6	18.2	46.5				
Change Period (Y+Rc), s	4.5	5.5	5.5	* 5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	5.0	42.3	28.7	* 25	15.2	32.1	14.8	38.9				
Max Q Clear Time (g_c+I1), s	3.9	46.3	29.9	27.0	17.2	34.1	13.7	21.8				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3				

Intersection Summary

HCM 6th Ctrl Delay	161.0
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

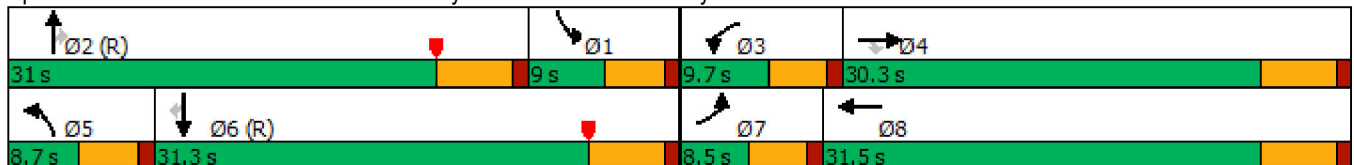
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Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	32	202	324	33	92	90	994	83	335	1118	22	
Future Volume (vph)	32	202	324	33	92	90	994	83	335	1118	22	
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	7	4		3	8	5	2		1	6		
Permitted Phases			4					2			6	
Detector Phase	7	4	4	3	8	5	2	2	1	6	6	
Switch Phase												
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	
Minimum Split (s)	8.5	23.5	23.5	8.5	31.5	8.5	30.5	30.5	8.5	23.5	23.5	
Total Split (s)	8.5	30.3	30.3	9.7	31.5	8.7	31.0	31.0	9.0	31.3	31.3	
Total Split (%)	10.6%	37.9%	37.9%	12.1%	39.4%	10.9%	38.8%	38.8%	11.3%	39.1%	39.1%	
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5	4.5	4.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	5.5	4.5	5.5	5.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max	
Act Effct Green (s)	4.0	15.4	15.4	5.0	16.2	9.0	38.7	38.7	4.5	34.2	34.2	
Actuated g/C Ratio	0.05	0.19	0.19	0.06	0.20	0.11	0.48	0.48	0.06	0.43	0.43	
v/c Ratio	0.39	0.64	0.67	0.32	0.34	0.48	0.65	0.09	3.77	0.84	0.03	
Control Delay	48.9	36.8	16.3	43.1	10.0	45.5	21.2	0.5	1286.4	30.4	0.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	48.9	36.8	16.3	43.1	10.0	45.5	21.2	0.5	1286.4	30.4	0.0	
LOS	D	D	B	D	B	D	C	A	F	C	A	
Approach Delay		25.6			13.6		21.6			315.2		
Approach LOS		C			B		C			F		

Intersection Summary

Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 100  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 3.77  
 Intersection Signal Delay: 145.1  
 Intersection LOS: F  
 Intersection Capacity Utilization 76.7%  
 ICU Level of Service D  
 Analysis Period (min) 15
























Splits and Phases: 6: Heacock Street & Meyer Drive/John F. Kennedy Drive



HCM 6th Signalized Intersection Summary  
 6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	202	324	33	92	179	90	994	83	335	1118	22
Future Volume (veh/h)	32	202	324	33	92	179	90	994	83	335	1118	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1900	1900	1885	1885	1900	1826	1900	1841	1811	1900
Adj Flow Rate, veh/h	37	232	372	38	106	206	103	1143	95	385	1285	25
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	1	0	0	1	1	0	5	0	4	6	0
Cap, veh/h	51	486	415	52	487	413	95	1164	513	232	1489	662
Arrive On Green	0.03	0.26	0.26	0.03	0.26	0.26	0.05	0.32	0.32	0.13	0.41	0.41
Sat Flow, veh/h	1810	1885	1610	1810	1885	1598	1810	3652	1610	1753	3622	1610
Grp Volume(v), veh/h	37	232	372	38	106	206	103	1143	95	385	1285	25
Grp Sat Flow(s),veh/h/ln	1810	1885	1610	1810	1885	1598	1810	1826	1610	1753	1811	1610
Q Serve(g_s), s	1.6	8.3	17.8	1.7	3.5	8.8	4.2	24.8	2.6	10.6	25.9	0.7
Cycle Q Clear(g_c), s	1.6	8.3	17.8	1.7	3.5	8.8	4.2	24.8	2.6	10.6	25.9	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	51	486	415	52	487	413	95	1164	513	232	1489	662
V/C Ratio(X)	0.73	0.48	0.90	0.74	0.22	0.50	1.08	0.98	0.19	1.66	0.86	0.04
Avail Cap(c_a), veh/h	90	584	499	118	613	519	95	1164	513	232	1489	662
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.66	0.66	0.66	0.09	0.09	0.09
Uniform Delay (d), s/veh	38.6	25.1	28.6	38.6	23.3	25.2	37.9	27.0	11.8	34.7	21.5	14.1
Incr Delay (d2), s/veh	7.3	0.3	15.0	7.4	0.1	0.3	99.3	17.6	0.5	299.3	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	3.6	8.0	0.8	1.5	3.1	4.4	12.3	1.2	23.4	9.4	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.8	25.4	43.6	45.9	23.4	25.6	137.2	44.6	12.4	334.0	22.2	14.1
LnGrp LOS	D	C	D	D	C	C	F	D	B	F	C	B
Approach Vol, veh/h		641			350			1341			1695	
Approach Delay, s/veh		37.1			27.1			49.4			92.9	
Approach LOS		D			C			D			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.1	31.0	6.8	26.1	8.7	38.4	6.7	26.2				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	4.5	* 26	5.2	24.8	4.2	25.8	4.0	26.0				
Max Q Clear Time (g_c+I1), s	12.6	26.8	3.7	19.8	6.2	27.9	3.6	10.8				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.9				

Intersection Summary













HCM 6th Ctrl Delay	63.8
HCM 6th LOS	E

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Timings  
7: Heacock Street & Gentian Avenue

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	7	103	1068	13	114	1313
Future Volume (vph)	7	103	1068	13	114	1313
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	27.6	27.6	27.2	27.2	9.6	16.2
Total Split (s)	31.0	31.0	62.0	62.0	27.0	89.0
Total Split (%)	25.8%	25.8%	51.7%	51.7%	22.5%	74.2%
Yellow Time (s)	3.6	3.6	5.2	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	6.2	6.2	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	12.3	12.3	36.4	36.4	10.7	51.9
Actuated g/C Ratio	0.16	0.16	0.48	0.48	0.14	0.69
v/c Ratio	0.03	0.29	0.73	0.02	0.51	0.63
Control Delay	31.9	9.0	19.3	9.9	40.2	7.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.9	9.0	19.3	9.9	40.2	7.9
LOS	C	A	B	A	D	A
Approach Delay	10.5		19.2			10.5
Approach LOS	B		B			B

Intersection Summary













Cycle Length: 120	
Actuated Cycle Length: 75.5	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 14.1	Intersection LOS: B
Intersection Capacity Utilization 57.0%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 7: Heacock Street & Gentian Avenue





HCM 6th Signalized Intersection Summary  
 7: Heacock Street & Gentian Avenue

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	7	103	1068	13	114	1313
Future Volume (veh/h)	7	103	1068	13	114	1313
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1826	1900	1826	1841
Adj Flow Rate, veh/h	8	117	1214	15	130	1492
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	5	0	5	4
Cap, veh/h	272	242	1686	782	167	2315
Arrive On Green	0.15	0.15	0.49	0.49	0.10	0.66
Sat Flow, veh/h	1810	1610	3561	1610	1739	3589
Grp Volume(v), veh/h	8	117	1214	15	130	1492
Grp Sat Flow(s),veh/h/ln	1810	1610	1735	1610	1739	1749
Q Serve(g_s), s	0.2	3.8	15.9	0.3	4.2	14.5
Cycle Q Clear(g_c), s	0.2	3.8	15.9	0.3	4.2	14.5
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	272	242	1686	782	167	2315
V/C Ratio(X)	0.03	0.48	0.72	0.02	0.78	0.64
Avail Cap(c_a), veh/h	830	739	3365	1562	677	5034
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.9	22.4	11.7	7.7	25.4	5.7
Incr Delay (d2), s/veh	0.0	0.6	0.6	0.0	2.9	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	1.3	4.3	0.1	1.6	2.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	20.9	23.0	12.3	7.7	28.3	6.0
LnGrp LOS	C	C	B	A	C	A
Approach Vol, veh/h	125		1229			1622
Approach Delay, s/veh	22.8		12.2			7.8
Approach LOS	C		B			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	10.1	34.2			44.3	13.2
Change Period (Y+Rc), s	4.6	6.2			6.2	4.6
Max Green Setting (Gmax), s	22.4	55.8			82.8	26.4
Max Q Clear Time (g_c+1), s	6.2	17.9			16.5	5.8
Green Ext Time (p_c), s	0.1	10.0			15.4	0.2
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			10.3			
HCM 6th LOS			B			

Timings  
8: Heacock Street & Iris Avenue



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖↗	↗	↕↕	↗	↖↗	↕↕
Traffic Volume (vph)	247	318	815	382	500	881
Future Volume (vph)	247	318	815	382	500	881
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	15.8	15.8	33.2	33.2	9.6	16.2
Total Split (s)	35.0	35.0	47.0	47.0	38.0	85.0
Total Split (%)	29.2%	29.2%	39.2%	39.2%	31.7%	70.8%
Yellow Time (s)	4.8	4.8	5.2	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	6.2	6.2	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	12.9	12.9	31.4	31.4	17.9	54.0
Actuated g/C Ratio	0.16	0.16	0.40	0.40	0.23	0.68
v/c Ratio	0.47	0.60	0.70	0.54	0.70	0.44
Control Delay	35.1	8.5	23.6	9.1	34.5	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.1	8.5	23.6	9.1	34.5	6.3
LOS	D	A	C	A	C	A
Approach Delay	20.1		19.0			16.5
Approach LOS	C		B			B

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 79.3	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.70	
Intersection Signal Delay: 18.1	Intersection LOS: B
Intersection Capacity Utilization 59.0%	ICU Level of Service B
Analysis Period (min) 15	

















Splits and Phases: 8: Heacock Street & Iris Avenue



HCM 6th Signalized Intersection Summary  
8: Heacock Street & Iris Avenue

Gateway Aviation TA (JN:13445)

05/10/2022

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 		 		 	 
Traffic Volume (veh/h)	247	318	815	382	500	881
Future Volume (veh/h)	247	318	815	382	500	881
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1811	1900	1885	1811
Adj Flow Rate, veh/h	284	366	937	439	575	1013
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	0	6	0	1	6
Cap, veh/h	912	418	1209	566	677	2063
Arrive On Green	0.26	0.26	0.35	0.35	0.19	0.60
Sat Flow, veh/h	3510	1610	3532	1610	3483	3532
Grp Volume(v), veh/h	284	366	937	439	575	1013
Grp Sat Flow(s),veh/h/ln	1755	1610	1721	1610	1742	1721
Q Serve(g_s), s	5.6	18.6	20.7	20.8	13.6	14.3
Cycle Q Clear(g_c), s	5.6	18.6	20.7	20.8	13.6	14.3
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	912	418	1209	566	677	2063
V/C Ratio(X)	0.31	0.87	0.77	0.78	0.85	0.49
Avail Cap(c_a), veh/h	1201	551	1644	769	1363	3176
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.4	30.3	24.7	24.7	33.2	9.7
Incr Delay (d2), s/veh	0.2	11.8	1.6	3.5	1.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	8.0	7.7	7.5	5.4	4.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	25.6	42.0	26.3	28.2	34.4	9.9
LnGrp LOS	C	D	C	C	C	A
Approach Vol, veh/h	650		1376			1588
Approach Delay, s/veh	34.9		26.9			18.8
Approach LOS	C		C			B
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	21.2	36.2			57.4	28.0
Change Period (Y+Rc), s	4.6	6.2			6.2	5.8
Max Green Setting (Gmax), s	33.4	40.8			78.8	29.2
Max Q Clear Time (g_c+1), s	15.6	22.8			16.3	20.6
Green Ext Time (p_c), s	1.0	7.3			8.0	1.6
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			24.8			
HCM 6th LOS			C			

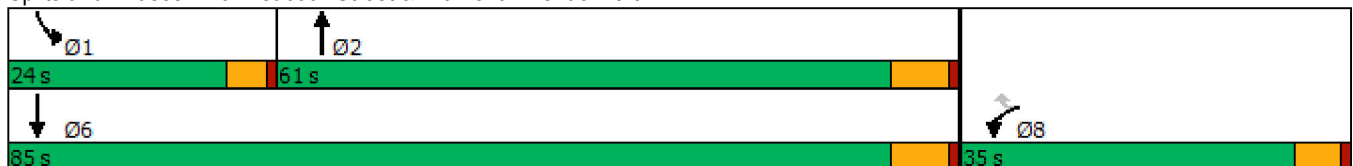
Timings  
9: Heacock Street & Krameria Avenue-North

	↙	↖	↑	↘	↓
Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations	↙	↖	↑↔	↘	↑↑
Traffic Volume (vph)	226	250	835	113	755
Future Volume (vph)	226	250	835	113	755
Turn Type	Prot	Perm	NA	Prot	NA
Protected Phases	8		2	1	6
Permitted Phases		8			
Detector Phase	8	8	2	1	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	29.1	29.1	29.2	9.6	16.2
Total Split (s)	35.0	35.0	61.0	24.0	85.0
Total Split (%)	29.2%	29.2%	50.8%	20.0%	70.8%
Yellow Time (s)	4.1	4.1	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	6.2	4.6	6.2
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	Min	Max	Min
Act Effct Green (s)	18.4	18.4	36.5	20.0	61.3
Actuated g/C Ratio	0.20	0.20	0.40	0.22	0.67
v/c Ratio	0.74	0.50	0.84	0.35	0.40
Control Delay	47.8	7.0	30.7	38.1	7.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	47.8	7.0	30.7	38.1	7.8
LOS	D	A	C	D	A
Approach Delay	26.4		30.7		11.7
Approach LOS	C		C		B

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 91.3	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay: 22.6	Intersection LOS: C
Intersection Capacity Utilization 58.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 9: Heacock Street & Krameria Avenue-North



HCM 6th Signalized Intersection Summary  
 9: Heacock Street & Krameria Avenue-North

Gateway Aviation TA (JN:13445)  
 05/10/2022



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	226	250	835	114	113	755
Future Volume (veh/h)	226	250	835	114	113	755
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1885	1856	1870	1900	1826	1856
Adj Flow Rate, veh/h	279	309	1031	141	140	932
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	1	3	2	0	5	3
Cap, veh/h	400	350	1187	162	382	2290
Arrive On Green	0.22	0.22	0.38	0.38	0.22	0.65
Sat Flow, veh/h	1795	1572	3234	429	1739	3618
Grp Volume(v), veh/h	279	309	583	589	140	932
Grp Sat Flow(s),veh/h/ln	1795	1572	1777	1792	1739	1763
Q Serve(g_s), s	12.6	16.8	26.8	26.9	6.0	11.1
Cycle Q Clear(g_c), s	12.6	16.8	26.8	26.9	6.0	11.1
Prop In Lane	1.00	1.00		0.24	1.00	
Lane Grp Cap(c), veh/h	400	350	672	677	382	2290
V/C Ratio(X)	0.70	0.88	0.87	0.87	0.37	0.41
Avail Cap(c_a), veh/h	607	532	1102	1111	382	3144
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.6	33.2	25.4	25.5	29.3	7.4
Incr Delay (d2), s/veh	0.8	7.7	2.3	2.3	2.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	7.1	10.4	10.5	2.6	3.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	32.4	41.0	27.7	27.8	32.0	7.4
LnGrp LOS	C	D	C	C	C	A
Approach Vol, veh/h	588		1172			1072
Approach Delay, s/veh	36.9		27.7			10.6
Approach LOS	D		C			B
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	24.0	39.6			63.6	24.8
Change Period (Y+Rc), s	4.6	6.2			6.2	5.1
Max Green Setting (Gmax), s	19.4	54.8			78.8	29.9
Max Q Clear Time (g_c+11), s	8.0	28.9			13.1	18.8
Green Ext Time (p_c), s	0.1	4.5			4.1	0.9
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			23.2			
HCM 6th LOS			C			

Timings  
10: Heacock Street & Driveway 1



Lane Group	EBL	EBT	NBL	NBT	SBT	SBR	Ø1	Ø8
Lane Configurations								
Traffic Volume (vph)	46	0	27	837	1038	2		
Future Volume (vph)	46	0	27	837	1038	2		
Turn Type	Perm	NA	Prot	NA	NA	Perm		
Protected Phases		4	5	2	6		1	8
Permitted Phases	4					6		
Detector Phase	4	4	5	2	6	6		
Switch Phase								
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	26.6	26.6	9.6	23.2	23.2	23.2	9.6	26.6
Total Split (s)	26.6	26.6	9.6	83.8	83.8	83.8	9.6	26.6
Total Split (%)	22.2%	22.2%	8.0%	69.8%	69.8%	69.8%	8%	22%
Yellow Time (s)	3.6	3.6	3.6	5.2	5.2	5.2	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.6	4.6	4.6	6.2	6.2	6.2		
Lead/Lag			Lead	Lag	Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	Min	Min	Min	None	None
Act Effct Green (s)	12.6	12.6	5.5	39.4	34.3	34.3		
Actuated g/C Ratio	0.22	0.22	0.10	0.70	0.61	0.61		
v/c Ratio	0.16	0.20	0.32	0.37	0.53	0.00		
Control Delay	22.9	1.2	43.1	6.2	12.0	0.0		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay	22.9	1.2	43.1	6.2	12.0	0.0		
LOS	C	A	D	A	B	A		
Approach Delay		9.9		7.3	11.9			
Approach LOS		A		A	B			

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 56.5	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.53	
Intersection Signal Delay: 9.8	Intersection LOS: A
Intersection Capacity Utilization 46.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 10: Heacock Street & Driveway 1

Ø1	Ø2	Ø4
9.6 s	83.8 s	26.6 s
Ø5	Ø6	Ø8
9.6 s	83.8 s	26.6 s

HCM 6th Signalized Intersection Summary  
 10: Heacock Street & Driveway 1

Gateway Aviation TA (JN:13445)

05/10/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	0	69	0	0	0	27	837	0	0	1038	2
Future Volume (veh/h)	46	0	69	0	0	0	27	837	0	0	1038	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1233	1900	1900	1900	522	1870	1900	1900	1856	1900
Adj Flow Rate, veh/h	50	0	75	0	0	0	29	910	0	0	1128	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	45	0	0	0	93	2	0	0	3	0
Cap, veh/h	453	0	271	0	319	0	17	2163	0	4	1693	773
Arrive On Green	0.17	0.00	0.17	0.00	0.00	0.00	0.03	0.61	0.00	0.00	0.48	0.48
Sat Flow, veh/h	1810	0	1610	0	1900	0	497	3647	0	1810	3526	1610
Grp Volume(v), veh/h	50	0	75	0	0	0	29	910	0	0	1128	2
Grp Sat Flow(s),veh/h/ln	1810	0	1610	0	1900	0	497	1777	0	1810	1763	1610
Q Serve(g_s), s	1.1	0.0	2.0	0.0	0.0	0.0	1.6	6.5	0.0	0.0	11.8	0.0
Cycle Q Clear(g_c), s	1.1	0.0	2.0	0.0	0.0	0.0	1.6	6.5	0.0	0.0	11.8	0.0
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	453	0	271	0	319	0	17	2163	0	4	1693	773
V/C Ratio(X)	0.11	0.00	0.28	0.00	0.00	0.00	1.75	0.42	0.00	0.00	0.67	0.00
Avail Cap(c_a), veh/h	971	0	732	0	864	0	51	5699	0	187	5653	2582
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	17.2	0.0	17.6	0.0	0.0	0.0	23.4	5.0	0.0	0.0	9.6	6.5
Incr Delay (d2), s/veh	0.1	0.0	0.5	0.0	0.0	0.0	382.0	0.1	0.0	0.0	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.7	0.0	0.0	0.0	1.9	0.9	0.0	0.0	2.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.3	0.0	18.1	0.0	0.0	0.0	405.4	5.1	0.0	0.0	10.1	6.5
LnGrp LOS	B	A	B	A	A	A	F	A	A	A	B	A
Approach Vol, veh/h		125			0			939			1130	
Approach Delay, s/veh		17.8			0.0			17.5			10.1	
Approach LOS		B						B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	35.7		12.7	6.2	29.4		12.7				
Change Period (Y+Rc), s	4.6	6.2		4.6	4.6	6.2		4.6				
Max Green Setting (Gmax), s	5.0	77.6		22.0	5.0	77.6		22.0				
Max Q Clear Time (g_c+1), s	0.0	8.5		4.0	3.6	13.8		0.0				
Green Ext Time (p_c), s	0.0	6.8		0.5	0.0	9.4		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay											13.7	
HCM 6th LOS											B	

Intersection						
Int Delay, s/veh	1.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↑↑	↗	↘	↑↑
Traffic Vol, veh/h	55	52	1000	19	17	1486
Future Vol, veh/h	55	52	1000	19	17	1486
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	0	140	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	2	8	7	11	6	9
Mvmt Flow	71	67	1282	24	22	1905

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	2279	641	0	0	1306
Stage 1	1282	-	-	-	-
Stage 2	997	-	-	-	-
Critical Hdwy	6.84	7.06	-	-	4.22
Critical Hdwy Stg 1	5.84	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-
Follow-up Hdwy	3.52	3.38	-	-	2.26
Pot Cap-1 Maneuver	~ 34	403	-	-	505
Stage 1	224	-	-	-	-
Stage 2	318	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	~ 33	403	-	-	505
Mov Cap-2 Maneuver	132	-	-	-	-
Stage 1	224	-	-	-	-
Stage 2	304	-	-	-	-

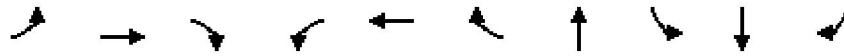
Approach	WB	NB	SB
HCM Control Delay, s	38.4	0	0.1
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	132	403	505	-
HCM Lane V/C Ratio	-	-	0.534	0.165	0.043	-
HCM Control Delay (s)	-	-	59.9	15.7	12.4	-
HCM Lane LOS	-	-	F	C	B	-
HCM 95th %tile Q(veh)	-	-	2.6	0.6	0.1	-

Notes  
 ~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon



Timings  
12: Heacock Street & San Michele Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBL	SBT	SBR	Ø5
Lane Configurations											
Traffic Volume (vph)	53	316	6	20	93	627	119	850	279	32	
Future Volume (vph)	53	316	6	20	93	627	119	850	279	32	
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	NA	Prot	NA	Perm	
Protected Phases	7	4		3	8	1	2	1	6		5
Permitted Phases			4			8				6	
Detector Phase	7	4	4	3	8	1	2	1	6	6	
Switch Phase											
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0
Minimum Split (s)	9.5	30.5	30.5	8.5	30.5	8.5	34.5	8.5	34.5	34.5	8.5
Total Split (s)	12.0	37.4	37.4	9.6	35.0	36.0	37.0	36.0	64.5	64.5	8.5
Total Split (%)	10.0%	31.2%	31.2%	8.0%	29.2%	30.0%	30.8%	30.0%	53.8%	53.8%	7%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5	5.5	
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	None	Max	Max	None
Act Effct Green (s)	15.1	29.1	29.1	5.0	17.1	54.4	31.7	31.7	67.9	67.9	
Actuated g/C Ratio	0.13	0.26	0.26	0.04	0.15	0.48	0.28	0.28	0.60	0.60	
v/c Ratio	0.30	0.93	0.02	0.35	0.47	0.80	0.26	2.29	0.41	0.04	
Control Delay	48.5	68.0	0.0	67.2	51.4	19.5	29.1	610.0	15.0	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	48.5	68.0	0.0	67.2	51.4	19.5	29.1	610.0	15.0	0.1	
LOS	D	E	A	E	D	B	C	F	B	A	
Approach Delay		64.1			24.8		29.1		450.0		
Approach LOS		E			C		C		F		

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 113.5  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 2.29  
 Intersection Signal Delay: 234.1  
 Intersection Capacity Utilization 81.2%  
 Analysis Period (min) 15  
 Intersection LOS: F  
 ICU Level of Service D

























Splits and Phases: 12: Heacock Street & San Michele Road



HCM 6th Signalized Intersection Summary  
 12: Heacock Street & San Michele Road

Gateway Aviation TA (JN:13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	316	6	20	93	627	0	119	37	850	279	32
Future Volume (veh/h)	53	316	6	20	93	627	0	119	37	850	279	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1870	1900	1574	1900	1900	1663	1900
Adj Flow Rate, veh/h	76	451	9	29	133	896	0	170	53	1214	399	46
Peak Hour Factor	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Percent Heavy Veh, %	0	0	0	0	0	2	0	22	0	0	16	0
Cap, veh/h	97	481	397	84	467	806	2	594	180	475	950	920
Arrive On Green	0.05	0.25	0.25	0.05	0.25	0.25	0.00	0.26	0.26	0.26	0.57	0.57
Sat Flow, veh/h	1810	1900	1570	1810	1900	1585	1810	2262	684	1810	1663	1610
Grp Volume(v), veh/h	76	451	9	29	133	896	0	111	112	1214	399	46
Grp Sat Flow(s),veh/h/ln	1810	1900	1570	1810	1900	1585	1810	1495	1451	1810	1663	1610
Q Serve(g_s), s	5.0	27.9	0.5	1.9	6.8	29.5	0.0	7.1	7.4	31.5	16.2	1.0
Cycle Q Clear(g_c), s	5.0	27.9	0.5	1.9	6.8	29.5	0.0	7.1	7.4	31.5	16.2	1.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.47	1.00		1.00
Lane Grp Cap(c), veh/h	97	481	397	84	467	806	2	393	381	475	950	920
V/C Ratio(X)	0.78	0.94	0.02	0.34	0.28	1.11	0.00	0.28	0.30	2.55	0.42	0.05
Avail Cap(c_a), veh/h	113	505	418	84	467	806	60	393	381	475	950	920
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.1	43.9	29.7	55.4	36.7	29.5	0.0	35.2	35.3	44.2	14.5	5.3
Incr Delay (d2), s/veh	21.8	24.4	0.0	0.9	0.1	66.8	0.0	1.8	2.0	705.6	1.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	16.4	0.2	0.9	3.1	22.1	0.0	2.7	2.7	106.5	5.9	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.9	68.3	29.7	56.3	36.8	96.3	0.0	37.0	37.3	749.8	15.9	5.4
LnGrp LOS	E	E	C	E	D	F	A	D	D	F	B	A
Approach Vol, veh/h		536			1058			223			1659	
Approach Delay, s/veh		69.0			87.7			37.1			552.6	
Approach LOS		E			F			D			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	37.0	37.0	10.1	35.8	0.0	74.0	10.9	35.0				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	31.5	* 32	5.1	31.9	4.0	59.0	7.5	29.5				
Max Q Clear Time (g_c+I1), s	33.5	9.4	3.9	29.9	0.0	18.2	7.0	31.5				
Green Ext Time (p_c), s	0.0	0.6	0.0	0.4	0.0	1.4	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	303.5
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection					
Intersection Delay, s/veh20.0					
Intersection LOS C					
Approach	EB	WB		NB	
Entry Lanes	3	2		2	
Conflicting Circle Lanes	2	2		2	
Adj Approach Flow, veh/h	0	1899		141	
Demand Flow Rate, veh/h	0	2051		147	
Vehicles Circulating, veh/h	13	130		1261	
Vehicles Exiting, veh/h	2168	1278		144	
Ped Vol Crossing Leg, #/h	0	0		0	
Ped Cap Adj	1.000	1.000		1.000	
Approach Delay, s/veh	0.0	20.6		10.8	
Approach LOS	-	C		B	
Lane	Left		Right		
Designated Moves	LT		TR		L LTR
Assumed Moves	LT		TR		L LTR
RT Channelized					
Lane Util	0.470	0.530	0.531	0.469	
Follow-Up Headway, s	2.667	2.535	2.667	2.535	
Critical Headway, s	4.645	4.328	4.645	4.328	
Entry Flow, veh/h	964	1087	78	69	
Cap Entry Lane, veh/h	1198	1272	423	486	
Entry HV Adj Factor	0.926	0.926	0.958	0.960	
Flow Entry, veh/h	893	1006	75	66	
Cap Entry, veh/h	1109	1177	405	467	
V/C Ratio	0.805	0.855	0.184	0.142	
Control Delay, s/veh	19.1	22.0	11.8	9.7	
LOS	C		C		B A
95th %tile Queue, veh	9	11	1	0	

Timings  
14: Indian Street & San Michele Road

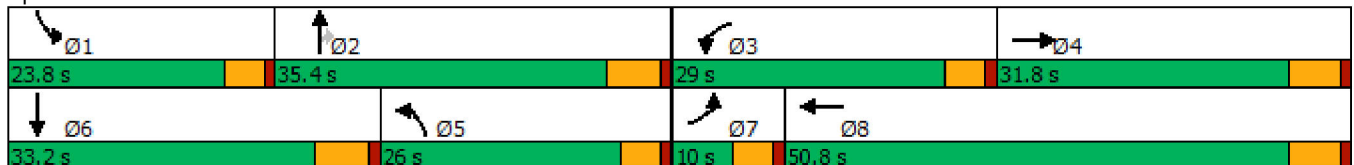


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	21	808	228	465	700	179	205	131	349
Future Volume (vph)	21	808	228	465	700	179	205	131	349
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8	5	2		1	6
Permitted Phases							2		
Detector Phase	7	4	3	8	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	31.8	9.6	31.8	9.6	32.8	32.8	9.6	32.8
Total Split (s)	10.0	31.8	29.0	50.8	26.0	35.4	35.4	23.8	33.2
Total Split (%)	8.3%	26.5%	24.2%	42.3%	21.7%	29.5%	29.5%	19.8%	27.7%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	5.3	26.1	23.0	47.9	21.5	27.8	27.8	15.4	21.8
Actuated g/C Ratio	0.05	0.23	0.20	0.42	0.19	0.25	0.25	0.14	0.19
v/c Ratio	0.38	3.50dr	0.91	0.51	1.53	0.60	0.45	0.77	0.82
Control Delay	67.4	1116.4	72.4	26.3	279.7	45.4	6.3	67.8	53.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.4	1116.4	72.4	26.3	279.7	45.4	6.3	67.8	53.7
LOS	E	F	E	C	F	D	A	E	D
Approach Delay		1106.6		40.4		189.3			57.3
Approach LOS		F		D		F			E

Intersection Summary























Cycle Length: 120  
 Actuated Cycle Length: 113.2  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 3.44  
 Intersection Signal Delay: 599.9  
 Intersection LOS: F  
 Intersection Capacity Utilization 141.8%  
 ICU Level of Service H  
 Analysis Period (min) 15  
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 14: Indian Street & San Michele Road



HCM 6th Signalized Intersection Summary  
 14: Indian Street & San Michele Road

Gateway Aviation TA (JN:13445)  
 05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	808	1421	228	465	54	700	179	205	131	349	30
Future Volume (veh/h)	21	808	1421	228	465	54	700	179	205	131	349	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		1.00	1.00		0.67
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1885	1870	1885	1870	1900	1841	1841	1870	1885	1870	1796
Adj Flow Rate, veh/h	32	1224	2153	345	705	82	1061	271	311	198	529	45
Peak Hour Factor	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66
Percent Heavy Veh, %	5	1	2	1	2	0	4	4	2	1	2	7
Cap, veh/h	47	386	334	363	1279	149	621	524	451	225	727	61
Arrive On Green	0.03	0.22	0.22	0.20	0.39	0.39	0.18	0.28	0.28	0.13	0.22	0.22
Sat Flow, veh/h	1739	1791	1553	1795	3279	381	3506	1841	1583	1795	3256	274
Grp Volume(v), veh/h	32	1224	2153	345	402	385	1061	271	311	198	301	273
Grp Sat Flow(s),veh/h/ln	1739	1791	1553	1795	1870	1790	1753	1841	1583	1795	1870	1659
Q Serve(g_s), s	2.2	26.0	26.0	22.9	20.2	20.2	21.4	14.9	21.1	13.1	18.0	18.4
Cycle Q Clear(g_c), s	2.2	26.0	26.0	22.9	20.2	20.2	21.4	14.9	21.1	13.1	18.0	18.4
Prop In Lane	1.00		1.00	1.00		0.21	1.00		1.00	1.00		0.17
Lane Grp Cap(c), veh/h	47	386	334	363	730	698	621	524	451	225	418	371
V/C Ratio(X)	0.68	3.17	6.44	0.95	0.55	0.55	1.71	0.52	0.69	0.88	0.72	0.74
Avail Cap(c_a), veh/h	78	386	334	363	730	698	621	524	451	285	424	376
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.2	47.4	47.4	47.6	28.6	28.6	49.7	36.2	38.4	51.9	43.4	43.6
Incr Delay (d2), s/veh	6.1	985.5	2454.2	34.3	0.5	0.6	325.4	0.4	3.7	18.7	5.0	6.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	116.7	237.6	13.4	8.8	8.4	37.1	6.5	8.4	6.9	8.6	7.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.3	1032.8	2501.6	81.9	29.1	29.2	375.1	36.6	42.1	70.6	48.4	49.9
LnGrp LOS	E	F	F	F	C	C	F	D	D	E	D	D
Approach Vol, veh/h		3409			1132			1643			772	
Approach Delay, s/veh		1951.4			45.2			256.2			54.6	
Approach LOS		F			D			F			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.8	40.2	29.0	31.8	27.2	32.8	7.9	52.9				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	5.8	* 5.8	4.6	5.8				
Max Green Setting (Gmax), s	19.2	29.6	24.4	26.0	21.4	* 27	5.4	45.0				
Max Q Clear Time (g_c+I1), s	15.1	23.1	24.9	28.0	23.4	20.4	4.2	22.2				
Green Ext Time (p_c), s	0.1	0.9	0.0	0.0	0.0	1.2	0.0	2.8				

Intersection Summary

HCM 6th Ctrl Delay	1030.3
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
15: Indian Street & Nandina Avenue

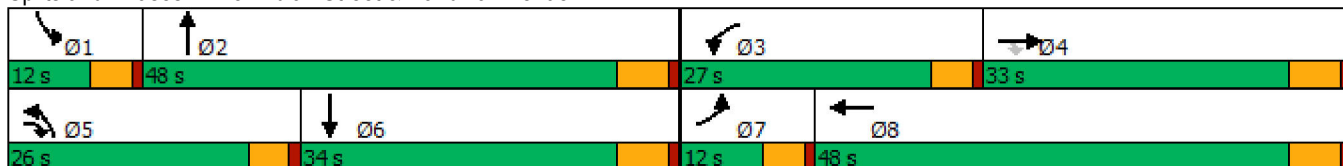


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	44	103	526	171	43	161	675	19	1463
Future Volume (vph)	44	103	526	171	43	161	675	19	1463
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	5	3	8	5	2	1	6
Permitted Phases	4								
Detector Phase	7	4	5	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	29.8	9.6	9.6	29.8	9.6	26.8	9.6	26.8
Total Split (s)	12.0	33.0	26.0	27.0	48.0	26.0	48.0	12.0	34.0
Total Split (%)	10.0%	27.5%	21.7%	22.5%	40.0%	21.7%	40.0%	10.0%	28.3%
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	6.7	14.9	41.6	18.3	28.7	20.9	47.6	6.0	28.4
Actuated g/C Ratio	0.06	0.14	0.40	0.18	0.28	0.20	0.46	0.06	0.27
v/c Ratio	0.50	0.58	0.96	0.82	0.28	0.74	0.60	0.25	2.01
Control Delay	64.0	51.7	51.4	63.8	19.1	56.1	25.2	55.8	482.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.0	51.7	51.4	63.8	19.1	56.1	25.2	55.8	482.9
LOS	E	D	D	E	B	E	C	E	F
Approach Delay	52.3		47.7			30.7		477.6	
Approach LOS	D		D			C		F	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 103.5  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 2.01  
 Intersection Signal Delay: 237.8  
 Intersection LOS: F  
 Intersection Capacity Utilization 96.1%  
 ICU Level of Service F  
 Analysis Period (min) 15
























Splits and Phases: 15: Indian Street & Nandina Avenue



HCM 6th Signalized Intersection Summary  
 15: Indian Street & Nandina Avenue

Gateway Aviation TA (JN:13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	103	526	171	43	53	161	675	69	19	1463	34
Future Volume (veh/h)	44	103	526	171	43	53	161	675	69	19	1463	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1752	1752	1678	1559	1870	1515	1885	1856	1811	1885	1856
Adj Flow Rate, veh/h	61	143	731	238	60	74	224	938	96	26	2032	47
Peak Hour Factor	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72
Percent Heavy Veh, %	0	10	10	15	23	2	26	1	3	6	1	3
Cap, veh/h	79	416	605	263	228	281	246	1318	135	42	903	21
Arrive On Green	0.04	0.24	0.24	0.16	0.36	0.36	0.17	0.39	0.39	0.02	0.25	0.25
Sat Flow, veh/h	1810	1752	1485	1598	635	783	1443	3364	344	1725	3670	85
Grp Volume(v), veh/h	61	143	731	238	0	134	224	526	508	26	1040	1040
Grp Sat Flow(s),veh/h/ln	1810	1752	1485	1598	0	1418	1443	1885	1823	1725	1885	1870
Q Serve(g_s), s	3.8	7.8	27.2	16.8	0.0	7.7	17.5	26.9	26.9	1.7	28.2	28.2
Cycle Q Clear(g_c), s	3.8	7.8	27.2	16.8	0.0	7.7	17.5	26.9	26.9	1.7	28.2	28.2
Prop In Lane	1.00		1.00	1.00		0.55	1.00		0.19	1.00		0.05
Lane Grp Cap(c), veh/h	79	416	605	263	0	508	246	739	715	42	464	460
V/C Ratio(X)	0.77	0.34	1.21	0.90	0.00	0.26	0.91	0.71	0.71	0.61	2.24	2.26
Avail Cap(c_a), veh/h	117	416	605	312	0	522	269	739	715	111	464	460
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.2	36.3	33.9	47.0	0.0	26.0	46.7	29.4	29.4	55.4	43.2	43.2
Incr Delay (d2), s/veh	8.7	0.5	108.3	23.6	0.0	0.3	29.7	3.2	3.3	5.3	565.2	573.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	3.3	33.8	8.2	0.0	2.5	8.0	12.0	11.6	0.8	85.3	85.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.9	36.8	142.3	70.5	0.0	26.3	76.4	32.6	32.7	60.6	608.4	616.8
LnGrp LOS	E	D	F	E	A	C	E	C	C	E	F	F
Approach Vol, veh/h		935			372			1258			2105	
Approach Delay, s/veh		121.0			54.6			40.4			605.8	
Approach LOS		F			D			D			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.4	50.7	23.5	33.0	24.1	34.0	9.6	46.9				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	7.4	42.2	22.4	27.2	21.4	28.2	7.4	42.2				
Max Q Clear Time (g_c+I1), s	3.7	28.9	18.8	29.2	19.5	30.2	5.8	9.7				
Green Ext Time (p_c), s	0.0	4.9	0.1	0.0	0.1	0.0	0.0	0.7				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			312.5									
HCM 6th LOS			F									



Timings  
16: Indian Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

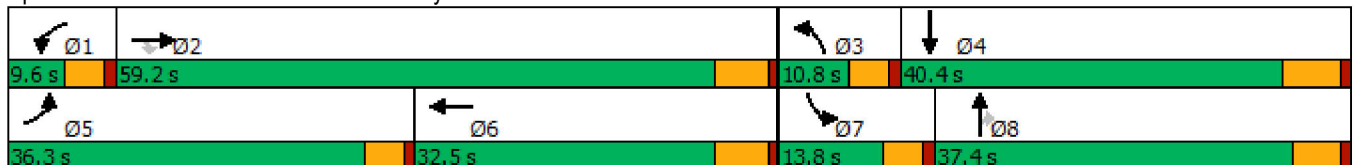
05/10/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	326	502	73	40	488	109	196	76	51	278
Future Volume (vph)	326	502	73	40	488	109	196	76	51	278
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	5	2		1	6	3	8		7	4
Permitted Phases			2					8		
Detector Phase	5	2	2	1	6	3	8	8	7	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	35.8	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2
Total Split (s)	36.3	59.2	59.2	9.6	32.5	10.8	37.4	37.4	13.8	40.4
Total Split (%)	30.3%	49.3%	49.3%	8.0%	27.1%	9.0%	31.2%	31.2%	11.5%	33.7%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.4	4.4	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	5.4	5.4	4.6	6.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	31.8	49.5	49.5	5.0	20.6	6.2	34.8	34.8	7.7	33.4
Actuated g/C Ratio	0.28	0.44	0.44	0.04	0.18	0.05	0.31	0.31	0.07	0.29
v/c Ratio	0.98	0.29	0.13	0.66	0.71	0.79	0.26	0.17	0.52	1.04dr
Control Delay	80.3	21.5	2.6	93.1	48.2	84.0	32.4	1.4	67.4	38.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.3	21.5	2.6	93.1	48.2	84.0	32.4	1.4	67.4	38.0
LOS	F	C	A	F	D	F	C	A	E	D
Approach Delay		41.3			51.5		40.9			39.5
Approach LOS		D			D		D			D

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 113.3  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.98  
 Intersection Signal Delay: 42.6  
 Intersection LOS: D  
 Intersection Capacity Utilization 78.4%  
 ICU Level of Service D  
 Analysis Period (min) 15  
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 16: Indian Av. & Harley Knox Bl.





HCM 6th Signalized Intersection Summary  
16: Indian Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

05/10/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	326	502	73	40	488	14	109	196	76	51	278	654
Future Volume (veh/h)	326	502	73	40	488	14	109	196	76	51	278	654
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1589	1841	1678	1826	1796	1781	1737	1648	1841	1900	1841	1767
Adj Flow Rate, veh/h	408	628	81	50	610	-4	136	245	88	64	348	762
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	21	4	15	5	7	8	11	17	4	0	4	9
Cap, veh/h	428	2053	581	64	796	0	179	996	490	83	539	480
Arrive On Green	0.28	0.41	0.41	0.04	0.16	0.00	0.06	0.32	0.32	0.05	0.31	0.31
Sat Flow, veh/h	1513	5025	1422	1739	5065	0	3209	3131	1540	1810	1749	1560
Grp Volume(v), veh/h	408	628	81	50	606	0	136	245	88	64	348	762
Grp Sat Flow(s),veh/h/ln	1513	1675	1422	1739	1635	0	1605	1566	1540	1810	1749	1560
Q Serve(g_s), s	29.4	9.4	4.0	3.2	13.1	0.0	4.6	6.4	4.6	3.9	19.1	34.2
Cycle Q Clear(g_c), s	29.4	9.4	4.0	3.2	13.1	0.0	4.6	6.4	4.6	3.9	19.1	34.2
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	428	2053	581	64	796	0	179	996	490	83	539	480
V/C Ratio(X)	0.95	0.31	0.14	0.79	0.76	0.00	0.76	0.25	0.18	0.77	0.65	1.59
Avail Cap(c_a), veh/h	432	2417	684	78	1179	0	179	996	490	150	539	480
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.1	22.2	20.6	53.1	44.5	0.0	51.7	28.0	27.4	52.4	33.2	38.4
Incr Delay (d2), s/veh	31.0	0.1	0.1	27.2	1.7	0.0	15.4	0.1	0.2	5.6	2.7	273.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.9	3.5	1.3	1.8	5.3	0.0	2.2	2.3	1.7	1.8	8.1	48.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	70.1	22.3	20.7	80.2	46.2	0.0	67.1	28.1	27.6	58.0	35.9	311.9
LnGrp LOS	E	C	C	F	D	A	E	C	C	E	D	F
Approach Vol, veh/h		1117			656			469			1174	
Approach Delay, s/veh		39.6			48.8			39.3			216.2	
Approach LOS		D			D			D			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.7	51.2	10.8	40.4	36.0	23.8	9.7	41.5				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	*6.2				
Max Green Setting (Gmax), s	5.0	53.4	6.2	34.2	31.7	26.7	9.2	*32				
Max Q Clear Time (g_c+I1), s	5.2	11.4	6.6	36.2	31.4	15.1	5.9	8.4				
Green Ext Time (p_c), s	0.0	4.5	0.0	0.0	0.0	2.9	0.0	1.7				

Intersection Summary

HCM 6th Ctrl Delay	102.0
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection						
Int Delay, s/veh	8.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↖		↘	↗
Traffic Vol, veh/h	0	153	2	10	278	12
Future Vol, veh/h	0	153	2	10	278	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	115	0	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	0	16	0	0	18	0
Mvmt Flow	0	204	3	13	371	16

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	768	10	0	0	16	0
Stage 1	10	-	-	-	-	-
Stage 2	758	-	-	-	-	-
Critical Hdwy	6.4	6.36	-	-	4.28	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.444	-	-	2.362	-
Pot Cap-1 Maneuver	373	1032	-	-	1503	-
Stage 1	1018	-	-	-	-	-
Stage 2	466	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	281	1032	-	-	1503	-
Mov Cap-2 Maneuver	281	-	-	-	-	-
Stage 1	1018	-	-	-	-	-
Stage 2	351	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.3	0	7.8
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	-	1032	1503
HCM Lane V/C Ratio	-	-	-	0.198	0.247
HCM Control Delay (s)	-	-	0	9.3	8.2
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	-	0.7	1

Timings  
18: Perris Bl. & San Michele Rd./Driveway



Lane Group	EBL	EBR	WBL	NBL	NBT	SBL	SBT	SBR	Ø4	Ø8
Lane Configurations	↖	↗	↖	↖	↑↑↑	↖	↑↑↑	↖		
Traffic Volume (vph)	143	167	1	67	1698	4	1791	88		
Future Volume (vph)	143	167	1	67	1698	4	1791	88		
Turn Type	Prot	pm+ov	Prot	Prot	NA	Prot	NA	Perm		
Protected Phases	7	5	3	5	2	1	6		4	8
Permitted Phases		4								6
Detector Phase	7	5	3	5	2	1	6	6		
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	10.0	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	9.6	9.6	9.6	34.8	9.6	34.8	34.8	31.4	26.4
Total Split (s)	25.0	18.0	10.0	18.0	58.6	10.0	50.6	50.6	41.4	26.4
Total Split (%)	20.8%	15.0%	8.3%	15.0%	48.8%	8.3%	42.2%	42.2%	35%	22%
Yellow Time (s)	3.6	3.6	3.6	3.6	4.8	3.6	4.8	4.8	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.6	4.6	4.6	4.6	5.8	4.6	5.8	5.8		
Lead/Lag	Lead	Lead	Lead	Lead	Lag	Lead	Lag	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 87.5  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated

























Splits and Phases: 18: Perris Bl. & San Michele Rd./Driveway



HCM 6th Signalized Intersection Summary  
 18: Perris Bl. & San Michele Rd./Driveway

Gateway Aviation (JN 13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	143	0	167	1	0	0	67	1698	0	4	1791	88
Future Volume (veh/h)	143	0	167	1	0	0	67	1698	0	4	1791	88
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1900	1811	1900	1900	1900	1826	1885	1900	1900	1856	1826
Adj Flow Rate, veh/h	161	0	98	1	0	0	75	1908	0	4	2012	80
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	0	6	0	0	0	5	1	0	0	3	5
Cap, veh/h	204	268	301	2	53	45	96	2969	0	10	2670	815
Arrive On Green	0.11	0.00	0.14	0.00	0.00	0.00	0.06	0.58	0.00	0.01	0.53	0.53
Sat Flow, veh/h	1781	1900	1532	1810	1900	1610	1739	5316	0	1810	5066	1546
Grp Volume(v), veh/h	161	0	98	1	0	0	75	1908	0	4	2012	80
Grp Sat Flow(s),veh/h/ln	1781	1900	1532	1810	1900	1610	1739	1716	0	1810	1689	1546
Q Serve(g_s), s	6.5	0.0	4.1	0.0	0.0	0.0	3.2	18.5	0.0	0.2	23.1	1.9
Cycle Q Clear(g_c), s	6.5	0.0	4.1	0.0	0.0	0.0	3.2	18.5	0.0	0.2	23.1	1.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	204	268	301	2	53	45	96	2969	0	10	2670	815
V/C Ratio(X)	0.79	0.00	0.33	0.40	0.00	0.00	0.78	0.64	0.00	0.41	0.75	0.10
Avail Cap(c_a), veh/h	490	923	829	132	538	456	314	3667	0	132	3063	935
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.9	0.0	25.6	37.0	0.0	0.0	34.6	10.5	0.0	36.7	13.7	8.7
Incr Delay (d2), s/veh	6.6	0.0	0.6	34.6	0.0	0.0	5.1	0.3	0.0	10.2	0.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	0.0	1.4	0.0	0.0	0.0	1.4	5.3	0.0	0.1	7.1	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.5	0.0	26.2	71.6	0.0	0.0	39.7	10.8	0.0	46.9	14.7	8.8
LnGrp LOS	D	A	C	E	A	A	D	B	A	D	B	A
Approach Vol, veh/h		259			1			1983			2096	
Approach Delay, s/veh		33.9			71.6			11.9			14.5	
Approach LOS		C			E			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.0	48.5	4.7	15.8	8.7	44.9	13.1	7.5				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.4	4.6	5.8	4.6	5.4				
Max Green Setting (Gmax), s	5.4	52.8	5.4	36.0	13.4	44.8	20.4	21.0				
Max Q Clear Time (g_c+I1), s	2.2	20.5	2.0	6.1	5.2	25.1	8.5	0.0				
Green Ext Time (p_c), s	0.0	17.8	0.0	0.3	0.0	14.0	0.3	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			14.5									
HCM 6th LOS			B									

Timings  
19: Perris Bl. & Nandina Av.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	48	2	24	5	11	47	1699	15	1868	48
Future Volume (vph)	48	2	24	5	11	47	1699	15	1868	48
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	pm+ov
Protected Phases	7	4	3	8		5	2	1	6	7
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	7
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	5.0
Minimum Split (s)	9.6	41.4	9.6	28.4	28.4	9.6	39.8	9.6	41.8	9.6
Total Split (s)	12.0	41.4	12.0	41.4	41.4	15.0	55.6	11.0	51.6	12.0
Total Split (%)	10.0%	34.5%	10.0%	34.5%	34.5%	12.5%	46.3%	9.2%	43.0%	10.0%
Yellow Time (s)	3.6	4.4	3.6	4.4	4.4	3.6	4.8	3.6	4.8	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	4.6	5.4	5.4	4.6	5.8	4.6	5.8	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 83.2  
 Natural Cycle: 105  
 Control Type: Actuated-Uncoordinated
























Splits and Phases: 19: Perris Bl. & Nandina Av.

Ø1	Ø2	Ø3	Ø4
11 s	55.6 s	12 s	41.4 s
Ø5	Ø6	Ø7	Ø8
15 s	51.6 s	12 s	41.4 s

HCM 6th Signalized Intersection Summary  
 19: Perris Bl. & Nandina Av.

Gateway Aviation (JN 13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	2	120	24	5	11	47	1699	14	15	1868	48
Future Volume (veh/h)	48	2	120	24	5	11	47	1699	14	15	1868	48
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1159	1841	1693	1307	1752	1796	1885	1218	1900	1870	1366
Adj Flow Rate, veh/h	53	2	64	26	5	1	52	1867	6	16	2053	23
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	50	4	14	40	10	7	1	46	0	2	36
Cap, veh/h	80	149	133	45	155	175	75	2675	9	118	2690	660
Arrive On Green	0.04	0.13	0.13	0.03	0.12	0.12	0.04	0.51	0.51	0.07	0.53	0.53
Sat Flow, veh/h	1810	1101	982	1612	1307	1478	1711	5296	17	1810	5106	1156
Grp Volume(v), veh/h	53	2	64	26	5	1	52	1209	664	16	2053	23
Grp Sat Flow(s),veh/h/ln	1810	1101	982	1612	1307	1478	1711	1716	1882	1810	1702	1156
Q Serve(g_s), s	2.2	0.1	4.6	1.2	0.3	0.0	2.3	20.6	20.6	0.6	24.3	0.7
Cycle Q Clear(g_c), s	2.2	0.1	4.6	1.2	0.3	0.0	2.3	20.6	20.6	0.6	24.3	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	80	149	133	45	155	175	75	1733	951	118	2690	660
V/C Ratio(X)	0.66	0.01	0.48	0.58	0.03	0.01	0.70	0.70	0.70	0.14	0.76	0.03
Avail Cap(c_a), veh/h	175	519	463	156	616	696	233	2235	1226	151	3059	744
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.0	28.7	30.6	36.7	29.8	29.7	36.0	14.5	14.5	33.7	14.3	7.2
Incr Delay (d2), s/veh	3.5	0.0	2.7	4.4	0.1	0.0	4.3	0.7	1.2	0.2	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	1.1	0.5	0.1	0.0	1.0	6.6	7.4	0.3	7.7	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.4	28.7	33.3	41.1	29.9	29.7	40.3	15.1	15.7	33.9	15.4	7.2
LnGrp LOS	D	C	C	D	C	C	D	B	B	C	B	A
Approach Vol, veh/h		119			32			1925			2092	
Approach Delay, s/veh		36.0			39.0			16.0			15.4	
Approach LOS		D			D			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.6	44.4	6.7	15.7	7.9	46.1	8.0	14.5				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.4	4.6	5.8	4.6	5.4				
Max Green Setting (Gmax), s	6.4	49.8	7.4	36.0	10.4	45.8	7.4	36.0				
Max Q Clear Time (g_c+I1), s	2.6	22.6	3.2	6.6	4.3	26.3	4.2	2.3				
Green Ext Time (p_c), s	0.0	14.9	0.0	0.3	0.0	13.9	0.0	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			16.4									
HCM 6th LOS			B									

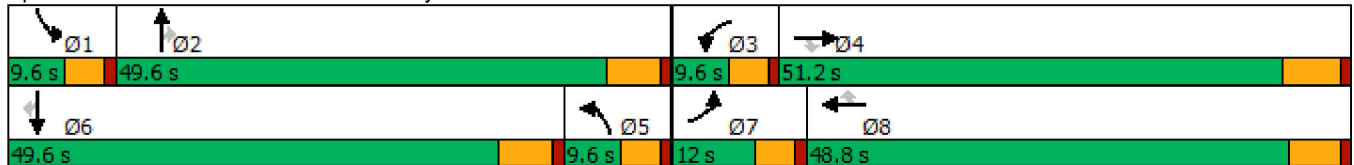
Timings  
20: Perris Bl. & Harley Knox Bl.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	308	217	103	8	238	104	46	840	11	135	1089	290
Future Volume (vph)	308	217	103	8	238	104	46	840	11	135	1089	290
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	47.2	47.2	9.6	48.8	48.8	9.6	48.8	48.8	9.6	43.8	43.8
Total Split (s)	12.0	51.2	51.2	9.6	48.8	48.8	9.6	49.6	49.6	9.6	49.6	49.6
Total Split (%)	10.0%	42.7%	42.7%	8.0%	40.7%	40.7%	8.0%	41.3%	41.3%	8.0%	41.3%	41.3%
Yellow Time (s)	3.6	5.2	5.2	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 76.6  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 20: Perris Bl. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 20: Perris Bl. & Harley Knox Bl.

Gateway Aviation (JN 13445)

05/10/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	308	217	103	8	238	104	46	840	11	135	1089	290
Future Volume (veh/h)	308	217	103	8	238	104	46	840	11	135	1089	290
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1841	1811	1500	1841	1856	1589	1856	1604	1885	1856	1796
Adj Flow Rate, veh/h	338	238	71	9	262	66	51	923	8	148	1197	263
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	6	4	6	27	4	3	21	3	20	1	3	7
Cap, veh/h	186	846	371	32	732	226	133	1871	502	239	1900	570
Arrive On Green	0.11	0.24	0.24	0.01	0.15	0.15	0.05	0.37	0.37	0.07	0.38	0.38
Sat Flow, veh/h	1725	3497	1535	2771	5025	1551	2935	5066	1359	3483	5066	1521
Grp Volume(v), veh/h	338	238	71	9	262	66	51	923	8	148	1197	263
Grp Sat Flow(s),veh/h/ln	1725	1749	1535	1386	1675	1551	1468	1689	1359	1742	1689	1521
Q Serve(g_s), s	7.4	3.8	1.8	0.2	3.2	2.6	1.2	9.6	0.3	2.8	13.3	5.2
Cycle Q Clear(g_c), s	7.4	3.8	1.8	0.2	3.2	2.6	1.2	9.6	0.3	2.8	13.3	5.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	186	846	371	32	732	226	133	1871	502	239	1900	570
V/C Ratio(X)	1.82	0.28	0.19	0.28	0.36	0.29	0.38	0.49	0.02	0.62	0.63	0.46
Avail Cap(c_a), veh/h	186	2292	1006	202	3147	971	214	3231	867	254	3231	970
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.6	21.2	10.4	33.7	26.4	26.2	31.8	16.7	13.7	31.1	17.6	5.6
Incr Delay (d2), s/veh	388.6	0.2	0.2	1.8	0.3	0.7	0.7	0.2	0.0	2.8	0.3	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	22.8	1.4	0.8	0.1	1.2	0.9	0.4	3.2	0.1	1.2	4.4	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	419.2	21.3	10.7	35.4	26.7	26.9	32.5	16.9	13.7	33.9	17.9	6.1
LnGrp LOS	F	C	B	D	C	C	C	B	B	C	B	A
Approach Vol, veh/h		647			337			982			1608	
Approach Delay, s/veh		228.0			27.0			17.7			17.5	
Approach LOS		F			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.3	31.2	5.4	22.8	8.9	31.6	12.0	16.2				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	5.8	* 5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	5.0	43.8	5.0	45.0	5.0	* 44	7.4	* 43				
Max Q Clear Time (g_c+I1), s	4.8	11.6	2.2	5.8	3.2	15.3	9.4	5.2				
Green Ext Time (p_c), s	0.0	6.8	0.0	1.6	0.0	10.4	0.0	1.9				

Intersection Summary

HCM 6th Ctrl Delay	56.5
HCM 6th LOS	E

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

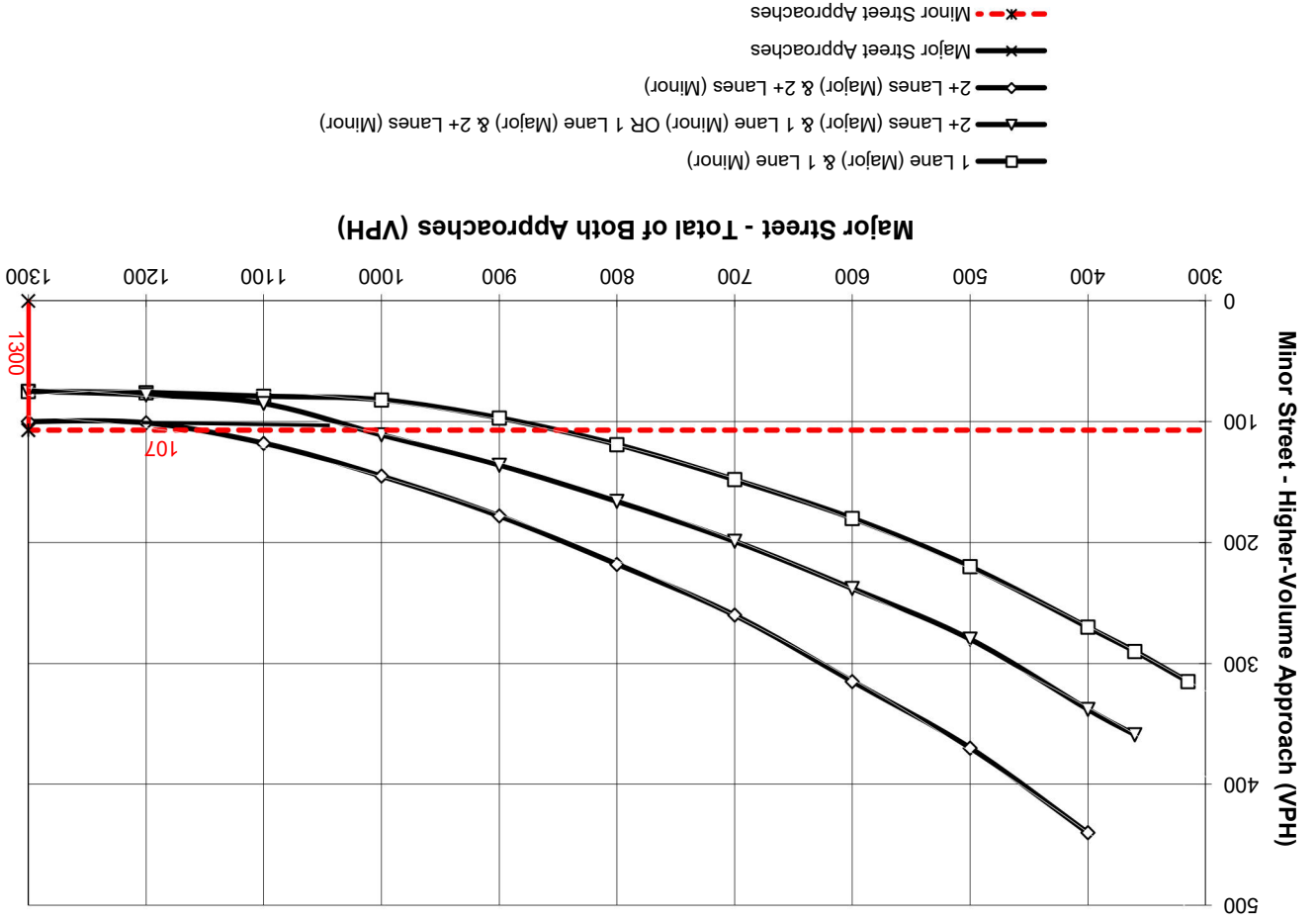


**APPENDIX 6.4:**

**OPENING YEAR CUMULATIVE (2026) WITHOUT PROJECT CONDITIONS TRAFFIC  
SIGNAL WARRANT ANALYSIS WORKSHEETS**

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\*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane



**WARRANTED FOR A SIGNAL**

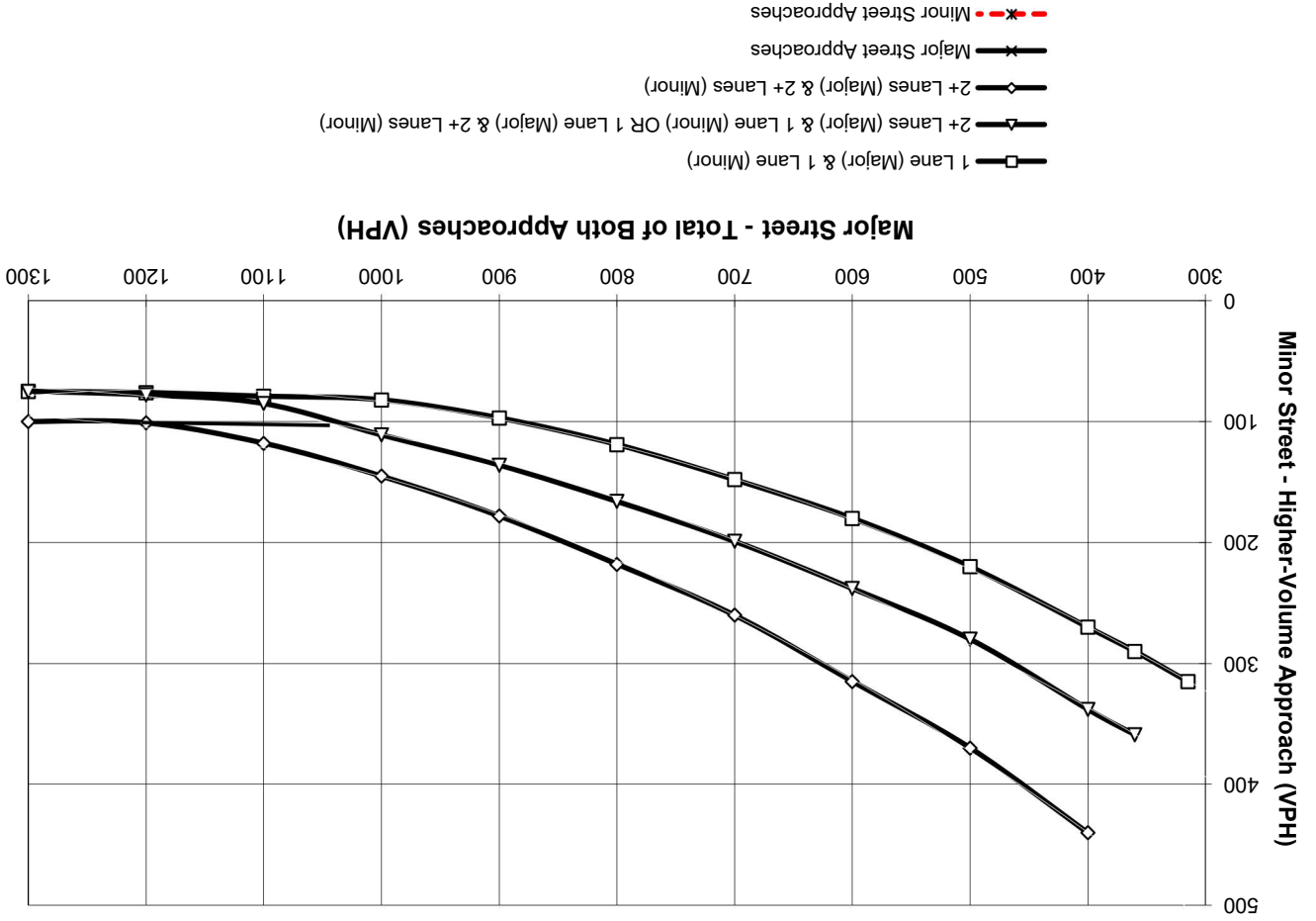
Traffic Conditions = **2023 NP Conditions - Weekday PM Peak Hour**  
 Major Street Name = **Heacock St.** Total of Both Approaches (VPH) = **2426** Number of Approach Lanes Major Street = **2**  
 Minor Street Name = **Cardinal Av.** High Volume Approach (VPH) = **107** Number of Approach Lanes Minor Street = **2**

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

**Figure 4C-4. Warrant 3, Peak Hour (70% Factor)**

California MUTCD 2014 Edition (FHWA's MUTCD 2009, as amended for use in California)

\*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane



**SIGNAL WARRANT NOT SATISFIED**

Traffic Conditions = **Opening Year Cumulative Without Project Conditions - PM Peak Hour**  
 Major Street Name = **Heacock St.** Total of Both Approaches (VPH) = **272** Number of Approach Lanes Major Street = **1**  
 Minor Street Name = **Nandina Av.** High Volume Approach (VPH) = **128** Number of Approach Lanes Minor Street = **1**

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

**Figure 4C-4. Warrant 3, Peak Hour (70% Factor)**

**APPENDIX 6.5:**

**OPENING YEAR CUMULATIVE (2026) WITH PROJECT (NON-PEAK) CONDITIONS  
TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS**

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### Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

<u>DIST</u>	<u>CO</u>	<u>RTE</u>	<u>PM</u>	TRAFFIC CONDITIONS	023 WP (non-Peal)
Jurisdiction: <u>March AFB</u>				CALC <u>CP</u>	DATE <u>11/10/20</u>
Major Street: <u>Heacock St.</u>				CHK <u>CP</u>	DATE <u>11/10/20</u>
Minor Street: <u>Driveway 1</u>				Critical Approach Speed (Major) <u>45</u> mph	
				Critical Approach Speed (Minor) <u>25</u> mph	
Major Street Approach Lanes = <u>2</u>	lane	Minor Street Approach Lanes = <u>1</u>	lane		
Major Street Future ADT = <u>22,556</u>	vpd	Minor Street Future ADT = <u>638</u>	vpd		
Speed limit or critical speed on major street traffic > 64 km/h (40 mph); .....				<input checked="" type="checkbox"/>	
				or	<b>RURAL (R)</b>
In built up area of isolated community of < 10,000 population .....				<input type="checkbox"/>	

**(Based on Estimated Average Daily Traffic - See Note)**

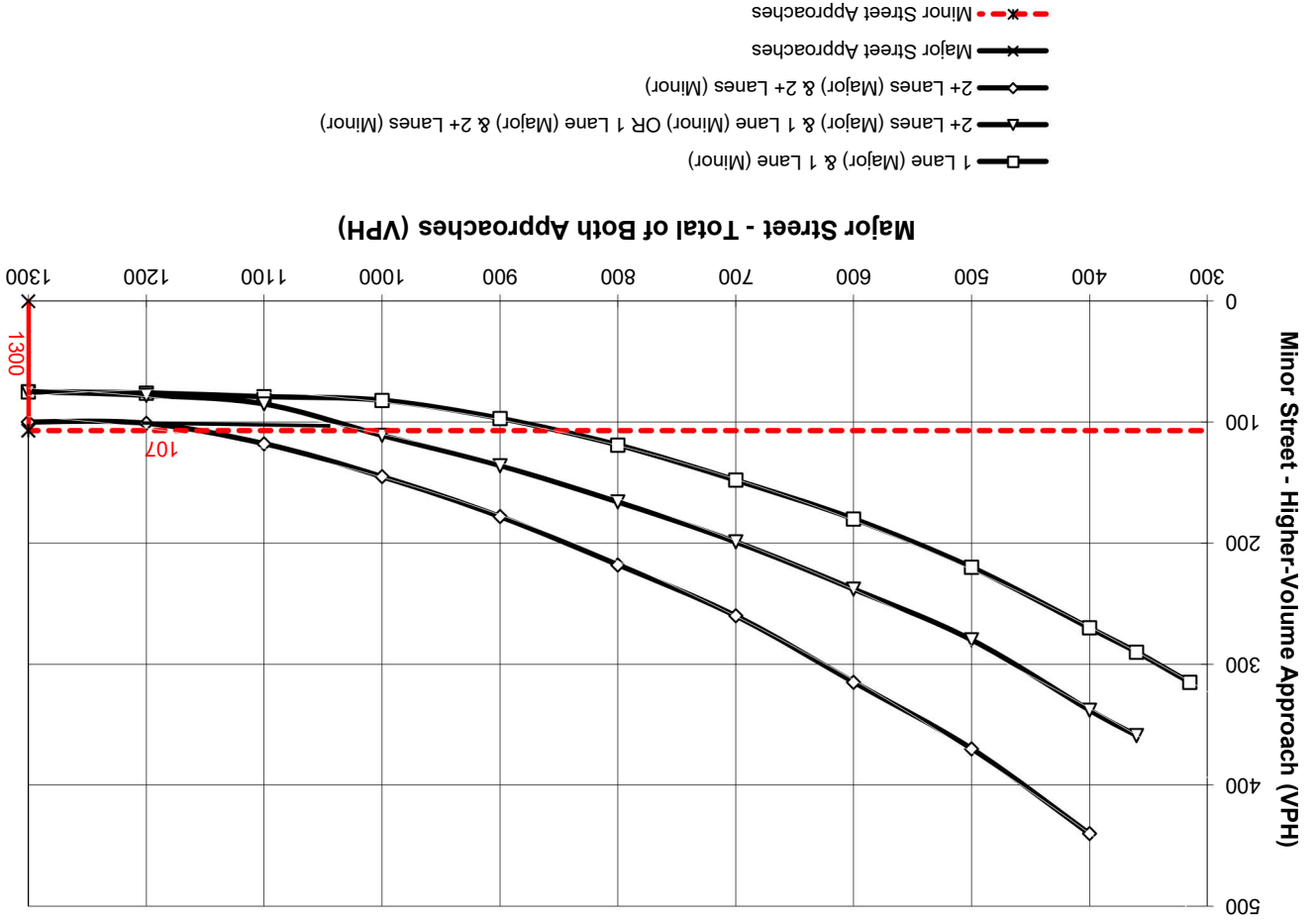
<u>URBAN</u>		<u>RURAL</u>		Minimum Requirements			
<b>CONDITION A - Minimum Vehicular Volume</b>		<b>XX</b>		EADT			
<u>Satisfied</u>		<u>Not Satisfied</u>		Vehicles Per Day on Major Street		Vehicles Per Day on Higher-Volume Minor Street Approach	
<u>Satisfied</u>		<b>XX</b>		(Total of Both Approaches)		(One Direction Only)	
<u>Major Street</u>		<u>Minor Street</u>		<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
Number of lanes for moving traffic on each approach		Number of lanes for moving traffic on each approach					
<u>1</u>		<u>1</u>		8,000	5,600	2,400	1,680
<u>2 + 22,556</u>		<u>1 638</u>		9,600	6,720 *	2,400	1,680
<u>2 +</u>		<u>2 +</u>		9,600	6,720	3,200	2,240
<u>1</u>		<u>2 +</u>		8,000	5,600	3,200	2,240
<b>CONDITION B - Interruption of Continuous Traffic</b>		<b>XX</b>		Vehicles Per Day on Major Street		Vehicles Per Day on Higher-Volume Minor Street Approach	
<u>Satisfied</u>		<u>Not Satisfied</u>		(Total of Both Approaches)		(One Direction Only)	
<u>Satisfied</u>		<b>XX</b>		<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
Number of lanes for moving traffic on each approach		Number of lanes for moving traffic on each approach					
<u>1</u>		<u>1</u>		12,000	8,400	1,200	850
<u>2 + 22,556</u>		<u>1 638</u>		14,400	10,080 *	1,200	850
<u>2 +</u>		<u>2 +</u>		14,400	10,080	1,600	1,120
<u>1</u>		<u>2 +</u>		12,000	8,400	1,600	1,120
<b>Combination of CONDITIONS A + B</b>		<b>XX</b>		2 CONDITIONS 80%		2 CONDITIONS 80%	
<u>Satisfied</u>		<u>Not Satisfied</u>					
No one condition satisfied, but following conditions fulfilled 80% of more .....		No one condition satisfied, but following conditions fulfilled 80% of more .....					
		<b>A</b>		<b>B</b>			
		<b>38%</b>		<b>75%</b>			

**Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.**

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.



\*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane



**WARRANTED FOR A SIGNAL**

Traffic Conditions = **2023 WP (Non-Peak) Conditions - Weekday PM Peak Hour**  
 Major Street Name = **Heacock St.** Total of Both Approaches (VPH) = **2426** Number of Approach Lanes Major Street = **2**  
 Minor Street Name = **Cardinal Av.** High Volume Approach (VPH) = **107** Number of Approach Lanes Minor Street = **2**

**Figure 4C-4. Warrant 3, Peak Hour (70% Factor)**  
 (COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

California MUTCD 2014 Edition (FHWA's MUTCD 2009, as amended for use in California)



**APPENDIX 6.6:**

**OPENING YEAR CUMULATIVE (2026) WITH PROJECT (PEAK) CONDITIONS TRAFFIC  
SIGNAL WARRANT ANALYSIS WORKSHEETS**

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### Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

<u>DIST</u>	<u>CO</u>	<u>RTE</u>	<u>PM</u>	TRAFFIC CONDITIONS	<b>2023 WP (Peak)</b>
Jurisdiction: <u>March AFB</u>				CALC <u>CP</u>	DATE <u>11/10/20</u>
Major Street: <u>Heacock St.</u>				CHK <u>CP</u>	DATE <u>11/10/20</u>
Minor Street: <u>Driveway 1</u>				Critical Approach Speed (Major) <u>45</u> mph	
				Critical Approach Speed (Minor) <u>25</u> mph	
Major Street Approach Lanes =	<u>2</u>	lane	Minor Street Approach Lanes =	<u>1</u>	lane
Major Street Future ADT =	<u>22,588</u>	vpd	Minor Street Future ADT =	<u>940</u>	vpd
Speed limit or critical speed on major street traffic > 64 km/h (40 mph); .....				<input checked="" type="checkbox"/>	
				or	<b>RURAL (R)</b>
In built up area of isolated community of < 10,000 population .....				<input type="checkbox"/>	

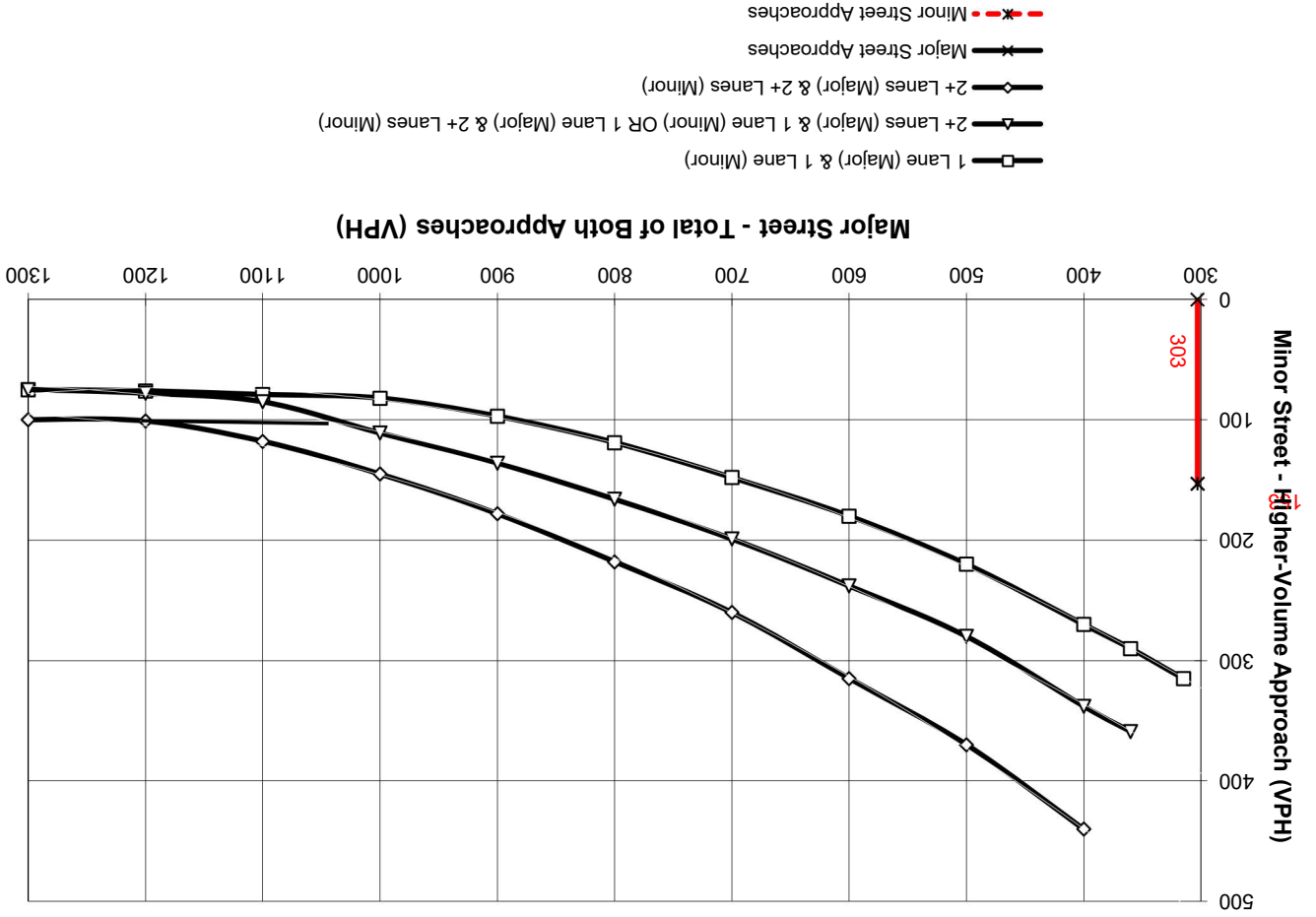
**(Based on Estimated Average Daily Traffic - See Note)**

<u>URBAN</u>	<u>RURAL</u>	Minimum Requirements EADT			
<b>CONDITION A - Minimum Vehicular Volume</b>		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Satisfied</u>	<u>Not Satisfied</u>				
	XX	<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
Number of lanes for moving traffic on each approach					
<u>Major Street</u>	<u>Minor Street</u>				
<u>1</u>	<u>1</u>	8,000	5,600	2,400	1,680
<u>2 + 22,588</u>	<u>1 940</u>	9,600	6,720 *	2,400	1,680
<u>2 +</u>	<u>2 +</u>	9,600	6,720	3,200	2,240
<u>1</u>	<u>2 +</u>	8,000	5,600	3,200	2,240
<b>CONDITION B - Interruption of Continuous Traffic</b>		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Satisfied</u>	<u>Not Satisfied</u>				
	XX	<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
Number of lanes for moving traffic on each approach					
<u>Major Street</u>	<u>Minor Street</u>				
<u>1</u>	<u>1</u>	12,000	8,400	1,200	850
<u>2 + 22,588</u>	<u>1 940</u>	14,400	10,080 *	1,200	850 *
<u>2 +</u>	<u>2 +</u>	14,400	10,080	1,600	1,120
<u>1</u>	<u>2 +</u>	12,000	8,400	1,600	1,120
<b>Combination of CONDITIONS A + B</b>		2 CONDITIONS		2 CONDITIONS	
<u>Satisfied</u>	<u>Not Satisfied</u>	80%		80%	
No one condition satisfied, but following conditions fulfilled 80% of more .....	XX				
	A				
	56%				
	B				
	100%				

**Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.**

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

\*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane



**SIGNAL WARRANT NOT SATISFIED**

Traffic Conditions = **Opening Year Cumulative With Project (Peak) Conditions - PM Peak Hour**

Major Street Name = **Heacock St.** Total of Both Approaches (VPH) = **303** Number of Approach Lanes Major Street = **1**

Minor Street Name = **Nandina Av.** High Volume Approach (VPH) = **153** Number of Approach Lanes Minor Street = **1**

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

**Figure 4C-4. Warrant 3, Peak Hour (70% Factor)**

California MUTCD 2014 Edition (FHWA's MUTCD 2009, as amended for use in California)

**APPENDIX 6.7:**

**OPENING YEAR CUMULATIVE (2026) WITHOUT PROJECT OFF-RAMP QUEUING  
ANALYSIS WORKSHEETS**

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Queues

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	874	28	192	302	874	315
v/c Ratio	0.53	0.04	0.95	0.18	1.55	0.43
Control Delay	12.2	3.0	80.4	15.7	276.7	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.2	3.0	80.4	15.7	276.7	4.1
Queue Length 50th (ft)	107	0	80	53	~460	0
Queue Length 95th (ft)	153	9	#192	87	#657	45
Internal Link Dist (ft)	844			286	1350	
Turn Bay Length (ft)		200	60			265
Base Capacity (vph)	1661	769	203	1694	565	732
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.04	0.95	0.18	1.55	0.43

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

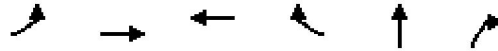
Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Queues

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox Bl./Harley Knox Bl.



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	528	1095	436	1132	61	280
v/c Ratio	1.23	0.45	0.31	1.41	0.41	1.02
Control Delay	138.8	2.4	12.2	208.7	35.0	78.2
Queue Delay	0.0	0.3	0.0	0.0	0.0	0.0
Total Delay	138.8	2.7	12.2	208.7	35.0	78.2
Queue Length 50th (ft)	~243	43	52	~503	22	~47
Queue Length 95th (ft)	#407	m26	81	#723	54	#182
Internal Link Dist (ft)		286	620		929	
Turn Bay Length (ft)	60					270
Base Capacity (vph)	429	2439	1394	804	148	274
Starvation Cap Reductn	0	674	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.23	0.62	0.31	1.41	0.41	1.02

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.



Queues

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



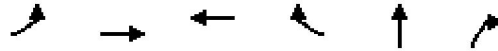
Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	653	100	655	278	545	236
v/c Ratio	0.35	0.11	1.67	0.15	1.18	0.40
Control Delay	8.2	2.0	332.9	8.4	128.1	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.2	2.0	332.9	8.4	128.1	5.2
Queue Length 50th (ft)	62	0	~382	47	~245	0
Queue Length 95th (ft)	88	16	#518	m57	#398	41
Internal Link Dist (ft)	844			286	1350	
Turn Bay Length (ft)		200	60			265
Base Capacity (vph)	1873	912	392	1873	460	589
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.11	1.67	0.15	1.18	0.40

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox Bl./Harley Knox Bl.



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	418	727	846	1108	51	341
v/c Ratio	1.07	0.34	0.67	1.27	0.18	0.74
Control Delay	86.3	3.0	19.0	145.0	23.4	18.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	86.3	3.0	19.0	145.0	23.4	18.8
Queue Length 50th (ft)	~172	32	131	~395	16	25
Queue Length 95th (ft)	#323	m32	187	#613	42	#135
Internal Link Dist (ft)		286	620		929	
Turn Bay Length (ft)	60					270
Base Capacity (vph)	390	2168	1272	874	283	458
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.07	0.34	0.67	1.27	0.18	0.74

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

**APPENDIX 6.8:**

**OPENING YEAR CUMULATIVE (2026) WITH PROJECT (NON-PEAK) CONDITIONS OFF-  
RAMP QUEUING ANALYSIS WORKSHEETS**

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Queues

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	874	28	203	302	893	315
v/c Ratio	0.53	0.04	1.00	0.18	1.59	0.43
Control Delay	12.2	3.0	93.8	15.7	297.6	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.2	3.0	93.8	15.7	297.6	4.1
Queue Length 50th (ft)	107	0	85	53	~477	0
Queue Length 95th (ft)	153	9	#204	87	#675	45
Internal Link Dist (ft)	844			286	1350	
Turn Bay Length (ft)		200	60			265
Base Capacity (vph)	1661	769	203	1694	560	732
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.04	1.00	0.18	1.59	0.43

Intersection Summary

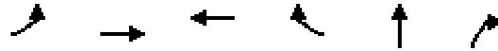
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Queues



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	528	1114	447	1146	61	299
v/c Ratio	1.23	0.46	0.32	1.43	0.41	1.11
Control Delay	138.8	2.4	12.3	220.4	35.0	105.5
Queue Delay	0.0	0.3	0.0	0.0	0.0	0.0
Total Delay	138.8	2.8	12.3	220.4	35.0	105.5
Queue Length 50th (ft)	~243	44	54	~517	22	~69
Queue Length 95th (ft)	#407	m26	83	#737	54	#205
Internal Link Dist (ft)		286	620		929	
Turn Bay Length (ft)	60					270
Base Capacity (vph)	429	2417	1394	799	148	270
Starvation Cap Reductn	0	656	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.23	0.63	0.32	1.43	0.41	1.11

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



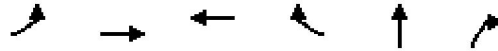
Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	653	100	668	278	563	236
v/c Ratio	0.35	0.11	1.70	0.15	1.26	0.40
Control Delay	8.2	2.0	347.3	8.3	157.1	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.2	2.0	347.3	8.3	157.1	5.2
Queue Length 50th (ft)	62	0	~394	47	~264	0
Queue Length 95th (ft)	88	16	#529	m55	#418	41
Internal Link Dist (ft)	844			286	1350	
Turn Bay Length (ft)		200	60			265
Base Capacity (vph)	1873	912	392	1873	448	589
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.11	1.70	0.15	1.26	0.40

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox Bl./Harley Knox Bl.



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	418	743	859	1134	51	345
v/c Ratio	1.07	0.35	0.68	1.31	0.18	0.77
Control Delay	86.3	2.9	19.2	164.6	23.4	21.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	86.3	2.9	19.2	164.6	23.4	21.3
Queue Length 50th (ft)	~172	32	133	~420	16	29
Queue Length 95th (ft)	#323	m31	190	#640	42	#147
Internal Link Dist (ft)		286	620		929	
Turn Bay Length (ft)	60					270
Base Capacity (vph)	390	2130	1272	864	283	448
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.07	0.35	0.68	1.31	0.18	0.77

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.



**APPENDIX 6.9:**

**OPENING YEAR CUMULATIVE (2026) WITH PROJECT (PEAK) CONDITIONS OFF-RAMP  
QUEUING ANALYSIS WORKSHEETS**

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Queues

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	874	28	208	302	902	315
v/c Ratio	0.53	0.04	1.02	0.18	1.61	0.43
Control Delay	12.2	3.0	100.0	15.7	304.7	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.2	3.0	100.0	15.7	304.7	4.1
Queue Length 50th (ft)	107	0	~88	53	~484	0
Queue Length 95th (ft)	153	9	#210	87	#683	45
Internal Link Dist (ft)	844			286	1350	
Turn Bay Length (ft)		200	60			265
Base Capacity (vph)	1661	769	203	1694	560	732
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.04	1.02	0.18	1.61	0.43

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

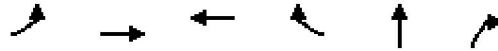
Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Queues

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox Bl./Harley Knox Bl.



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	528	1123	451	1152	61	308
v/c Ratio	1.23	0.46	0.32	1.44	0.41	1.15
Control Delay	138.8	2.4	12.3	223.7	35.0	122.1
Queue Delay	0.0	0.3	0.0	0.0	0.0	0.0
Total Delay	138.8	2.8	12.3	223.7	35.0	122.1
Queue Length 50th (ft)	~243	44	54	~521	22	~79
Queue Length 95th (ft)	#407	m26	84	#742	54	#217
Internal Link Dist (ft)		286	620		929	
Turn Bay Length (ft)	60					270
Base Capacity (vph)	429	2417	1394	799	148	267
Starvation Cap Reductn	0	655	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.23	0.64	0.32	1.44	0.41	1.15

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



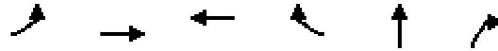
Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	653	100	674	278	570	236
v/c Ratio	0.35	0.11	1.74	0.15	1.28	0.40
Control Delay	8.2	2.0	361.8	8.3	168.3	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.2	2.0	361.8	8.3	168.3	5.2
Queue Length 50th (ft)	62	0	~400	47	~271	0
Queue Length 95th (ft)	88	16	#537	m54	#426	41
Internal Link Dist (ft)	844			286	1350	
Turn Bay Length (ft)		200	60			265
Base Capacity (vph)	1873	912	388	1873	444	589
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.11	1.74	0.15	1.28	0.40

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox Bl./Harley Knox Bl.



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	418	751	864	1146	51	346
v/c Ratio	1.07	0.36	0.68	1.33	0.18	0.78
Control Delay	86.3	2.8	19.3	170.7	23.4	22.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	86.3	2.8	19.3	170.7	23.4	22.2
Queue Length 50th (ft)	~172	32	134	~430	16	31
Queue Length 95th (ft)	#323	m30	192	#650	42	#150
Internal Link Dist (ft)		286	620		929	
Turn Bay Length (ft)	60					270
Base Capacity (vph)	390	2111	1272	864	283	445
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.07	0.36	0.68	1.33	0.18	0.78

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

**APPENDIX 6.10:**

**OPENING YEAR CUMULATIVE (2026) WITHOUT PROJECT CONDITIONS INTERSECTION  
OPERATIONS ANALYSIS WORKSHEETS WITH IMPROVEMENTS**

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Timings

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

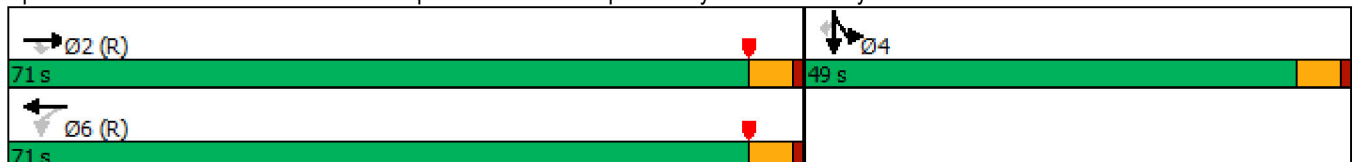


Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations	↑↑	↑	↑↑	↑	↑	↑	↑
Traffic Volume (vph)	804	26	177	278	803	1	290
Future Volume (vph)	804	26	177	278	803	1	290
Turn Type	NA	Perm	Perm	NA	Split	NA	Perm
Protected Phases	2			6	4	4	
Permitted Phases		2	6				4
Detector Phase	2	2	6	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	25.0	25.0	10.0	10.0	10.0
Total Split (s)	71.0	71.0	71.0	71.0	49.0	49.0	49.0
Total Split (%)	59.2%	59.2%	59.2%	59.2%	40.8%	40.8%	40.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None	None
Act Effct Green (s)	69.9	69.9	69.9	69.9	40.1	40.1	40.1
Actuated g/C Ratio	0.58	0.58	0.58	0.58	0.33	0.33	0.33
v/c Ratio	0.44	0.03	0.40	0.28	0.87	0.87	0.44
Control Delay	15.5	4.4	11.8	7.6	55.4	55.6	5.0
Queue Delay	0.0	0.0	0.0	0.2	54.2	54.1	0.0
Total Delay	15.6	4.4	11.8	7.7	109.6	109.7	5.0
LOS	B	A	B	A	F	F	A
Approach Delay	15.2			9.3		81.9	
Approach LOS	B			A		F	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection  
 Natural Cycle: 55  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.87  
 Intersection Signal Delay: 44.8  
 Intersection LOS: D  
 Intersection Capacity Utilization 132.5%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

05/10/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑↑	↑					↑	↑	↑
Traffic Volume (veh/h)	0	804	26	177	278	0	0	0	0	803	1	290
Future Volume (veh/h)	0	804	26	177	278	0	0	0	0	803	1	290
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1826	1826	1604	1870	0				1693	1900	1781
Adj Flow Rate, veh/h	0	874	28	192	302	0				874	0	255
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	5	5	20	2	0				14	0	8
Cap, veh/h	0	2125	948	615	1146	0				980	0	459
Arrive On Green	0.00	0.61	0.61	1.00	1.00	0.00				0.30	0.00	0.30
Sat Flow, veh/h	0	3561	1547	1027	1870	0				3224	0	1510
Grp Volume(v), veh/h	0	874	28	192	302	0				874	0	255
Grp Sat Flow(s),veh/h/ln	0	1735	1547	514	1870	0				1612	0	1510
Q Serve(g_s), s	0.0	15.7	0.9	6.9	0.0	0.0				31.1	0.0	17.0
Cycle Q Clear(g_c), s	0.0	15.7	0.9	22.5	0.0	0.0				31.1	0.0	17.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2125	948	615	1146	0				980	0	459
V/C Ratio(X)	0.00	0.41	0.03	0.31	0.26	0.00				0.89	0.00	0.56
Avail Cap(c_a), veh/h	0	2125	948	615	1146	0				1182	0	554
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.97	0.97	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	12.0	9.2	2.4	0.0	0.0				39.9	0.0	35.0
Incr Delay (d2), s/veh	0.0	0.6	0.1	1.3	0.5	0.0				7.7	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.6	0.3	0.3	0.2	0.0				12.8	0.0	6.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	12.6	9.2	3.7	0.5	0.0				47.6	0.0	36.0
LnGrp LOS	A	B	A	A	A	A				D	A	D
Approach Vol, veh/h		902			494						1129	
Approach Delay, s/veh		12.5			1.8						45.0	
Approach LOS		B			A						D	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		78.5		41.5		78.5						
Change Period (Y+Rc), s		5.0		5.0		5.0						
Max Green Setting (Gmax), s		66.0		44.0		66.0						
Max Q Clear Time (g_c+I1), s		17.7		33.1		24.5						
Green Ext Time (p_c), s		4.0		3.4		3.3						

Intersection Summary

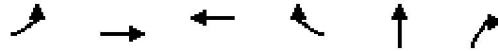
HCM 6th Ctrl Delay	24.9
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Timings

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

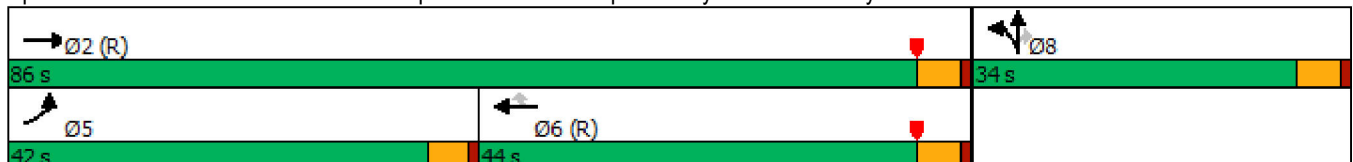


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	486	1007	401	1041	3	258
Future Volume (vph)	486	1007	401	1041	3	258
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	26.0	24.0	24.0	10.0	10.0
Total Split (s)	42.0	86.0	44.0	44.0	34.0	34.0
Total Split (%)	35.0%	71.7%	36.7%	36.7%	28.3%	28.3%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max
Act Effct Green (s)	23.4	81.0	53.1	53.1	29.0	29.0
Actuated g/C Ratio	0.20	0.68	0.44	0.44	0.24	0.24
v/c Ratio	0.80	0.50	0.29	1.21	0.14	0.60
Control Delay	71.9	20.9	22.9	121.9	36.9	27.5
Queue Delay	0.0	4.4	0.0	0.0	0.0	0.0
Total Delay	71.9	25.3	22.9	121.9	36.9	27.5
LOS	E	C	C	F	D	C
Approach Delay		40.5	94.3		29.2	
Approach LOS		D	F		C	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.21  
 Intersection Signal Delay: 63.3  
 Intersection LOS: E  
 Intersection Capacity Utilization 132.5%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox Bl./Harley Knox Bl.

05/10/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↕			↕	↗		↕	↗			
Traffic Volume (veh/h)	486	1007	0	0	401	1041	53	3	258	0	0	0
Future Volume (veh/h)	486	1007	0	0	401	1041	53	3	258	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1841	1722	0	0	1796	1752	1870	1900	1811			
Adj Flow Rate, veh/h	528	1095	0	0	436	0	58	3	215			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	4	12	0	0	7	10	2	0	6			
Cap, veh/h	585	2209	0	0	1589		417	22	371			
Arrive On Green	0.34	1.00	0.00	0.00	0.47	0.00	0.24	0.24	0.24			
Sat Flow, veh/h	3401	3358	0	0	3503	1485	1725	89	1535			
Grp Volume(v), veh/h	528	1095	0	0	436	0	61	0	215			
Grp Sat Flow(s),veh/h/ln	1700	1636	0	0	1706	1485	1814	0	1535			
Q Serve(g_s), s	17.7	0.0	0.0	0.0	9.4	0.0	3.2	0.0	14.8			
Cycle Q Clear(g_c), s	17.7	0.0	0.0	0.0	9.4	0.0	3.2	0.0	14.8			
Prop In Lane	1.00		0.00	0.00		1.00	0.95		1.00			
Lane Grp Cap(c), veh/h	585	2209	0	0	1589		438	0	371			
V/C Ratio(X)	0.90	0.50	0.00	0.00	0.27		0.14	0.00	0.58			
Avail Cap(c_a), veh/h	1063	2209	0	0	1589		438	0	371			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.79	0.79	0.00	0.00	0.83	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	38.4	0.0	0.0	0.0	19.7	0.0	35.7	0.0	40.1			
Incr Delay (d2), s/veh	1.7	0.6	0.0	0.0	0.4	0.0	0.7	0.0	6.5			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	5.9	0.2	0.0	0.0	3.6	0.0	1.4	0.0	6.1			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.1	0.6	0.0	0.0	20.0	0.0	36.4	0.0	46.6			
LnGrp LOS	D	A	A	A	C		D	A	D			
Approach Vol, veh/h		1623			436	A		276				
Approach Delay, s/veh		13.5			20.0			44.3				
Approach LOS		B			C			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		86.0			25.1	60.9		34.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		81.0			37.5	39.0		29.0				
Max Q Clear Time (g_c+I1), s		2.0			19.7	11.4		16.8				
Green Ext Time (p_c), s		5.5			0.9	1.7		0.8				

Intersection Summary

HCM 6th Ctrl Delay	18.3
HCM 6th LOS	B

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Timings  
5: Heacock Street & Cactus Avenue

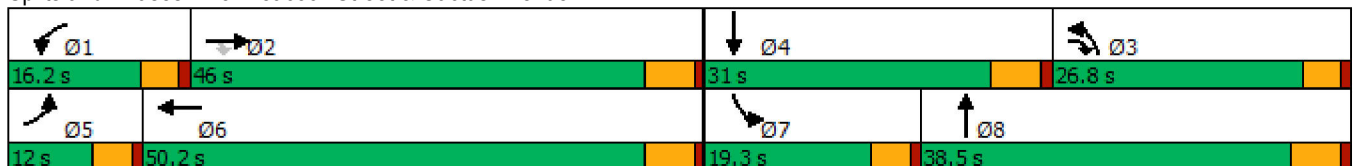


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↑↑↑	↗	↖	↑↑↑	↗	↑↑	↖	↑↑
Traffic Volume (vph)	162	981	701	61	1904	789	663	129	343
Future Volume (vph)	162	981	701	61	1904	789	663	129	343
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	3	1	6	3	8	7	4
Permitted Phases			2						
Detector Phase	5	2	3	1	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.5	30.5	9.5	9.5	30.5	9.5	30.5	9.5	30.5
Total Split (s)	12.0	46.0	26.8	16.2	50.2	26.8	38.5	19.3	31.0
Total Split (%)	10.0%	38.3%	22.3%	13.5%	41.8%	22.3%	32.1%	16.1%	25.8%
Yellow Time (s)	3.5	4.5	3.5	3.5	4.5	3.5	4.5	3.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-2.0	0.0	0.0	-2.0	-2.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.5	3.5	4.5	4.5	3.5	2.5	4.5	3.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None
Act Effct Green (s)	8.5	48.1	70.9	8.2	46.8	24.9	30.0	12.8	18.9
Actuated g/C Ratio	0.08	0.43	0.63	0.07	0.41	0.22	0.27	0.11	0.17
v/c Ratio	1.21	0.43	0.63	0.47	0.91	1.03	0.74	0.64	0.72
Control Delay	188.6	25.2	8.9	62.1	38.8	84.2	43.2	62.2	48.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	188.6	25.2	8.9	62.1	38.8	84.2	43.2	62.2	48.2
LOS	F	C	A	E	D	F	D	E	D
Approach Delay		33.4			39.5		65.2		51.4
Approach LOS		C			D		E		D

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 113.1  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.21  
 Intersection Signal Delay: 45.0  
 Intersection LOS: D  
 Intersection Capacity Utilization 97.9%  
 ICU Level of Service F  
 Analysis Period (min) 15





























Splits and Phases: 5: Heacock Street & Cactus Avenue



HCM 6th Signalized Intersection Summary  
5: Heacock Street & Cactus Avenue

Gateway Aviation TA (JN:13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 			 	
Traffic Volume (veh/h)	162	981	701	61	1904	147	789	663	21	129	343	97
Future Volume (veh/h)	162	981	701	61	1904	147	789	663	21	129	343	97
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1752	1900	1885	1856	1826	1841	1841	1870	1841	1885
Adj Flow Rate, veh/h	169	1022	600	64	1983	91	822	691	6	134	357	75
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	10	0	1	3	5	4	4	2	4	1
Cap, veh/h	138	2417	915	83	2190	100	772	1011	9	178	459	95
Arrive On Green	0.12	0.65	0.41	0.05	0.61	0.39	0.33	0.42	0.27	0.10	0.16	0.15
Sat Flow, veh/h	1781	5611	1485	1810	5366	246	3478	3644	32	1781	2957	614
Grp Volume(v), veh/h	169	1022	600	64	1392	682	822	349	348	134	221	211
Grp Sat Flow(s),veh/h/ln	1781	1870	1485	1810	1885	1841	1739	1841	1835	1781	1841	1730
Q Serve(g_s), s	8.5	9.7	6.5	3.8	35.1	36.0	24.3	16.9	17.0	8.0	12.6	12.9
Cycle Q Clear(g_c), s	8.5	9.7	6.5	3.8	35.1	36.0	24.3	16.9	17.0	8.0	12.6	12.9
Prop In Lane	1.00		1.00	1.00		0.13	1.00		0.02	1.00		0.35
Lane Grp Cap(c), veh/h	138	2417	915	83	1539	751	772	511	509	178	285	268
V/C Ratio(X)	1.22	0.42	0.66	0.77	0.90	0.91	1.06	0.68	0.68	0.75	0.77	0.79
Avail Cap(c_a), veh/h	138	2417	915	193	1609	786	772	572	570	257	446	419
HCM Platoon Ratio	1.50	1.50	1.00	1.00	1.50	1.00	1.50	1.50	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.3	12.7	4.2	51.6	19.4	21.0	36.5	28.0	28.2	48.0	44.4	44.7
Incr Delay (d2), s/veh	148.0	0.0	1.4	5.6	7.1	13.5	50.9	2.1	2.1	3.6	1.7	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.2	3.2	2.8	1.8	11.6	13.8	14.1	6.4	6.4	3.6	5.7	5.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	196.3	12.8	5.6	57.2	26.5	34.6	87.4	30.1	30.3	51.6	46.1	46.8
LnGrp LOS	F	B	A	E	C	C	F	C	C	D	D	D
Approach Vol, veh/h		1791			2138			1519			566	
Approach Delay, s/veh		27.7			30.0			61.2			47.7	
Approach LOS		C			C			E			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.5	50.6	27.8	21.5	12.0	48.2	14.4	34.9				
Change Period (Y+Rc), s	4.5	5.5	5.5	* 5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	11.7	40.5	22.3	* 26	7.5	44.7	14.8	33.0				
Max Q Clear Time (g_c+I1), s	5.8	11.7	26.3	14.9	10.5	38.0	10.0	19.0				
Green Ext Time (p_c), s	0.0	5.9	0.0	1.1	0.0	4.7	0.1	2.1				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			38.8									
HCM 6th LOS			D									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings  
6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

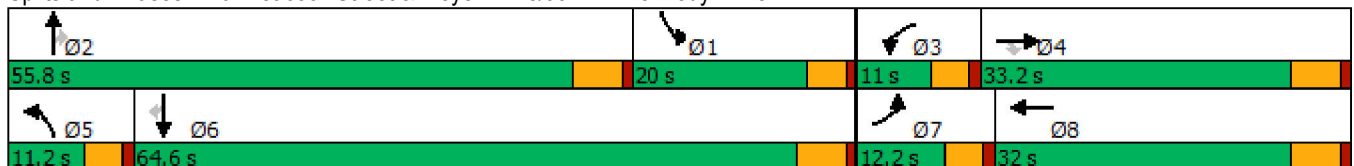
05/10/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	38	42	111	30	220	34	955	52	117	741	20	
Future Volume (vph)	38	42	111	30	220	34	955	52	117	741	20	
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	7	4		3	8	5	2		1	6		
Permitted Phases			4					2			6	
Detector Phase	7	4	4	3	8	5	2	2	1	6	6	
Switch Phase												
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	
Minimum Split (s)	8.5	23.5	23.5	8.5	31.5	8.5	30.5	30.5	8.5	23.5	23.5	
Total Split (s)	12.2	33.2	33.2	11.0	32.0	11.2	55.8	55.8	20.0	64.6	64.6	
Total Split (%)	10.2%	27.7%	27.7%	9.2%	26.7%	9.3%	46.5%	46.5%	16.7%	53.8%	53.8%	
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5	4.5	4.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	5.5	4.5	5.5	5.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max	
Act Effct Green (s)	6.5	13.7	13.7	5.8	13.1	5.9	51.6	51.6	11.9	62.1	62.1	
Actuated g/C Ratio	0.07	0.14	0.14	0.06	0.13	0.06	0.52	0.52	0.12	0.63	0.63	
v/c Ratio	0.38	0.18	0.30	0.30	0.69	0.33	0.53	0.06	0.55	0.35	0.02	
Control Delay	59.8	40.6	4.5	57.8	29.5	58.6	20.0	0.1	53.3	12.6	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	59.8	40.6	4.5	57.8	29.5	58.6	20.0	0.1	53.3	12.6	0.1	
LOS	E	D	A	E	C	E	C	A	D	B	A	
Approach Delay		23.5			31.4		20.3			17.7		
Approach LOS		C			C		C			B		

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 98.9  
 Natural Cycle: 80  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.69  
 Intersection Signal Delay: 21.6  
 Intersection LOS: C  
 Intersection Capacity Utilization 67.4%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 6: Heacock Street & Meyer Drive/John F. Kennedy Drive




























HCM 6th Signalized Intersection Summary  
 6: Heacock Street & Meyer Drive/John F. Kennedy Drive













Gateway Aviation TA (JN:13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	42	111	30	220	213	34	955	52	117	741	20
Future Volume (veh/h)	38	42	111	30	220	213	34	955	52	117	741	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.96	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1648	1767	1811	1796	1841	1885	1781	1811	1767	1856	1767	1618
Adj Flow Rate, veh/h	40	44	80	31	229	186	35	995	44	122	772	11
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	17	9	6	7	4	1	8	6	9	3	9	19
Cap, veh/h	48	295	256	39	306	236	43	1808	716	181	2072	794
Arrive On Green	0.03	0.17	0.17	0.02	0.16	0.16	0.03	0.50	0.50	0.10	0.59	0.59
Sat Flow, veh/h	1570	1767	1535	1711	1917	1481	1697	3622	1436	1767	3533	1354
Grp Volume(v), veh/h	40	44	80	31	219	196	35	995	44	122	772	11
Grp Sat Flow(s),veh/h/ln	1570	1767	1535	1711	1841	1557	1697	1811	1436	1767	1767	1354
Q Serve(g_s), s	2.6	2.1	4.6	1.8	11.5	12.2	2.1	19.1	1.2	6.7	11.7	0.3
Cycle Q Clear(g_c), s	2.6	2.1	4.6	1.8	11.5	12.2	2.1	19.1	1.2	6.7	11.7	0.3
Prop In Lane	1.00		1.00	1.00		0.95	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	48	295	256	39	294	248	43	1808	716	181	2072	794
V/C Ratio(X)	0.84	0.15	0.31	0.79	0.75	0.79	0.82	0.55	0.06	0.67	0.37	0.01
Avail Cap(c_a), veh/h	120	486	422	110	484	409	113	1808	716	272	2072	794
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.6	35.9	36.9	49.0	40.4	40.7	48.9	17.4	7.5	43.6	11.0	8.7
Incr Delay (d2), s/veh	13.0	0.1	0.3	12.0	1.4	2.1	13.0	1.2	0.2	1.6	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.9	1.7	0.9	5.1	4.6	1.0	7.3	0.5	2.9	4.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.7	36.0	37.2	61.0	41.9	42.8	61.9	18.6	7.6	45.2	11.5	8.7
LnGrp LOS	E	D	D	E	D	D	E	B	A	D	B	A
Approach Vol, veh/h		164			446			1074			905	
Approach Delay, s/veh		42.8			43.6			19.6			16.1	
Approach LOS		D			D			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.8	55.8	6.8	22.3	7.0	64.6	7.6	21.6				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	15.5	* 50	6.5	27.7	6.7	59.1	7.7	26.5				
Max Q Clear Time (g_c+I1), s	8.7	21.1	3.8	6.6	4.1	13.7	4.6	14.2				
Green Ext Time (p_c), s	0.1	4.4	0.0	0.2	0.0	3.3	0.0	1.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			24.0									
HCM 6th LOS			C									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												



Timings  
11: Heacock Street & Cardinal Avenue

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	11	12	981	56	47	849
Future Volume (vph)	11	12	981	56	47	849
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	26.6	26.6	21.6	21.6	9.6	16.2
Total Split (s)	27.0	27.0	76.0	76.0	17.0	93.0
Total Split (%)	22.5%	22.5%	63.3%	63.3%	14.2%	77.5%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	13.0	13.0	40.0	40.0	7.2	46.5
Actuated g/C Ratio	0.24	0.24	0.74	0.74	0.13	0.86
v/c Ratio	0.04	0.04	0.43	0.05	0.23	0.36
Control Delay	23.5	12.9	9.0	3.4	31.1	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.5	12.9	9.0	3.4	31.1	4.2
LOS	C	B	A	A	C	A
Approach Delay	18.0		8.7			5.6
Approach LOS	B		A			A

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 54.2	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.43	
Intersection Signal Delay: 7.4	Intersection LOS: A
Intersection Capacity Utilization 51.1%	ICU Level of Service A
Analysis Period (min) 15	













Splits and Phases: 11: Heacock Street & Cardinal Avenue



HCM 6th Signalized Intersection Summary  
 11: Heacock Street & Cardinal Avenue

Gateway Aviation TA (JN:13445)

05/10/2022

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	11	12	981	56	47	849
Future Volume (veh/h)	11	12	981	56	47	849
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1559	1441	1781	1870	1781	1693
Adj Flow Rate, veh/h	12	14	1115	64	53	965
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	23	31	8	2	8	14
Cap, veh/h	93	76	1807	804	94	2169
Arrive On Green	0.06	0.06	0.51	0.51	0.06	0.67
Sat Flow, veh/h	1485	1221	3563	1585	1697	3300
Grp Volume(v), veh/h	12	14	1115	64	53	965
Grp Sat Flow(s),veh/h/ln	1485	1221	1781	1585	1697	1608
Q Serve(g_s), s	0.3	0.4	9.2	0.9	1.3	5.7
Cycle Q Clear(g_c), s	0.3	0.4	9.2	0.9	1.3	5.7
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	93	76	1807	804	94	2169
V/C Ratio(X)	0.13	0.18	0.62	0.08	0.57	0.44
Avail Cap(c_a), veh/h	810	666	6198	2757	513	6801
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.2	18.2	7.3	5.2	18.9	3.1
Incr Delay (d2), s/veh	0.6	1.1	0.3	0.0	2.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.1	1.6	0.1	0.4	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	18.8	19.4	7.6	5.2	20.9	3.3
LnGrp LOS	B	B	A	A	C	A
Approach Vol, veh/h	26		1179			1018
Approach Delay, s/veh	19.1		7.5			4.2
Approach LOS	B		A			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	6.9	27.0			33.9	7.2
Change Period (Y+Rc), s	4.6	* 6.2			6.2	4.6
Max Green Setting (Gmax), s	12.4	* 71			86.8	22.4
Max Q Clear Time (g_c+I1), s	3.3	11.2			7.7	2.4
Green Ext Time (p_c), s	0.0	9.6			7.6	0.0

Intersection Summary

HCM 6th Ctrl Delay	6.1
HCM 6th LOS	A

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
12: Heacock Street & San Michele Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	28	74	4	36	310	687	1	51	436	98	47
Future Volume (vph)	28	74	4	36	310	687	1	51	436	98	47
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	1	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	4.0	5.0	4.0	5.0	5.0
Minimum Split (s)	9.5	30.5	30.5	8.5	30.5	8.5	8.5	34.5	8.5	34.5	34.5
Total Split (s)	10.0	36.4	36.4	11.6	38.0	35.0	8.5	37.0	35.0	63.5	63.5
Total Split (%)	8.3%	30.3%	30.3%	9.7%	31.7%	29.2%	7.1%	30.8%	29.2%	52.9%	52.9%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	3.5	4.5	3.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	4.5	5.5	4.5	5.5	5.5
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	Min	Min
Act Effct Green (s)	5.8	15.3	15.3	12.1	21.6	47.0	4.5	9.3	19.3	32.6	32.6
Actuated g/C Ratio	0.08	0.21	0.21	0.17	0.30	0.65	0.06	0.13	0.27	0.45	0.45
v/c Ratio	0.25	0.25	0.01	0.16	0.73	0.63	0.01	0.18	0.63	0.16	0.07
Control Delay	46.6	33.7	0.0	34.3	35.0	4.4	47.0	29.2	29.7	15.4	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.6	33.7	0.0	34.3	35.0	4.4	47.0	29.2	29.7	15.4	0.9
LOS	D	C	A	C	C	A	D	C	C	B	A
Approach Delay		35.9			14.6			29.5		25.0	
Approach LOS		D			B			C		C	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 72.7  
 Natural Cycle: 95  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.73  
 Intersection Signal Delay: 19.7  
 Intersection LOS: B  
 Intersection Capacity Utilization 62.1%  
 ICU Level of Service B  
 Analysis Period (min) 15

























Splits and Phases: 12: Heacock Street & San Michele Road



HCM 6th Signalized Intersection Summary  
 12: Heacock Street & San Michele Road

Gateway Aviation TA (JN:13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	74	4	36	310	687	1	51	9	436	98	47
Future Volume (veh/h)	28	74	4	36	310	687	1	51	9	436	98	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1856	1366	1796	1900	1856	1900	1856	1707	1811	1826	1856
Adj Flow Rate, veh/h	37	99	5	48	413	649	1	68	12	581	131	63
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh, %	0	3	36	7	0	3	0	3	13	6	5	3
Cap, veh/h	57	173	108	377	536	787	3	271	47	731	594	512
Arrive On Green	0.03	0.09	0.09	0.22	0.28	0.28	0.00	0.09	0.09	0.22	0.33	0.33
Sat Flow, veh/h	1810	1856	1158	1711	1900	1572	1810	3008	518	3346	1826	1572
Grp Volume(v), veh/h	37	99	5	48	413	649	1	39	41	581	131	63
Grp Sat Flow(s),veh/h/ln	1810	1856	1158	1711	1900	1572	1810	1763	1762	1673	1826	1572
Q Serve(g_s), s	1.1	2.8	0.2	1.3	11.1	7.4	0.0	1.1	1.2	9.1	2.9	1.1
Cycle Q Clear(g_c), s	1.1	2.8	0.2	1.3	11.1	7.4	0.0	1.1	1.2	9.1	2.9	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.29	1.00		1.00
Lane Grp Cap(c), veh/h	57	173	108	377	536	787	3	159	159	731	594	512
V/C Ratio(X)	0.65	0.57	0.05	0.13	0.77	0.82	0.31	0.25	0.26	0.79	0.22	0.12
Avail Cap(c_a), veh/h	179	1032	644	377	1111	1263	130	999	999	1837	1906	1642
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.6	24.1	14.7	17.4	18.3	11.8	27.7	23.5	23.6	20.5	13.6	6.2
Incr Delay (d2), s/veh	4.7	1.1	0.1	0.1	0.9	1.1	18.5	0.3	0.3	0.8	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.2	0.1	0.4	4.1	4.8	0.0	0.4	0.4	3.0	0.9	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.3	25.2	14.8	17.4	19.2	12.9	46.3	23.8	23.9	21.3	13.7	6.3
LnGrp LOS	C	C	B	B	B	B	D	C	C	C	B	A
Approach Vol, veh/h		141			1110			81			775	
Approach Delay, s/veh		26.5			15.4			24.1			18.8	
Approach LOS		C			B			C			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.6	10.5	16.7	10.7	4.6	23.6	6.2	21.2				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	30.5	* 32	7.1	30.9	4.0	58.0	5.5	32.5				
Max Q Clear Time (g_c+I1), s	11.1	3.2	3.3	4.8	2.0	4.9	3.1	13.1				
Green Ext Time (p_c), s	1.0	0.2	0.0	0.3	0.0	0.5	0.0	2.6				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				17.7								
HCM 6th LOS				B								
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings  
14: Indian Street & San Michele Road

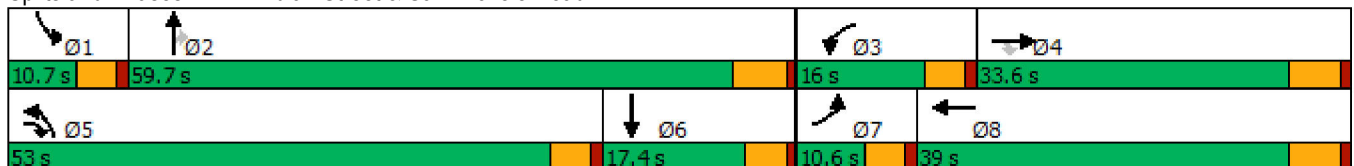


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↘	↑↑	↗↗	↘↘	↑↑	↗↗	↑	↗	↘	↑↑
Traffic Volume (vph)	14	188	331	170	817	1411	198	216	5	128
Future Volume (vph)	14	188	331	170	817	1411	198	216	5	128
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	5	3	8	5	2		1	6
Permitted Phases			4					2		
Detector Phase	7	4	5	3	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	10.0	5.0	8.8
Minimum Split (s)	9.6	31.8	9.6	9.6	31.8	9.6	32.8	32.8	9.6	14.6
Total Split (s)	10.6	33.6	53.0	16.0	39.0	53.0	59.7	59.7	10.7	17.4
Total Split (%)	8.8%	28.0%	44.2%	13.3%	32.5%	44.2%	49.8%	49.8%	8.9%	14.5%
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	3.6	4.8	4.8	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	4.6	5.8	5.8	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None	None
Act Effct Green (s)	5.5	19.6	74.3	9.5	29.9	48.8	60.3	60.3	5.2	9.9
Actuated g/C Ratio	0.05	0.18	0.69	0.09	0.28	0.45	0.56	0.56	0.05	0.09
v/c Ratio	0.23	0.38	0.14	0.58	0.89	0.92	0.22	0.22	0.05	0.48
Control Delay	61.2	40.5	3.0	56.1	50.1	38.9	15.0	2.8	54.8	51.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.2	40.5	3.0	56.1	50.1	38.9	15.0	2.8	54.8	51.1
LOS	E	D	A	E	D	D	B	A	D	D
Approach Delay		17.7			51.2		32.1			51.3
Approach LOS		B			D		C			D

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 107.6  
 Natural Cycle: 105  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.92  
 Intersection Signal Delay: 36.1  
 Intersection LOS: D  
 Intersection Capacity Utilization 91.0%  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 14: Indian Street & San Michele Road



HCM 6th Signalized Intersection Summary  
 14: Indian Street & San Michele Road

Gateway Aviation TA (JN:13445)

05/10/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	188	331	170	817	10	1411	198	216	5	128	12
Future Volume (veh/h)	14	188	331	170	817	10	1411	198	216	5	128	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.99	1.00		0.89
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1218	1470	1870	1826	1826	1900	1856	1752	1767	1900	1707	1900
Adj Flow Rate, veh/h	15	204	300	185	888	4	1534	215	153	5	139	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	46	29	2	5	5	0	3	10	9	0	13	0
Cap, veh/h	19	625	2076	248	970	4	1564	906	765	12	254	18
Arrive On Green	0.02	0.32	0.32	0.07	0.40	0.27	0.66	0.52	0.52	0.01	0.08	0.08
Sat Flow, veh/h	1160	2940	3170	3478	3632	16	3534	1752	1478	1810	3122	221
Grp Volume(v), veh/h	15	204	300	185	446	446	1534	215	153	5	75	74
Grp Sat Flow(s),veh/h/ln	1160	1470	1585	1739	1826	1823	1767	1752	1478	1810	1707	1635
Q Serve(g_s), s	1.4	5.7	3.6	5.6	25.0	25.0	45.3	7.3	6.0	0.3	4.6	4.7
Cycle Q Clear(g_c), s	1.4	5.7	3.6	5.6	25.0	25.0	45.3	7.3	6.0	0.3	4.6	4.7
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	1.00		0.14
Lane Grp Cap(c), veh/h	19	625	2076	248	488	487	1564	906	765	12	139	133
V/C Ratio(X)	0.77	0.33	0.14	0.75	0.92	0.92	0.98	0.24	0.20	0.43	0.54	0.56
Avail Cap(c_a), veh/h	64	756	2217	367	560	559	1582	906	765	102	202	194
HCM Platoon Ratio	1.00	1.50	1.50	1.00	1.50	1.00	1.50	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.0	31.0	6.1	49.3	31.2	31.3	17.8	14.4	14.1	53.5	47.7	47.8
Incr Delay (d2), s/veh	20.8	0.1	0.0	1.9	17.2	17.2	18.1	0.0	0.0	9.0	1.2	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.9	1.0	2.4	11.3	11.2	13.7	2.6	1.9	0.2	1.9	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	73.7	31.1	6.1	51.1	48.4	48.5	35.8	14.4	14.1	62.5	48.9	49.2
LnGrp LOS	E	C	A	D	D	D	D	B	B	E	D	D
Approach Vol, veh/h		519			1077			1902			154	
Approach Delay, s/veh		17.9			48.9			31.6			49.5	
Approach LOS		B			D			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.3	61.8	12.3	28.8	52.4	14.6	6.4	34.7				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	* 5.8	4.6	5.8				
Max Green Setting (Gmax), s	6.1	53.9	11.4	27.8	48.4	* 13	6.0	33.2				
Max Q Clear Time (g_c+I1), s	2.3	9.3	7.6	7.7	47.3	6.7	3.4	27.0				
Green Ext Time (p_c), s	0.0	0.9	0.1	1.4	0.6	0.2	0.0	1.9				

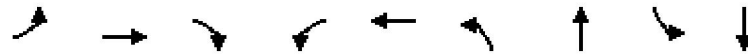
Intersection Summary

HCM 6th Ctrl Delay	35.5
HCM 6th LOS	D

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
15: Indian Street & Nandina Avenue



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↑	↗	↖	↗	↖↗	↖↗	↖	↖↗
Traffic Volume (vph)	7	32	143	33	41	326	1616	12	445
Future Volume (vph)	7	32	143	33	41	326	1616	12	445
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	5	3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	5	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	29.8	9.6	9.6	29.8	9.6	26.8	9.6	26.8
Total Split (s)	9.7	29.9	29.0	10.0	30.2	29.0	70.4	9.7	51.1
Total Split (%)	8.1%	24.9%	24.2%	8.3%	25.2%	24.2%	58.7%	8.1%	42.6%
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	6.3	14.3	30.4	6.5	17.8	17.1	57.3	6.3	32.8
Actuated g/C Ratio	0.08	0.18	0.38	0.08	0.22	0.21	0.71	0.08	0.40
v/c Ratio	0.05	0.15	0.28	0.30	0.22	0.57	0.73	0.12	0.36
Control Delay	50.4	40.2	4.8	54.5	28.1	38.5	15.3	51.9	19.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.4	40.2	4.8	54.5	28.1	38.5	15.3	51.9	19.3
LOS	D	D	A	D	C	D	B	D	B
Approach Delay		12.9			37.3		19.0		20.1
Approach LOS		B			D		B		C

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 81  
 Natural Cycle: 110  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.73  
 Intersection Signal Delay: 19.4  
 Intersection LOS: B  
 Intersection Capacity Utilization 73.1%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 15: Indian Street & Nandina Avenue























↖ Ø1	↑ Ø2	↖ Ø3	→ Ø4
9.7 s	70.4 s	10 s	29.9 s
↗ Ø5	↓ Ø6	↗ Ø7	← Ø8
29 s	51.1 s	9.7 s	30.2 s



HCM 6th Signalized Intersection Summary  
15: Indian Street & Nandina Avenue

Gateway Aviation TA (JN:13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	32	143	33	41	22	326	1616	70	12	445	24
Future Volume (veh/h)	7	32	143	33	41	22	326	1616	70	12	445	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1248	1100	1559	1441	1455	1559	1841	1707	1411	1811	1900
Adj Flow Rate, veh/h	8	36	159	37	46	24	362	1796	78	13	494	27
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	44	54	23	31	30	23	4	13	33	6	0
Cap, veh/h	18	206	291	47	167	87	424	2038	88	20	1532	84
Arrive On Green	0.01	0.16	0.16	0.03	0.19	0.19	0.15	0.58	0.58	0.02	0.45	0.45
Sat Flow, veh/h	1810	1248	932	1485	892	465	2881	3500	151	1344	3403	186
Grp Volume(v), veh/h	8	36	159	37	0	70	362	938	936	13	262	259
Grp Sat Flow(s),veh/h/ln	1810	1248	932	1485	0	1357	1440	1841	1810	1344	1811	1778
Q Serve(g_s), s	0.4	2.5	14.3	2.5	0.0	4.5	12.4	43.9	45.3	1.0	9.4	9.5
Cycle Q Clear(g_c), s	0.4	2.5	14.3	2.5	0.0	4.5	12.4	43.9	45.3	1.0	9.4	9.5
Prop In Lane	1.00		1.00	1.00		0.34	1.00		0.08	1.00		0.10
Lane Grp Cap(c), veh/h	18	206	291	47	0	254	424	1072	1054	20	815	800
V/C Ratio(X)	0.44	0.17	0.55	0.78	0.00	0.28	0.85	0.88	0.89	0.64	0.32	0.32
Avail Cap(c_a), veh/h	91	297	359	79	0	327	694	1175	1155	68	815	800
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.8	36.3	28.9	48.6	0.0	35.3	42.1	18.0	18.3	49.6	17.9	17.9
Incr Delay (d2), s/veh	6.3	0.4	1.6	9.8	0.0	0.6	2.8	7.1	8.2	11.8	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.8	3.1	1.0	0.0	1.5	4.3	17.3	17.8	0.4	3.6	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.1	36.7	30.5	58.5	0.0	35.9	44.9	25.1	26.5	61.3	18.1	18.1
LnGrp LOS	E	D	C	E	A	D	D	C	C	E	B	B
Approach Vol, veh/h		203			107			2236			534	
Approach Delay, s/veh		32.6			43.7			28.9			19.2	
Approach LOS		C			D			C			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.1	64.8	7.8	22.5	19.5	51.4	5.6	24.7				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	5.1	64.6	5.4	24.1	24.4	45.3	5.1	24.4				
Max Q Clear Time (g_c+I1), s	3.0	47.3	4.5	16.3	14.4	11.5	2.4	6.5				
Green Ext Time (p_c), s	0.0	11.7	0.0	0.4	0.5	2.8	0.0	0.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			28.0									
HCM 6th LOS			C									



Timings  
16: Indian Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

05/10/2022



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↔↔	↕↕↔	↔	↕↕↔	↔↔	↕↕	↕	↔	↕↔
Traffic Volume (vph)	507	445	62	787	136	288	41	13	73
Future Volume (vph)	507	445	62	787	136	288	41	13	73
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	5	2	1	6	3	8		7	4
Permitted Phases							8		
Detector Phase	5	2	1	6	3	8	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2
Total Split (s)	37.0	54.5	14.7	32.2	10.6	41.2	41.2	9.6	40.2
Total Split (%)	30.8%	45.4%	12.3%	26.8%	8.8%	34.3%	34.3%	8.0%	33.5%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.4	4.4	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.4	5.4	4.6	6.2
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	29.4	47.3	7.8	23.3	6.1	24.2	24.2	5.1	14.1
Actuated g/C Ratio	0.31	0.50	0.08	0.25	0.06	0.26	0.26	0.05	0.15
v/c Ratio	0.82	0.25	0.47	0.74	0.73	0.37	0.09	0.15	0.50
Control Delay	42.7	14.3	56.0	38.0	67.6	31.5	0.4	52.8	15.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.7	14.3	56.0	38.0	67.6	31.5	0.4	52.8	15.4
LOS	D	B	E	D	E	C	A	D	B
Approach Delay		28.0		39.2		39.3			17.3
Approach LOS		C		D		D			B

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 94.6	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay: 32.7	Intersection LOS: C
Intersection Capacity Utilization 60.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 16: Indian Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 16: Indian Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

05/10/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	507	445	99	62	787	47	136	288	41	13	73	169
Future Volume (veh/h)	507	445	99	62	787	47	136	288	41	13	73	169
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1011	1811	1707	1870	1856	1900	1737	1781	1796	1885	1811	1366
Adj Flow Rate, veh/h	557	489	54	68	865	-168	149	316	22	14	80	76
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	60	6	13	2	3	0	11	8	7	1	6	36
Cap, veh/h	606	2157	235	89	1024	0	220	614	276	30	229	195
Arrive On Green	0.32	0.48	0.48	0.05	0.20	0.00	0.07	0.18	0.18	0.02	0.13	0.13
Sat Flow, veh/h	1868	4526	493	1781	5233	0	3209	3385	1522	1795	1761	1501
Grp Volume(v), veh/h	557	354	189	68	697	0	149	316	22	14	78	78
Grp Sat Flow(s),veh/h/ln	934	1648	1722	1781	1689	0	1605	1692	1522	1795	1721	1541
Q Serve(g_s), s	22.1	4.9	5.0	2.9	9.8	0.0	3.5	6.5	0.9	0.6	3.2	3.6
Cycle Q Clear(g_c), s	22.1	4.9	5.0	2.9	9.8	0.0	3.5	6.5	0.9	0.6	3.2	3.6
Prop In Lane	1.00		0.29	1.00		0.00	1.00		1.00	1.00		0.97
Lane Grp Cap(c), veh/h	606	1571	821	89	1024	0	220	614	276	30	223	200
V/C Ratio(X)	0.92	0.23	0.23	0.77	0.68	0.00	0.68	0.51	0.08	0.46	0.35	0.39
Avail Cap(c_a), veh/h	785	2084	1089	234	1736	0	250	1573	707	117	759	680
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.1	11.8	11.8	36.2	28.4	0.0	35.0	28.5	26.2	37.5	30.6	30.7
Incr Delay (d2), s/veh	11.9	0.1	0.1	5.1	0.8	0.0	4.3	0.7	0.1	4.1	0.9	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	1.5	1.6	1.3	3.7	0.0	1.4	2.5	0.3	0.3	1.3	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.0	11.9	12.0	41.3	29.2	0.0	39.3	29.1	26.3	41.6	31.5	32.0
LnGrp LOS	D	B	B	D	C	A	D	C	C	D	C	C
Approach Vol, veh/h		1100			765			487				170
Approach Delay, s/veh		24.6			30.3			32.1				32.5
Approach LOS		C			C			C				C
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.4	42.5	9.9	16.2	29.6	21.4	5.9	20.2				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	10.1	48.7	6.0	34.0	32.4	26.4	5.0	* 36				
Max Q Clear Time (g_c+I1), s	4.9	7.0	5.5	5.6	24.1	11.8	2.6	8.5				
Green Ext Time (p_c), s	0.0	3.3	0.0	0.8	0.9	3.8	0.0	1.9				

Intersection Summary

HCM 6th Ctrl Delay	28.3
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

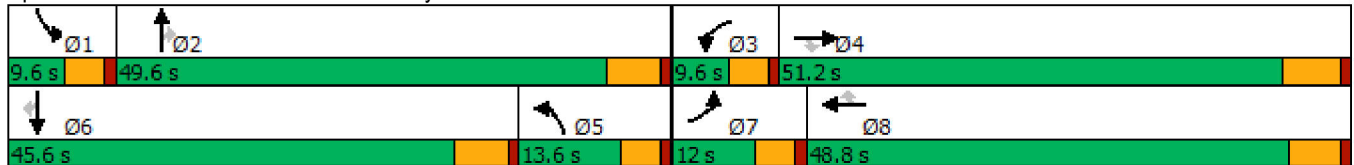
Timings  
20: Perris Bl. & Harley Knox Bl.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	217	279	22	9	374	181	231	1126	14	70	693	278
Future Volume (vph)	217	279	22	9	374	181	231	1126	14	70	693	278
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	47.2	47.2	9.6	48.8	48.8	9.6	48.8	48.8	9.6	43.8	43.8
Total Split (s)	12.0	51.2	51.2	9.6	48.8	48.8	13.6	49.6	49.6	9.6	45.6	45.6
Total Split (%)	10.0%	42.7%	42.7%	8.0%	40.7%	40.7%	11.3%	41.3%	41.3%	8.0%	38.0%	38.0%
Yellow Time (s)	3.6	5.2	5.2	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 79.3  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 20: Perris Bl. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 20: Perris Bl. & Harley Knox Bl.

Gateway Aviation (JN 13445)  
 05/10/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	217	279	22	9	374	181	231	1126	14	70	693	278
Future Volume (veh/h)	217	279	22	9	374	181	231	1126	14	70	693	278
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1767	1856	1530	1544	1856	1885	1796	1856	1574	1826	1870	1796
Adj Flow Rate, veh/h	238	307	19	10	411	106	254	1237	12	77	762	197
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	9	3	25	24	3	1	7	3	22	5	2	7
Cap, veh/h	326	837	308	36	761	240	536	1905	502	192	1295	386
Arrive On Green	0.10	0.24	0.24	0.01	0.15	0.15	0.16	0.38	0.38	0.06	0.25	0.25
Sat Flow, veh/h	3264	3526	1296	2853	5066	1598	3319	5066	1334	3374	5106	1520
Grp Volume(v), veh/h	238	307	19	10	411	106	254	1237	12	77	762	197
Grp Sat Flow(s),veh/h/ln	1632	1763	1296	1427	1689	1598	1659	1689	1334	1687	1702	1520
Q Serve(g_s), s	4.7	4.9	0.4	0.2	5.0	4.0	4.6	13.5	0.4	1.5	8.8	4.9
Cycle Q Clear(g_c), s	4.7	4.9	0.4	0.2	5.0	4.0	4.6	13.5	0.4	1.5	8.8	4.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	326	837	308	36	761	240	536	1905	502	192	1295	386
V/C Ratio(X)	0.73	0.37	0.06	0.28	0.54	0.44	0.47	0.65	0.02	0.40	0.59	0.51
Avail Cap(c_a), veh/h	361	2371	872	213	3256	1027	536	3317	873	252	3038	905
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.2	21.3	6.0	32.7	26.3	25.9	25.5	17.2	13.1	30.4	21.9	9.3
Incr Delay (d2), s/veh	5.3	0.3	0.1	1.5	0.6	1.3	0.2	0.4	0.0	0.5	0.4	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	1.8	0.2	0.1	1.9	1.5	1.7	4.5	0.1	0.6	3.1	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.5	21.6	6.1	34.2	26.9	27.2	25.7	17.6	13.2	31.0	22.3	10.3
LnGrp LOS	C	C	A	C	C	C	C	B	B	C	C	B
Approach Vol, veh/h		564			527			1503			1036	
Approach Delay, s/veh		26.5			27.1			18.9			20.7	
Approach LOS		C			C			B			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.4	31.0	5.4	22.1	16.6	22.8	11.3	16.2				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	5.8	* 5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	5.0	43.8	5.0	45.0	9.0	* 40	7.4	* 43				
Max Q Clear Time (g_c+I1), s	3.5	15.5	2.2	6.9	6.6	10.8	6.7	7.0				
Green Ext Time (p_c), s	0.0	9.5	0.0	1.9	0.1	6.0	0.0	3.0				

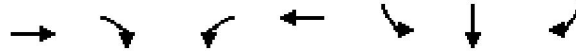
Intersection Summary												
HCM 6th Ctrl Delay				21.8								
HCM 6th LOS				C								

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

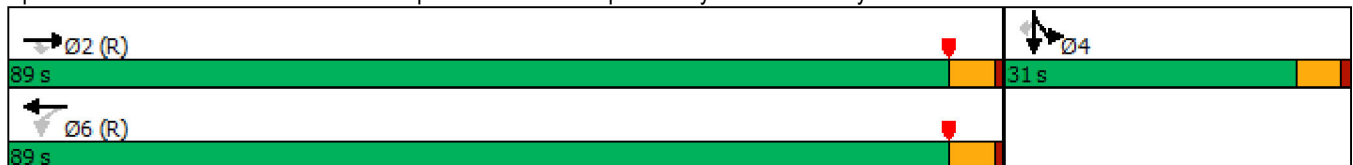


Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations	↑↑	↑	↑↑	↑	↑	↑	↑
Traffic Volume (vph)	575	88	576	245	480	0	208
Future Volume (vph)	575	88	576	245	480	0	208
Turn Type	NA	Perm	Perm	NA	Split	NA	Perm
Protected Phases	2			6	4	4	
Permitted Phases		2	6				4
Detector Phase	2	2	6	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	25.0	25.0	10.0	10.0	10.0
Total Split (s)	89.0	89.0	89.0	89.0	31.0	31.0	31.0
Total Split (%)	74.2%	74.2%	74.2%	74.2%	25.8%	25.8%	25.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None	None
Act Effct Green (s)	85.2	85.2	85.2	85.2	24.8	24.8	24.8
Actuated g/C Ratio	0.71	0.71	0.71	0.71	0.21	0.21	0.21
v/c Ratio	0.27	0.09	0.67	0.22	0.90	0.90	0.48
Control Delay	6.7	1.3	20.3	2.9	77.9	78.4	8.4
Queue Delay	0.0	0.0	0.0	0.3	0.0	0.0	0.0
Total Delay	6.8	1.3	20.3	3.2	77.9	78.4	8.4
LOS	A	A	C	A	E	E	A
Approach Delay	6.0			15.2		57.1	
Approach LOS	A			B		E	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection  
 Natural Cycle: 55  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.90  
 Intersection Signal Delay: 25.7  
 Intersection LOS: C  
 Intersection Capacity Utilization 90.3%  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

05/10/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑↑	↑					↑	↑	↑
Traffic Volume (veh/h)	0	575	88	576	245	0	0	0	0	480	0	208
Future Volume (veh/h)	0	575	88	576	245	0	0	0	0	480	0	208
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1826	1885	1841	1826	0				1648	1900	1767
Adj Flow Rate, veh/h	0	653	100	655	278	0				545	0	174
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88				0.88	0.88	0.88
Percent Heavy Veh, %	0	5	1	4	5	0				17	0	9
Cap, veh/h	0	2505	1153	1012	1318	0				611	0	291
Arrive On Green	0.00	0.72	0.72	1.00	1.00	0.00				0.19	0.00	0.19
Sat Flow, veh/h	0	3561	1597	1356	1826	0				3139	0	1497
Grp Volume(v), veh/h	0	653	100	655	278	0				545	0	174
Grp Sat Flow(s),veh/h/ln	0	1735	1597	678	1826	0				1570	0	1497
Q Serve(g_s), s	0.0	7.7	2.2	15.6	0.0	0.0				20.3	0.0	12.7
Cycle Q Clear(g_c), s	0.0	7.7	2.2	23.4	0.0	0.0				20.3	0.0	12.7
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2505	1153	1012	1318	0				611	0	291
V/C Ratio(X)	0.00	0.26	0.09	0.65	0.21	0.00				0.89	0.00	0.60
Avail Cap(c_a), veh/h	0	2505	1153	1012	1318	0				680	0	324
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.81	0.81	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	5.7	4.9	1.0	0.0	0.0				47.1	0.0	44.0
Incr Delay (d2), s/veh	0.0	0.3	0.1	2.6	0.3	0.0				13.2	0.0	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.4	0.7	0.4	0.1	0.0				8.8	0.0	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	6.0	5.1	3.6	0.3	0.0				60.3	0.0	46.5
LnGrp LOS	A	A	A	A	A	A				E	A	D
Approach Vol, veh/h		753			933						719	
Approach Delay, s/veh		5.8			2.6						57.0	
Approach LOS		A			A						E	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		91.6		28.4		91.6						
Change Period (Y+Rc), s		5.0		5.0		5.0						
Max Green Setting (Gmax), s		84.0		26.0		84.0						
Max Q Clear Time (g_c+I1), s		9.7		22.3		25.4						
Green Ext Time (p_c), s		2.9		1.0		6.9						

Intersection Summary

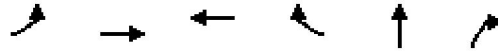
HCM 6th Ctrl Delay	19.9
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Timings

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

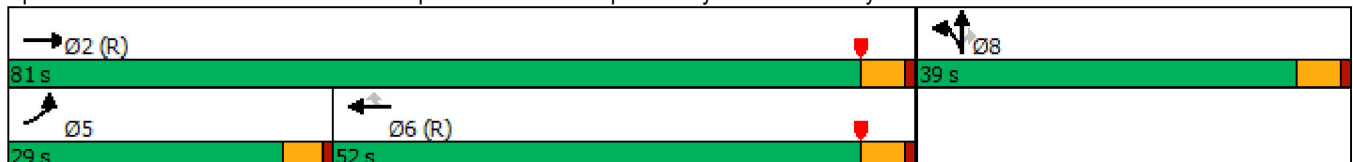


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations	↗↗	↑↑	↗↗	↗	↖	↗
Traffic Volume (vph)	385	669	778	1019	3	314
Future Volume (vph)	385	669	778	1019	3	314
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	26.0	24.0	24.0	10.0	10.0
Total Split (s)	29.0	81.0	52.0	52.0	39.0	39.0
Total Split (%)	24.2%	67.5%	43.3%	43.3%	32.5%	32.5%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max
Act Effct Green (s)	19.2	76.0	52.3	52.3	34.0	34.0
Actuated g/C Ratio	0.16	0.63	0.44	0.44	0.28	0.28
v/c Ratio	0.78	0.36	0.56	1.10	0.11	0.60
Control Delay	51.9	26.3	27.7	74.2	32.7	15.6
Queue Delay	0.0	1.9	0.0	0.0	0.0	0.0
Total Delay	51.9	28.2	27.7	74.2	32.7	15.6
LOS	D	C	C	E	C	B
Approach Delay		36.9	54.1		17.8	
Approach LOS		D	D		B	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 100  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.10  
 Intersection Signal Delay: 44.4  
 Intersection LOS: D  
 Intersection Capacity Utilization 90.3%  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.





HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

05/10/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑			↑↑	↔		↑	↔			
Traffic Volume (veh/h)	385	669	0	0	778	1019	44	3	314	0	0	0
Future Volume (veh/h)	385	669	0	0	778	1019	44	3	314	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1841	1722	0	0	1841	1752	1796	1900	1663			
Adj Flow Rate, veh/h	418	727	0	0	846	0	48	3	276			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	4	12	0	0	4	10	7	0	16			
Cap, veh/h	472	2072	0	0	1598		484	30	399			
Arrive On Green	0.28	1.00	0.00	0.00	0.46	0.00	0.28	0.28	0.28			
Sat Flow, veh/h	3401	3358	0	0	3589	1485	1708	107	1409			
Grp Volume(v), veh/h	418	727	0	0	846	0	51	0	276			
Grp Sat Flow(s),veh/h/ln	1700	1636	0	0	1749	1485	1815	0	1409			
Q Serve(g_s), s	14.1	0.0	0.0	0.0	20.8	0.0	2.5	0.0	20.9			
Cycle Q Clear(g_c), s	14.1	0.0	0.0	0.0	20.8	0.0	2.5	0.0	20.9			
Prop In Lane	1.00		0.00	0.00		1.00	0.94		1.00			
Lane Grp Cap(c), veh/h	472	2072	0	0	1598		514	0	399			
V/C Ratio(X)	0.88	0.35	0.00	0.00	0.53		0.10	0.00	0.69			
Avail Cap(c_a), veh/h	694	2072	0	0	1598		514	0	399			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.89	0.89	0.00	0.00	0.67	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	42.4	0.0	0.0	0.0	23.3	0.0	31.7	0.0	38.3			
Incr Delay (d2), s/veh	6.2	0.4	0.0	0.0	0.8	0.0	0.4	0.0	9.5			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	5.3	0.1	0.0	0.0	8.3	0.0	1.1	0.0	8.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.6	0.4	0.0	0.0	24.2	0.0	32.1	0.0	47.8			
LnGrp LOS	D	A	A	A	C		C	A	D			
Approach Vol, veh/h		1145			846	A		327				
Approach Delay, s/veh		18.0			24.2			45.3				
Approach LOS		B			C			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		81.0			21.2	59.8		39.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		76.0			24.5	47.0		34.0				
Max Q Clear Time (g_c+I1), s		2.0			16.1	22.8		22.9				
Green Ext Time (p_c), s		3.2			0.5	3.6		0.9				

Intersection Summary

HCM 6th Ctrl Delay	24.1
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Timings  
5: Heacock Street & Cactus Avenue

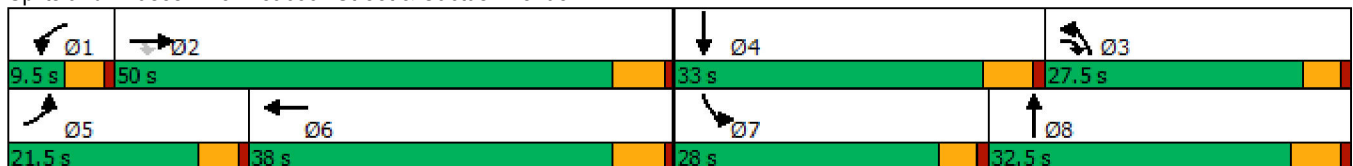


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↶	↶↶↶	↶	↶	↶↶↶	↶↶	↶↶	↶	↶↶
Traffic Volume (vph)	226	1974	1271	25	881	752	620	169	688
Future Volume (vph)	226	1974	1271	25	881	752	620	169	688
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	3	1	6	3	8	7	4
Permitted Phases			2						
Detector Phase	5	2	3	1	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.5	30.5	9.5	9.5	30.5	9.5	30.5	9.5	30.5
Total Split (s)	21.5	50.0	27.5	9.5	38.0	27.5	32.5	28.0	33.0
Total Split (%)	17.9%	41.7%	22.9%	7.9%	31.7%	22.9%	27.1%	23.3%	27.5%
Yellow Time (s)	3.5	4.5	3.5	3.5	4.5	3.5	4.5	3.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-2.0	0.0	0.0	-2.0	-2.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.5	3.5	4.5	4.5	3.5	2.5	4.5	3.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None
Act Effct Green (s)	16.9	45.7	67.8	5.0	30.6	25.1	34.8	15.9	26.6
Actuated g/C Ratio	0.15	0.40	0.60	0.04	0.27	0.22	0.31	0.14	0.23
v/c Ratio	0.83	0.90	1.20	0.33	0.68	0.99	0.61	0.66	0.89
Control Delay	72.1	39.4	121.5	66.6	38.7	73.9	37.6	58.9	55.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.1	39.4	121.5	66.6	38.7	73.9	37.6	58.9	55.4
LOS	E	D	F	E	D	E	D	E	E
Approach Delay		71.6			39.4		56.7		56.0
Approach LOS		E			D		E		E

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 113.4	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.20	
Intersection Signal Delay: 61.6	Intersection LOS: E
Intersection Capacity Utilization 115.3%	ICU Level of Service H
Analysis Period (min) 15	





























Splits and Phases: 5: Heacock Street & Cactus Avenue



HCM 6th Signalized Intersection Summary  
5: Heacock Street & Cactus Avenue

Gateway Aviation TA (JN:13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 			 	
Traffic Volume (veh/h)	226	1974	1271	25	881	121	752	620	56	169	688	56
Future Volume (veh/h)	226	1974	1271	25	881	121	752	620	56	169	688	56
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1811	1826	1885	1870	1811	1870	1870	1900	1856	1900
Adj Flow Rate, veh/h	235	2056	621	26	918	64	783	646	22	176	717	11
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	1	6	5	1	2	6	2	2	0	3	0
Cap, veh/h	273	2235	885	43	1450	101	748	1150	39	220	819	13
Arrive On Green	0.23	0.59	0.38	0.02	0.42	0.26	0.33	0.48	0.31	0.12	0.22	0.22
Sat Flow, veh/h	1810	5656	1531	1739	5227	363	3450	3594	122	1810	3645	56
Grp Volume(v), veh/h	235	2056	621	26	662	320	783	336	332	176	365	363
Grp Sat Flow(s),veh/h/ln	1810	1885	1531	1739	1885	1820	1725	1870	1846	1810	1856	1845
Q Serve(g_s), s	14.4	37.5	5.0	1.7	16.0	16.5	25.0	14.7	15.0	10.9	21.9	21.9
Cycle Q Clear(g_c), s	14.4	37.5	5.0	1.7	16.0	16.5	25.0	14.7	15.0	10.9	21.9	21.9
Prop In Lane	1.00		1.00	1.00		0.20	1.00		0.07	1.00		0.03
Lane Grp Cap(c), veh/h	273	2235	885	43	1046	505	748	599	591	220	417	415
V/C Ratio(X)	0.86	0.92	0.70	0.61	0.63	0.63	1.05	0.56	0.56	0.80	0.88	0.88
Avail Cap(c_a), veh/h	283	2281	897	75	1128	545	748	599	591	385	459	456
HCM Platoon Ratio	1.50	1.50	1.00	1.00	1.50	1.00	1.50	1.50	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.4	21.9	7.1	55.7	29.0	30.7	38.9	24.2	24.8	49.3	43.1	43.1
Incr Delay (d2), s/veh	21.0	6.4	2.0	5.2	0.7	1.5	45.8	0.7	0.8	2.6	14.9	15.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.3	12.4	5.6	0.8	6.2	6.5	13.8	5.5	5.6	4.9	11.4	11.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.5	28.3	9.2	60.8	29.7	32.2	84.7	25.0	25.6	51.8	58.0	58.2
LnGrp LOS	E	C	A	E	C	C	F	C	C	D	E	E
Approach Vol, veh/h		2912			1008			1451			904	
Approach Delay, s/veh		27.1			31.3			57.3			56.9	
Approach LOS		C			C			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.3	49.0	28.5	30.4	20.9	35.5	17.5	41.4				
Change Period (Y+Rc), s	4.5	5.5	5.5	* 5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	5.0	44.5	23.0	* 28	17.0	32.5	23.5	27.0				
Max Q Clear Time (g_c+I1), s	3.7	39.5	27.0	23.9	16.4	18.5	12.9	17.0				
Green Ext Time (p_c), s	0.0	4.0	0.0	1.0	0.0	3.4	0.2	1.7				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			39.1									
HCM 6th LOS			D									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings  
6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

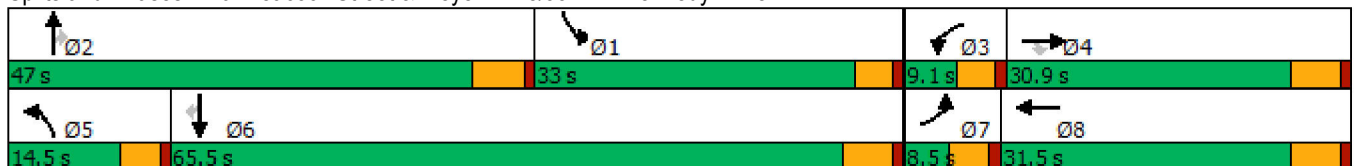
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Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	32	202	324	33	92	90	963	80	335	1117	22	
Future Volume (vph)	32	202	324	33	92	90	963	80	335	1117	22	
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	7	4		3	8	5	2		1	6		
Permitted Phases			4					2			6	
Detector Phase	7	4	4	3	8	5	2	2	1	6	6	
Switch Phase												
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	
Minimum Split (s)	8.5	23.5	23.5	8.5	31.5	8.5	29.5	29.5	8.5	23.5	23.5	
Total Split (s)	8.5	30.9	30.9	9.1	31.5	14.5	47.0	47.0	33.0	65.5	65.5	
Total Split (%)	7.1%	25.8%	25.8%	7.6%	26.3%	12.1%	39.2%	39.2%	27.5%	54.6%	54.6%	
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5	4.5	4.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	5.5	4.5	5.5	5.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max	
Act Effct Green (s)	4.0	17.9	17.9	4.6	16.4	9.0	41.9	41.9	27.6	60.6	60.6	
Actuated g/C Ratio	0.04	0.17	0.17	0.04	0.15	0.08	0.39	0.39	0.26	0.56	0.56	
v/c Ratio	0.52	0.75	0.77	0.47	0.42	0.66	0.80	0.11	0.83	0.65	0.02	
Control Delay	80.7	58.6	30.5	73.4	15.9	70.5	36.4	3.3	55.6	20.2	0.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	80.7	58.6	30.5	73.4	15.9	70.5	36.4	3.3	55.6	20.2	0.0	
LOS	F	E	C	E	B	E	D	A	E	C	A	
Approach Delay		43.6			22.1		36.8			27.9		
Approach LOS		D			C		D			C		

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 108.2	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 32.8	Intersection LOS: C
Intersection Capacity Utilization 75.8%	ICU Level of Service D
Analysis Period (min) 15	
























Splits and Phases: 6: Heacock Street & Meyer Drive/John F. Kennedy Drive

















HCM 6th Signalized Intersection Summary  
 6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	202	324	33	92	179	90	963	80	335	1117	22
Future Volume (veh/h)	32	202	324	33	92	179	90	963	80	335	1117	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1900	1900	1885	1885	1900	1811	1900	1841	1796	1900
Adj Flow Rate, veh/h	37	232	194	38	106	143	103	1107	63	385	1284	11
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	1	0	0	1	1	0	6	0	4	7	0
Cap, veh/h	47	277	237	48	279	236	129	1418	630	415	2034	911
Arrive On Green	0.03	0.15	0.15	0.03	0.15	0.15	0.07	0.39	0.39	0.24	0.57	0.57
Sat Flow, veh/h	1810	1885	1610	1810	1885	1598	1810	3622	1610	1753	3593	1610
Grp Volume(v), veh/h	37	232	194	38	106	143	103	1107	63	385	1284	11
Grp Sat Flow(s),veh/h/ln	1810	1885	1610	1810	1885	1598	1810	1811	1610	1753	1796	1610
Q Serve(g_s), s	2.2	12.7	12.4	2.2	5.4	8.9	5.9	28.4	2.1	22.8	25.6	0.3
Cycle Q Clear(g_c), s	2.2	12.7	12.4	2.2	5.4	8.9	5.9	28.4	2.1	22.8	25.6	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	47	277	237	48	279	236	129	1418	630	415	2034	911
V/C Ratio(X)	0.79	0.84	0.82	0.78	0.38	0.61	0.80	0.78	0.10	0.93	0.63	0.01
Avail Cap(c_a), veh/h	68	452	386	79	462	392	171	1418	630	471	2034	911
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.3	44.0	43.8	51.3	40.8	42.3	48.4	28.3	13.1	39.6	15.5	10.0
Incr Delay (d2), s/veh	18.5	3.4	2.9	9.9	0.3	0.9	12.9	4.3	0.3	22.1	1.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	6.1	4.9	1.1	2.4	3.4	3.0	12.1	1.0	11.8	9.4	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.8	47.3	46.7	61.1	41.1	43.2	61.3	32.6	13.4	61.7	17.0	10.1
LnGrp LOS	E	D	D	E	D	D	E	C	B	E	B	B
Approach Vol, veh/h		463			287			1273			1680	
Approach Delay, s/veh		48.9			44.8			34.0			27.2	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	30.6	47.0	7.3	21.1	12.1	65.5	7.3	21.2				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	28.5	* 42	4.6	25.4	10.0	60.0	4.0	26.0				
Max Q Clear Time (g_c+I1), s	24.8	30.4	4.2	14.7	7.9	27.6	4.2	10.9				
Green Ext Time (p_c), s	0.2	3.8	0.0	0.9	0.0	6.3	0.0	0.7				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			33.6									
HCM 6th LOS			C									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings  
11: Heacock Street & Cardinal Avenue

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			 			 
Traffic Volume (vph)	55	52	973	19	17	1417
Future Volume (vph)	55	52	973	19	17	1417
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	26.6	26.6	21.6	21.6	9.6	16.2
Total Split (s)	27.0	27.0	82.0	82.0	11.0	93.0
Total Split (%)	22.5%	22.5%	68.3%	68.3%	9.2%	77.5%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	12.7	12.7	55.7	55.7	6.1	58.1
Actuated g/C Ratio	0.17	0.17	0.74	0.74	0.08	0.77
v/c Ratio	0.24	0.19	0.48	0.02	0.15	0.72
Control Delay	35.6	11.2	7.6	2.8	44.5	9.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.6	11.2	7.6	2.8	44.5	9.0
LOS	D	B	A	A	D	A
Approach Delay	23.8		7.5			9.5
Approach LOS	C		A			A

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 75.4	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 9.3	Intersection LOS: A
Intersection Capacity Utilization 56.5%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 11: Heacock Street & Cardinal Avenue



HCM 6th Signalized Intersection Summary  
 11: Heacock Street & Cardinal Avenue

Gateway Aviation TA (JN:13445)

05/10/2022



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↶	↷	↕	↷	↶	↕
Traffic Volume (veh/h)	55	52	973	19	17	1417
Future Volume (veh/h)	55	52	973	19	17	1417
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1752	1781	1693	1781	1752
Adj Flow Rate, veh/h	71	67	1247	24	22	1817
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	2	10	8	14	8	10
Cap, veh/h	240	200	2199	885	42	2359
Arrive On Green	0.13	0.13	0.62	0.62	0.02	0.71
Sat Flow, veh/h	1781	1485	3563	1434	1697	3416
Grp Volume(v), veh/h	71	67	1247	24	22	1817
Grp Sat Flow(s),veh/h/ln	1781	1485	1781	1434	1697	1664
Q Serve(g_s), s	2.5	2.8	14.2	0.4	0.9	24.2
Cycle Q Clear(g_c), s	2.5	2.8	14.2	0.4	0.9	24.2
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	240	200	2199	885	42	2359
V/C Ratio(X)	0.30	0.34	0.57	0.03	0.52	0.77
Avail Cap(c_a), veh/h	579	482	3999	1610	157	4189
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.9	27.0	7.8	5.1	33.2	6.4
Incr Delay (d2), s/veh	0.7	1.0	0.2	0.0	3.6	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	1.0	3.5	0.1	0.4	3.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	27.6	28.0	8.0	5.2	36.9	7.0
LnGrp LOS	C	C	A	A	D	A
Approach Vol, veh/h	138		1271			1839
Approach Delay, s/veh	27.8		8.0			7.4
Approach LOS	C		A			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	6.3	48.8			55.1	13.9
Change Period (Y+Rc), s	4.6	* 6.2			6.2	4.6
Max Green Setting (Gmax), s	6.4	* 77			86.8	22.4
Max Q Clear Time (g_c+I1), s	2.9	16.2			26.2	4.8
Green Ext Time (p_c), s	0.0	11.3			22.7	0.3

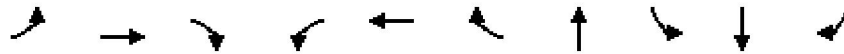
Intersection Summary

HCM 6th Ctrl Delay	8.5
HCM 6th LOS	A

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
12: Heacock Street & San Michele Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBL	SBT	SBR	Ø5
Lane Configurations	↖	↗	↘	↖	↗	↘	↕	↖	↗	↘	↖
Traffic Volume (vph)	53	316	6	20	93	625	94	812	248	32	
Future Volume (vph)	53	316	6	20	93	625	94	812	248	32	
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	NA	Prot	NA	Perm	
Protected Phases	7	4		3	8	1	2	1	6		5
Permitted Phases			4			8				6	
Detector Phase	7	4	4	3	8	1	2	1	6	6	
Switch Phase											
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0
Minimum Split (s)	9.5	30.5	30.5	8.5	30.5	8.5	34.5	8.5	34.5	34.5	8.5
Total Split (s)	10.3	33.6	33.6	8.5	31.8	43.3	34.6	43.3	69.4	69.4	8.5
Total Split (%)	8.6%	28.0%	28.0%	7.1%	26.5%	36.1%	28.8%	36.1%	57.8%	57.8%	7%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5	5.5	
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min	Min	None
Act Effct Green (s)	16.3	28.7	28.7	4.1	12.4	54.8	11.2	36.7	52.6	52.6	
Actuated g/C Ratio	0.17	0.30	0.30	0.04	0.13	0.56	0.12	0.38	0.54	0.54	
v/c Ratio	0.24	0.81	0.01	0.37	0.55	0.71	0.44	0.84	0.36	0.04	
Control Delay	43.8	46.8	0.0	63.9	49.4	10.2	32.9	35.7	14.0	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	43.8	46.8	0.0	63.9	49.4	10.2	32.9	35.7	14.0	0.1	
LOS	D	D	A	E	D	B	C	D	B	A	
Approach Delay		45.6			16.6		32.9		29.7		
Approach LOS		D			B		C		C		

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 97.1	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay: 28.3	Intersection LOS: C
Intersection Capacity Utilization 58.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 12: Heacock Street & San Michele Road





























HCM 6th Signalized Intersection Summary  
 12: Heacock Street & San Michele Road

Gateway Aviation TA (JN:13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	316	6	20	93	625	0	94	37	812	248	32
Future Volume (veh/h)	53	316	6	20	93	625	0	94	37	812	248	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1870	1900	1826	1900	1885	1826	1900
Adj Flow Rate, veh/h	76	451	9	29	133	536	0	134	32	1160	354	46
Peak Hour Factor	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Percent Heavy Veh, %	0	0	0	0	0	2	0	5	0	1	5	0
Cap, veh/h	329	511	422	43	210	757	2	219	51	1278	938	827
Arrive On Green	0.18	0.27	0.27	0.02	0.11	0.11	0.00	0.08	0.08	0.37	0.51	0.51
Sat Flow, veh/h	1810	1900	1571	1810	1900	1585	1810	2795	649	3483	1826	1610
Grp Volume(v), veh/h	76	451	9	29	133	536	0	82	84	1160	354	46
Grp Sat Flow(s),veh/h/ln	1810	1900	1571	1810	1900	1585	1810	1735	1709	1742	1826	1610
Q Serve(g_s), s	2.9	18.2	0.3	1.3	5.4	0.0	0.0	3.7	3.8	25.3	9.4	0.4
Cycle Q Clear(g_c), s	2.9	18.2	0.3	1.3	5.4	0.0	0.0	3.7	3.8	25.3	9.4	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.38	1.00		1.00
Lane Grp Cap(c), veh/h	329	511	422	43	210	757	2	136	134	1278	938	827
V/C Ratio(X)	0.23	0.88	0.02	0.68	0.63	0.71	0.00	0.60	0.63	0.91	0.38	0.06
Avail Cap(c_a), veh/h	329	666	551	90	624	1102	90	630	621	1687	1456	1284
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.0	28.1	17.7	38.8	34.1	16.5	0.0	35.7	35.8	24.1	11.7	1.3
Incr Delay (d2), s/veh	0.1	9.2	0.0	6.7	1.2	0.5	0.0	1.6	1.8	5.2	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	9.3	0.1	0.6	2.4	6.6	0.0	1.5	1.5	9.9	3.1	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.1	37.2	17.7	45.5	35.2	17.0	0.0	37.3	37.6	29.3	11.8	1.3
LnGrp LOS	C	D	B	D	D	B	A	D	D	C	B	A
Approach Vol, veh/h		536			698			166			1560	
Approach Delay, s/veh		35.6			21.6			37.5			24.5	
Approach LOS		D			C			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	34.9	11.8	6.4	27.0	0.0	46.7	19.1	14.4				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	38.8	* 29	4.0	28.1	4.0	63.9	5.8	26.3				
Max Q Clear Time (g_c+I1), s	27.3	5.8	3.3	20.2	0.0	11.4	4.9	7.4				
Green Ext Time (p_c), s	2.1	0.4	0.0	1.3	0.0	1.2	0.0	1.3				

Intersection Summary

HCM 6th Ctrl Delay	26.6
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



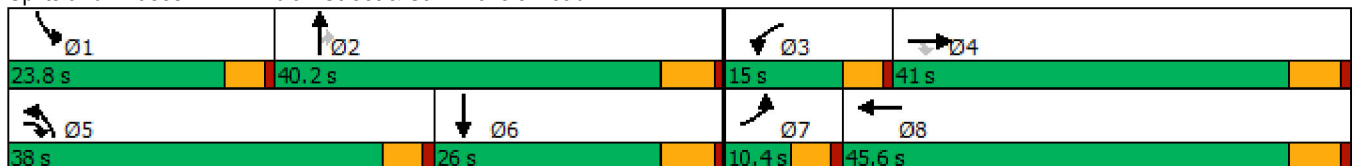
Timings  
14: Indian Street & San Michele Road

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	21	800	1392	228	465	699	179	205	131	349
Future Volume (vph)	21	800	1392	228	465	699	179	205	131	349
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	5	3	8	5	2		1	6
Permitted Phases			4					2		
Detector Phase	7	4	5	3	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	31.8	9.6	9.6	31.8	9.6	32.8	32.8	9.6	24.8
Total Split (s)	10.4	41.0	38.0	15.0	45.6	38.0	40.2	40.2	23.8	26.0
Total Split (%)	8.7%	34.2%	31.7%	12.5%	38.0%	31.7%	33.5%	33.5%	19.8%	21.7%
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	3.6	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	4.6	5.8	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None	None
Act Effct Green (s)	5.5	31.0	60.9	10.1	40.0	28.7	32.5	32.5	12.8	16.5
Actuated g/C Ratio	0.05	0.29	0.57	0.09	0.37	0.27	0.30	0.30	0.12	0.15
v/c Ratio	0.25	0.88	0.87	0.74	0.42	0.80	0.36	0.32	0.64	0.75
Control Delay	60.8	48.5	23.6	64.0	27.8	44.8	33.4	5.4	60.9	53.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.8	48.5	23.6	64.0	27.8	44.8	33.4	5.4	60.9	53.4
LOS	E	D	C	E	C	D	C	A	E	D
Approach Delay		33.0			38.9		35.5			55.3
Approach LOS		C			D		D			E

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 107.5  
 Natural Cycle: 85  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.88  
 Intersection Signal Delay: 37.0  
 Intersection LOS: D  
 Intersection Capacity Utilization 85.5%  
 ICU Level of Service E  
 Analysis Period (min) 15
























Splits and Phases: 14: Indian Street & San Michele Road



HCM 6th Signalized Intersection Summary  
 14: Indian Street & San Michele Road

Gateway Aviation TA (JN:13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	800	1392	228	465	54	699	179	205	131	349	30
Future Volume (veh/h)	21	800	1392	228	465	54	699	179	205	131	349	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		1.00	1.00		0.64
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1796	1856	1826	1900	1796	1796	1856	1870	1841	1752
Adj Flow Rate, veh/h	23	870	861	248	505	42	760	195	158	142	379	23
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	5	7	3	5	0	7	7	3	2	4	10
Cap, veh/h	40	1015	1413	309	1193	99	838	586	512	172	590	35
Arrive On Green	0.02	0.29	0.29	0.09	0.36	0.36	0.24	0.33	0.33	0.10	0.18	0.18
Sat Flow, veh/h	1739	3469	2588	3428	3318	275	3421	1796	1571	1781	3319	198
Grp Volume(v), veh/h	23	870	861	248	277	270	760	195	158	142	207	195
Grp Sat Flow(s),veh/h/ln	1739	1735	1294	1714	1826	1768	1711	1796	1571	1781	1841	1676
Q Serve(g_s), s	1.4	25.3	24.6	7.6	12.2	12.3	23.0	8.8	8.0	8.4	11.1	11.5
Cycle Q Clear(g_c), s	1.4	25.3	24.6	7.6	12.2	12.3	23.0	8.8	8.0	8.4	11.1	11.5
Prop In Lane	1.00		1.00	1.00		0.16	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	40	1015	1413	309	656	635	838	586	512	172	327	298
V/C Ratio(X)	0.57	0.86	0.61	0.80	0.42	0.42	0.91	0.33	0.31	0.83	0.63	0.65
Avail Cap(c_a), veh/h	94	1144	1509	334	681	659	1071	586	512	320	348	317
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.6	35.7	17.1	47.6	25.8	25.8	39.1	27.2	26.9	47.3	40.7	40.8
Incr Delay (d2), s/veh	4.7	5.5	0.4	11.1	0.2	0.2	8.2	0.1	0.1	3.8	2.4	3.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	10.9	6.6	3.6	5.1	4.9	10.0	3.6	2.9	3.7	5.0	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.3	41.1	17.5	58.8	26.0	26.0	47.3	27.3	27.1	51.1	43.1	44.1
LnGrp LOS	E	D	B	E	C	C	D	C	C	D	D	D
Approach Vol, veh/h		1754			795			1113				544
Approach Delay, s/veh		29.8			36.2			40.9				45.5
Approach LOS		C			D			D				D
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.9	40.6	14.2	37.0	30.7	24.8	7.1	44.2				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	19.2	34.4	10.4	35.2	33.4	20.2	5.8	39.8				
Max Q Clear Time (g_c+I1), s	10.4	10.8	9.6	27.3	25.0	13.5	3.4	14.3				
Green Ext Time (p_c), s	0.1	0.8	0.0	3.9	1.1	0.8	0.0	1.8				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			36.0									
HCM 6th LOS			D									

Timings  
15: Indian Street & Nandina Avenue



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	44	103	495	171	43	136	674	19	1434
Future Volume (vph)	44	103	495	171	43	136	674	19	1434
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	5	3	8	5	2	1	6
Permitted Phases	4								
Detector Phase	7	4	5	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	24.8	9.6	9.6	29.8	9.6	26.8	9.6	26.8
Total Split (s)	11.1	24.8	20.0	18.0	31.7	20.0	66.7	10.5	57.2
Total Split (%)	9.3%	20.7%	16.7%	15.0%	26.4%	16.7%	55.6%	8.8%	47.7%
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	6.1	13.4	34.6	13.4	22.7	15.4	67.4	5.5	51.4
Actuated g/C Ratio	0.05	0.12	0.30	0.12	0.20	0.13	0.59	0.05	0.45
v/c Ratio	0.48	0.57	0.97	0.99	0.31	0.42	0.37	0.25	0.95
Control Delay	69.3	59.0	63.6	114.3	25.8	50.3	13.9	60.8	44.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.3	59.0	63.6	114.3	25.8	50.3	13.9	60.8	44.5
LOS	E	E	E	F	C	D	B	E	D
Approach Delay	63.3		82.3			19.5		44.7	
Approach LOS	E		F			B		D	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 114.5  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.99  
 Intersection Signal Delay: 44.7  
 Intersection LOS: D  
 Intersection Capacity Utilization 93.3%  
 ICU Level of Service F  
 Analysis Period (min) 15























Splits and Phases: 15: Indian Street & Nandina Avenue



HCM 6th Signalized Intersection Summary  
 15: Indian Street & Nandina Avenue

Gateway Aviation TA (JN:13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	103	495	171	43	53	136	674	69	19	1434	34
Future Volume (veh/h)	44	103	495	171	43	53	136	674	69	19	1434	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1722	1604	1633	1500	1870	1218	1870	1841	1796	1870	1841
Adj Flow Rate, veh/h	48	112	158	186	47	22	148	733	37	21	1559	17
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	12	20	18	27	2	46	2	4	7	2	4
Cap, veh/h	65	221	286	201	214	100	190	1839	93	37	1702	19
Arrive On Green	0.04	0.13	0.13	0.13	0.22	0.22	0.08	0.65	0.52	0.02	0.58	0.46
Sat Flow, veh/h	1810	1722	1359	1555	966	452	2321	3531	178	1711	3693	40
Grp Volume(v), veh/h	48	112	158	186	0	69	148	388	382	21	789	787
Grp Sat Flow(s),veh/h/ln	1810	1722	1359	1555	0	1418	1160	1870	1838	1711	1870	1863
Q Serve(g_s), s	2.7	6.3	10.8	12.3	0.0	4.1	6.5	10.2	10.5	1.3	39.3	39.5
Cycle Q Clear(g_c), s	2.7	6.3	10.8	12.3	0.0	4.1	6.5	10.2	10.5	1.3	39.3	39.5
Prop In Lane	1.00		1.00	1.00		0.32	1.00		0.10	1.00		0.02
Lane Grp Cap(c), veh/h	65	221	286	201	0	314	190	974	957	37	862	859
V/C Ratio(X)	0.74	0.51	0.55	0.93	0.00	0.22	0.78	0.40	0.40	0.56	0.92	0.92
Avail Cap(c_a), veh/h	113	315	360	201	0	353	344	1096	1077	97	925	921
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.25	1.00	1.00	1.25	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.6	42.2	36.7	44.8	0.0	33.1	46.8	10.5	10.9	50.3	20.2	20.4
Incr Delay (d2), s/veh	5.9	1.8	1.7	43.0	0.0	0.3	2.6	0.3	0.3	4.8	13.0	13.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	2.7	3.6	7.0	0.0	1.4	1.9	3.4	3.5	0.6	15.6	15.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.5	44.0	38.4	87.8	0.0	33.5	49.4	10.7	11.2	55.2	33.2	33.5
LnGrp LOS	E	D	D	F	A	C	D	B	B	E	C	C
Approach Vol, veh/h		318			255			918			1597	
Approach Delay, s/veh		42.9			73.1			17.1			33.6	
Approach LOS		D			E			B			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.9	59.9	18.0	19.1	13.1	53.7	8.3	28.8				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	5.9	60.9	13.4	19.0	15.4	51.4	6.5	25.9				
Max Q Clear Time (g_c+I1), s	3.3	12.5	14.3	12.8	8.5	41.5	4.7	6.1				
Green Ext Time (p_c), s	0.0	4.6	0.0	0.5	0.1	6.4	0.0	0.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			33.0									
HCM 6th LOS			C									

Timings  
16: Indian Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

05/10/2022

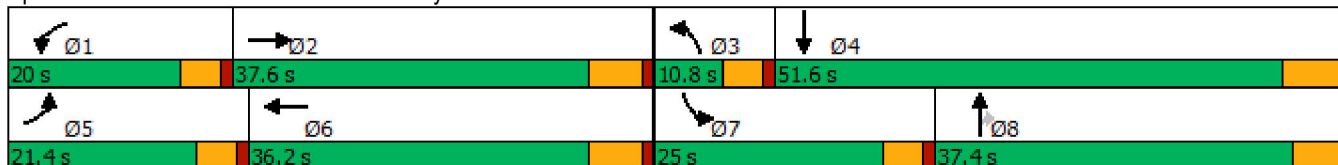


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↖↗	↕↔	↖	↕↔	↖↗	↕↕	↗	↖	↕↔
Traffic Volume (vph)	300	502	40	488	109	196	76	51	274
Future Volume (vph)	300	502	40	488	109	196	76	51	274
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	5	2	1	6	3	8		7	4
Permitted Phases							8		
Detector Phase	5	2	1	6	3	8	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2
Total Split (s)	21.4	37.6	20.0	36.2	10.8	37.4	37.4	25.0	51.6
Total Split (%)	17.8%	31.3%	16.7%	30.2%	9.0%	31.2%	31.2%	20.8%	43.0%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.4	4.4	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.4	5.4	4.6	6.2
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	16.3	29.4	7.4	18.0	6.3	35.0	35.0	8.0	33.5
Actuated g/C Ratio	0.17	0.31	0.08	0.19	0.07	0.37	0.37	0.08	0.35
v/c Ratio	0.77	0.44	0.36	0.62	0.66	0.21	0.14	0.42	1.00dr
Control Delay	52.1	28.6	53.5	39.2	63.8	23.5	1.2	54.0	26.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.1	28.6	53.5	39.2	63.8	23.5	1.2	54.0	26.5
LOS	D	C	D	D	E	C	A	D	C
Approach Delay		36.7		40.2		30.6			28.0
Approach LOS		D		D		C			C

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 95.8  
 Natural Cycle: 100  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.85  
 Intersection Signal Delay: 33.6  
 Intersection LOS: C  
 Intersection Capacity Utilization 67.0%  
 ICU Level of Service C  
 Analysis Period (min) 15  
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.
































Splits and Phases: 16: Indian Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 16: Indian Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  			  		 	 			 	 
Traffic Volume (veh/h)	300	502	73	40	488	14	109	196	76	51	274	598
Future Volume (veh/h)	300	502	73	40	488	14	109	196	76	51	274	598
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1559	1841	1707	1885	1811	1885	1707	1678	1870	1900	1856	1767
Adj Flow Rate, veh/h	375	628	-3	50	610	-76	136	245	-74	64	342	217
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	23	4	13	1	6	1	13	15	2	0	3	9
Cap, veh/h	474	1625	0	84	959	0	232	827	411	98	501	312
Arrive On Green	0.16	0.29	0.00	0.05	0.18	0.00	0.07	0.26	0.00	0.05	0.24	0.24
Sat Flow, veh/h	2881	5522	0	1795	5433	0	3155	3188	1585	1810	2086	1298
Grp Volume(v), veh/h	375	625	0	50	534	0	136	245	-74	64	288	271
Grp Sat Flow(s),veh/h/ln	1440	1841	0	1795	1811	0	1577	1594	1585	1810	1763	1622
Q Serve(g_s), s	7.7	5.5	0.0	1.7	5.5	0.0	2.6	3.8	0.0	2.1	9.1	9.4
Cycle Q Clear(g_c), s	7.7	5.5	0.0	1.7	5.5	0.0	2.6	3.8	0.0	2.1	9.1	9.4
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		0.80
Lane Grp Cap(c), veh/h	474	1625	0	84	959	0	232	827	411	98	423	389
V/C Ratio(X)	0.79	0.38	0.00	0.60	0.56	0.00	0.59	0.30	-0.18	0.65	0.68	0.70
Avail Cap(c_a), veh/h	788	2861	0	450	2691	0	319	1662	826	601	1304	1200
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.6	17.2	0.0	28.7	23.1	0.0	27.5	18.2	0.0	28.5	21.2	21.3
Incr Delay (d2), s/veh	1.1	0.1	0.0	2.5	0.5	0.0	0.9	0.2	0.0	2.7	1.9	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	2.0	0.0	0.7	2.1	0.0	0.9	1.2	0.0	0.9	3.5	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.8	17.4	0.0	31.2	23.6	0.0	28.4	18.4	0.0	31.2	23.1	23.5
LnGrp LOS	C	B	A	C	C	A	C	B	A	C	C	C
Approach Vol, veh/h		1000			584			307			623	
Approach Delay, s/veh		20.5			24.2			27.3			24.1	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.5	23.9	9.1	20.9	14.7	16.6	7.9	22.1				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	15.4	31.8	6.2	45.4	16.8	30.4	20.4	* 32				
Max Q Clear Time (g_c+I1), s	3.7	7.5	4.6	11.4	9.7	7.5	4.1	5.8				
Green Ext Time (p_c), s	0.0	3.9	0.0	3.4	0.4	3.3	0.0	1.4				

Intersection Summary

HCM 6th Ctrl Delay	23.1
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings

20: Perris Bl. & Harley Knox Bl.

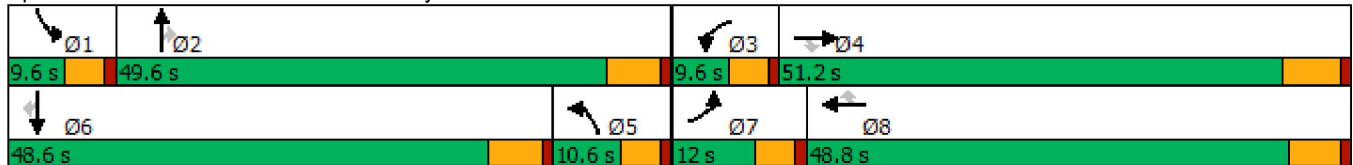
05/10/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	308	217	103	8	238	104	46	840	11	135	1082	290
Future Volume (vph)	308	217	103	8	238	104	46	840	11	135	1082	290
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	47.2	47.2	9.6	48.8	48.8	9.6	48.8	48.8	9.6	43.8	43.8
Total Split (s)	12.0	51.2	51.2	9.6	48.8	48.8	10.6	49.6	49.6	9.6	48.6	48.6
Total Split (%)	10.0%	42.7%	42.7%	8.0%	40.7%	40.7%	8.8%	41.3%	41.3%	8.0%	40.5%	40.5%
Yellow Time (s)	3.6	5.2	5.2	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 77.1  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 20: Perris Bl. & Harley Knox Bl.





























HCM 6th Signalized Intersection Summary  
 20: Perris Bl. & Harley Knox Bl.

Gateway Aviation (JN 13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	308	217	103	8	238	104	46	840	11	135	1082	290
Future Volume (veh/h)	308	217	103	8	238	104	46	840	11	135	1082	290
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1841	1811	1500	1841	1856	1589	1856	1604	1885	1856	1796
Adj Flow Rate, veh/h	338	238	71	9	262	66	51	923	8	148	1189	263
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	6	4	6	27	4	3	21	3	20	1	3	7
Cap, veh/h	362	850	373	32	735	227	133	1856	498	239	1886	566
Arrive On Green	0.11	0.24	0.24	0.01	0.15	0.15	0.05	0.37	0.37	0.07	0.37	0.37
Sat Flow, veh/h	3346	3497	1535	2771	5025	1551	2935	5066	1359	3483	5066	1521
Grp Volume(v), veh/h	338	238	71	9	262	66	51	923	8	148	1189	263
Grp Sat Flow(s),veh/h/ln	1673	1749	1535	1386	1675	1551	1468	1689	1359	1742	1689	1521
Q Serve(g_s), s	6.8	3.8	1.8	0.2	3.2	2.6	1.2	9.6	0.3	2.8	13.2	5.2
Cycle Q Clear(g_c), s	6.8	3.8	1.8	0.2	3.2	2.6	1.2	9.6	0.3	2.8	13.2	5.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	362	850	373	32	735	227	133	1856	498	239	1886	566
V/C Ratio(X)	0.93	0.28	0.19	0.28	0.36	0.29	0.38	0.50	0.02	0.62	0.63	0.46
Avail Cap(c_a), veh/h	362	2303	1011	203	3162	976	258	3247	871	255	3172	953
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.2	21.0	10.3	33.5	26.3	26.0	31.7	16.8	13.8	30.9	17.6	5.6
Incr Delay (d2), s/veh	30.2	0.2	0.2	1.8	0.3	0.7	0.7	0.2	0.0	2.7	0.4	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	1.4	0.8	0.1	1.2	0.9	0.4	3.2	0.1	1.2	4.4	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.5	21.2	10.5	35.3	26.6	26.7	32.4	17.0	13.8	33.7	17.9	6.2
LnGrp LOS	E	C	B	D	C	C	C	B	B	C	B	A
Approach Vol, veh/h		647			337			982			1600	
Approach Delay, s/veh		40.5			26.8			17.8			17.5	
Approach LOS		D			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.3	30.8	5.4	22.8	8.9	31.2	12.0	16.2				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	5.8	* 5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	5.0	43.8	5.0	45.0	6.0	* 43	7.4	* 43				
Max Q Clear Time (g_c+I1), s	4.8	11.6	2.2	5.8	3.2	15.2	8.8	5.2				
Green Ext Time (p_c), s	0.0	6.8	0.0	1.6	0.0	10.2	0.0	1.9				

Intersection Summary

HCM 6th Ctrl Delay	22.6
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



**APPENDIX 6.11:**

**OPENING YEAR CUMULATIVE (2026) WITH PROJECT (NON-PEAK) CONDITIONS  
INTERSECTION OPERATIONS ANALYSIS WORKSHEETS WITH IMPROVEMENTS**

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Timings

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

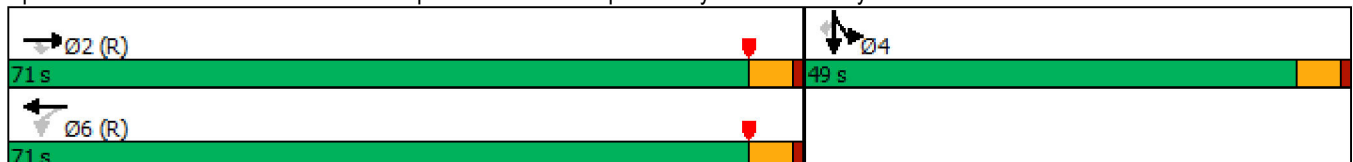


Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations	↑↑	↑	↑↑	↑	↑	↑	↑
Traffic Volume (vph)	804	26	187	278	821	1	290
Future Volume (vph)	804	26	187	278	821	1	290
Turn Type	NA	Perm	Perm	NA	Split	NA	Perm
Protected Phases	2			6	4	4	
Permitted Phases		2	6				4
Detector Phase	2	2	6	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	25.0	25.0	10.0	10.0	10.0
Total Split (s)	71.0	71.0	71.0	71.0	49.0	49.0	49.0
Total Split (%)	59.2%	59.2%	59.2%	59.2%	40.8%	40.8%	40.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None	None
Act Effct Green (s)	69.4	69.4	69.4	69.4	40.6	40.6	40.6
Actuated g/C Ratio	0.58	0.58	0.58	0.58	0.34	0.34	0.34
v/c Ratio	0.44	0.03	0.43	0.28	0.88	0.88	0.44
Control Delay	15.8	4.4	12.4	7.5	56.1	56.1	4.9
Queue Delay	0.0	0.0	0.0	0.2	53.8	53.8	0.0
Total Delay	15.8	4.4	12.4	7.7	110.0	110.0	4.9
LOS	B	A	B	A	F	F	A
Approach Delay	15.5			9.6		82.6	
Approach LOS	B			A		F	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection  
 Natural Cycle: 55  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.88  
 Intersection Signal Delay: 45.3  
 Intersection LOS: D  
 Intersection Capacity Utilization 134.9%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

05/10/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑↑	↑					↑	↑	↑
Traffic Volume (veh/h)	0	804	26	187	278	0	0	0	0	821	1	290
Future Volume (veh/h)	0	804	26	187	278	0	0	0	0	821	1	290
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1826	1826	1604	1870	0				1693	1900	1781
Adj Flow Rate, veh/h	0	874	28	203	302	0				893	0	255
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	5	5	20	2	0				14	0	8
Cap, veh/h	0	2107	940	608	1136	0				998	0	467
Arrive On Green	0.00	0.61	0.61	1.00	1.00	0.00				0.31	0.00	0.31
Sat Flow, veh/h	0	3561	1547	1027	1870	0				3224	0	1510
Grp Volume(v), veh/h	0	874	28	203	302	0				893	0	255
Grp Sat Flow(s),veh/h/ln	0	1735	1547	514	1870	0				1612	0	1510
Q Serve(g_s), s	0.0	15.9	0.9	7.7	0.0	0.0				31.7	0.0	16.8
Cycle Q Clear(g_c), s	0.0	15.9	0.9	23.5	0.0	0.0				31.7	0.0	16.8
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2107	940	608	1136	0				998	0	467
V/C Ratio(X)	0.00	0.41	0.03	0.33	0.27	0.00				0.90	0.00	0.55
Avail Cap(c_a), veh/h	0	2107	940	608	1136	0				1182	0	554
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.96	0.96	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	12.4	9.4	2.6	0.0	0.0				39.6	0.0	34.4
Incr Delay (d2), s/veh	0.0	0.6	0.1	1.4	0.6	0.0				8.1	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.7	0.3	0.3	0.2	0.0				13.1	0.0	6.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	13.0	9.5	4.0	0.6	0.0				47.7	0.0	35.4
LnGrp LOS	A	B	A	A	A	A				D	A	D
Approach Vol, veh/h		902			505						1148	
Approach Delay, s/veh		12.9			1.9						45.0	
Approach LOS		B			A						D	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		77.9		42.1		77.9						
Change Period (Y+Rc), s		5.0		5.0		5.0						
Max Green Setting (Gmax), s		66.0		44.0		66.0						
Max Q Clear Time (g_c+I1), s		17.9		33.7		25.5						
Green Ext Time (p_c), s		4.0		3.4		3.4						

Intersection Summary

HCM 6th Ctrl Delay	25.1
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Timings

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

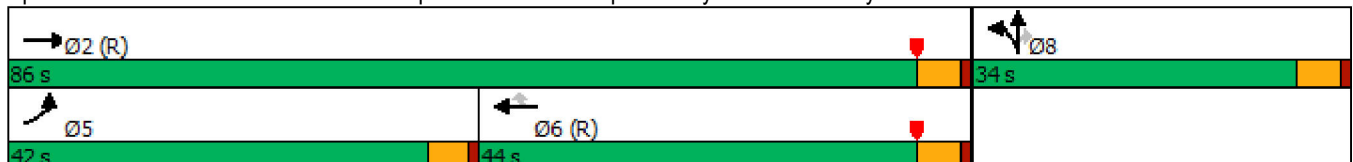


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations	↖↖	↕↕	↕↕	↗	↖	↗
Traffic Volume (vph)	486	1025	411	1054	3	275
Future Volume (vph)	486	1025	411	1054	3	275
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	26.0	24.0	24.0	10.0	10.0
Total Split (s)	42.0	86.0	44.0	44.0	34.0	34.0
Total Split (%)	35.0%	71.7%	36.7%	36.7%	28.3%	28.3%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max
Act Effct Green (s)	23.4	81.0	53.1	53.1	29.0	29.0
Actuated g/C Ratio	0.20	0.68	0.44	0.44	0.24	0.24
v/c Ratio	0.80	0.51	0.30	1.22	0.14	0.65
Control Delay	73.4	21.1	23.0	128.3	36.9	31.0
Queue Delay	0.0	5.1	0.0	0.0	0.0	0.0
Total Delay	73.4	26.2	23.0	128.3	36.9	31.0
LOS	E	C	C	F	D	C
Approach Delay		41.4	98.7		32.0	
Approach LOS		D	F		C	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.22  
 Intersection Signal Delay: 65.8  
 Intersection LOS: E  
 Intersection Capacity Utilization 134.9%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox Bl./Harley Knox Bl.

05/10/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↕			↕	↖		↕	↖			
Traffic Volume (veh/h)	486	1025	0	0	411	1054	53	3	275	0	0	0
Future Volume (veh/h)	486	1025	0	0	411	1054	53	3	275	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1841	1722	0	0	1796	1752	1870	1900	1811			
Adj Flow Rate, veh/h	528	1114	0	0	447	0	58	3	234			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	4	12	0	0	7	10	2	0	6			
Cap, veh/h	585	2209	0	0	1589		417	22	371			
Arrive On Green	0.34	1.00	0.00	0.00	0.47	0.00	0.24	0.24	0.24			
Sat Flow, veh/h	3401	3358	0	0	3503	1485	1725	89	1535			
Grp Volume(v), veh/h	528	1114	0	0	447	0	61	0	234			
Grp Sat Flow(s),veh/h/ln	1700	1636	0	0	1706	1485	1814	0	1535			
Q Serve(g_s), s	17.7	0.0	0.0	0.0	9.7	0.0	3.2	0.0	16.4			
Cycle Q Clear(g_c), s	17.7	0.0	0.0	0.0	9.7	0.0	3.2	0.0	16.4			
Prop In Lane	1.00		0.00	0.00		1.00	0.95		1.00			
Lane Grp Cap(c), veh/h	585	2209	0	0	1589		438	0	371			
V/C Ratio(X)	0.90	0.50	0.00	0.00	0.28		0.14	0.00	0.63			
Avail Cap(c_a), veh/h	1063	2209	0	0	1589		438	0	371			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.78	0.78	0.00	0.00	0.82	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	38.4	0.0	0.0	0.0	19.7	0.0	35.7	0.0	40.7			
Incr Delay (d2), s/veh	1.7	0.6	0.0	0.0	0.4	0.0	0.7	0.0	7.9			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	5.9	0.2	0.0	0.0	3.7	0.0	1.4	0.0	6.8			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.1	0.6	0.0	0.0	20.1	0.0	36.4	0.0	48.6			
LnGrp LOS	D	A	A	A	C		D	A	D			
Approach Vol, veh/h		1642			447	A		295				
Approach Delay, s/veh		13.3			20.1			46.1				
Approach LOS		B			C			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		86.0			25.1	60.9		34.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		81.0			37.5	39.0		29.0				
Max Q Clear Time (g_c+1), s		2.0			19.7	11.7		18.4				
Green Ext Time (p_c), s		5.7			0.9	1.7		0.8				

Intersection Summary

HCM 6th Ctrl Delay	18.7
HCM 6th LOS	B

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Timings  
5: Heacock Street & Cactus Avenue

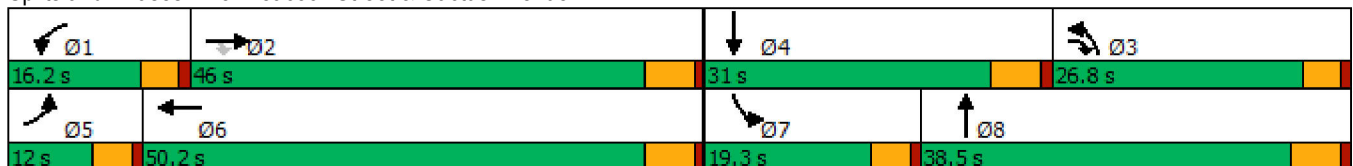


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↶	↶↶↶	↶	↶	↶↶↶	↶↶	↶↶	↶	↶↶
Traffic Volume (vph)	162	981	722	75	1904	800	665	129	347
Future Volume (vph)	162	981	722	75	1904	800	665	129	347
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	3	1	6	3	8	7	4
Permitted Phases			2						
Detector Phase	5	2	3	1	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.5	30.5	9.5	9.5	30.5	9.5	30.5	9.5	30.5
Total Split (s)	12.0	46.0	26.8	16.2	50.2	26.8	38.5	19.3	31.0
Total Split (%)	10.0%	38.3%	22.3%	13.5%	41.8%	22.3%	32.1%	16.1%	25.8%
Yellow Time (s)	3.5	4.5	3.5	3.5	4.5	3.5	4.5	3.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-2.0	0.0	0.0	-2.0	-2.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.5	3.5	4.5	4.5	3.5	2.5	4.5	3.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None
Act Effct Green (s)	8.5	47.6	70.5	8.8	46.8	25.0	30.1	12.9	19.0
Actuated g/C Ratio	0.08	0.42	0.62	0.08	0.41	0.22	0.27	0.11	0.17
v/c Ratio	1.22	0.44	0.66	0.53	0.91	1.05	0.74	0.64	0.72
Control Delay	189.2	25.6	10.2	64.2	39.0	87.6	43.4	62.3	48.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	189.2	25.6	10.2	64.2	39.0	87.6	43.4	62.3	48.4
LOS	F	C	B	E	D	F	D	E	D
Approach Delay		33.9			39.9		67.1		51.5
Approach LOS		C			D		E		D

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 113.3	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.22	
Intersection Signal Delay: 45.8	Intersection LOS: D
Intersection Capacity Utilization 98.3%	ICU Level of Service F
Analysis Period (min) 15	





























Splits and Phases: 5: Heacock Street & Cactus Avenue



HCM 6th Signalized Intersection Summary  
5: Heacock Street & Cactus Avenue

Gateway Aviation TA (JN:13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 			 	
Traffic Volume (veh/h)	162	981	722	75	1904	147	800	665	28	129	347	97
Future Volume (veh/h)	162	981	722	75	1904	147	800	665	28	129	347	97
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1752	1900	1885	1856	1826	1841	1841	1870	1841	1885
Adj Flow Rate, veh/h	169	1022	622	78	1983	91	833	693	13	134	361	75
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	10	0	1	3	5	4	4	2	4	1
Cap, veh/h	138	2362	900	100	2188	100	771	1002	19	177	463	95
Arrive On Green	0.12	0.63	0.40	0.06	0.61	0.39	0.33	0.42	0.27	0.10	0.16	0.15
Sat Flow, veh/h	1781	5611	1485	1810	5366	246	3478	3602	68	1781	2963	609
Grp Volume(v), veh/h	169	1022	622	78	1392	682	833	354	352	134	223	213
Grp Sat Flow(s),veh/h/ln	1781	1870	1485	1810	1885	1841	1739	1841	1829	1781	1841	1731
Q Serve(g_s), s	8.5	10.1	7.6	4.7	35.2	36.1	24.3	17.3	17.4	8.0	12.7	13.0
Cycle Q Clear(g_c), s	8.5	10.1	7.6	4.7	35.2	36.1	24.3	17.3	17.4	8.0	12.7	13.0
Prop In Lane	1.00		1.00	1.00		0.13	1.00		0.04	1.00		0.35
Lane Grp Cap(c), veh/h	138	2362	900	100	1538	751	771	512	509	177	287	270
V/C Ratio(X)	1.22	0.43	0.69	0.78	0.91	0.91	1.08	0.69	0.69	0.76	0.78	0.79
Avail Cap(c_a), veh/h	138	2362	900	193	1606	784	771	571	567	257	445	419
HCM Platoon Ratio	1.50	1.50	1.00	1.00	1.50	1.00	1.50	1.50	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.4	13.6	4.5	51.1	19.4	21.1	36.6	28.1	28.4	48.0	44.4	44.7
Incr Delay (d2), s/veh	148.8	0.0	1.9	4.8	7.2	13.6	56.3	2.3	2.4	3.6	1.7	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.2	3.4	3.1	2.2	11.6	13.9	14.7	6.6	6.6	3.6	5.7	5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	197.2	13.6	6.5	55.9	26.6	34.7	92.9	30.4	30.7	51.7	46.1	47.1
LnGrp LOS	F	B	A	E	C	C	F	C	C	D	D	D
Approach Vol, veh/h		1813			2152			1539			570	
Approach Delay, s/veh		28.3			30.3			64.3			47.8	
Approach LOS		C			C			E			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.6	49.6	27.8	21.6	12.0	48.2	14.4	35.0				
Change Period (Y+Rc), s	4.5	5.5	5.5	* 5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	11.7	40.5	22.3	* 26	7.5	44.7	14.8	33.0				
Max Q Clear Time (g_c+I1), s	6.7	12.1	26.3	15.0	10.5	38.1	10.0	19.4				
Green Ext Time (p_c), s	0.0	6.0	0.0	1.1	0.0	4.7	0.1	2.1				

Intersection Summary

HCM 6th Ctrl Delay	39.9
HCM 6th LOS	D

Notes

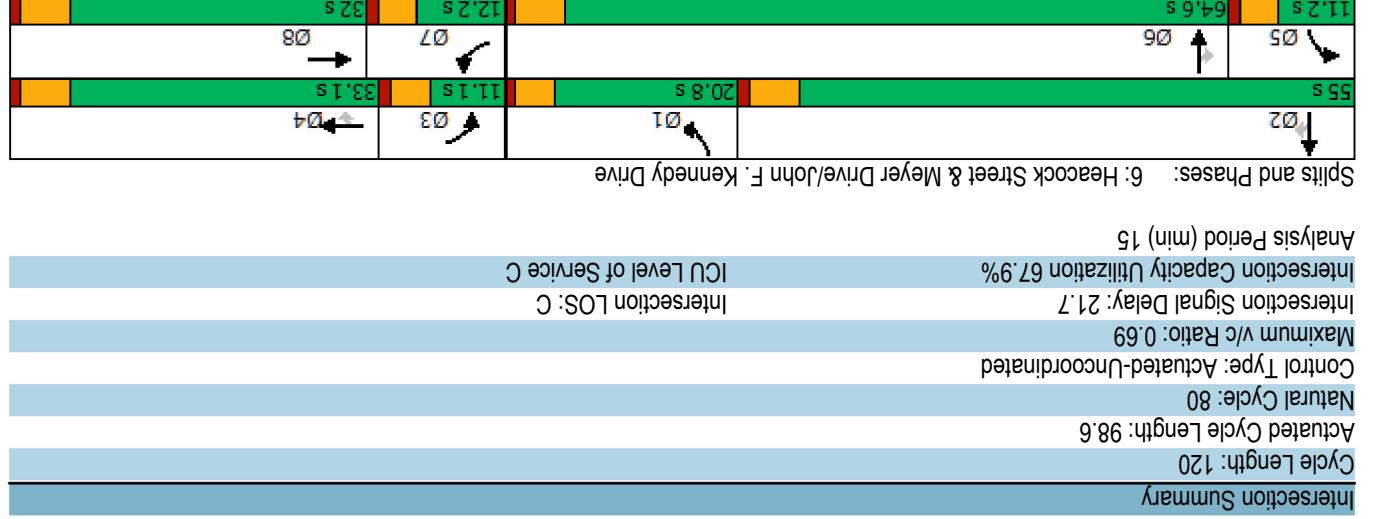
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.





Lane Group	EBL	EBT	EBR	WBL	WBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘
Traffic Volume (vph)	38	42	111	33	220	34	976	54	117	779	20	20	20
Future Volume (vph)	38	42	111	33	220	34	976	54	117	779	20	20	20
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	4	4	4	4	4	4	4	4	4	4	4
Permitted Phases	7	4	4	4	4	4	4	4	4	4	4	4	4
Detector Phase	7	4	4	4	4	4	4	4	4	4	4	4	4
Switch Phase	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	5.0
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	5.0
Minimum Split (s)	8.5	23.5	23.5	8.5	31.5	31.5	8.5	30.5	30.5	8.5	23.5	23.5	23.5
Total Split (s)	12.2	33.1	33.1	11.1	32.0	11.2	55.0	55.0	20.8	64.6	64.6	64.6	64.6
Total Split (%)	10.2%	27.6%	27.6%	9.3%	26.7%	9.3%	45.8%	45.8%	17.3%	53.8%	53.8%	53.8%	53.8%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	5.5	4.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	6.5	13.6	13.6	5.9	13.1	6.0	50.8	50.8	12.3	61.8	61.8	61.8	61.8
Actuated g/C Ratio	0.07	0.14	0.14	0.06	0.13	0.06	0.52	0.52	0.12	0.63	0.63	0.63	0.63
v/c Ratio	0.38	0.18	0.30	0.32	0.69	0.33	0.55	0.06	0.53	0.37	0.02	0.02	0.02
Control Delay	59.7	40.6	4.5	58.4	29.5	58.6	20.7	0.1	51.6	12.8	0.1	0.1	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.7	40.6	4.5	58.4	29.5	58.6	20.7	0.1	51.6	12.8	0.1	0.1	0.1
LOS	E	D	A	E	C	E	C	A	D	B	A	A	A
Approach Delay	23.5	31.5	20.9	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4
Approach LOS	C	C	C	C	C	C	C	C	C	C	C	C	C

Intersection Summary													
Cycle Length:	120												
Actuated Cycle Length:	98.6												
Natural Cycle:	80												
Control Type:	Actuated-Uncoordinated												
Maximum v/c Ratio:	0.69												
Intersection Signal Delay:	21.7												
Intersection LOS:	C												
Intersection Capacity Utilization:	67.9%												
ICU Level of Service:	C												
Analysis Period (min):	15												



























Splits and Phases: 6: Heacock Street & Meyer Drive/John F. Kennedy Drive

HCM 6th Signalized Intersection Summary  
 6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	42	111	33	220	213	34	976	54	117	779	20
Future Volume (veh/h)	38	42	111	33	220	213	34	976	54	117	779	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.96	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1648	1767	1811	1796	1841	1885	1781	1811	1767	1856	1767	1618
Adj Flow Rate, veh/h	40	44	80	34	229	186	35	1017	46	122	811	11
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	17	9	6	7	4	1	8	6	9	3	9	19
Cap, veh/h	48	293	254	42	306	236	43	1779	705	195	2072	794
Arrive On Green	0.03	0.17	0.17	0.02	0.16	0.16	0.03	0.49	0.49	0.11	0.59	0.59
Sat Flow, veh/h	1570	1767	1535	1711	1917	1481	1697	3622	1435	1767	3533	1354
Grp Volume(v), veh/h	40	44	80	34	219	196	35	1017	46	122	811	11
Grp Sat Flow(s),veh/h/ln	1570	1767	1535	1711	1841	1557	1697	1811	1435	1767	1767	1354
Q Serve(g_s), s	2.6	2.1	4.6	2.0	11.5	12.2	2.1	20.0	1.3	6.6	12.4	0.3
Cycle Q Clear(g_c), s	2.6	2.1	4.6	2.0	11.5	12.2	2.1	20.0	1.3	6.6	12.4	0.3
Prop In Lane	1.00		1.00	1.00		0.95	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	48	293	254	42	294	248	43	1779	705	195	2072	794
V/C Ratio(X)	0.84	0.15	0.31	0.82	0.75	0.79	0.82	0.57	0.07	0.62	0.39	0.01
Avail Cap(c_a), veh/h	120	484	420	112	484	409	113	1779	705	286	2072	794
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.6	36.0	37.0	48.9	40.4	40.7	48.9	18.1	7.7	42.8	11.2	8.7
Incr Delay (d2), s/veh	13.0	0.1	0.3	13.2	1.4	2.1	13.0	1.3	0.2	1.2	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.9	1.7	1.0	5.1	4.6	1.0	7.7	0.5	2.8	4.3	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.7	36.1	37.3	62.2	41.9	42.8	61.9	19.5	7.9	44.0	11.7	8.7
LnGrp LOS	E	D	D	E	D	D	E	B	A	D	B	A
Approach Vol, veh/h		164			449			1098			944	
Approach Delay, s/veh		42.9			43.8			20.4			15.9	
Approach LOS		D			D			C			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.6	55.0	7.0	22.2	7.0	64.6	7.6	21.6				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	16.3	* 50	6.6	27.6	6.7	59.1	7.7	26.5				
Max Q Clear Time (g_c+I1), s	8.6	22.0	4.0	6.6	4.1	14.4	4.6	14.2				
Green Ext Time (p_c), s	0.1	4.5	0.0	0.2	0.0	3.5	0.0	1.2				













Intersection Summary

HCM 6th Ctrl Delay	24.1
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
11: Heacock Street & Cardinal Avenue

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	11	12	1037	56	47	883
Future Volume (vph)	11	12	1037	56	47	883
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	26.6	26.6	21.6	21.6	9.6	16.2
Total Split (s)	27.0	27.0	76.0	76.0	17.0	93.0
Total Split (%)	22.5%	22.5%	63.3%	63.3%	14.2%	77.5%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	13.0	13.0	42.2	42.2	7.3	48.8
Actuated g/C Ratio	0.23	0.23	0.75	0.75	0.13	0.86
v/c Ratio	0.04	0.04	0.45	0.05	0.23	0.37
Control Delay	25.1	13.7	8.9	3.2	32.6	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.1	13.7	8.9	3.2	32.6	4.1
LOS	C	B	A	A	C	A
Approach Delay	19.2		8.6			5.5
Approach LOS	B		A			A













Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 56.5	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.45	
Intersection Signal Delay: 7.3	Intersection LOS: A
Intersection Capacity Utilization 52.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 11: Heacock Street & Cardinal Avenue



HCM 6th Signalized Intersection Summary  
 11: Heacock Street & Cardinal Avenue

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	11	12	1037	56	47	883
Future Volume (veh/h)	11	12	1037	56	47	883
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1559	1441	1781	1870	1781	1693
Adj Flow Rate, veh/h	12	14	1178	64	53	1003
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	23	31	8	2	8	14
Cap, veh/h	92	76	1870	832	93	2208
Arrive On Green	0.06	0.06	0.52	0.52	0.05	0.69
Sat Flow, veh/h	1485	1221	3563	1585	1697	3300
Grp Volume(v), veh/h	12	14	1178	64	53	1003
Grp Sat Flow(s),veh/h/ln	1485	1221	1781	1585	1697	1608
Q Serve(g_s), s	0.3	0.5	10.1	0.9	1.3	6.1
Cycle Q Clear(g_c), s	0.3	0.5	10.1	0.9	1.3	6.1
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	92	76	1870	832	93	2208
V/C Ratio(X)	0.13	0.18	0.63	0.08	0.57	0.45
Avail Cap(c_a), veh/h	774	637	5923	2635	490	6499
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.0	19.1	7.2	5.1	19.8	3.1
Incr Delay (d2), s/veh	0.6	1.2	0.4	0.0	2.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.1	1.8	0.1	0.5	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	19.7	20.3	7.6	5.1	21.9	3.2
LnGrp LOS	B	C	A	A	C	A
Approach Vol, veh/h	26		1242			1056
Approach Delay, s/veh	20.0		7.5			4.2
Approach LOS	B		A			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	6.9	28.7			35.7	7.3
Change Period (Y+Rc), s	4.6	* 6.2			6.2	4.6
Max Green Setting (Gmax), s	12.4	* 71			86.8	22.4
Max Q Clear Time (g_c+I1), s	3.3	12.1			8.1	2.5
Green Ext Time (p_c), s	0.0	10.5			8.0	0.0

Intersection Summary

HCM 6th Ctrl Delay	6.1
HCM 6th LOS	A

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
12: Heacock Street & San Michele Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	28	74	4	36	310	734	1	60	461	107	47
Future Volume (vph)	28	74	4	36	310	734	1	60	461	107	47
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	1	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	4.0	5.0	4.0	5.0	5.0
Minimum Split (s)	9.5	30.5	30.5	8.5	30.5	8.5	8.5	34.5	8.5	34.5	34.5
Total Split (s)	10.0	36.4	36.4	11.6	38.0	35.0	8.5	37.0	35.0	63.5	63.5
Total Split (%)	8.3%	30.3%	30.3%	9.7%	31.7%	29.2%	7.1%	30.8%	29.2%	52.9%	52.9%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	3.5	4.5	3.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	4.5	5.5	4.5	5.5	5.5
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	Min	Min
Act Effct Green (s)	5.8	15.5	15.5	12.2	21.9	48.3	4.5	9.5	20.2	33.7	33.7
Actuated g/C Ratio	0.08	0.21	0.21	0.16	0.30	0.65	0.06	0.13	0.27	0.45	0.45
v/c Ratio	0.25	0.26	0.01	0.16	0.74	0.68	0.01	0.21	0.65	0.17	0.07
Control Delay	47.4	34.4	0.0	34.8	35.7	5.8	48.0	30.3	30.2	15.4	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.4	34.4	0.0	34.8	35.7	5.8	48.0	30.3	30.2	15.4	0.9
LOS	D	C	A	C	D	A	D	C	C	B	A
Approach Delay		36.6			15.3			30.5		25.3	
Approach LOS		D			B			C		C	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 74.1  
 Natural Cycle: 95  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.74  
 Intersection Signal Delay: 20.4  
 Intersection LOS: C  
 Intersection Capacity Utilization 65.0%  
 ICU Level of Service C  
 Analysis Period (min) 15

























Splits and Phases: 12: Heacock Street & San Michele Road



HCM 6th Signalized Intersection Summary  
 12: Heacock Street & San Michele Road

Gateway Aviation TA (JN:13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	74	4	36	310	734	1	60	9	461	107	47
Future Volume (veh/h)	28	74	4	36	310	734	1	60	9	461	107	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1856	1366	1796	1900	1856	1900	1856	1707	1811	1826	1856
Adj Flow Rate, veh/h	37	99	5	48	413	712	1	80	12	615	143	63
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh, %	0	3	36	7	0	3	0	3	13	6	5	3
Cap, veh/h	56	171	107	380	538	804	3	271	40	763	607	523
Arrive On Green	0.03	0.09	0.09	0.22	0.28	0.28	0.00	0.09	0.09	0.23	0.33	0.33
Sat Flow, veh/h	1810	1856	1158	1711	1900	1572	1810	3084	453	3346	1826	1572
Grp Volume(v), veh/h	37	99	5	48	413	712	1	45	47	615	143	63
Grp Sat Flow(s),veh/h/ln	1810	1856	1158	1711	1900	1572	1810	1763	1774	1673	1826	1572
Q Serve(g_s), s	1.1	2.9	0.2	1.3	11.3	10.0	0.0	1.4	1.4	9.9	3.2	1.1
Cycle Q Clear(g_c), s	1.1	2.9	0.2	1.3	11.3	10.0	0.0	1.4	1.4	9.9	3.2	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	56	171	107	380	538	804	3	155	156	763	607	523
V/C Ratio(X)	0.66	0.58	0.05	0.13	0.77	0.89	0.31	0.29	0.30	0.81	0.24	0.12
Avail Cap(c_a), veh/h	175	1009	630	380	1087	1258	127	977	984	1796	1864	1605
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.2	24.7	15.2	17.7	18.6	12.4	28.3	24.2	24.3	20.7	13.7	6.3
Incr Delay (d2), s/veh	4.8	1.1	0.1	0.1	0.9	3.3	19.5	0.4	0.4	0.8	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	1.3	0.1	0.4	4.2	6.2	0.0	0.5	0.5	3.2	1.1	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.0	25.9	15.3	17.7	19.5	15.7	47.9	24.6	24.7	21.5	13.8	6.3
LnGrp LOS	C	C	B	B	B	B	D	C	C	C	B	A
Approach Vol, veh/h		141			1173			93			821	
Approach Delay, s/veh		27.1			17.1			24.9			19.0	
Approach LOS		C			B			C			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.5	10.5	17.1	10.7	4.6	24.4	6.3	21.6				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	30.5	* 32	7.1	30.9	4.0	58.0	5.5	32.5				
Max Q Clear Time (g_c+I1), s	11.9	3.4	3.3	4.9	2.0	5.2	3.1	13.3				
Green Ext Time (p_c), s	1.1	0.2	0.0	0.3	0.0	0.5	0.0	2.8				

Intersection Summary

HCM 6th Ctrl Delay	18.8
HCM 6th LOS	B

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
14: Indian Street & San Michele Road

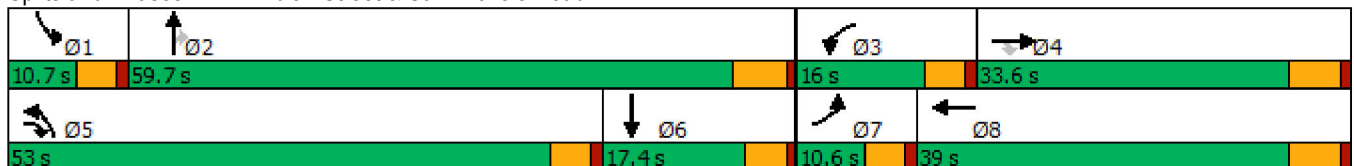


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↘	↑↑	↗↗	↘↘	↑↑	↗↗	↑	↗	↘	↑↑
Traffic Volume (vph)	14	194	351	170	827	1447	198	216	5	128
Future Volume (vph)	14	194	351	170	827	1447	198	216	5	128
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	5	3	8	5	2		1	6
Permitted Phases			4					2		
Detector Phase	7	4	5	3	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	10.0	5.0	8.8
Minimum Split (s)	9.6	31.8	9.6	9.6	31.8	9.6	32.8	32.8	9.6	14.6
Total Split (s)	10.6	33.6	53.0	16.0	39.0	53.0	59.7	59.7	10.7	17.4
Total Split (%)	8.8%	28.0%	44.2%	13.3%	32.5%	44.2%	49.8%	49.8%	8.9%	14.5%
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	3.6	4.8	4.8	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	4.6	5.8	5.8	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None	None
Act Effct Green (s)	5.5	20.1	74.7	9.5	30.4	48.7	60.2	60.2	5.2	9.9
Actuated g/C Ratio	0.05	0.19	0.69	0.09	0.28	0.45	0.56	0.56	0.05	0.09
v/c Ratio	0.23	0.39	0.15	0.58	0.90	0.94	0.22	0.22	0.05	0.48
Control Delay	61.3	40.5	3.2	56.4	50.2	42.4	15.2	2.8	54.8	51.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.3	40.5	3.2	56.4	50.2	42.4	15.2	2.8	54.8	51.3
LOS	E	D	A	E	D	D	B	A	D	D
Approach Delay		17.6			51.2		34.9			51.5
Approach LOS		B			D		C			D

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 108  
 Natural Cycle: 105  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.94  
 Intersection Signal Delay: 37.5  
 Intersection LOS: D  
 Intersection Capacity Utilization 92.3%  
 ICU Level of Service F  
 Analysis Period (min) 15
























Splits and Phases: 14: Indian Street & San Michele Road





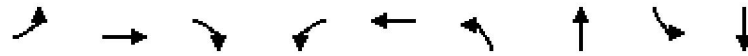
HCM 6th Signalized Intersection Summary  
 14: Indian Street & San Michele Road

Gateway Aviation TA (JN:13445)  
 05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	194	351	170	827	10	1447	198	216	5	128	12
Future Volume (veh/h)	14	194	351	170	827	10	1447	198	216	5	128	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.99	1.00		0.89
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1218	1470	1870	1826	1826	1900	1856	1752	1767	1900	1707	1900
Adj Flow Rate, veh/h	15	211	322	185	899	4	1573	215	153	5	139	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	46	29	2	5	5	0	3	10	9	0	13	0
Cap, veh/h	19	631	2085	248	978	4	1566	906	764	12	251	18
Arrive On Green	0.02	0.32	0.32	0.07	0.40	0.27	0.66	0.52	0.52	0.01	0.08	0.08
Sat Flow, veh/h	1160	2940	3170	3478	3632	16	3534	1752	1478	1810	3121	221
Grp Volume(v), veh/h	15	211	322	185	452	451	1573	215	153	5	75	74
Grp Sat Flow(s),veh/h/ln	1160	1470	1585	1739	1826	1823	1767	1752	1478	1810	1707	1635
Q Serve(g_s), s	1.4	6.0	3.9	5.7	25.6	25.6	48.4	7.4	6.1	0.3	4.6	4.8
Cycle Q Clear(g_c), s	1.4	6.0	3.9	5.7	25.6	25.6	48.4	7.4	6.1	0.3	4.6	4.8
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	1.00		0.14
Lane Grp Cap(c), veh/h	19	631	2085	248	492	491	1566	906	764	12	138	132
V/C Ratio(X)	0.77	0.33	0.15	0.75	0.92	0.92	1.00	0.24	0.20	0.43	0.55	0.56
Avail Cap(c_a), veh/h	64	748	2211	363	555	554	1566	906	764	101	200	192
HCM Platoon Ratio	1.00	1.50	1.50	1.00	1.50	1.00	1.50	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.5	31.1	6.1	49.8	31.4	31.5	18.3	14.5	14.2	54.1	48.3	48.4
Incr Delay (d2), s/veh	21.0	0.1	0.0	2.1	18.3	18.3	23.8	0.0	0.0	9.0	1.3	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	2.0	1.0	2.5	11.7	11.7	15.7	2.7	1.9	0.2	1.9	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	74.5	31.2	6.1	51.8	49.7	49.8	42.1	14.6	14.2	63.1	49.5	49.8
LnGrp LOS	E	C	A	D	D	D	F	B	B	E	D	D
Approach Vol, veh/h		548			1088			1941			154	
Approach Delay, s/veh		17.6			50.1			36.9			50.1	
Approach LOS		B			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.3	62.3	12.4	29.3	53.0	14.6	6.4	35.2				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	* 5.8	4.6	5.8				
Max Green Setting (Gmax), s	6.1	53.9	11.4	27.8	48.4	* 13	6.0	33.2				
Max Q Clear Time (g_c+I1), s	2.3	9.4	7.7	8.0	50.4	6.8	3.4	27.6				
Green Ext Time (p_c), s	0.0	0.9	0.1	1.4	0.0	0.2	0.0	1.8				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			38.5									
HCM 6th LOS			D									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												



Timings  
15: Indian Street & Nandina Avenue



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↑	↗	↖	↗	↖↗	↖↗	↖	↖↗
Traffic Volume (vph)	7	32	152	33	41	335	1652	12	465
Future Volume (vph)	7	32	152	33	41	335	1652	12	465
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	5	3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	5	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	29.8	9.6	9.6	29.8	9.6	26.8	9.6	26.8
Total Split (s)	9.7	29.9	29.0	10.0	30.2	29.0	70.4	9.7	51.1
Total Split (%)	8.1%	24.9%	24.2%	8.3%	25.2%	24.2%	58.7%	8.1%	42.6%
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	6.0	13.8	30.4	6.2	17.4	17.0	59.9	6.0	36.1
Actuated g/C Ratio	0.07	0.16	0.36	0.07	0.21	0.20	0.71	0.07	0.43
v/c Ratio	0.06	0.17	0.30	0.32	0.23	0.61	0.74	0.13	0.35
Control Delay	50.9	40.9	4.8	56.2	28.8	40.2	15.4	52.7	19.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.9	40.9	4.8	56.2	28.8	40.2	15.4	52.7	19.2
LOS	D	D	A	E	C	D	B	D	B
Approach Delay		12.7			38.3		19.4		20.0
Approach LOS		B			D		B		B

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 83.8	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 19.7	Intersection LOS: B
Intersection Capacity Utilization 74.1%	ICU Level of Service D
Analysis Period (min) 15	























Splits and Phases: 15: Indian Street & Nandina Avenue

↖ Ø1 9.7 s	↑ Ø2 70.4 s	↖ Ø3 10 s	→ Ø4 29.9 s
↗ Ø5 29 s	↓ Ø6 51.1 s	↗ Ø7 9.7 s	← Ø8 30.2 s

HCM 6th Signalized Intersection Summary  
 15: Indian Street & Nandina Avenue

Gateway Aviation TA (JN:13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	32	152	33	41	22	335	1652	70	12	465	24
Future Volume (veh/h)	7	32	152	33	41	22	335	1652	70	12	465	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1248	1100	1559	1441	1455	1559	1841	1707	1411	1811	1900
Adj Flow Rate, veh/h	8	36	169	37	46	24	372	1836	78	13	517	27
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	44	54	23	31	30	23	4	13	33	6	0
Cap, veh/h	18	215	301	47	173	90	432	2040	86	20	1526	80
Arrive On Green	0.01	0.17	0.17	0.03	0.19	0.19	0.15	0.58	0.58	0.02	0.45	0.45
Sat Flow, veh/h	1810	1248	932	1485	892	465	2881	3503	148	1344	3412	178
Grp Volume(v), veh/h	8	36	169	37	0	70	372	958	956	13	274	270
Grp Sat Flow(s),veh/h/ln	1810	1248	932	1485	0	1357	1440	1841	1810	1344	1811	1779
Q Serve(g_s), s	0.5	2.6	15.7	2.6	0.0	4.6	13.2	47.4	49.0	1.0	10.3	10.4
Cycle Q Clear(g_c), s	0.5	2.6	15.7	2.6	0.0	4.6	13.2	47.4	49.0	1.0	10.3	10.4
Prop In Lane	1.00		1.00	1.00		0.34	1.00		0.08	1.00		0.10
Lane Grp Cap(c), veh/h	18	215	301	47	0	263	432	1072	1054	20	810	796
V/C Ratio(X)	0.45	0.17	0.56	0.79	0.00	0.27	0.86	0.89	0.91	0.64	0.34	0.34
Avail Cap(c_a), veh/h	88	287	354	77	0	316	671	1136	1117	65	810	796
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.5	36.9	29.3	50.3	0.0	35.8	43.4	19.0	19.4	51.3	18.8	18.9
Incr Delay (d2), s/veh	6.3	0.4	1.6	10.6	0.0	0.5	4.3	8.9	10.4	12.0	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.8	3.5	1.1	0.0	1.5	4.7	19.4	20.0	0.4	4.0	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.9	37.3	31.0	60.9	0.0	36.4	47.8	28.0	29.8	63.3	19.1	19.1
LnGrp LOS	E	D	C	E	A	D	D	C	C	E	B	B
Approach Vol, veh/h		213			107			2286			557	
Approach Delay, s/veh		33.1			44.9			31.9			20.1	
Approach LOS		C			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.2	66.7	7.9	23.9	20.3	52.6	5.6	26.1				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	5.1	64.6	5.4	24.1	24.4	45.3	5.1	24.4				
Max Q Clear Time (g_c+I1), s	3.0	51.0	4.6	17.7	15.2	12.4	2.5	6.6				
Green Ext Time (p_c), s	0.0	10.0	0.0	0.4	0.5	3.0	0.0	0.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			30.4									
HCM 6th LOS			C									

Timings  
16: Indian Av. & Harley Knox Bl.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↖↗	↖↗↘	↖	↖↗↘	↖↗	↖↗	↖	↖	↖↗
Traffic Volume (vph)	547	445	62	787	136	293	41	13	76
Future Volume (vph)	547	445	62	787	136	293	41	13	76
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	5	2	1	6	3	8		7	4
Permitted Phases							8		
Detector Phase	5	2	1	6	3	8	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2
Total Split (s)	37.0	54.5	14.7	32.2	10.6	41.2	41.2	9.6	40.2
Total Split (%)	30.8%	45.4%	12.3%	26.8%	8.8%	34.3%	34.3%	8.0%	33.5%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.4	4.4	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.4	5.4	4.6	6.2
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	32.8	50.5	7.8	23.4	6.1	24.2	24.2	5.1	14.2
Actuated g/C Ratio	0.34	0.52	0.08	0.24	0.06	0.25	0.25	0.05	0.15
v/c Ratio	0.82	0.24	0.48	0.76	0.76	0.39	0.09	0.15	0.54
Control Delay	42.3	14.1	57.5	40.0	72.2	32.7	0.4	53.2	15.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.3	14.1	57.5	40.0	72.2	32.7	0.4	53.2	15.3
LOS	D	B	E	D	E	C	A	D	B
Approach Delay		28.2		41.2		41.3			17.0
Approach LOS		C		D		D			B

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 97.9  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.82  
 Intersection Signal Delay: 33.5  
 Intersection LOS: C  
 Intersection Capacity Utilization 62.1%  
 ICU Level of Service B  
 Analysis Period (min) 15

































Splits and Phases: 16: Indian Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
16: Indian Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  		 	  		 	 			 	 
Traffic Volume (veh/h)	547	445	99	62	787	47	136	293	41	13	76	195
Future Volume (veh/h)	547	445	99	62	787	47	136	293	41	13	76	195
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1011	1811	1707	1870	1856	1900	1737	1781	1796	1885	1811	1366
Adj Flow Rate, veh/h	601	489	54	68	865	-168	149	322	22	14	84	104
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	60	6	13	2	3	0	11	8	7	1	6	36
Cap, veh/h	644	2239	244	87	1008	0	218	594	267	30	214	191
Arrive On Green	0.34	0.49	0.49	0.05	0.20	0.00	0.07	0.18	0.18	0.02	0.12	0.12
Sat Flow, veh/h	1868	4526	493	1781	5233	0	3209	3385	1522	1795	1721	1535
Grp Volume(v), veh/h	601	354	189	68	697	0	149	322	22	14	84	104
Grp Sat Flow(s),veh/h/ln	934	1648	1722	1781	1689	0	1605	1692	1522	1795	1721	1535
Q Serve(g_s), s	25.0	4.9	5.0	3.0	10.3	0.0	3.6	7.0	1.0	0.6	3.6	5.1
Cycle Q Clear(g_c), s	25.0	4.9	5.0	3.0	10.3	0.0	3.6	7.0	1.0	0.6	3.6	5.1
Prop In Lane	1.00		0.29	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	644	1631	852	87	1008	0	218	594	267	30	214	191
V/C Ratio(X)	0.93	0.22	0.22	0.78	0.69	0.00	0.68	0.54	0.08	0.47	0.39	0.54
Avail Cap(c_a), veh/h	753	1998	1044	224	1664	0	240	1508	678	112	728	649
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.4	11.5	11.5	37.8	29.9	0.0	36.6	30.2	27.7	39.2	32.4	33.0
Incr Delay (d2), s/veh	16.0	0.1	0.1	5.5	0.9	0.0	5.3	0.8	0.1	4.1	1.2	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	1.5	1.6	1.4	3.9	0.0	1.5	2.7	0.3	0.3	1.5	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.4	11.6	11.6	43.2	30.8	0.0	41.9	31.0	27.8	43.3	33.6	35.4
LnGrp LOS	D	B	B	D	C	A	D	C	C	D	C	D
Approach Vol, veh/h		1144			765			493			202	
Approach Delay, s/veh		27.2			31.9			34.1			35.2	
Approach LOS		C			C			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.5	45.6	10.1	16.2	32.3	21.8	5.9	20.3				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	10.1	48.7	6.0	34.0	32.4	26.4	5.0	* 36				
Max Q Clear Time (g_c+I1), s	5.0	7.0	5.6	7.1	27.0	12.3	2.6	9.0				
Green Ext Time (p_c), s	0.0	3.3	0.0	1.0	0.7	3.7	0.0	2.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				30.5								
HCM 6th LOS				C								
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

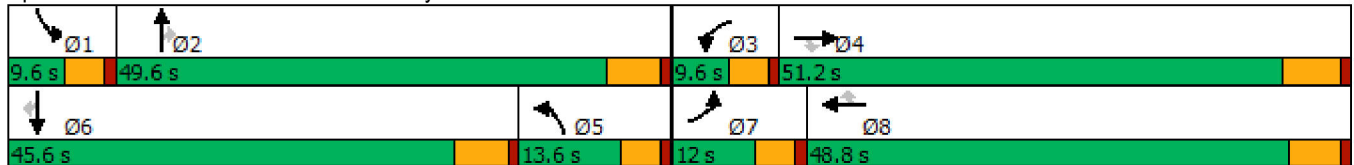
Timings  
20: Perris Bl. & Harley Knox Bl.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	217	279	22	9	374	181	231	1134	14	70	697	278
Future Volume (vph)	217	279	22	9	374	181	231	1134	14	70	697	278
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	47.2	47.2	9.6	48.8	48.8	9.6	48.8	48.8	9.6	43.8	43.8
Total Split (s)	12.0	51.2	51.2	9.6	48.8	48.8	13.6	49.6	49.6	9.6	45.6	45.6
Total Split (%)	10.0%	42.7%	42.7%	8.0%	40.7%	40.7%	11.3%	41.3%	41.3%	8.0%	38.0%	38.0%
Yellow Time (s)	3.6	5.2	5.2	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 79.6  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 20: Perris Bl. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 20: Perris Bl. & Harley Knox Bl.

Gateway Aviation (JN 13445)

05/10/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	217	279	22	9	374	181	231	1134	14	70	697	278
Future Volume (veh/h)	217	279	22	9	374	181	231	1134	14	70	697	278
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1767	1856	1530	1544	1856	1885	1796	1856	1574	1826	1870	1796
Adj Flow Rate, veh/h	238	307	19	10	411	106	254	1246	12	77	766	197
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	9	3	25	24	3	1	7	3	22	5	2	7
Cap, veh/h	326	836	307	36	759	239	539	1914	504	191	1298	387
Arrive On Green	0.10	0.24	0.24	0.01	0.15	0.15	0.16	0.38	0.38	0.06	0.25	0.25
Sat Flow, veh/h	3264	3526	1296	2853	5066	1598	3319	5066	1334	3374	5106	1520
Grp Volume(v), veh/h	238	307	19	10	411	106	254	1246	12	77	766	197
Grp Sat Flow(s),veh/h/ln	1632	1763	1296	1427	1689	1598	1659	1689	1334	1687	1702	1520
Q Serve(g_s), s	4.8	4.9	0.4	0.2	5.0	4.1	4.7	13.6	0.4	1.5	8.8	4.9
Cycle Q Clear(g_c), s	4.8	4.9	0.4	0.2	5.0	4.1	4.7	13.6	0.4	1.5	8.8	4.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	326	836	307	36	759	239	539	1914	504	191	1298	387
V/C Ratio(X)	0.73	0.37	0.06	0.28	0.54	0.44	0.47	0.65	0.02	0.40	0.59	0.51
Avail Cap(c_a), veh/h	360	2362	868	212	3243	1023	539	3303	870	251	3026	901
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.4	21.4	6.1	32.9	26.4	26.0	25.5	17.2	13.1	30.6	22.0	9.3
Incr Delay (d2), s/veh	5.4	0.3	0.1	1.5	0.6	1.3	0.2	0.4	0.0	0.5	0.4	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	1.8	0.2	0.1	1.9	1.5	1.7	4.5	0.1	0.6	3.2	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.8	21.7	6.1	34.4	27.0	27.3	25.7	17.6	13.1	31.1	22.4	10.3
LnGrp LOS	C	C	A	C	C	C	C	B	B	C	C	B
Approach Vol, veh/h		564			527			1512			1040	
Approach Delay, s/veh		26.7			27.2			18.9			20.8	
Approach LOS		C			C			B			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.4	31.2	5.5	22.1	16.7	22.9	11.3	16.3				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	5.8	* 5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	5.0	43.8	5.0	45.0	9.0	* 40	7.4	* 43				
Max Q Clear Time (g_c+I1), s	3.5	15.6	2.2	6.9	6.7	10.8	6.8	7.0				
Green Ext Time (p_c), s	0.0	9.6	0.0	1.9	0.1	6.0	0.0	3.0				

Intersection Summary

HCM 6th Ctrl Delay	21.9
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

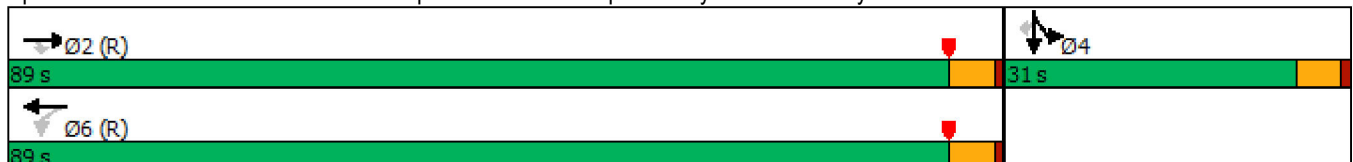


Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations	↑↑	↑	↑↑	↑	↑	↑	↑
Traffic Volume (vph)	575	88	588	245	495	0	208
Future Volume (vph)	575	88	588	245	495	0	208
Turn Type	NA	Perm	Perm	NA	Split	NA	Perm
Protected Phases	2			6	4	4	
Permitted Phases		2	6				4
Detector Phase	2	2	6	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	25.0	25.0	10.0	10.0	10.0
Total Split (s)	89.0	89.0	89.0	89.0	31.0	31.0	31.0
Total Split (%)	74.2%	74.2%	74.2%	74.2%	25.8%	25.8%	25.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None	None
Act Effct Green (s)	85.0	85.0	85.0	85.0	25.0	25.0	25.0
Actuated g/C Ratio	0.71	0.71	0.71	0.71	0.21	0.21	0.21
v/c Ratio	0.27	0.09	0.69	0.22	0.92	0.92	0.48
Control Delay	6.8	1.3	21.2	2.9	81.6	82.2	8.4
Queue Delay	0.0	0.0	0.0	0.3	0.5	0.5	0.0
Total Delay	6.8	1.3	21.2	3.2	82.1	82.7	8.4
LOS	A	A	C	A	F	F	A
Approach Delay	6.1			15.9		60.5	
Approach LOS	A			B		E	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection  
 Natural Cycle: 55  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.92  
 Intersection Signal Delay: 27.2  
 Intersection LOS: C  
 Intersection Capacity Utilization 91.8%  
 ICU Level of Service F  
 Analysis Period (min) 15

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.





HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

05/10/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑↑	↑					↑	↑	↑
Traffic Volume (veh/h)	0	575	88	588	245	0	0	0	0	495	0	208
Future Volume (veh/h)	0	575	88	588	245	0	0	0	0	495	0	208
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1826	1885	1841	1826	0				1648	1900	1767
Adj Flow Rate, veh/h	0	653	100	668	278	0				562	0	174
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88				0.88	0.88	0.88
Percent Heavy Veh, %	0	5	1	4	5	0				17	0	9
Cap, veh/h	0	2490	1146	1004	1310	0				625	0	298
Arrive On Green	0.00	0.72	0.72	1.00	1.00	0.00				0.20	0.00	0.20
Sat Flow, veh/h	0	3561	1597	1356	1826	0				3139	0	1497
Grp Volume(v), veh/h	0	653	100	668	278	0				562	0	174
Grp Sat Flow(s),veh/h/ln	0	1735	1597	678	1826	0				1570	0	1497
Q Serve(g_s), s	0.0	7.9	2.3	17.2	0.0	0.0				21.0	0.0	12.6
Cycle Q Clear(g_c), s	0.0	7.9	2.3	25.1	0.0	0.0				21.0	0.0	12.6
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2490	1146	1004	1310	0				625	0	298
V/C Ratio(X)	0.00	0.26	0.09	0.67	0.21	0.00				0.90	0.00	0.58
Avail Cap(c_a), veh/h	0	2490	1146	1004	1310	0				680	0	324
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.80	0.80	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	5.9	5.1	1.1	0.0	0.0				46.9	0.0	43.6
Incr Delay (d2), s/veh	0.0	0.3	0.2	2.8	0.3	0.0				14.3	0.0	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.4	0.7	0.4	0.1	0.0				9.2	0.0	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	6.1	5.3	3.9	0.3	0.0				61.2	0.0	45.8
LnGrp LOS	A	A	A	A	A	A				E	A	D
Approach Vol, veh/h		753			946						736	
Approach Delay, s/veh		6.0			2.9						57.5	
Approach LOS		A			A						E	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		91.1		28.9		91.1						
Change Period (Y+Rc), s		5.0		5.0		5.0						
Max Green Setting (Gmax), s		84.0		26.0		84.0						
Max Q Clear Time (g_c+I1), s		9.9		23.0		27.1						
Green Ext Time (p_c), s		2.9		0.9		7.0						

Intersection Summary

HCM 6th Ctrl Delay	20.4
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.



Timings

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

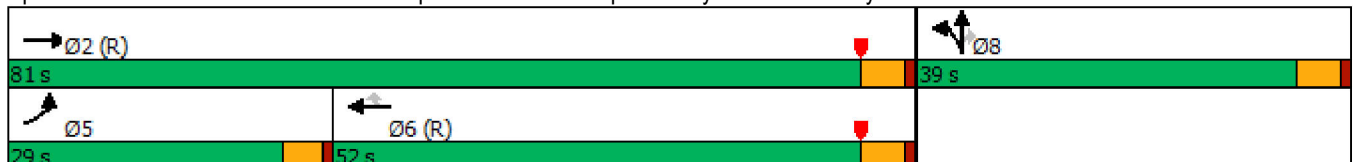


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	385	684	790	1043	3	317
Future Volume (vph)	385	684	790	1043	3	317
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	26.0	24.0	24.0	10.0	10.0
Total Split (s)	29.0	81.0	52.0	52.0	39.0	39.0
Total Split (%)	24.2%	67.5%	43.3%	43.3%	32.5%	32.5%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max
Act Effct Green (s)	19.2	76.0	52.3	52.3	34.0	34.0
Actuated g/C Ratio	0.16	0.63	0.44	0.44	0.28	0.28
v/c Ratio	0.78	0.36	0.57	1.12	0.11	0.61
Control Delay	51.9	26.7	27.8	84.4	32.7	16.9
Queue Delay	0.0	2.1	0.0	0.0	0.0	0.0
Total Delay	51.9	28.7	27.8	84.4	32.7	16.9
LOS	D	C	C	F	C	B
Approach Delay		37.1	60.0		18.9	
Approach LOS		D	E		B	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.12  
 Intersection Signal Delay: 47.9  
 Intersection LOS: D  
 Intersection Capacity Utilization 91.8%  
 ICU Level of Service F  
 Analysis Period (min) 15

Splits and Phases: 2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox Bl./Harley Knox Bl.

05/10/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑			↑↑	↔		↔	↔			
Traffic Volume (veh/h)	385	684	0	0	790	1043	44	3	317	0	0	0
Future Volume (veh/h)	385	684	0	0	790	1043	44	3	317	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1841	1722	0	0	1841	1752	1796	1900	1663			
Adj Flow Rate, veh/h	418	743	0	0	859	0	48	3	280			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	4	12	0	0	4	10	7	0	16			
Cap, veh/h	472	2072	0	0	1598		484	30	399			
Arrive On Green	0.28	1.00	0.00	0.00	0.46	0.00	0.28	0.28	0.28			
Sat Flow, veh/h	3401	3358	0	0	3589	1485	1708	107	1409			
Grp Volume(v), veh/h	418	743	0	0	859	0	51	0	280			
Grp Sat Flow(s),veh/h/ln	1700	1636	0	0	1749	1485	1815	0	1409			
Q Serve(g_s), s	14.1	0.0	0.0	0.0	21.2	0.0	2.5	0.0	21.3			
Cycle Q Clear(g_c), s	14.1	0.0	0.0	0.0	21.2	0.0	2.5	0.0	21.3			
Prop In Lane	1.00		0.00	0.00		1.00	0.94		1.00			
Lane Grp Cap(c), veh/h	472	2072	0	0	1598		514	0	399			
V/C Ratio(X)	0.88	0.36	0.00	0.00	0.54		0.10	0.00	0.70			
Avail Cap(c_a), veh/h	694	2072	0	0	1598		514	0	399			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.88	0.88	0.00	0.00	0.66	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	42.4	0.0	0.0	0.0	23.5	0.0	31.7	0.0	38.5			
Incr Delay (d2), s/veh	6.2	0.4	0.0	0.0	0.9	0.0	0.4	0.0	9.9			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	5.3	0.1	0.0	0.0	8.5	0.0	1.1	0.0	8.2			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.6	0.4	0.0	0.0	24.3	0.0	32.1	0.0	48.3			
LnGrp LOS	D	A	A	A	C		C	A	D			
Approach Vol, veh/h		1161			859	A		331				
Approach Delay, s/veh		17.8			24.3			45.8				
Approach LOS		B			C			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		81.0			21.2	59.8		39.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		76.0			24.5	47.0		34.0				
Max Q Clear Time (g_c+1), s		2.0			16.1	23.2		23.3				
Green Ext Time (p_c), s		3.3			0.5	3.7		0.9				

Intersection Summary

HCM 6th Ctrl Delay	24.1
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Timings  
5: Heacock Street & Cactus Avenue

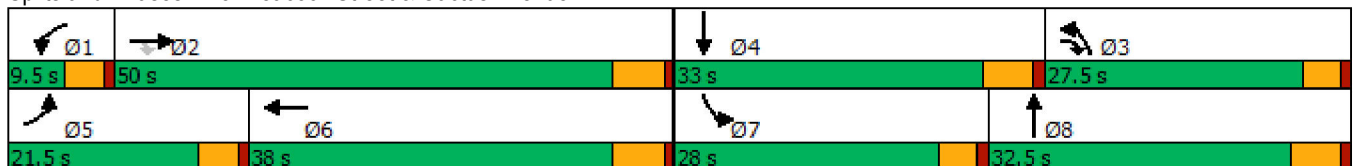


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↗↗↗	↖	↖	↗↗↗	↖↖	↗↖	↖	↗↗
Traffic Volume (vph)	226	1974	1272	25	881	763	622	169	688
Future Volume (vph)	226	1974	1272	25	881	763	622	169	688
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	3	1	6	3	8	7	4
Permitted Phases			2						
Detector Phase	5	2	3	1	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.5	30.5	9.5	9.5	30.5	9.5	30.5	9.5	30.5
Total Split (s)	21.5	50.0	27.5	9.5	38.0	27.5	32.5	28.0	33.0
Total Split (%)	17.9%	41.7%	22.9%	7.9%	31.7%	22.9%	27.1%	23.3%	27.5%
Yellow Time (s)	3.5	4.5	3.5	3.5	4.5	3.5	4.5	3.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-2.0	0.0	0.0	-2.0	-2.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.5	3.5	4.5	4.5	3.5	2.5	4.5	3.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None
Act Effct Green (s)	16.9	45.7	67.8	5.0	30.6	25.1	34.8	15.9	26.6
Actuated g/C Ratio	0.15	0.40	0.60	0.04	0.27	0.22	0.31	0.14	0.23
v/c Ratio	0.83	0.90	1.21	0.33	0.68	1.00	0.62	0.66	0.89
Control Delay	72.1	39.4	121.9	66.6	38.7	77.5	37.8	58.9	55.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.1	39.4	121.9	66.6	38.7	77.5	37.8	58.9	55.4
LOS	E	D	F	E	D	E	D	E	E
Approach Delay		71.7			39.4		58.7		56.0
Approach LOS		E			D		E		E

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 113.4  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.21  
 Intersection Signal Delay: 62.0  
 Intersection LOS: E  
 Intersection Capacity Utilization 115.3%  
 ICU Level of Service H  
 Analysis Period (min) 15





























Splits and Phases: 5: Heacock Street & Cactus Avenue



HCM 6th Signalized Intersection Summary  
5: Heacock Street & Cactus Avenue

Gateway Aviation TA (JN:13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 			 	
Traffic Volume (veh/h)	226	1974	1272	25	881	121	763	622	63	169	688	56
Future Volume (veh/h)	226	1974	1272	25	881	121	763	622	63	169	688	56
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1811	1826	1885	1870	1811	1870	1870	1900	1856	1900
Adj Flow Rate, veh/h	235	2056	622	26	918	64	795	648	30	176	717	11
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	1	6	5	1	2	6	2	2	0	3	0
Cap, veh/h	273	2235	885	43	1450	101	748	1134	52	220	819	13
Arrive On Green	0.23	0.59	0.38	0.02	0.42	0.26	0.33	0.48	0.31	0.12	0.22	0.22
Sat Flow, veh/h	1810	5656	1531	1739	5227	363	3450	3544	164	1810	3645	56
Grp Volume(v), veh/h	235	2056	622	26	662	320	795	342	336	176	365	363
Grp Sat Flow(s),veh/h/ln	1810	1885	1531	1739	1885	1820	1725	1870	1837	1810	1856	1845
Q Serve(g_s), s	14.4	37.5	5.0	1.7	16.0	16.5	25.0	15.1	15.4	10.9	21.9	21.9
Cycle Q Clear(g_c), s	14.4	37.5	5.0	1.7	16.0	16.5	25.0	15.1	15.4	10.9	21.9	21.9
Prop In Lane	1.00		1.00	1.00		0.20	1.00		0.09	1.00		0.03
Lane Grp Cap(c), veh/h	273	2235	885	43	1046	505	748	599	588	220	417	415
V/C Ratio(X)	0.86	0.92	0.70	0.61	0.63	0.63	1.06	0.57	0.57	0.80	0.88	0.88
Avail Cap(c_a), veh/h	283	2281	897	75	1128	545	748	599	588	385	459	456
HCM Platoon Ratio	1.50	1.50	1.00	1.00	1.50	1.00	1.50	1.50	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.4	21.9	7.1	55.7	29.0	30.7	38.9	24.3	25.1	49.3	43.1	43.1
Incr Delay (d2), s/veh	21.0	6.4	2.1	5.2	0.7	1.5	50.9	0.8	0.9	2.6	14.9	15.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.3	12.4	5.6	0.8	6.2	6.5	14.3	5.7	5.8	4.9	11.4	11.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.5	28.3	9.2	60.8	29.7	32.2	89.7	25.1	26.0	51.8	58.0	58.2
LnGrp LOS	E	C	A	E	C	C	F	C	C	D	E	E
Approach Vol, veh/h		2913			1008			1473			904	
Approach Delay, s/veh		27.1			31.3			60.2			56.9	
Approach LOS		C			C			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.3	49.0	28.5	30.4	20.9	35.5	17.5	41.4				
Change Period (Y+Rc), s	4.5	5.5	5.5	* 5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	5.0	44.5	23.0	* 28	17.0	32.5	23.5	27.0				
Max Q Clear Time (g_c+I1), s	3.7	39.5	27.0	23.9	16.4	18.5	12.9	17.4				
Green Ext Time (p_c), s	0.0	4.0	0.0	1.0	0.0	3.4	0.2	1.7				

Intersection Summary

HCM 6th Ctrl Delay	39.8
HCM 6th LOS	D

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

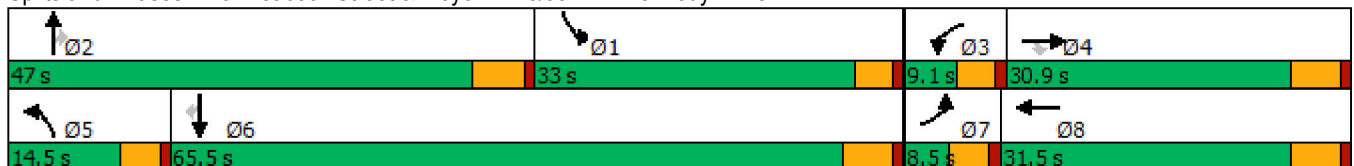
05/10/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	32	202	324	33	92	90	984	82	335	1118	22	
Future Volume (vph)	32	202	324	33	92	90	984	82	335	1118	22	
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	7	4		3	8	5	2		1	6		
Permitted Phases			4					2			6	
Detector Phase	7	4	4	3	8	5	2	2	1	6	6	
Switch Phase												
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	
Minimum Split (s)	8.5	23.5	23.5	8.5	31.5	8.5	29.5	29.5	8.5	23.5	23.5	
Total Split (s)	8.5	30.9	30.9	9.1	31.5	14.5	47.0	47.0	33.0	65.5	65.5	
Total Split (%)	7.1%	25.8%	25.8%	7.6%	26.3%	12.1%	39.2%	39.2%	27.5%	54.6%	54.6%	
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5	4.5	4.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	5.5	4.5	5.5	5.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max	
Act Effct Green (s)	4.0	17.9	17.9	4.6	16.4	9.0	41.9	41.9	27.6	60.6	60.6	
Actuated g/C Ratio	0.04	0.17	0.17	0.04	0.15	0.08	0.39	0.39	0.26	0.56	0.56	
v/c Ratio	0.52	0.75	0.77	0.47	0.42	0.66	0.81	0.12	0.83	0.65	0.02	
Control Delay	80.7	58.6	30.5	73.4	15.9	70.5	37.2	3.5	55.6	20.2	0.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	80.7	58.6	30.5	73.4	15.9	70.5	37.2	3.5	55.6	20.2	0.0	
LOS	F	E	C	E	B	E	D	A	E	C	A	
Approach Delay		43.6			22.1		37.4			27.9		
Approach LOS		D			C		D			C		

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 108.2  
 Natural Cycle: 100  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.83  
 Intersection Signal Delay: 33.1  
 Intersection LOS: C  
 Intersection Capacity Utilization 76.4%  
 ICU Level of Service D  
 Analysis Period (min) 15
























Splits and Phases: 6: Heacock Street & Meyer Drive/John F. Kennedy Drive















HCM 6th Signalized Intersection Summary  
 6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	202	324	33	92	179	90	984	82	335	1118	22
Future Volume (veh/h)	32	202	324	33	92	179	90	984	82	335	1118	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1900	1900	1885	1885	1900	1811	1900	1841	1796	1900
Adj Flow Rate, veh/h	37	232	194	38	106	143	103	1131	65	385	1285	11
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	1	0	0	1	1	0	6	0	4	7	0
Cap, veh/h	47	277	237	48	279	236	129	1418	630	415	2034	911
Arrive On Green	0.03	0.15	0.15	0.03	0.15	0.15	0.07	0.39	0.39	0.24	0.57	0.57
Sat Flow, veh/h	1810	1885	1610	1810	1885	1598	1810	3622	1610	1753	3593	1610
Grp Volume(v), veh/h	37	232	194	38	106	143	103	1131	65	385	1285	11
Grp Sat Flow(s),veh/h/ln	1810	1885	1610	1810	1885	1598	1810	1811	1610	1753	1796	1610
Q Serve(g_s), s	2.2	12.7	12.4	2.2	5.4	8.9	5.9	29.3	2.2	22.8	25.6	0.3
Cycle Q Clear(g_c), s	2.2	12.7	12.4	2.2	5.4	8.9	5.9	29.3	2.2	22.8	25.6	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	47	277	237	48	279	236	129	1418	630	415	2034	911
V/C Ratio(X)	0.79	0.84	0.82	0.78	0.38	0.61	0.80	0.80	0.10	0.93	0.63	0.01
Avail Cap(c_a), veh/h	68	452	386	79	462	392	171	1418	630	471	2034	911
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.3	44.0	43.8	51.3	40.8	42.3	48.4	28.5	13.1	39.6	15.5	10.0
Incr Delay (d2), s/veh	18.5	3.4	2.9	9.9	0.3	0.9	12.9	4.8	0.3	22.1	1.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	6.1	4.9	1.1	2.4	3.4	3.0	12.6	1.0	11.8	9.4	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.8	47.3	46.7	61.1	41.1	43.2	61.3	33.3	13.4	61.7	17.0	10.1
LnGrp LOS	E	D	D	E	D	D	E	C	B	E	B	B
Approach Vol, veh/h		463			287			1299			1681	
Approach Delay, s/veh		48.9			44.8			34.5			27.2	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	30.6	47.0	7.3	21.1	12.1	65.5	7.3	21.2				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	28.5	* 42	4.6	25.4	10.0	60.0	4.0	26.0				
Max Q Clear Time (g_c+I1), s	24.8	31.3	4.2	14.7	7.9	27.6	4.2	10.9				
Green Ext Time (p_c), s	0.2	3.7	0.0	0.9	0.0	6.3	0.0	0.7				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			33.8									
HCM 6th LOS			C									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings  
11: Heacock Street & Cardinal Avenue

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	55	52	991	19	17	1464
Future Volume (vph)	55	52	991	19	17	1464
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	26.6	26.6	21.6	21.6	9.6	16.2
Total Split (s)	27.0	27.0	82.0	82.0	11.0	93.0
Total Split (%)	22.5%	22.5%	68.3%	68.3%	9.2%	77.5%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	12.7	12.7	58.1	58.1	6.1	60.5
Actuated g/C Ratio	0.16	0.16	0.75	0.75	0.08	0.78
v/c Ratio	0.25	0.20	0.48	0.02	0.16	0.74
Control Delay	36.8	11.4	7.6	2.8	45.6	9.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.8	11.4	7.6	2.8	45.6	9.4
LOS	D	B	A	A	D	A
Approach Delay	24.5		7.5			9.8
Approach LOS	C		A			A

Intersection Summary













Cycle Length: 120	
Actuated Cycle Length: 77.8	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 9.5	Intersection LOS: A
Intersection Capacity Utilization 57.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 11: Heacock Street & Cardinal Avenue





HCM 6th Signalized Intersection Summary  
 11: Heacock Street & Cardinal Avenue

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	55	52	991	19	17	1464
Future Volume (veh/h)	55	52	991	19	17	1464
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1752	1781	1693	1781	1752
Adj Flow Rate, veh/h	71	67	1271	24	22	1877
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	2	10	8	14	8	10
Cap, veh/h	231	193	2254	907	42	2399
Arrive On Green	0.13	0.13	0.63	0.63	0.02	0.72
Sat Flow, veh/h	1781	1485	3563	1434	1697	3416
Grp Volume(v), veh/h	71	67	1271	24	22	1877
Grp Sat Flow(s),veh/h/ln	1781	1485	1781	1434	1697	1664
Q Serve(g_s), s	2.6	3.0	14.7	0.5	0.9	26.1
Cycle Q Clear(g_c), s	2.6	3.0	14.7	0.5	0.9	26.1
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	231	193	2254	907	42	2399
V/C Ratio(X)	0.31	0.35	0.56	0.03	0.52	0.78
Avail Cap(c_a), veh/h	552	460	3815	1536	150	3997
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.5	28.7	7.6	5.0	34.8	6.5
Incr Delay (d2), s/veh	0.7	1.1	0.2	0.0	3.7	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	1.1	3.6	0.1	0.4	4.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	29.3	29.7	7.8	5.0	38.6	7.0
LnGrp LOS	C	C	A	A	D	A
Approach Vol, veh/h	138		1295			1899
Approach Delay, s/veh	29.5		7.8			7.4
Approach LOS	C		A			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	6.4	51.9			58.3	14.0
Change Period (Y+Rc), s	4.6	* 6.2			6.2	4.6
Max Green Setting (Gmax), s	6.4	* 77			86.8	22.4
Max Q Clear Time (g_c+I1), s	2.9	16.7			28.1	5.0
Green Ext Time (p_c), s	0.0	11.6			24.0	0.3

Intersection Summary

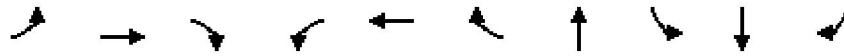
HCM 6th Ctrl Delay	8.5
HCM 6th LOS	A

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Timings  
12: Heacock Street & San Michele Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBL	SBT	SBR	Ø5
Lane Configurations	↖	↗	↖	↖	↗	↖	↗↖	↖↗	↗	↖	
Traffic Volume (vph)	53	316	6	20	93	626	111	838	269	32	
Future Volume (vph)	53	316	6	20	93	626	111	838	269	32	
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	NA	Prot	NA	Perm	
Protected Phases	7	4		3	8	1	2	1	6		5
Permitted Phases			4			8				6	
Detector Phase	7	4	4	3	8	1	2	1	6	6	
Switch Phase											
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0
Minimum Split (s)	9.5	30.5	30.5	8.5	30.5	8.5	34.5	8.5	34.5	34.5	8.5
Total Split (s)	10.3	33.6	33.6	8.5	31.8	43.3	34.6	43.3	69.4	69.4	8.5
Total Split (%)	8.6%	28.0%	28.0%	7.1%	26.5%	36.1%	28.8%	36.1%	57.8%	57.8%	7%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5	5.5	
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min	Min	None
Act Effct Green (s)	16.1	28.4	28.4	4.0	12.6	57.4	12.2	39.2	56.0	56.0	
Actuated g/C Ratio	0.16	0.28	0.28	0.04	0.13	0.57	0.12	0.39	0.56	0.56	
v/c Ratio	0.25	0.84	0.01	0.38	0.56	0.72	0.49	0.84	0.38	0.04	
Control Delay	44.5	50.9	0.0	65.6	50.8	11.7	37.4	35.8	14.0	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	44.5	50.9	0.0	65.6	50.8	11.7	37.4	35.8	14.0	0.1	
LOS	D	D	A	E	D	B	D	D	B	A	
Approach Delay		49.2			18.1		37.4		29.6		
Approach LOS		D			B		D		C		

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 100.3  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.84  
 Intersection Signal Delay: 29.6  
 Intersection LOS: C  
 Intersection Capacity Utilization 58.4%  
 ICU Level of Service B  
 Analysis Period (min) 15

























Splits and Phases: 12: Heacock Street & San Michele Road



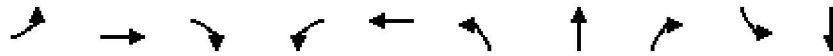
HCM 6th Signalized Intersection Summary  
 12: Heacock Street & San Michele Road

Gateway Aviation TA (JN:13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	316	6	20	93	626	0	111	37	838	269	32
Future Volume (veh/h)	53	316	6	20	93	626	0	111	37	838	269	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1870	1900	1826	1900	1885	1826	1900
Adj Flow Rate, veh/h	76	451	9	29	133	537	0	159	32	1197	384	46
Peak Hour Factor	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Percent Heavy Veh, %	0	0	0	0	0	2	0	5	0	1	5	0
Cap, veh/h	328	506	419	42	207	767	2	244	48	1306	959	846
Arrive On Green	0.18	0.27	0.27	0.02	0.11	0.11	0.00	0.08	0.08	0.38	0.53	0.53
Sat Flow, veh/h	1810	1900	1571	1810	1900	1585	1810	2889	569	3483	1826	1610
Grp Volume(v), veh/h	76	451	9	29	133	537	0	94	97	1197	384	46
Grp Sat Flow(s),veh/h/ln	1810	1900	1571	1810	1900	1585	1810	1735	1724	1742	1826	1610
Q Serve(g_s), s	3.0	19.1	0.3	1.3	5.6	0.0	0.0	4.4	4.6	27.4	10.6	0.4
Cycle Q Clear(g_c), s	3.0	19.1	0.3	1.3	5.6	0.0	0.0	4.4	4.6	27.4	10.6	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.33	1.00		1.00
Lane Grp Cap(c), veh/h	328	506	419	42	207	767	2	147	146	1306	959	846
V/C Ratio(X)	0.23	0.89	0.02	0.68	0.64	0.70	0.00	0.64	0.66	0.92	0.40	0.05
Avail Cap(c_a), veh/h	328	637	526	86	596	1091	86	602	598	1611	1391	1227
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.4	29.6	18.8	40.6	35.8	16.9	0.0	37.2	37.2	25.0	12.0	1.3
Incr Delay (d2), s/veh	0.1	11.0	0.0	7.0	1.2	0.4	0.0	1.7	1.9	6.7	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	10.1	0.1	0.6	2.5	7.0	0.0	1.8	1.9	11.0	3.6	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.5	40.5	18.8	47.7	37.0	17.3	0.0	38.9	39.2	31.7	12.1	1.3
LnGrp LOS	C	D	B	D	D	B	A	D	D	C	B	A
Approach Vol, veh/h		536			699			191			1627	
Approach Delay, s/veh		38.6			22.3			39.0			26.2	
Approach LOS		D			C			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	37.0	12.6	6.5	27.9	0.0	49.6	19.7	14.6				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	38.8	* 29	4.0	28.1	4.0	63.9	5.8	26.3				
Max Q Clear Time (g_c+I1), s	29.4	6.6	3.3	21.1	0.0	12.6	5.0	7.6				
Green Ext Time (p_c), s	2.0	0.5	0.0	1.2	0.0	1.3	0.0	1.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				28.3								
HCM 6th LOS				C								
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings  
14: Indian Street & San Michele Road

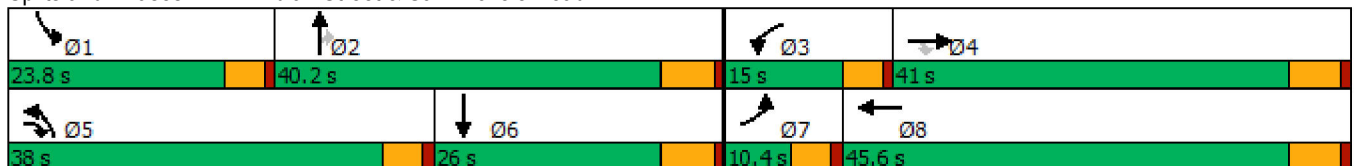


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↘	↑↑	↗↗	↘↘	↑↑	↗↗	↑	↗	↘	↑↑
Traffic Volume (vph)	21	806	1412	228	465	700	179	205	131	349
Future Volume (vph)	21	806	1412	228	465	700	179	205	131	349
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	5	3	8	5	2		1	6
Permitted Phases			4					2		
Detector Phase	7	4	5	3	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	31.8	9.6	9.6	31.8	9.6	32.8	32.8	9.6	24.8
Total Split (s)	10.4	41.0	38.0	15.0	45.6	38.0	40.2	40.2	23.8	26.0
Total Split (%)	8.7%	34.2%	31.7%	12.5%	38.0%	31.7%	33.5%	33.5%	19.8%	21.7%
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	3.6	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	4.6	5.8	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None	None
Act Effct Green (s)	5.5	31.2	61.4	10.1	40.3	29.0	32.7	32.7	12.8	16.6
Actuated g/C Ratio	0.05	0.29	0.57	0.09	0.37	0.27	0.30	0.30	0.12	0.15
v/c Ratio	0.25	0.88	0.88	0.74	0.42	0.80	0.36	0.32	0.65	0.75
Control Delay	61.0	49.0	24.4	64.6	27.9	44.8	33.4	5.4	61.2	53.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.0	49.0	24.4	64.6	27.9	44.8	33.4	5.4	61.2	53.7
LOS	E	D	C	E	C	D	C	A	E	D
Approach Delay		33.6			39.1		35.5			55.6
Approach LOS		C			D		D			E

Intersection Summary
























Cycle Length: 120  
 Actuated Cycle Length: 108.1  
 Natural Cycle: 95  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.88  
 Intersection Signal Delay: 37.4  
 Intersection LOS: D  
 Intersection Capacity Utilization 86.2%  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 14: Indian Street & San Michele Road

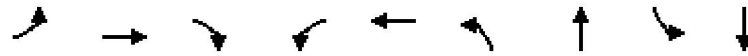


HCM 6th Signalized Intersection Summary  
 14: Indian Street & San Michele Road

Gateway Aviation TA (JN:13445)  
 05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	806	1412	228	465	54	700	179	205	131	349	30
Future Volume (veh/h)	21	806	1412	228	465	54	700	179	205	131	349	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		1.00	1.00		0.64
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1796	1856	1826	1900	1796	1796	1856	1870	1841	1752
Adj Flow Rate, veh/h	23	876	883	248	505	42	761	195	158	142	379	23
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	5	7	3	5	0	7	7	3	2	4	10
Cap, veh/h	40	1019	1417	308	1197	99	838	585	512	172	587	35
Arrive On Green	0.02	0.29	0.29	0.09	0.36	0.36	0.25	0.33	0.33	0.10	0.18	0.18
Sat Flow, veh/h	1739	3469	2588	3428	3318	275	3421	1796	1571	1781	3319	198
Grp Volume(v), veh/h	23	876	883	248	277	270	761	195	158	142	207	195
Grp Sat Flow(s),veh/h/ln	1739	1735	1294	1714	1826	1768	1711	1796	1571	1781	1841	1676
Q Serve(g_s), s	1.4	25.6	25.6	7.6	12.3	12.3	23.1	8.8	8.1	8.4	11.2	11.6
Cycle Q Clear(g_c), s	1.4	25.6	25.6	7.6	12.3	12.3	23.1	8.8	8.1	8.4	11.2	11.6
Prop In Lane	1.00		1.00	1.00		0.16	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	40	1019	1417	308	659	637	838	585	512	172	326	297
V/C Ratio(X)	0.57	0.86	0.62	0.80	0.42	0.42	0.91	0.33	0.31	0.83	0.64	0.66
Avail Cap(c_a), veh/h	94	1140	1507	333	678	657	1067	585	512	319	347	316
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.8	35.7	17.3	47.8	25.8	25.8	39.3	27.3	27.1	47.5	40.9	41.1
Incr Delay (d2), s/veh	4.7	5.7	0.5	11.3	0.2	0.2	8.3	0.1	0.1	3.8	2.5	3.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	11.0	6.9	3.6	5.1	4.9	10.1	3.6	2.9	3.7	5.1	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.5	41.4	17.8	59.1	26.0	26.0	47.6	27.5	27.2	51.3	43.4	44.4
LnGrp LOS	E	D	B	E	C	C	D	C	C	D	D	D
Approach Vol, veh/h		1782			795			1114			544	
Approach Delay, s/veh		29.9			36.3			41.2			45.8	
Approach LOS		C			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.9	40.7	14.2	37.3	30.9	24.8	7.1	44.4				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	19.2	34.4	10.4	35.2	33.4	20.2	5.8	39.8				
Max Q Clear Time (g_c+I1), s	10.4	10.8	9.6	27.6	25.1	13.6	3.4	14.3				
Green Ext Time (p_c), s	0.1	0.8	0.0	3.9	1.1	0.7	0.0	1.8				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			36.1									
HCM 6th LOS			D									

Timings  
15: Indian Street & Nandina Avenue



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	44	103	516	171	43	153	675	19	1454
Future Volume (vph)	44	103	516	171	43	153	675	19	1454
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	5	3	8	5	2	1	6
Permitted Phases	4								
Detector Phase	7	4	5	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	24.8	9.6	9.6	29.8	9.6	26.8	9.6	26.8
Total Split (s)	11.1	24.8	20.0	18.0	31.7	20.0	66.7	10.5	57.2
Total Split (%)	9.3%	20.7%	16.7%	15.0%	26.4%	16.7%	55.6%	8.8%	47.7%
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	6.1	13.4	34.6	13.4	22.7	15.4	67.4	5.5	51.4
Actuated g/C Ratio	0.05	0.12	0.30	0.12	0.20	0.13	0.59	0.05	0.45
v/c Ratio	0.48	0.57	1.01	0.99	0.31	0.47	0.37	0.25	0.97
Control Delay	69.3	59.0	73.8	114.3	25.8	51.5	13.9	60.8	46.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.3	59.0	73.8	114.3	25.8	51.5	13.9	60.8	46.6
LOS	E	E	E	F	C	D	B	E	D
Approach Delay	71.2		82.3			20.3		46.8	
Approach LOS	E		F			C		D	

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 114.5	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.01	
Intersection Signal Delay: 47.4	Intersection LOS: D
Intersection Capacity Utilization 95.2%	ICU Level of Service F
Analysis Period (min) 15	























Splits and Phases: 15: Indian Street & Nandina Avenue



HCM 6th Signalized Intersection Summary  
 15: Indian Street & Nandina Avenue

Gateway Aviation TA (JN:13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	103	516	171	43	53	153	675	69	19	1454	34
Future Volume (veh/h)	44	103	516	171	43	53	153	675	69	19	1454	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1722	1604	1633	1500	1870	1218	1870	1841	1796	1870	1841
Adj Flow Rate, veh/h	48	112	181	186	47	22	166	734	37	21	1580	17
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	12	20	18	27	2	46	2	4	7	2	4
Cap, veh/h	64	242	312	191	221	103	207	1848	93	37	1684	18
Arrive On Green	0.04	0.14	0.14	0.12	0.23	0.23	0.09	0.65	0.52	0.02	0.57	0.46
Sat Flow, veh/h	1810	1722	1359	1555	966	452	2321	3531	178	1711	3694	40
Grp Volume(v), veh/h	48	112	181	186	0	69	166	389	382	21	799	798
Grp Sat Flow(s),veh/h/ln	1810	1722	1359	1555	0	1418	1160	1870	1838	1711	1870	1863
Q Serve(g_s), s	2.9	6.5	12.9	13.0	0.0	4.3	7.6	10.6	10.9	1.3	43.0	43.1
Cycle Q Clear(g_c), s	2.9	6.5	12.9	13.0	0.0	4.3	7.6	10.6	10.9	1.3	43.0	43.1
Prop In Lane	1.00		1.00	1.00		0.32	1.00		0.10	1.00		0.02
Lane Grp Cap(c), veh/h	64	242	312	191	0	324	207	979	962	37	853	849
V/C Ratio(X)	0.75	0.46	0.58	0.97	0.00	0.21	0.80	0.40	0.40	0.57	0.94	0.94
Avail Cap(c_a), veh/h	108	301	358	191	0	338	328	1047	1029	93	883	880
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.25	1.00	1.00	1.25	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.0	43.0	37.2	47.5	0.0	34.0	48.6	10.8	11.2	52.7	22.0	22.1
Incr Delay (d2), s/veh	6.6	1.4	1.8	56.3	0.0	0.3	3.1	0.3	0.3	5.0	16.8	17.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	2.8	4.3	7.8	0.0	1.5	2.2	3.6	3.7	0.6	18.2	18.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.6	44.4	39.0	103.8	0.0	34.4	51.7	11.0	11.5	57.8	38.8	39.3
LnGrp LOS	E	D	D	F	A	C	D	B	B	E	D	D
Approach Vol, veh/h		341			255			937			1618	
Approach Delay, s/veh		43.5			85.0			18.4			39.3	
Approach LOS		D			F			B			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.0	62.8	18.0	21.1	14.3	55.4	8.4	30.7				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	5.9	60.9	13.4	19.0	15.4	51.4	6.5	25.9				
Max Q Clear Time (g_c+I1), s	3.3	12.9	15.0	14.9	9.6	45.1	4.9	6.3				
Green Ext Time (p_c), s	0.0	4.7	0.0	0.4	0.1	4.5	0.0	0.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				37.2								
HCM 6th LOS				D								

Timings  
16: Indian Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

05/10/2022

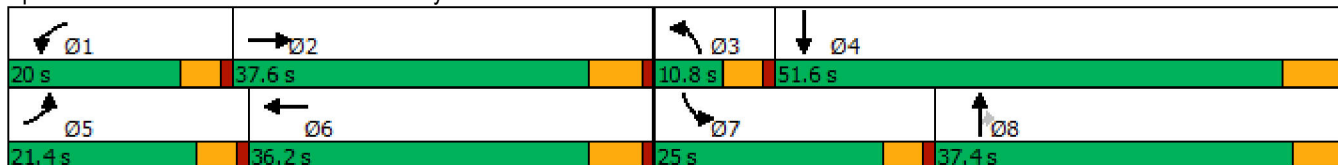


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↔↔	↕↕↔	↔	↕↕↔	↔↔	↕↕	↔	↔	↕↕
Traffic Volume (vph)	318	502	40	488	109	196	76	51	277
Future Volume (vph)	318	502	40	488	109	196	76	51	277
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	5	2	1	6	3	8		7	4
Permitted Phases							8		
Detector Phase	5	2	1	6	3	8	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2
Total Split (s)	21.4	37.6	20.0	36.2	10.8	37.4	37.4	25.0	51.6
Total Split (%)	17.8%	31.3%	16.7%	30.2%	9.0%	31.2%	31.2%	20.8%	43.0%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.4	4.4	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.4	5.4	4.6	6.2
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	17.1	30.3	7.4	18.2	6.3	37.2	37.2	8.1	35.8
Actuated g/C Ratio	0.17	0.31	0.07	0.18	0.06	0.38	0.38	0.08	0.36
v/c Ratio	0.81	0.44	0.38	0.63	0.69	0.21	0.14	0.44	1.05dr
Control Delay	55.9	29.6	55.1	40.7	67.3	23.2	1.2	55.7	28.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.9	29.6	55.1	40.7	67.3	23.2	1.2	55.7	28.1
LOS	E	C	E	D	E	C	A	E	C
Approach Delay		39.0		41.8		31.4			29.5
Approach LOS		D		D		C			C

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 99  
 Natural Cycle: 100  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.87  
 Intersection Signal Delay: 35.2  
 Intersection LOS: D  
 Intersection Capacity Utilization 68.8%  
 ICU Level of Service C  
 Analysis Period (min) 15  
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 16: Indian Av. & Harley Knox Bl.




































HCM 6th Signalized Intersection Summary  
16: Indian Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  			  		 	 			 	 
Traffic Volume (veh/h)	318	502	73	40	488	14	109	196	76	51	277	636
Future Volume (veh/h)	318	502	73	40	488	14	109	196	76	51	277	636
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1559	1841	1707	1885	1811	1885	1707	1678	1870	1900	1856	1767
Adj Flow Rate, veh/h	398	628	-3	50	610	-76	136	245	-74	64	346	264
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	23	4	13	1	6	1	13	15	2	0	3	9
Cap, veh/h	492	1643	0	82	938	0	223	875	435	96	492	369
Arrive On Green	0.17	0.30	0.00	0.05	0.17	0.00	0.07	0.27	0.00	0.05	0.26	0.26
Sat Flow, veh/h	2881	5522	0	1795	5433	0	3155	3188	1585	1810	1920	1439
Grp Volume(v), veh/h	398	625	0	50	534	0	136	245	-74	64	317	293
Grp Sat Flow(s),veh/h/ln	1440	1841	0	1795	1811	0	1577	1594	1585	1810	1763	1597
Q Serve(g_s), s	8.6	5.8	0.0	1.8	5.8	0.0	2.7	3.9	0.0	2.2	10.5	10.8
Cycle Q Clear(g_c), s	8.6	5.8	0.0	1.8	5.8	0.0	2.7	3.9	0.0	2.2	10.5	10.8
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		0.90
Lane Grp Cap(c), veh/h	492	1643	0	82	938	0	223	875	435	96	452	409
V/C Ratio(X)	0.81	0.38	0.00	0.61	0.57	0.00	0.61	0.28	-0.17	0.67	0.70	0.72
Avail Cap(c_a), veh/h	752	2727	0	429	2565	0	304	1584	788	573	1243	1126
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.7	17.9	0.0	30.1	24.4	0.0	29.0	18.4	0.0	29.9	21.7	21.8
Incr Delay (d2), s/veh	2.0	0.1	0.0	2.7	0.5	0.0	1.0	0.2	0.0	3.0	2.0	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	2.1	0.0	0.8	2.3	0.0	1.0	1.3	0.0	1.0	4.0	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.7	18.1	0.0	32.8	25.0	0.0	30.0	18.5	0.0	32.9	23.7	24.1
LnGrp LOS	C	B	A	C	C	A	C	B	A	C	C	C
Approach Vol, veh/h		1023			584			307			674	
Approach Delay, s/veh		21.8			25.7			28.1			24.8	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.6	25.0	9.2	22.7	15.6	16.9	8.0	23.9				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	*6.2				
Max Green Setting (Gmax), s	15.4	31.8	6.2	45.4	16.8	30.4	20.4	*32				
Max Q Clear Time (g_c+I1), s	3.8	7.8	4.7	12.8	10.6	7.8	4.2	5.9				
Green Ext Time (p_c), s	0.0	3.9	0.0	3.8	0.4	3.3	0.0	1.4				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				24.2								
HCM 6th LOS				C								
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												



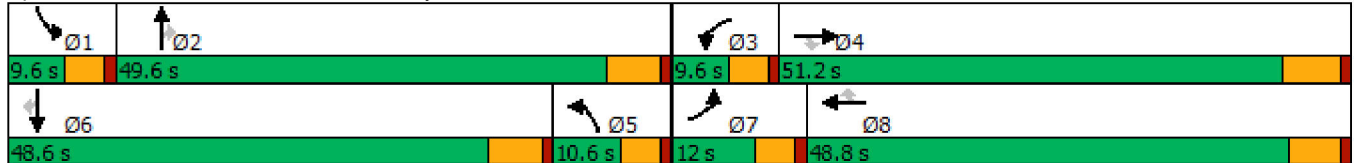
Timings  
20: Perris Bl. & Harley Knox Bl.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	308	217	103	8	238	104	46	840	11	135	1087	290
Future Volume (vph)	308	217	103	8	238	104	46	840	11	135	1087	290
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	47.2	47.2	9.6	48.8	48.8	9.6	48.8	48.8	9.6	43.8	43.8
Total Split (s)	12.0	51.2	51.2	9.6	48.8	48.8	10.6	49.6	49.6	9.6	48.6	48.6
Total Split (%)	10.0%	42.7%	42.7%	8.0%	40.7%	40.7%	8.8%	41.3%	41.3%	8.0%	40.5%	40.5%
Yellow Time (s)	3.6	5.2	5.2	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 77.1  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 20: Perris Bl. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 20: Perris Bl. & Harley Knox Bl.

Gateway Aviation (JN 13445)  
 05/10/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	308	217	103	8	238	104	46	840	11	135	1087	290
Future Volume (veh/h)	308	217	103	8	238	104	46	840	11	135	1087	290
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1841	1811	1500	1841	1856	1589	1856	1604	1885	1856	1796
Adj Flow Rate, veh/h	338	238	71	9	262	66	51	923	8	148	1195	263
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	6	4	6	27	4	3	21	3	20	1	3	7
Cap, veh/h	362	848	372	32	734	227	133	1863	500	239	1892	568
Arrive On Green	0.11	0.24	0.24	0.01	0.15	0.15	0.05	0.37	0.37	0.07	0.37	0.37
Sat Flow, veh/h	3346	3497	1535	2771	5025	1551	2935	5066	1359	3483	5066	1521
Grp Volume(v), veh/h	338	238	71	9	262	66	51	923	8	148	1195	263
Grp Sat Flow(s),veh/h/ln	1673	1749	1535	1386	1675	1551	1468	1689	1359	1742	1689	1521
Q Serve(g_s), s	6.9	3.8	1.8	0.2	3.2	2.6	1.2	9.6	0.3	2.8	13.2	5.2
Cycle Q Clear(g_c), s	6.9	3.8	1.8	0.2	3.2	2.6	1.2	9.6	0.3	2.8	13.2	5.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	362	848	372	32	734	227	133	1863	500	239	1892	568
V/C Ratio(X)	0.93	0.28	0.19	0.28	0.36	0.29	0.38	0.50	0.02	0.62	0.63	0.46
Avail Cap(c_a), veh/h	362	2298	1009	202	3155	974	257	3240	869	254	3166	951
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.3	21.1	10.3	33.6	26.3	26.1	31.8	16.7	13.8	31.0	17.6	5.6
Incr Delay (d2), s/veh	30.7	0.2	0.2	1.8	0.3	0.7	0.7	0.2	0.0	2.8	0.4	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	1.4	0.8	0.1	1.2	0.9	0.4	3.2	0.1	1.2	4.4	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.0	21.3	10.6	35.3	26.6	26.8	32.4	16.9	13.8	33.8	17.9	6.2
LnGrp LOS	E	C	B	D	C	C	C	B	B	C	B	A
Approach Vol, veh/h		647			337			982			1606	
Approach Delay, s/veh		40.8			26.9			17.7			17.5	
Approach LOS		D			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.3	31.0	5.4	22.8	8.9	31.4	12.0	16.2				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	5.8	* 5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	5.0	43.8	5.0	45.0	6.0	* 43	7.4	* 43				
Max Q Clear Time (g_c+I1), s	4.8	11.6	2.2	5.8	3.2	15.2	8.9	5.2				
Green Ext Time (p_c), s	0.0	6.8	0.0	1.6	0.0	10.2	0.0	1.9				

Intersection Summary

HCM 6th Ctrl Delay	22.7
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

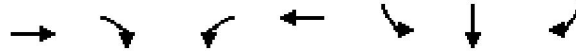
**APPENDIX 6.12:**

**OPENING YEAR CUMULATIVE (2026) WITH PROJECT (PEAK) CONDITIONS  
INTERSECTION OPERATIONS ANALYSIS WORKSHEETS WITH IMPROVEMENTS**

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Timings

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

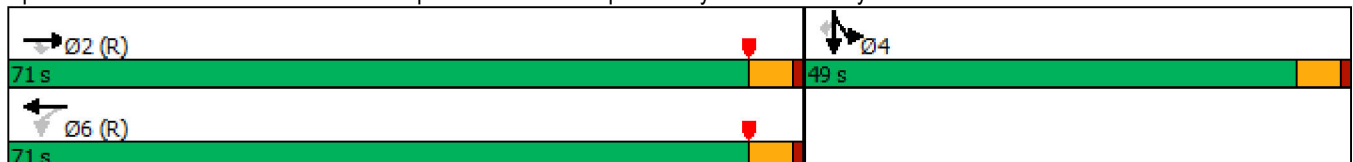


Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations	↑↑	↑	↑↑	↑	↑	↑	↑
Traffic Volume (vph)	804	26	191	278	829	1	290
Future Volume (vph)	804	26	191	278	829	1	290
Turn Type	NA	Perm	Perm	NA	Split	NA	Perm
Protected Phases	2			6	4	4	
Permitted Phases		2	6				4
Detector Phase	2	2	6	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	25.0	25.0	10.0	10.0	10.0
Total Split (s)	71.0	71.0	71.0	71.0	49.0	49.0	49.0
Total Split (%)	59.2%	59.2%	59.2%	59.2%	40.8%	40.8%	40.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None	None
Act Effct Green (s)	69.2	69.2	69.2	69.2	40.8	40.8	40.8
Actuated g/C Ratio	0.58	0.58	0.58	0.58	0.34	0.34	0.34
v/c Ratio	0.44	0.03	0.44	0.28	0.88	0.88	0.44
Control Delay	15.9	4.4	12.8	7.5	56.6	56.8	4.9
Queue Delay	0.0	0.0	0.0	0.2	53.7	53.7	0.0
Total Delay	15.9	4.4	12.8	7.6	110.3	110.5	4.9
LOS	B	A	B	A	F	F	A
Approach Delay	15.5			9.7		83.1	
Approach LOS	B			A		F	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.88  
 Intersection Signal Delay: 45.7  
 Intersection LOS: D  
 Intersection Capacity Utilization 136.0%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

05/10/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑↑	↑					↑	↑	↑
Traffic Volume (veh/h)	0	804	26	191	278	0	0	0	0	829	1	290
Future Volume (veh/h)	0	804	26	191	278	0	0	0	0	829	1	290
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1826	1826	1604	1870	0				1693	1900	1781
Adj Flow Rate, veh/h	0	874	28	208	302	0				902	0	255
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	5	5	20	2	0				14	0	8
Cap, veh/h	0	2098	936	605	1131	0				1006	0	471
Arrive On Green	0.00	0.60	0.60	1.00	1.00	0.00				0.31	0.00	0.31
Sat Flow, veh/h	0	3561	1547	1027	1870	0				3224	0	1510
Grp Volume(v), veh/h	0	874	28	208	302	0				902	0	255
Grp Sat Flow(s),veh/h/ln	0	1735	1547	514	1870	0				1612	0	1510
Q Serve(g_s), s	0.0	16.0	0.9	8.0	0.0	0.0				32.1	0.0	16.8
Cycle Q Clear(g_c), s	0.0	16.0	0.9	24.0	0.0	0.0				32.1	0.0	16.8
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2098	936	605	1131	0				1006	0	471
V/C Ratio(X)	0.00	0.42	0.03	0.34	0.27	0.00				0.90	0.00	0.54
Avail Cap(c_a), veh/h	0	2098	936	605	1131	0				1182	0	554
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.96	0.96	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	12.5	9.5	2.6	0.0	0.0				39.4	0.0	34.2
Incr Delay (d2), s/veh	0.0	0.6	0.1	1.5	0.6	0.0				8.3	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.8	0.3	0.4	0.2	0.0				13.3	0.0	6.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	13.1	9.6	4.1	0.6	0.0				47.7	0.0	35.1
LnGrp LOS	A	B	A	A	A	A				D	A	D
Approach Vol, veh/h		902			510						1157	
Approach Delay, s/veh		13.0			2.0						45.0	
Approach LOS		B			A						D	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		77.6		42.4		77.6						
Change Period (Y+Rc), s		5.0		5.0		5.0						
Max Green Setting (Gmax), s		66.0		44.0		66.0						
Max Q Clear Time (g_c+I1), s		18.0		34.1		26.0						
Green Ext Time (p_c), s		4.0		3.4		3.5						

Intersection Summary

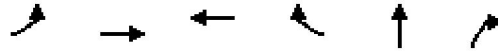
HCM 6th Ctrl Delay	25.2
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Timings

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

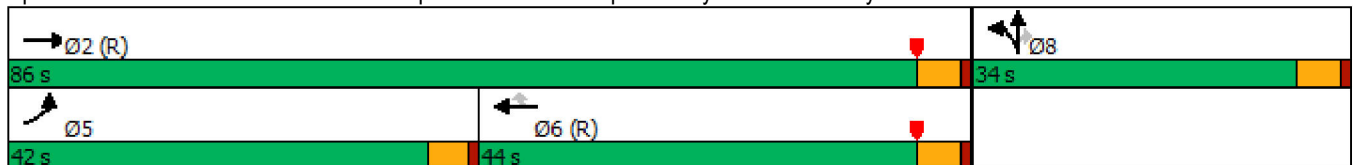


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	486	1033	415	1060	3	283
Future Volume (vph)	486	1033	415	1060	3	283
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	26.0	24.0	24.0	10.0	10.0
Total Split (s)	42.0	86.0	44.0	44.0	34.0	34.0
Total Split (%)	35.0%	71.7%	36.7%	36.7%	28.3%	28.3%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max
Act Effct Green (s)	23.4	81.0	53.1	53.1	29.0	29.0
Actuated g/C Ratio	0.20	0.68	0.44	0.44	0.24	0.24
v/c Ratio	0.80	0.52	0.30	1.23	0.14	0.67
Control Delay	73.9	21.2	23.0	131.0	36.9	32.6
Queue Delay	0.0	5.7	0.0	0.0	0.0	0.0
Total Delay	74.0	26.9	23.0	131.0	36.9	32.6
LOS	E	C	C	F	D	C
Approach Delay		41.9	100.6		33.3	
Approach LOS		D	F		C	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.23  
 Intersection Signal Delay: 67.0  
 Intersection LOS: E  
 Intersection Capacity Utilization 136.0%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

05/10/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↕			↕	↖		↕	↖			
Traffic Volume (veh/h)	486	1033	0	0	415	1060	53	3	283	0	0	0
Future Volume (veh/h)	486	1033	0	0	415	1060	53	3	283	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1841	1722	0	0	1796	1752	1870	1900	1811			
Adj Flow Rate, veh/h	528	1123	0	0	451	0	58	3	243			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	4	12	0	0	7	10	2	0	6			
Cap, veh/h	585	2209	0	0	1589		417	22	371			
Arrive On Green	0.34	1.00	0.00	0.00	0.47	0.00	0.24	0.24	0.24			
Sat Flow, veh/h	3401	3358	0	0	3503	1485	1725	89	1535			
Grp Volume(v), veh/h	528	1123	0	0	451	0	61	0	243			
Grp Sat Flow(s),veh/h/ln	1700	1636	0	0	1706	1485	1814	0	1535			
Q Serve(g_s), s	17.7	0.0	0.0	0.0	9.8	0.0	3.2	0.0	17.1			
Cycle Q Clear(g_c), s	17.7	0.0	0.0	0.0	9.8	0.0	3.2	0.0	17.1			
Prop In Lane	1.00		0.00	0.00		1.00	0.95		1.00			
Lane Grp Cap(c), veh/h	585	2209	0	0	1589		438	0	371			
V/C Ratio(X)	0.90	0.51	0.00	0.00	0.28		0.14	0.00	0.66			
Avail Cap(c_a), veh/h	1063	2209	0	0	1589		438	0	371			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.78	0.78	0.00	0.00	0.82	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	38.4	0.0	0.0	0.0	19.8	0.0	35.7	0.0	41.0			
Incr Delay (d2), s/veh	1.7	0.7	0.0	0.0	0.4	0.0	0.7	0.0	8.7			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	5.9	0.2	0.0	0.0	3.8	0.0	1.4	0.0	7.2			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.1	0.7	0.0	0.0	20.1	0.0	36.4	0.0	49.7			
LnGrp LOS	D	A	A	A	C		D	A	D			
Approach Vol, veh/h		1651			451	A		304				
Approach Delay, s/veh		13.3			20.1			47.0				
Approach LOS		B			C			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		86.0			25.1	60.9		34.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		81.0			37.5	39.0		29.0				
Max Q Clear Time (g_c+I1), s		2.0			19.7	11.8		19.1				
Green Ext Time (p_c), s		5.7			0.9	1.8		0.8				

Intersection Summary

HCM 6th Ctrl Delay	18.8
HCM 6th LOS	B

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Timings  
5: Heacock Street & Cactus Avenue

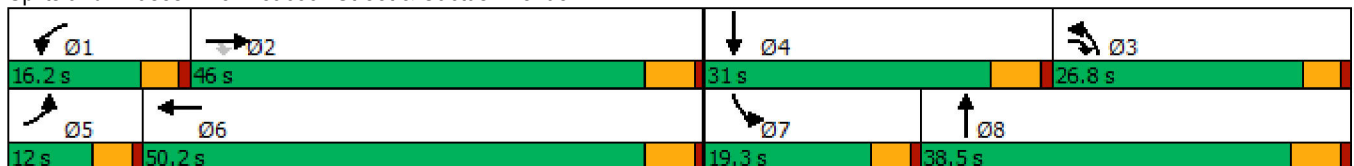


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↑↑↑	↗	↖	↑↑↑	↗	↑↑	↖	↑↑
Traffic Volume (vph)	162	981	732	81	1904	805	666	129	349
Future Volume (vph)	162	981	732	81	1904	805	666	129	349
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	3	1	6	3	8	7	4
Permitted Phases			2						
Detector Phase	5	2	3	1	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.5	30.5	9.5	9.5	30.5	9.5	30.5	9.5	30.5
Total Split (s)	12.0	46.0	26.8	16.2	50.2	26.8	38.5	19.3	31.0
Total Split (%)	10.0%	38.3%	22.3%	13.5%	41.8%	22.3%	32.1%	16.1%	25.8%
Yellow Time (s)	3.5	4.5	3.5	3.5	4.5	3.5	4.5	3.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-2.0	0.0	0.0	-2.0	-2.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.5	3.5	4.5	4.5	3.5	2.5	4.5	3.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None
Act Effct Green (s)	8.5	47.4	70.4	9.0	46.8	25.0	30.2	12.8	19.1
Actuated g/C Ratio	0.07	0.42	0.62	0.08	0.41	0.22	0.27	0.11	0.17
v/c Ratio	1.22	0.44	0.67	0.56	0.92	1.05	0.74	0.64	0.72
Control Delay	189.9	25.8	10.8	65.1	39.1	90.0	43.5	62.4	48.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	189.9	25.8	10.8	65.1	39.1	90.0	43.5	62.4	48.6
LOS	F	C	B	E	D	F	D	E	D
Approach Delay		34.1			40.1		68.4		51.7
Approach LOS		C			D		E		D

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 113.4  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.22  
 Intersection Signal Delay: 46.4  
 Intersection LOS: D  
 Intersection Capacity Utilization 98.5%  
 ICU Level of Service F  
 Analysis Period (min) 15





























Splits and Phases: 5: Heacock Street & Cactus Avenue



HCM 6th Signalized Intersection Summary  
5: Heacock Street & Cactus Avenue

Gateway Aviation TA (JN:13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 			 	
Traffic Volume (veh/h)	162	981	732	81	1904	147	805	666	32	129	349	97
Future Volume (veh/h)	162	981	732	81	1904	147	805	666	32	129	349	97
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1752	1900	1885	1856	1826	1841	1841	1870	1841	1885
Adj Flow Rate, veh/h	169	1022	632	84	1983	91	839	694	17	134	364	75
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	10	0	1	3	5	4	4	2	4	1
Cap, veh/h	138	2338	893	107	2187	100	770	997	24	177	466	95
Arrive On Green	0.12	0.62	0.40	0.06	0.61	0.39	0.33	0.42	0.27	0.10	0.16	0.15
Sat Flow, veh/h	1781	5611	1485	1810	5366	246	3478	3578	88	1781	2968	605
Grp Volume(v), veh/h	169	1022	632	84	1392	682	839	357	354	134	224	215
Grp Sat Flow(s),veh/h/ln	1781	1870	1485	1810	1885	1841	1739	1841	1825	1781	1841	1732
Q Serve(g_s), s	8.5	10.3	8.2	5.0	35.3	36.1	24.3	17.5	17.6	8.0	12.8	13.1
Cycle Q Clear(g_c), s	8.5	10.3	8.2	5.0	35.3	36.1	24.3	17.5	17.6	8.0	12.8	13.1
Prop In Lane	1.00		1.00	1.00		0.13	1.00		0.05	1.00		0.35
Lane Grp Cap(c), veh/h	138	2338	893	107	1537	750	770	513	509	177	289	272
V/C Ratio(X)	1.22	0.44	0.71	0.78	0.91	0.91	1.09	0.70	0.70	0.76	0.78	0.79
Avail Cap(c_a), veh/h	138	2338	893	193	1604	783	770	570	565	256	444	418
HCM Platoon Ratio	1.50	1.50	1.00	1.00	1.50	1.00	1.50	1.50	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.5	13.9	4.7	50.9	19.5	21.1	36.6	28.1	28.5	48.1	44.4	44.7
Incr Delay (d2), s/veh	149.4	0.0	2.2	4.6	7.3	13.7	59.5	2.5	2.5	3.7	1.9	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.2	3.5	3.3	2.3	11.7	14.0	15.0	6.6	6.7	3.6	5.8	5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	197.9	14.0	6.9	55.5	26.7	34.9	96.2	30.6	31.0	51.8	46.3	47.3
LnGrp LOS	F	B	A	E	C	C	F	C	C	D	D	D
Approach Vol, veh/h		1823			2158			1550			573	
Approach Delay, s/veh		28.6			30.4			66.2			47.9	
Approach LOS		C			C			E			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.0	49.2	27.8	21.7	12.0	48.2	14.4	35.1				
Change Period (Y+Rc), s	4.5	5.5	5.5	* 5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	11.7	40.5	22.3	* 26	7.5	44.7	14.8	33.0				
Max Q Clear Time (g_c+I1), s	7.0	12.3	26.3	15.1	10.5	38.1	10.0	19.6				
Green Ext Time (p_c), s	0.0	6.0	0.0	1.1	0.0	4.6	0.1	2.1				

Intersection Summary

HCM 6th Ctrl Delay	40.6
HCM 6th LOS	D

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

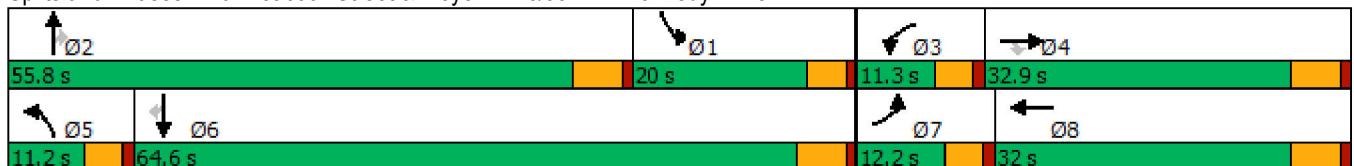
05/10/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	38	42	111	35	220	34	985	54	117	798	20	
Future Volume (vph)	38	42	111	35	220	34	985	54	117	798	20	
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	7	4		3	8	5	2		1	6		
Permitted Phases			4					2			6	
Detector Phase	7	4	4	3	8	5	2	2	1	6	6	
Switch Phase												
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	
Minimum Split (s)	8.5	23.5	23.5	8.5	31.5	8.5	30.5	30.5	8.5	23.5	23.5	
Total Split (s)	12.2	32.9	32.9	11.3	32.0	11.2	55.8	55.8	20.0	64.6	64.6	
Total Split (%)	10.2%	27.4%	27.4%	9.4%	26.7%	9.3%	46.5%	46.5%	16.7%	53.8%	53.8%	
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5	4.5	4.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	5.5	4.5	5.5	5.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max	
Act Effct Green (s)	6.5	13.6	13.6	6.0	13.1	5.9	51.6	51.6	11.9	62.1	62.1	
Actuated g/C Ratio	0.07	0.14	0.14	0.06	0.13	0.06	0.52	0.52	0.12	0.63	0.63	
v/c Ratio	0.38	0.18	0.31	0.34	0.69	0.33	0.55	0.06	0.55	0.38	0.02	
Control Delay	59.8	40.9	4.5	58.6	29.5	58.6	20.3	0.1	53.3	12.9	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	59.8	40.9	4.5	58.6	29.5	58.6	20.3	0.1	53.3	12.9	0.1	
LOS	E	D	A	E	C	E	C	A	D	B	A	
Approach Delay		23.6			31.7		20.5			17.6		
Approach LOS		C			C		C			B		

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 98.9	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay: 21.7	Intersection LOS: C
Intersection Capacity Utilization 68.2%	ICU Level of Service C
Analysis Period (min) 15	

























Splits and Phases: 6: Heacock Street & Meyer Drive/John F. Kennedy Drive



HCM 6th Signalized Intersection Summary  
 6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	42	111	35	220	213	34	985	54	117	798	20
Future Volume (veh/h)	38	42	111	35	220	213	34	985	54	117	798	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.96	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1648	1767	1811	1796	1841	1885	1781	1811	1767	1856	1767	1618
Adj Flow Rate, veh/h	40	44	80	36	229	186	35	1026	46	122	831	11
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	17	9	6	7	4	1	8	6	9	3	9	19
Cap, veh/h	48	290	252	44	306	236	43	1808	716	181	2072	794
Arrive On Green	0.03	0.16	0.16	0.03	0.16	0.16	0.03	0.50	0.50	0.10	0.59	0.59
Sat Flow, veh/h	1570	1767	1535	1711	1917	1481	1697	3622	1436	1767	3533	1354
Grp Volume(v), veh/h	40	44	80	36	219	196	35	1026	46	122	831	11
Grp Sat Flow(s),veh/h/ln	1570	1767	1535	1711	1841	1557	1697	1811	1436	1767	1767	1354
Q Serve(g_s), s	2.6	2.2	4.6	2.1	11.5	12.2	2.1	20.0	1.3	6.7	12.8	0.3
Cycle Q Clear(g_c), s	2.6	2.2	4.6	2.1	11.5	12.2	2.1	20.0	1.3	6.7	12.8	0.3
Prop In Lane	1.00		1.00	1.00		0.95	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	48	290	252	44	294	248	43	1808	716	181	2072	794
V/C Ratio(X)	0.84	0.15	0.32	0.81	0.75	0.79	0.82	0.57	0.06	0.67	0.40	0.01
Avail Cap(c_a), veh/h	120	480	417	115	484	409	113	1808	716	272	2072	794
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.6	36.1	37.2	48.8	40.4	40.7	48.9	17.6	7.4	43.6	11.3	8.7
Incr Delay (d2), s/veh	13.0	0.1	0.3	12.3	1.4	2.1	13.0	1.3	0.2	1.6	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.9	1.7	1.0	5.1	4.6	1.0	7.6	0.5	2.9	4.4	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.7	36.2	37.4	61.1	41.9	42.8	61.9	18.9	7.5	45.2	11.9	8.7
LnGrp LOS	E	D	D	E	D	D	E	B	A	D	B	A
Approach Vol, veh/h		164			451			1107			964	
Approach Delay, s/veh		43.0			43.8			19.8			16.0	
Approach LOS		D			D			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.8	55.8	7.1	22.0	7.0	64.6	7.6	21.6				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	15.5	* 50	6.8	27.4	6.7	59.1	7.7	26.5				
Max Q Clear Time (g_c+I1), s	8.7	22.0	4.1	6.6	4.1	14.8	4.6	14.2				
Green Ext Time (p_c), s	0.1	4.6	0.0	0.2	0.0	3.6	0.0	1.2				













Intersection Summary

HCM 6th Ctrl Delay	23.9
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
11: Heacock Street & Cardinal Avenue

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	11	12	1063	56	47	899
Future Volume (vph)	11	12	1063	56	47	899
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	26.6	26.6	21.6	21.6	9.6	16.2
Total Split (s)	27.0	27.0	76.0	76.0	17.0	93.0
Total Split (%)	22.5%	22.5%	63.3%	63.3%	14.2%	77.5%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	13.1	13.1	42.9	42.9	7.4	49.5
Actuated g/C Ratio	0.23	0.23	0.75	0.75	0.13	0.87
v/c Ratio	0.04	0.04	0.46	0.05	0.23	0.37
Control Delay	25.6	13.9	8.9	3.2	33.1	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.6	13.9	8.9	3.2	33.1	4.1
LOS	C	B	A	A	C	A
Approach Delay	19.6		8.7			5.5
Approach LOS	B		A			A

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 57.2	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.46	
Intersection Signal Delay: 7.4	Intersection LOS: A
Intersection Capacity Utilization 53.4%	ICU Level of Service A
Analysis Period (min) 15	













Splits and Phases: 11: Heacock Street & Cardinal Avenue



HCM 6th Signalized Intersection Summary  
 11: Heacock Street & Cardinal Avenue

Gateway Aviation TA (JN:13445)

05/10/2022

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	11	12	1063	56	47	899
Future Volume (veh/h)	11	12	1063	56	47	899
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1559	1441	1781	1870	1781	1693
Adj Flow Rate, veh/h	12	14	1208	64	53	1022
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	23	31	8	2	8	14
Cap, veh/h	92	76	1899	845	92	2226
Arrive On Green	0.06	0.06	0.53	0.53	0.05	0.69
Sat Flow, veh/h	1485	1221	3563	1585	1697	3300
Grp Volume(v), veh/h	12	14	1208	64	53	1022
Grp Sat Flow(s),veh/h/ln	1485	1221	1781	1585	1697	1608
Q Serve(g_s), s	0.3	0.5	10.5	0.9	1.3	6.3
Cycle Q Clear(g_c), s	0.3	0.5	10.5	0.9	1.3	6.3
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	92	76	1899	845	92	2226
V/C Ratio(X)	0.13	0.19	0.64	0.08	0.58	0.46
Avail Cap(c_a), veh/h	758	623	5795	2578	479	6358
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.5	19.5	7.2	5.0	20.3	3.1
Incr Delay (d2), s/veh	0.6	1.2	0.4	0.0	2.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.1	1.8	0.1	0.5	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	20.1	20.7	7.6	5.0	22.4	3.2
LnGrp LOS	C	C	A	A	C	A
Approach Vol, veh/h	26		1272			1075
Approach Delay, s/veh	20.4		7.5			4.1
Approach LOS	C		A			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	7.0	29.6			36.6	7.3
Change Period (Y+Rc), s	4.6	* 6.2			6.2	4.6
Max Green Setting (Gmax), s	12.4	* 71			86.8	22.4
Max Q Clear Time (g_c+I1), s	3.3	12.5			8.3	2.5
Green Ext Time (p_c), s	0.0	10.9			8.2	0.0

Intersection Summary

HCM 6th Ctrl Delay	6.1
HCM 6th LOS	A

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
12: Heacock Street & San Michele Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	28	74	4	36	310	756	1	64	473	111	47
Future Volume (vph)	28	74	4	36	310	756	1	64	473	111	47
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	1	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	4.0	5.0	4.0	5.0	5.0
Minimum Split (s)	9.5	30.5	30.5	8.5	30.5	8.5	8.5	34.5	8.5	34.5	34.5
Total Split (s)	10.0	36.4	36.4	11.6	38.0	35.0	8.5	37.0	35.0	63.5	63.5
Total Split (%)	8.3%	30.3%	30.3%	9.7%	31.7%	29.2%	7.1%	30.8%	29.2%	52.9%	52.9%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	3.5	4.5	3.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	4.5	5.5	4.5	5.5	5.5
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	Min	Min
Act Effct Green (s)	5.8	15.6	15.6	12.3	22.1	48.8	4.5	9.6	20.5	34.1	34.1
Actuated g/C Ratio	0.08	0.21	0.21	0.16	0.30	0.65	0.06	0.13	0.27	0.46	0.46
v/c Ratio	0.25	0.26	0.01	0.16	0.74	0.70	0.01	0.22	0.66	0.18	0.07
Control Delay	47.8	34.6	0.0	34.9	35.8	6.5	48.0	30.7	30.5	15.4	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.8	34.6	0.0	34.9	35.8	6.5	48.0	30.7	30.5	15.4	0.9
LOS	D	C	A	C	D	A	D	C	C	B	A
Approach Delay		36.8			15.7			30.9		25.6	
Approach LOS		D			B			C		C	

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 74.7	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 20.7	Intersection LOS: C
Intersection Capacity Utilization 66.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 12: Heacock Street & San Michele Road





























HCM 6th Signalized Intersection Summary  
 12: Heacock Street & San Michele Road

Gateway Aviation TA (JN:13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	74	4	36	310	756	1	64	9	473	111	47
Future Volume (veh/h)	28	74	4	36	310	756	1	64	9	473	111	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1856	1366	1796	1900	1856	1900	1856	1707	1811	1826	1856
Adj Flow Rate, veh/h	37	99	5	48	413	741	1	85	12	631	148	63
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh, %	0	3	36	7	0	3	0	3	13	6	5	3
Cap, veh/h	56	171	106	381	539	812	3	271	38	778	613	528
Arrive On Green	0.03	0.09	0.09	0.22	0.28	0.28	0.00	0.09	0.09	0.23	0.34	0.34
Sat Flow, veh/h	1810	1856	1158	1711	1900	1572	1810	3110	431	3346	1826	1572
Grp Volume(v), veh/h	37	99	5	48	413	741	1	47	50	631	148	63
Grp Sat Flow(s),veh/h/ln	1810	1856	1158	1711	1900	1572	1810	1763	1778	1673	1826	1572
Q Serve(g_s), s	1.2	2.9	0.2	1.3	11.4	11.4	0.0	1.5	1.5	10.2	3.4	1.1
Cycle Q Clear(g_c), s	1.2	2.9	0.2	1.3	11.4	11.4	0.0	1.5	1.5	10.2	3.4	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.24	1.00		1.00
Lane Grp Cap(c), veh/h	56	171	106	381	539	812	3	154	155	778	613	528
V/C Ratio(X)	0.66	0.58	0.05	0.13	0.77	0.91	0.32	0.31	0.32	0.81	0.24	0.12
Avail Cap(c_a), veh/h	173	999	623	381	1075	1256	126	967	975	1778	1844	1588
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.5	25.0	15.5	17.8	18.8	12.7	28.6	24.6	24.6	20.8	13.8	6.3
Incr Delay (d2), s/veh	4.8	1.2	0.1	0.1	0.9	5.1	20.0	0.4	0.4	0.8	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	1.3	0.1	0.4	4.3	6.9	0.0	0.5	0.6	3.4	1.1	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.3	26.2	15.6	17.9	19.7	17.8	48.6	25.0	25.1	21.6	13.9	6.3
LnGrp LOS	C	C	B	B	B	B	D	C	C	C	B	A
Approach Vol, veh/h		141			1202			98			842	
Approach Delay, s/veh		27.4			18.4			25.3			19.1	
Approach LOS		C			B			C			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.8	10.5	17.3	10.8	4.6	24.8	6.3	21.8				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	30.5	* 32	7.1	30.9	4.0	58.0	5.5	32.5				
Max Q Clear Time (g_c+I1), s	12.2	3.5	3.3	4.9	2.0	5.4	3.2	13.4				
Green Ext Time (p_c), s	1.1	0.2	0.0	0.3	0.0	0.5	0.0	2.9				

Intersection Summary

HCM 6th Ctrl Delay	19.5
HCM 6th LOS	B

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Timings  
14: Indian Street & San Michele Road

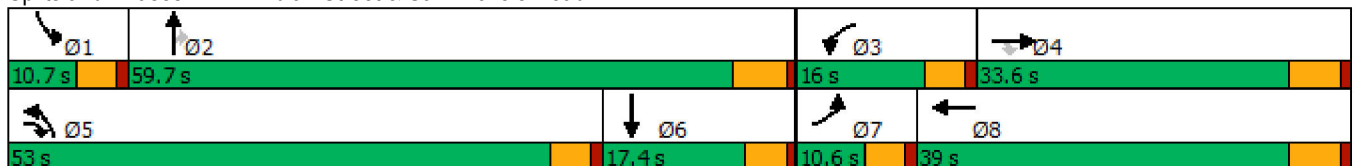


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↘	↑↑	↗↗	↘↘	↑↑	↘↘	↑	↗	↘	↑↑
Traffic Volume (vph)	14	196	360	170	832	1465	198	216	5	128
Future Volume (vph)	14	196	360	170	832	1465	198	216	5	128
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	5	3	8	5	2		1	6
Permitted Phases			4					2		
Detector Phase	7	4	5	3	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	10.0	5.0	8.8
Minimum Split (s)	9.6	31.8	9.6	9.6	31.8	9.6	32.8	32.8	9.6	14.6
Total Split (s)	10.6	33.6	53.0	16.0	39.0	53.0	59.7	59.7	10.7	17.4
Total Split (%)	8.8%	28.0%	44.2%	13.3%	32.5%	44.2%	49.8%	49.8%	8.9%	14.5%
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	3.6	4.8	4.8	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	4.6	5.8	5.8	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None	None
Act Effct Green (s)	5.5	20.3	74.9	9.5	30.6	48.7	60.2	60.2	5.2	9.9
Actuated g/C Ratio	0.05	0.19	0.69	0.09	0.28	0.45	0.56	0.56	0.05	0.09
v/c Ratio	0.23	0.39	0.15	0.58	0.90	0.96	0.22	0.22	0.05	0.48
Control Delay	61.4	40.5	3.3	56.4	50.2	44.6	15.2	2.8	54.8	51.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.4	40.5	3.3	56.4	50.2	44.6	15.2	2.8	54.8	51.4
LOS	E	D	A	E	D	D	B	A	D	D
Approach Delay		17.5			51.2		36.7			51.5
Approach LOS		B			D		D			D

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 108.2  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.96  
 Intersection Signal Delay: 38.3  
 Intersection LOS: D  
 Intersection Capacity Utilization 93.0%  
 ICU Level of Service F  
 Analysis Period (min) 15

Splits and Phases: 14: Indian Street & San Michele Road



HCM 6th Signalized Intersection Summary  
 14: Indian Street & San Michele Road

Gateway Aviation TA (JN:13445)

05/10/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	196	360	170	832	10	1465	198	216	5	128	12
Future Volume (veh/h)	14	196	360	170	832	10	1465	198	216	5	128	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.99	1.00		0.89
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1218	1470	1870	1826	1826	1900	1856	1752	1767	1900	1707	1900
Adj Flow Rate, veh/h	15	213	331	185	904	4	1592	215	153	5	139	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	46	29	2	5	5	0	3	10	9	0	13	0
Cap, veh/h	19	635	2087	248	982	4	1564	905	763	12	251	18
Arrive On Green	0.02	0.32	0.32	0.07	0.41	0.27	0.66	0.52	0.52	0.01	0.08	0.08
Sat Flow, veh/h	1160	2940	3170	3478	3633	16	3534	1752	1478	1810	3121	221
Grp Volume(v), veh/h	15	213	331	185	454	454	1592	215	153	5	75	74
Grp Sat Flow(s),veh/h/ln	1160	1470	1585	1739	1826	1823	1767	1752	1478	1810	1707	1635
Q Serve(g_s), s	1.4	6.0	4.0	5.7	25.8	25.8	48.4	7.4	6.1	0.3	4.6	4.8
Cycle Q Clear(g_c), s	1.4	6.0	4.0	5.7	25.8	25.8	48.4	7.4	6.1	0.3	4.6	4.8
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	1.00		0.14
Lane Grp Cap(c), veh/h	19	635	2087	248	494	493	1564	905	763	12	137	132
V/C Ratio(X)	0.77	0.34	0.16	0.75	0.92	0.92	1.02	0.24	0.20	0.43	0.55	0.56
Avail Cap(c_a), veh/h	64	747	2208	362	554	553	1564	905	763	101	200	191
HCM Platoon Ratio	1.00	1.50	1.50	1.00	1.50	1.00	1.50	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.6	31.0	6.1	49.8	31.4	31.5	18.4	14.6	14.3	54.1	48.4	48.4
Incr Delay (d2), s/veh	21.0	0.1	0.0	2.1	18.6	18.6	27.4	0.0	0.0	9.0	1.3	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	2.0	1.1	2.5	11.8	11.8	16.5	2.7	1.9	0.2	1.9	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	74.6	31.2	6.1	51.9	50.0	50.1	45.8	14.6	14.3	63.1	49.6	49.9
LnGrp LOS	E	C	A	D	D	D	F	B	B	E	D	D
Approach Vol, veh/h		559			1093			1960			154	
Approach Delay, s/veh		17.5			50.4			39.9			50.2	
Approach LOS		B			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.3	62.3	12.4	29.4	53.0	14.6	6.4	35.4				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	* 5.8	4.6	5.8				
Max Green Setting (Gmax), s	6.1	53.9	11.4	27.8	48.4	* 13	6.0	33.2				
Max Q Clear Time (g_c+I1), s	2.3	9.4	7.7	8.0	50.4	6.8	3.4	27.8				
Green Ext Time (p_c), s	0.0	0.9	0.1	1.5	0.0	0.2	0.0	1.7				

Intersection Summary

HCM 6th Ctrl Delay	40.1
HCM 6th LOS	D

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
15: Indian Street & Nandina Avenue



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↑	↗	↖	↗	↖↗	↖↗	↖	↖↗
Traffic Volume (vph)	7	32	156	33	41	339	1670	12	474
Future Volume (vph)	7	32	156	33	41	339	1670	12	474
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	5	3	8	5	2	1	6
Permitted Phases	4								
Detector Phase	7	4	5	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	29.8	9.6	9.6	29.8	9.6	26.8	9.6	26.8
Total Split (s)	9.7	29.9	29.0	10.0	30.2	29.0	70.4	9.7	51.1
Total Split (%)	8.1%	24.9%	24.2%	8.3%	25.2%	24.2%	58.7%	8.1%	42.6%
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	5.8	13.6	30.4	6.1	17.1	16.9	61.3	5.8	38.0
Actuated g/C Ratio	0.07	0.16	0.36	0.07	0.20	0.20	0.72	0.07	0.45
v/c Ratio	0.06	0.17	0.31	0.34	0.24	0.64	0.74	0.13	0.35
Control Delay	50.9	41.2	4.9	57.1	29.0	41.2	15.5	52.9	19.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.9	41.2	4.9	57.1	29.0	41.2	15.5	52.9	19.1
LOS	D	D	A	E	C	D	B	D	B
Approach Delay	12.6		38.7			19.7		19.9	
Approach LOS	B		D			B		B	

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 85.3	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 19.9	Intersection LOS: B
Intersection Capacity Utilization 74.6%	ICU Level of Service D
Analysis Period (min) 15	























Splits and Phases: 15: Indian Street & Nandina Avenue

↖ Ø1	↑ Ø2	↖ Ø3	→ Ø4
9.7 s	70.4 s	10 s	29.9 s
↗ Ø5	↓ Ø6	↗ Ø7	← Ø8
29 s	51.1 s	9.7 s	30.2 s

HCM 6th Signalized Intersection Summary  
 15: Indian Street & Nandina Avenue

Gateway Aviation TA (JN:13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	32	156	33	41	22	339	1670	70	12	474	24
Future Volume (veh/h)	7	32	156	33	41	22	339	1670	70	12	474	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1248	1100	1559	1441	1455	1559	1841	1707	1411	1811	1900
Adj Flow Rate, veh/h	8	36	173	37	46	24	377	1856	78	13	527	27
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	44	54	23	31	30	23	4	13	33	6	0
Cap, veh/h	18	219	305	46	176	92	436	2041	85	20	1523	78
Arrive On Green	0.01	0.18	0.18	0.03	0.20	0.20	0.15	0.58	0.58	0.01	0.45	0.45
Sat Flow, veh/h	1810	1248	932	1485	892	465	2881	3505	146	1344	3416	175
Grp Volume(v), veh/h	8	36	173	37	0	70	377	967	967	13	279	275
Grp Sat Flow(s),veh/h/ln	1810	1248	932	1485	0	1357	1440	1841	1811	1344	1811	1780
Q Serve(g_s), s	0.5	2.6	16.3	2.6	0.0	4.6	13.6	49.1	50.8	1.0	10.7	10.7
Cycle Q Clear(g_c), s	0.5	2.6	16.3	2.6	0.0	4.6	13.6	49.1	50.8	1.0	10.7	10.7
Prop In Lane	1.00		1.00	1.00		0.34	1.00		0.08	1.00		0.10
Lane Grp Cap(c), veh/h	18	219	305	46	0	267	436	1072	1054	20	807	793
V/C Ratio(X)	0.45	0.16	0.57	0.80	0.00	0.26	0.86	0.90	0.92	0.64	0.35	0.35
Avail Cap(c_a), veh/h	87	284	353	76	0	312	663	1121	1103	65	807	793
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.2	37.1	29.5	51.0	0.0	36.1	43.9	19.5	19.9	52.0	19.3	19.3
Incr Delay (d2), s/veh	6.3	0.3	1.7	10.9	0.0	0.5	5.0	10.0	11.6	12.1	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.8	3.6	1.1	0.0	1.5	4.9	20.4	21.1	0.4	4.2	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.6	37.5	31.2	61.9	0.0	36.6	49.0	29.5	31.5	64.1	19.5	19.5
LnGrp LOS	E	D	C	E	A	D	D	C	C	E	B	B
Approach Vol, veh/h		217			107			2311				567
Approach Delay, s/veh		33.2			45.3			33.5				20.5
Approach LOS		C			D			C				C
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.2	67.6	7.9	24.4	20.7	53.1	5.7	26.7				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	5.1	64.6	5.4	24.1	24.4	45.3	5.1	24.4				
Max Q Clear Time (g_c+I1), s	3.0	52.8	4.6	18.3	15.6	12.7	2.5	6.6				
Green Ext Time (p_c), s	0.0	9.0	0.0	0.3	0.5	3.0	0.0	0.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			31.6									
HCM 6th LOS			C									

Timings  
16: Indian Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

05/10/2022

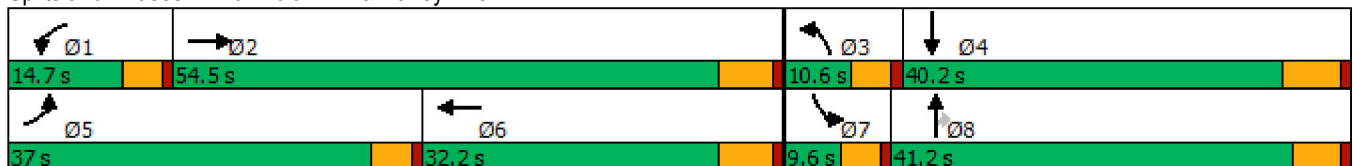


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↔↔	↕↕↔	↔	↕↕↔	↔↔	↕↕	↕	↔	↕↔
Traffic Volume (vph)	566	445	62	787	136	296	41	13	77
Future Volume (vph)	566	445	62	787	136	296	41	13	77
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	5	2	1	6	3	8		7	4
Permitted Phases							8		
Detector Phase	5	2	1	6	3	8	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2
Total Split (s)	37.0	54.5	14.7	32.2	10.6	41.2	41.2	9.6	40.2
Total Split (%)	30.8%	45.4%	12.3%	26.8%	8.8%	34.3%	34.3%	8.0%	33.5%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.4	4.4	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.4	5.4	4.6	6.2
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	32.8	50.5	7.8	23.4	6.1	24.2	24.2	5.1	14.2
Actuated g/C Ratio	0.34	0.52	0.08	0.24	0.06	0.25	0.25	0.05	0.15
v/c Ratio	0.85	0.24	0.48	0.77	0.76	0.39	0.09	0.15	0.56
Control Delay	44.4	14.1	57.4	40.0	72.2	32.8	0.4	53.2	15.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.4	14.1	57.4	40.0	72.2	32.8	0.4	53.2	15.1
LOS	D	B	E	D	E	C	A	D	B
Approach Delay		29.6		41.2		41.3			16.7
Approach LOS		C		D		D			B

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 97.9  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.85  
 Intersection Signal Delay: 33.9  
 Intersection LOS: C  
 Intersection Capacity Utilization 63.0%  
 ICU Level of Service B  
 Analysis Period (min) 15































Splits and Phases: 16: Indian Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
16: Indian Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  			  		 	 			 	
Traffic Volume (veh/h)	566	445	99	62	787	47	136	296	41	13	77	207
Future Volume (veh/h)	566	445	99	62	787	47	136	296	41	13	77	207
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1011	1811	1707	1870	1856	1900	1737	1781	1796	1885	1811	1366
Adj Flow Rate, veh/h	622	489	54	68	865	-168	149	325	22	14	85	117
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	60	6	13	2	3	0	11	8	7	1	6	36
Cap, veh/h	662	2275	248	88	1000	0	217	585	263	30	210	187
Arrive On Green	0.35	0.50	0.50	0.05	0.20	0.00	0.07	0.17	0.17	0.02	0.12	0.12
Sat Flow, veh/h	1868	4526	493	1781	5233	0	3209	3385	1522	1795	1721	1535
Grp Volume(v), veh/h	622	354	189	68	697	0	149	325	22	14	85	117
Grp Sat Flow(s),veh/h/ln	934	1648	1722	1781	1689	0	1605	1692	1522	1795	1721	1535
Q Serve(g_s), s	26.4	4.9	5.0	3.1	10.5	0.0	3.7	7.2	1.0	0.6	3.7	5.9
Cycle Q Clear(g_c), s	26.4	4.9	5.0	3.1	10.5	0.0	3.7	7.2	1.0	0.6	3.7	5.9
Prop In Lane	1.00		0.29	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	662	1657	866	88	1000	0	217	585	263	30	210	187
V/C Ratio(X)	0.94	0.21	0.22	0.78	0.70	0.00	0.69	0.56	0.08	0.47	0.41	0.62
Avail Cap(c_a), veh/h	738	1958	1023	219	1631	0	235	1478	665	110	714	637
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.6	11.4	11.4	38.5	30.6	0.0	37.4	31.0	28.5	39.9	33.2	34.2
Incr Delay (d2), s/veh	18.0	0.1	0.1	5.4	0.9	0.0	5.7	0.8	0.1	4.2	1.3	3.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.8	1.5	1.6	1.4	4.0	0.0	1.6	2.8	0.4	0.3	1.5	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.7	11.4	11.5	44.0	31.5	0.0	43.1	31.8	28.6	44.1	34.5	37.6
LnGrp LOS	D	B	B	D	C	A	D	C	C	D	C	D
Approach Vol, veh/h		1165			765			496				216
Approach Delay, s/veh		28.6			32.6			35.1				36.8
Approach LOS		C			C			D				D
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.6	47.0	10.1	16.2	33.7	22.0	6.0	20.4				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	10.1	48.7	6.0	34.0	32.4	26.4	5.0	* 36				
Max Q Clear Time (g_c+I1), s	5.1	7.0	5.7	7.9	28.4	12.5	2.6	9.2				
Green Ext Time (p_c), s	0.0	3.3	0.0	1.0	0.6	3.7	0.0	2.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				31.7								
HCM 6th LOS				C								
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

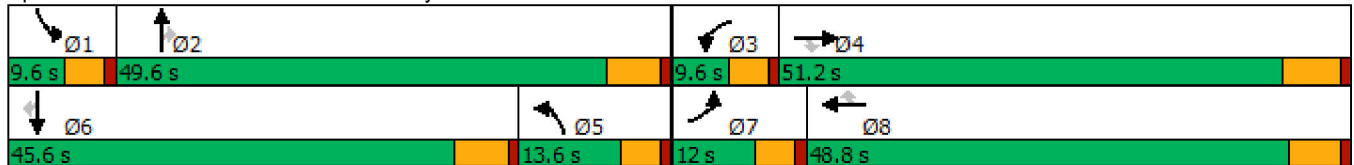
Timings  
20: Perris Bl. & Harley Knox Bl.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	217	279	22	9	374	181	231	1138	14	70	700	278
Future Volume (vph)	217	279	22	9	374	181	231	1138	14	70	700	278
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	47.2	47.2	9.6	48.8	48.8	9.6	48.8	48.8	9.6	43.8	43.8
Total Split (s)	12.0	51.2	51.2	9.6	48.8	48.8	13.6	49.6	49.6	9.6	45.6	45.6
Total Split (%)	10.0%	42.7%	42.7%	8.0%	40.7%	40.7%	11.3%	41.3%	41.3%	8.0%	38.0%	38.0%
Yellow Time (s)	3.6	5.2	5.2	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 79.7  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 20: Perris Bl. & Harley Knox Bl.








































HCM 6th Signalized Intersection Summary  
 20: Perris Bl. & Harley Knox Bl.

Gateway Aviation (JN 13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 		 	  		 	  		 	  	
Traffic Volume (veh/h)	217	279	22	9	374	181	231	1138	14	70	700	278
Future Volume (veh/h)	217	279	22	9	374	181	231	1138	14	70	700	278
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1767	1856	1530	1544	1856	1885	1796	1856	1574	1826	1870	1796
Adj Flow Rate, veh/h	238	307	19	10	411	106	254	1251	12	77	769	197
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	9	3	25	24	3	1	7	3	22	5	2	7
Cap, veh/h	326	835	307	36	759	239	541	1919	505	191	1301	387
Arrive On Green	0.10	0.24	0.24	0.01	0.15	0.15	0.16	0.38	0.38	0.06	0.25	0.25
Sat Flow, veh/h	3264	3526	1296	2853	5066	1598	3319	5066	1334	3374	5106	1520
Grp Volume(v), veh/h	238	307	19	10	411	106	254	1251	12	77	769	197
Grp Sat Flow(s),veh/h/ln	1632	1763	1296	1427	1689	1598	1659	1689	1334	1687	1702	1520
Q Serve(g_s), s	4.8	4.9	0.4	0.2	5.1	4.1	4.7	13.7	0.4	1.5	8.9	4.9
Cycle Q Clear(g_c), s	4.8	4.9	0.4	0.2	5.1	4.1	4.7	13.7	0.4	1.5	8.9	4.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	326	835	307	36	759	239	541	1919	505	191	1301	387
V/C Ratio(X)	0.73	0.37	0.06	0.28	0.54	0.44	0.47	0.65	0.02	0.40	0.59	0.51
Avail Cap(c_a), veh/h	359	2357	867	212	3236	1021	541	3296	868	251	3019	899
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.4	21.5	6.1	32.9	26.5	26.1	25.5	17.2	13.1	30.6	22.0	9.3
Incr Delay (d2), s/veh	5.5	0.3	0.1	1.5	0.6	1.3	0.2	0.4	0.0	0.5	0.4	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	1.8	0.2	0.1	1.9	1.5	1.7	4.5	0.1	0.6	3.2	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.9	21.7	6.2	34.4	27.1	27.3	25.8	17.6	13.1	31.2	22.4	10.4
LnGrp LOS	C	C	A	C	C	C	C	B	B	C	C	B
Approach Vol, veh/h		564			527			1517			1043	
Approach Delay, s/veh		26.8			27.3			19.0			20.8	
Approach LOS		C			C			B			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.4	31.3	5.5	22.1	16.8	22.9	11.3	16.3				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	5.8	* 5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	5.0	43.8	5.0	45.0	9.0	* 40	7.4	* 43				
Max Q Clear Time (g_c+I1), s	3.5	15.7	2.2	6.9	6.7	10.9	6.8	7.1				
Green Ext Time (p_c), s	0.0	9.6	0.0	1.9	0.1	6.1	0.0	3.0				

Intersection Summary

HCM 6th Ctrl Delay	21.9
HCM 6th LOS	C

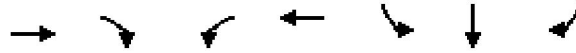
Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Timings

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

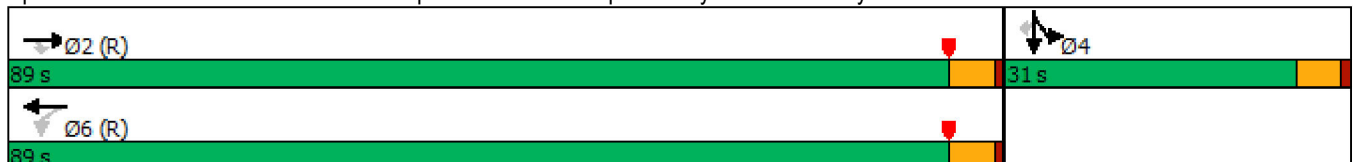


Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations	↑↑	↑	↑↑	↑	↑	↑	↑
Traffic Volume (vph)	575	88	593	245	502	0	208
Future Volume (vph)	575	88	593	245	502	0	208
Turn Type	NA	Perm	Perm	NA	Split	NA	Perm
Protected Phases	2			6	4	4	
Permitted Phases		2	6				4
Detector Phase	2	2	6	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	25.0	25.0	10.0	10.0	10.0
Total Split (s)	89.0	89.0	89.0	89.0	31.0	31.0	31.0
Total Split (%)	74.2%	74.2%	74.2%	74.2%	25.8%	25.8%	25.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None	None
Act Effct Green (s)	84.9	84.9	84.9	84.9	25.1	25.1	25.1
Actuated g/C Ratio	0.71	0.71	0.71	0.71	0.21	0.21	0.21
v/c Ratio	0.27	0.09	0.69	0.22	0.93	0.93	0.48
Control Delay	6.8	1.3	21.7	2.9	83.1	83.1	8.4
Queue Delay	0.0	0.0	0.0	0.3	0.9	0.9	0.0
Total Delay	6.8	1.3	21.7	3.2	84.0	84.0	8.4
LOS	A	A	C	A	F	F	A
Approach Delay	6.1			16.3		61.9	
Approach LOS	A			B		E	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.93  
 Intersection Signal Delay: 27.9  
 Intersection LOS: C  
 Intersection Capacity Utilization 92.5%  
 ICU Level of Service F  
 Analysis Period (min) 15

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

05/10/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑↑	↑					↑	↑	↑
Traffic Volume (veh/h)	0	575	88	593	245	0	0	0	0	502	0	208
Future Volume (veh/h)	0	575	88	593	245	0	0	0	0	502	0	208
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1826	1885	1841	1826	0				1648	1900	1767
Adj Flow Rate, veh/h	0	653	100	674	278	0				570	0	174
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88				0.88	0.88	0.88
Percent Heavy Veh, %	0	5	1	4	5	0				17	0	9
Cap, veh/h	0	2483	1143	1001	1307	0				631	0	301
Arrive On Green	0.00	0.72	0.72	1.00	1.00	0.00				0.20	0.00	0.20
Sat Flow, veh/h	0	3561	1597	1356	1826	0				3139	0	1497
Grp Volume(v), veh/h	0	653	100	674	278	0				570	0	174
Grp Sat Flow(s),veh/h/ln	0	1735	1597	678	1826	0				1570	0	1497
Q Serve(g_s), s	0.0	7.9	2.3	18.0	0.0	0.0				21.3	0.0	12.6
Cycle Q Clear(g_c), s	0.0	7.9	2.3	25.9	0.0	0.0				21.3	0.0	12.6
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2483	1143	1001	1307	0				631	0	301
V/C Ratio(X)	0.00	0.26	0.09	0.67	0.21	0.00				0.90	0.00	0.58
Avail Cap(c_a), veh/h	0	2483	1143	1001	1307	0				680	0	324
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.80	0.80	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	6.0	5.2	1.2	0.0	0.0				46.8	0.0	43.3
Incr Delay (d2), s/veh	0.0	0.3	0.2	2.9	0.3	0.0				14.8	0.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.5	0.7	0.4	0.1	0.0				9.3	0.0	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	6.2	5.3	4.1	0.3	0.0				61.6	0.0	45.5
LnGrp LOS	A	A	A	A	A	A				E	A	D
Approach Vol, veh/h		753			952						744	
Approach Delay, s/veh		6.1			3.0						57.9	
Approach LOS		A			A						E	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		90.9		29.1		90.9						
Change Period (Y+Rc), s		5.0		5.0		5.0						
Max Green Setting (Gmax), s		84.0		26.0		84.0						
Max Q Clear Time (g_c+I1), s		9.9		23.3		27.9						
Green Ext Time (p_c), s		2.9		0.9		7.1						

Intersection Summary

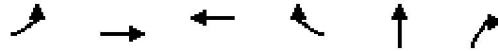
HCM 6th Ctrl Delay	20.6
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Timings

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

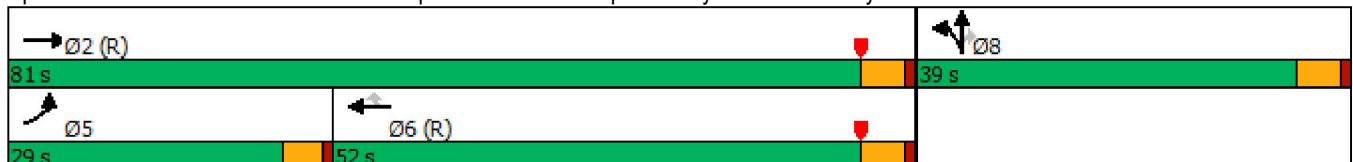


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations	↗↗	↑↑	↗↗	↗	↖	↗
Traffic Volume (vph)	385	691	795	1054	3	318
Future Volume (vph)	385	691	795	1054	3	318
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	26.0	24.0	24.0	10.0	10.0
Total Split (s)	29.0	81.0	52.0	52.0	39.0	39.0
Total Split (%)	24.2%	67.5%	43.3%	43.3%	32.5%	32.5%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max
Act Effct Green (s)	19.2	76.0	52.3	52.3	34.0	34.0
Actuated g/C Ratio	0.16	0.63	0.44	0.44	0.28	0.28
v/c Ratio	0.78	0.37	0.57	1.14	0.11	0.62
Control Delay	51.8	26.8	27.9	89.3	32.7	17.4
Queue Delay	0.0	2.2	0.0	0.0	0.0	0.0
Total Delay	51.8	29.0	27.9	89.3	32.7	17.4
LOS	D	C	C	F	C	B
Approach Delay		37.2	62.9		19.4	
Approach LOS		D	E		B	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 110  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.14  
 Intersection Signal Delay: 49.7  
 Intersection LOS: D  
 Intersection Capacity Utilization 92.5%  
 ICU Level of Service F  
 Analysis Period (min) 15

Splits and Phases: 2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox Bl./Harley Knox Bl.

05/10/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑			↑↑	↗		↖	↗			
Traffic Volume (veh/h)	385	691	0	0	795	1054	44	3	318	0	0	0
Future Volume (veh/h)	385	691	0	0	795	1054	44	3	318	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1841	1722	0	0	1841	1752	1796	1900	1663			
Adj Flow Rate, veh/h	418	751	0	0	864	0	48	3	281			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	4	12	0	0	4	10	7	0	16			
Cap, veh/h	472	2072	0	0	1598		484	30	399			
Arrive On Green	0.28	1.00	0.00	0.00	0.46	0.00	0.28	0.28	0.28			
Sat Flow, veh/h	3401	3358	0	0	3589	1485	1708	107	1409			
Grp Volume(v), veh/h	418	751	0	0	864	0	51	0	281			
Grp Sat Flow(s),veh/h/ln	1700	1636	0	0	1749	1485	1815	0	1409			
Q Serve(g_s), s	14.1	0.0	0.0	0.0	21.4	0.0	2.5	0.0	21.4			
Cycle Q Clear(g_c), s	14.1	0.0	0.0	0.0	21.4	0.0	2.5	0.0	21.4			
Prop In Lane	1.00		0.00	0.00		1.00	0.94		1.00			
Lane Grp Cap(c), veh/h	472	2072	0	0	1598		514	0	399			
V/C Ratio(X)	0.88	0.36	0.00	0.00	0.54		0.10	0.00	0.70			
Avail Cap(c_a), veh/h	694	2072	0	0	1598		514	0	399			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.88	0.88	0.00	0.00	0.66	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	42.4	0.0	0.0	0.0	23.5	0.0	31.7	0.0	38.5			
Incr Delay (d2), s/veh	6.2	0.4	0.0	0.0	0.9	0.0	0.4	0.0	10.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	5.3	0.1	0.0	0.0	8.5	0.0	1.1	0.0	8.2			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.6	0.4	0.0	0.0	24.4	0.0	32.1	0.0	48.5			
LnGrp LOS	D	A	A	A	C		C	A	D			
Approach Vol, veh/h		1169			864	A		332				
Approach Delay, s/veh		17.6			24.4			45.9				
Approach LOS		B			C			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		81.0			21.2	59.8		39.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		76.0			24.5	47.0		34.0				
Max Q Clear Time (g_c+I1), s		2.0			16.1	23.4		23.4				
Green Ext Time (p_c), s		3.3			0.5	3.7		0.9				

Intersection Summary

HCM 6th Ctrl Delay	24.1
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Timings  
5: Heacock Street & Cactus Avenue

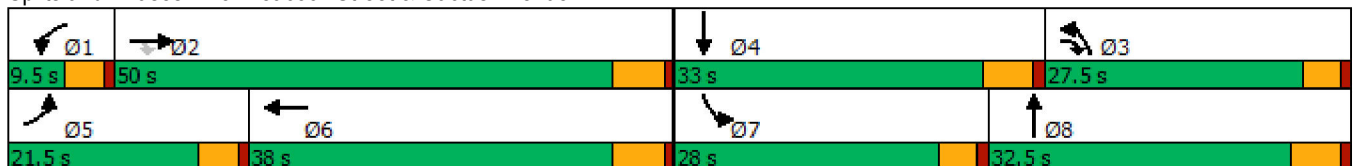


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↶	↶↶↶	↶	↶	↶↶↶	↶↶	↶↶	↶	↶↶
Traffic Volume (vph)	226	1974	1272	26	881	769	623	169	688
Future Volume (vph)	226	1974	1272	26	881	769	623	169	688
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	3	1	6	3	8	7	4
Permitted Phases			2						
Detector Phase	5	2	3	1	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.5	30.5	9.5	9.5	30.5	9.5	30.5	9.5	30.5
Total Split (s)	21.5	50.0	27.5	9.5	38.0	27.5	32.5	28.0	33.0
Total Split (%)	17.9%	41.7%	22.9%	7.9%	31.7%	22.9%	27.1%	23.3%	27.5%
Yellow Time (s)	3.5	4.5	3.5	3.5	4.5	3.5	4.5	3.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-2.0	0.0	0.0	-2.0	-2.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.5	3.5	4.5	4.5	3.5	2.5	4.5	3.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None
Act Effct Green (s)	16.9	45.7	67.8	5.0	30.6	25.1	34.8	15.9	26.6
Actuated g/C Ratio	0.15	0.40	0.60	0.04	0.27	0.22	0.31	0.14	0.23
v/c Ratio	0.83	0.90	1.21	0.34	0.68	1.01	0.63	0.66	0.89
Control Delay	72.1	39.4	122.4	67.2	38.7	79.1	37.9	58.9	55.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.1	39.4	122.4	67.2	38.7	79.1	37.9	58.9	55.4
LOS	E	D	F	E	D	E	D	E	E
Approach Delay		71.9			39.5		59.6		56.0
Approach LOS		E			D		E		E

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 113.4  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.21  
 Intersection Signal Delay: 62.3  
 Intersection LOS: E  
 Intersection Capacity Utilization 115.3%  
 ICU Level of Service H  
 Analysis Period (min) 15





























Splits and Phases: 5: Heacock Street & Cactus Avenue



HCM 6th Signalized Intersection Summary  
5: Heacock Street & Cactus Avenue

Gateway Aviation TA (JN:13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 			 	
Traffic Volume (veh/h)	226	1974	1272	26	881	121	769	623	67	169	688	56
Future Volume (veh/h)	226	1974	1272	26	881	121	769	623	67	169	688	56
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1811	1826	1885	1870	1811	1870	1870	1900	1856	1900
Adj Flow Rate, veh/h	235	2056	622	27	918	64	801	649	34	176	717	11
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	1	6	5	1	2	6	2	2	0	3	0
Cap, veh/h	273	2233	884	44	1452	101	747	1125	59	220	819	13
Arrive On Green	0.23	0.59	0.38	0.03	0.42	0.26	0.32	0.48	0.31	0.12	0.22	0.22
Sat Flow, veh/h	1810	5656	1531	1739	5227	363	3450	3519	184	1810	3645	56
Grp Volume(v), veh/h	235	2056	622	27	662	320	801	345	338	176	365	363
Grp Sat Flow(s),veh/h/ln	1810	1885	1531	1739	1885	1820	1725	1870	1833	1810	1856	1845
Q Serve(g_s), s	14.4	37.6	5.1	1.8	16.0	16.5	25.0	15.3	15.6	10.9	21.9	21.9
Cycle Q Clear(g_c), s	14.4	37.6	5.1	1.8	16.0	16.5	25.0	15.3	15.6	10.9	21.9	21.9
Prop In Lane	1.00		1.00	1.00		0.20	1.00		0.10	1.00		0.03
Lane Grp Cap(c), veh/h	273	2233	884	44	1047	505	747	598	586	220	417	415
V/C Ratio(X)	0.86	0.92	0.70	0.62	0.63	0.63	1.07	0.58	0.58	0.80	0.88	0.88
Avail Cap(c_a), veh/h	282	2279	896	75	1127	544	747	598	586	384	458	456
HCM Platoon Ratio	1.50	1.50	1.00	1.00	1.50	1.00	1.50	1.50	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.5	21.9	7.1	55.7	29.0	30.7	38.9	24.4	25.3	49.3	43.2	43.2
Incr Delay (d2), s/veh	21.1	6.5	2.1	5.2	0.7	1.5	53.8	0.9	0.9	2.6	15.0	15.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.3	12.5	5.6	0.8	6.2	6.5	14.6	5.7	5.9	5.0	11.4	11.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.5	28.4	9.2	60.9	29.7	32.2	92.8	25.3	26.2	51.9	58.1	58.3
LnGrp LOS	E	C	A	E	C	C	F	C	C	D	E	E
Approach Vol, veh/h		2913			1009			1484			904	
Approach Delay, s/veh		27.2			31.3			61.9			57.0	
Approach LOS		C			C			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.4	49.1	28.5	30.4	20.9	35.6	17.5	41.4				
Change Period (Y+Rc), s	4.5	5.5	5.5	* 5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	5.0	44.5	23.0	* 28	17.0	32.5	23.5	27.0				
Max Q Clear Time (g_c+I1), s	3.8	39.6	27.0	23.9	16.4	18.5	12.9	17.6				
Green Ext Time (p_c), s	0.0	4.0	0.0	1.0	0.0	3.4	0.2	1.7				

Intersection Summary

HCM 6th Ctrl Delay	40.3
HCM 6th LOS	D

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

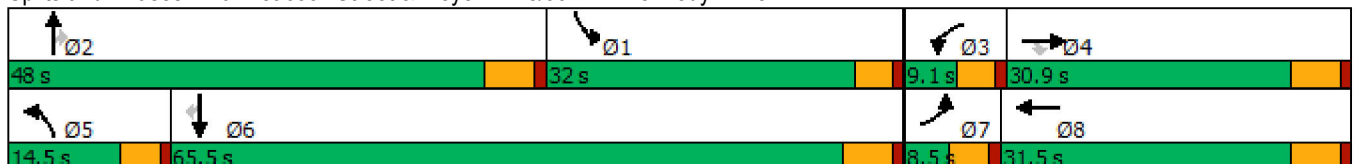
05/10/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	32	202	324	33	92	90	994	83	335	1118	22	
Future Volume (vph)	32	202	324	33	92	90	994	83	335	1118	22	
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	7	4		3	8	5	2		1	6		
Permitted Phases			4					2			6	
Detector Phase	7	4	4	3	8	5	2	2	1	6	6	
Switch Phase												
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	
Minimum Split (s)	8.5	23.5	23.5	8.5	31.5	8.5	29.5	29.5	8.5	23.5	23.5	
Total Split (s)	8.5	30.9	30.9	9.1	31.5	14.5	48.0	48.0	32.0	65.5	65.5	
Total Split (%)	7.1%	25.8%	25.8%	7.6%	26.3%	12.1%	40.0%	40.0%	26.7%	54.6%	54.6%	
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5	4.5	4.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	5.5	4.5	5.5	5.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max	
Act Effct Green (s)	4.0	17.9	17.9	4.6	16.4	9.0	42.9	42.9	26.7	60.7	60.7	
Actuated g/C Ratio	0.04	0.17	0.17	0.04	0.15	0.08	0.40	0.40	0.25	0.56	0.56	
v/c Ratio	0.53	0.75	0.77	0.47	0.42	0.66	0.80	0.12	0.86	0.65	0.02	
Control Delay	80.9	58.7	30.5	73.4	15.9	70.6	36.1	3.5	59.6	20.2	0.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	80.9	58.7	30.5	73.4	15.9	70.6	36.1	3.5	59.6	20.2	0.0	
LOS	F	E	C	E	B	E	D	A	E	C	A	
Approach Delay		43.7			22.1		36.5			28.8		
Approach LOS		D			C		D			C		

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 108.3	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay: 33.1	Intersection LOS: C
Intersection Capacity Utilization 76.7%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 6: Heacock Street & Meyer Drive/John F. Kennedy Drive




























HCM 6th Signalized Intersection Summary  
 6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	202	324	33	92	179	90	994	83	335	1118	22
Future Volume (veh/h)	32	202	324	33	92	179	90	994	83	335	1118	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1900	1900	1885	1885	1900	1811	1900	1841	1796	1900
Adj Flow Rate, veh/h	37	232	194	38	106	143	103	1143	66	385	1285	11
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	1	0	0	1	1	0	6	0	4	7	0
Cap, veh/h	47	276	236	48	278	235	129	1433	637	413	2044	916
Arrive On Green	0.03	0.15	0.15	0.03	0.15	0.15	0.07	0.40	0.40	0.24	0.57	0.57
Sat Flow, veh/h	1810	1885	1610	1810	1885	1598	1810	3622	1610	1753	3593	1610
Grp Volume(v), veh/h	37	232	194	38	106	143	103	1143	66	385	1285	11
Grp Sat Flow(s),veh/h/ln	1810	1885	1610	1810	1885	1598	1810	1811	1610	1753	1796	1610
Q Serve(g_s), s	2.2	12.9	12.6	2.2	5.5	9.0	6.0	29.9	2.2	23.1	25.8	0.3
Cycle Q Clear(g_c), s	2.2	12.9	12.6	2.2	5.5	9.0	6.0	29.9	2.2	23.1	25.8	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	47	276	236	48	278	235	129	1433	637	413	2044	916
V/C Ratio(X)	0.79	0.84	0.82	0.78	0.38	0.61	0.80	0.80	0.10	0.93	0.63	0.01
Avail Cap(c_a), veh/h	67	446	381	77	456	387	168	1433	637	449	2044	916
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.0	44.6	44.5	52.0	41.4	42.9	49.1	28.7	13.1	40.2	15.5	10.0
Incr Delay (d2), s/veh	19.8	3.8	3.3	9.8	0.3	0.9	13.6	4.7	0.3	24.7	1.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	6.2	5.0	1.1	2.5	3.5	3.1	12.8	1.0	12.2	9.5	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.8	48.4	47.8	61.8	41.7	43.8	62.7	33.4	13.5	64.9	17.0	10.1
LnGrp LOS	E	D	D	E	D	D	E	C	B	E	B	B
Approach Vol, veh/h		463			287			1312			1681	
Approach Delay, s/veh		50.0			45.4			34.7			27.9	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	30.8	48.0	7.4	21.2	12.2	66.6	7.3	21.3				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	27.5	* 43	4.6	25.4	10.0	60.0	4.0	26.0				
Max Q Clear Time (g_c+I1), s	25.1	31.9	4.2	14.9	8.0	27.8	4.2	11.0				
Green Ext Time (p_c), s	0.2	3.8	0.0	0.9	0.0	6.3	0.0	0.7				

Intersection Summary













HCM 6th Ctrl Delay	34.4
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Timings  
11: Heacock Street & Cardinal Avenue

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	55	52	1000	19	17	1486
Future Volume (vph)	55	52	1000	19	17	1486
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	26.6	26.6	21.6	21.6	9.6	16.2
Total Split (s)	27.0	27.0	82.0	82.0	11.0	93.0
Total Split (%)	22.5%	22.5%	68.3%	68.3%	9.2%	77.5%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	12.8	12.8	59.1	59.1	6.1	61.5
Actuated g/C Ratio	0.16	0.16	0.75	0.75	0.08	0.78
v/c Ratio	0.25	0.20	0.49	0.02	0.16	0.74
Control Delay	37.4	11.5	7.5	2.8	46.4	9.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.4	11.5	7.5	2.8	46.4	9.5
LOS	D	B	A	A	D	A
Approach Delay	24.8		7.5			10.0
Approach LOS	C		A			A

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 78.8	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 9.6	Intersection LOS: A
Intersection Capacity Utilization 58.4%	ICU Level of Service B
Analysis Period (min) 15	













Splits and Phases: 11: Heacock Street & Cardinal Avenue



HCM 6th Signalized Intersection Summary  
 11: Heacock Street & Cardinal Avenue

Gateway Aviation TA (JN:13445)

05/10/2022

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	55	52	1000	19	17	1486
Future Volume (veh/h)	55	52	1000	19	17	1486
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1752	1781	1693	1781	1752
Adj Flow Rate, veh/h	71	67	1282	24	22	1905
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	2	10	8	14	8	10
Cap, veh/h	227	189	2278	917	42	2418
Arrive On Green	0.13	0.13	0.64	0.64	0.02	0.73
Sat Flow, veh/h	1781	1485	3563	1434	1697	3416
Grp Volume(v), veh/h	71	67	1282	24	22	1905
Grp Sat Flow(s),veh/h/ln	1781	1485	1781	1434	1697	1664
Q Serve(g_s), s	2.7	3.0	15.0	0.5	0.9	27.0
Cycle Q Clear(g_c), s	2.7	3.0	15.0	0.5	0.9	27.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	227	189	2278	917	42	2418
V/C Ratio(X)	0.31	0.35	0.56	0.03	0.53	0.79
Avail Cap(c_a), veh/h	540	450	3734	1503	147	3912
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.3	29.4	7.5	4.9	35.6	6.5
Incr Delay (d2), s/veh	0.8	1.1	0.2	0.0	3.8	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	1.1	3.7	0.1	0.4	4.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	30.1	30.6	7.7	4.9	39.4	7.1
LnGrp LOS	C	C	A	A	D	A
Approach Vol, veh/h	138		1306			1927
Approach Delay, s/veh	30.3		7.7			7.4
Approach LOS	C		A			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	6.4	53.4			59.8	14.0
Change Period (Y+Rc), s	4.6	* 6.2			6.2	4.6
Max Green Setting (Gmax), s	6.4	* 77			86.8	22.4
Max Q Clear Time (g_c+I1), s	2.9	17.0			29.0	5.0
Green Ext Time (p_c), s	0.0	11.8			24.6	0.3

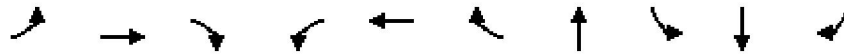
Intersection Summary

HCM 6th Ctrl Delay	8.5
HCM 6th LOS	A

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
12: Heacock Street & San Michele Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBL	SBT	SBR	Ø5
Lane Configurations	↖	↗	↘	↖	↗	↘	↕	↖	↗	↘	↖
Traffic Volume (vph)	53	316	6	20	93	627	119	850	279	32	
Future Volume (vph)	53	316	6	20	93	627	119	850	279	32	
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	NA	Prot	NA	Perm	
Protected Phases	7	4		3	8	1	2	1	6		5
Permitted Phases			4			8				6	
Detector Phase	7	4	4	3	8	1	2	1	6	6	
Switch Phase											
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0
Minimum Split (s)	9.5	30.5	30.5	8.5	30.5	8.5	34.5	8.5	34.5	34.5	8.5
Total Split (s)	10.3	33.6	33.6	8.5	31.8	43.3	34.6	43.3	69.4	69.4	8.5
Total Split (%)	8.6%	28.0%	28.0%	7.1%	26.5%	36.1%	28.8%	36.1%	57.8%	57.8%	7%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5	5.5	
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min	Min	None
Act Effct Green (s)	16.0	28.4	28.4	4.0	12.6	57.4	12.5	39.2	56.3	56.3	
Actuated g/C Ratio	0.16	0.28	0.28	0.04	0.13	0.57	0.12	0.39	0.56	0.56	
v/c Ratio	0.25	0.84	0.01	0.38	0.56	0.73	0.50	0.85	0.39	0.04	
Control Delay	44.7	51.4	0.0	65.8	50.9	12.5	38.5	36.8	14.1	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	44.7	51.4	0.0	65.8	50.9	12.5	38.5	36.8	14.1	0.1	
LOS	D	D	A	E	D	B	D	D	B	A	
Approach Delay		49.6			18.8		38.5		30.3		
Approach LOS		D			B		D		C		

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 100.6	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay: 30.3	Intersection LOS: C
Intersection Capacity Utilization 58.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 12: Heacock Street & San Michele Road



HCM 6th Signalized Intersection Summary  
 12: Heacock Street & San Michele Road

Gateway Aviation TA (JN:13445)

05/10/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	316	6	20	93	627	0	119	37	850	279	32
Future Volume (veh/h)	53	316	6	20	93	627	0	119	37	850	279	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1870	1900	1826	1900	1885	1826	1900
Adj Flow Rate, veh/h	76	451	9	29	133	539	0	170	32	1214	399	46
Peak Hour Factor	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Percent Heavy Veh, %	0	0	0	0	0	2	0	5	0	1	5	0
Cap, veh/h	327	504	417	42	206	772	2	255	47	1319	968	854
Arrive On Green	0.18	0.27	0.27	0.02	0.11	0.11	0.00	0.09	0.09	0.38	0.53	0.53
Sat Flow, veh/h	1810	1900	1571	1810	1900	1585	1810	2924	539	3483	1826	1610
Grp Volume(v), veh/h	76	451	9	29	133	539	0	99	103	1214	399	46
Grp Sat Flow(s),veh/h/ln	1810	1900	1571	1810	1900	1585	1810	1735	1729	1742	1826	1610
Q Serve(g_s), s	3.1	19.6	0.3	1.4	5.7	0.0	0.0	4.8	4.9	28.5	11.2	0.4
Cycle Q Clear(g_c), s	3.1	19.6	0.3	1.4	5.7	0.0	0.0	4.8	4.9	28.5	11.2	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.31	1.00		1.00
Lane Grp Cap(c), veh/h	327	504	417	42	206	772	2	152	151	1319	968	854
V/C Ratio(X)	0.23	0.89	0.02	0.69	0.65	0.70	0.00	0.66	0.68	0.92	0.41	0.05
Avail Cap(c_a), veh/h	327	624	515	85	584	1087	85	590	588	1578	1363	1202
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.0	30.3	19.3	41.5	36.6	17.1	0.0	37.8	37.9	25.4	12.1	1.3
Incr Delay (d2), s/veh	0.1	11.8	0.0	7.2	1.3	0.4	0.0	1.8	2.0	7.5	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	10.4	0.1	0.7	2.6	7.2	0.0	2.0	2.0	11.6	3.8	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.1	42.1	19.4	48.7	37.9	17.5	0.0	39.6	39.9	32.9	12.2	1.3
LnGrp LOS	C	D	B	D	D	B	A	D	D	C	B	A
Approach Vol, veh/h		536			701			202			1659	
Approach Delay, s/veh		40.0			22.7			39.8			27.0	
Approach LOS		D			C			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	37.9	13.0	6.5	28.2	0.0	50.9	20.0	14.8				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	38.8	* 29	4.0	28.1	4.0	63.9	5.8	26.3				
Max Q Clear Time (g_c+I1), s	30.5	6.9	3.4	21.6	0.0	13.2	5.1	7.7				
Green Ext Time (p_c), s	2.0	0.6	0.0	1.1	0.0	1.4	0.0	1.3				

Intersection Summary

HCM 6th Ctrl Delay	29.1
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
14: Indian Street & San Michele Road

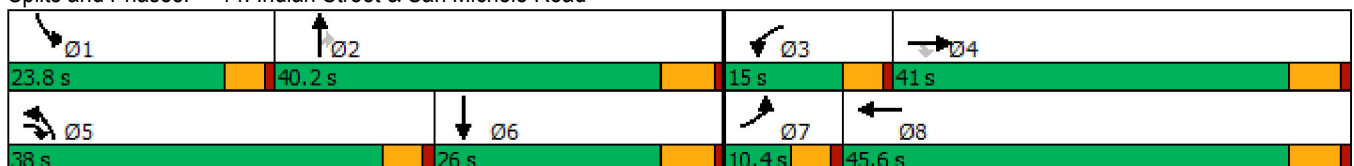


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↘	↑↑	↗↗	↘↘	↑↑	↗↗	↑	↗	↘	↑↑
Traffic Volume (vph)	21	808	1421	228	465	700	179	205	131	349
Future Volume (vph)	21	808	1421	228	465	700	179	205	131	349
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	5	3	8	5	2		1	6
Permitted Phases			4					2		
Detector Phase	7	4	5	3	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	31.8	9.6	9.6	31.8	9.6	32.8	32.8	9.6	24.8
Total Split (s)	10.4	41.0	38.0	15.0	45.6	38.0	40.2	40.2	23.8	26.0
Total Split (%)	8.7%	34.2%	31.7%	12.5%	38.0%	31.7%	33.5%	33.5%	19.8%	21.7%
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	3.6	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	4.6	5.8	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None	None
Act Effct Green (s)	5.5	31.3	61.5	10.1	40.3	29.0	32.7	32.7	12.8	16.6
Actuated g/C Ratio	0.05	0.29	0.57	0.09	0.37	0.27	0.30	0.30	0.12	0.15
v/c Ratio	0.25	0.88	0.89	0.74	0.42	0.80	0.36	0.32	0.65	0.75
Control Delay	61.0	49.0	24.8	64.7	27.9	44.9	33.4	5.4	61.2	53.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.0	49.0	24.8	64.7	27.9	44.9	33.4	5.4	61.2	53.8
LOS	E	D	C	E	C	D	C	A	E	D
Approach Delay		33.9			39.1		35.5			55.7
Approach LOS		C			D		D			E

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 108.1  
 Natural Cycle: 95  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.89  
 Intersection Signal Delay: 37.5  
 Intersection LOS: D  
 Intersection Capacity Utilization 86.5%  
 ICU Level of Service E  
 Analysis Period (min) 15
























Splits and Phases: 14: Indian Street & San Michele Road



HCM 6th Signalized Intersection Summary  
 14: Indian Street & San Michele Road

Gateway Aviation TA (JN:13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	808	1421	228	465	54	700	179	205	131	349	30
Future Volume (veh/h)	21	808	1421	228	465	54	700	179	205	131	349	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		1.00	1.00		0.64
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1796	1856	1826	1900	1796	1796	1856	1870	1841	1752
Adj Flow Rate, veh/h	23	878	893	248	505	42	761	195	158	142	379	23
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	5	7	3	5	0	7	7	3	2	4	10
Cap, veh/h	40	1025	1421	308	1202	100	838	583	510	172	585	35
Arrive On Green	0.02	0.30	0.30	0.09	0.36	0.36	0.24	0.32	0.32	0.10	0.18	0.18
Sat Flow, veh/h	1739	3469	2589	3428	3318	275	3421	1796	1571	1781	3318	198
Grp Volume(v), veh/h	23	878	893	248	277	270	761	195	158	142	207	195
Grp Sat Flow(s),veh/h/ln	1739	1735	1294	1714	1826	1768	1711	1796	1571	1781	1841	1676
Q Serve(g_s), s	1.4	25.7	26.0	7.6	12.3	12.4	23.2	8.8	8.1	8.4	11.2	11.7
Cycle Q Clear(g_c), s	1.4	25.7	26.0	7.6	12.3	12.4	23.2	8.8	8.1	8.4	11.2	11.7
Prop In Lane	1.00		1.00	1.00		0.16	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	40	1025	1421	308	662	640	838	583	510	172	325	295
V/C Ratio(X)	0.57	0.86	0.63	0.80	0.42	0.42	0.91	0.33	0.31	0.83	0.64	0.66
Avail Cap(c_a), veh/h	94	1135	1503	331	676	654	1062	583	510	318	346	315
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.0	35.7	17.3	48.0	25.8	25.8	39.4	27.5	27.3	47.7	41.1	41.3
Incr Delay (d2), s/veh	4.7	5.6	0.5	11.4	0.2	0.2	8.4	0.1	0.1	3.8	2.5	3.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	11.1	7.0	3.7	5.1	5.0	10.2	3.6	2.9	3.8	5.1	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.7	41.4	17.9	59.5	25.9	26.0	47.9	27.6	27.4	51.6	43.7	44.7
LnGrp LOS	E	D	B	E	C	C	D	C	C	D	D	D
Approach Vol, veh/h		1794			795			1114			544	
Approach Delay, s/veh		29.9			36.4			41.4			46.1	
Approach LOS		C			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.0	40.7	14.3	37.6	30.9	24.8	7.1	44.8				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	19.2	34.4	10.4	35.2	33.4	20.2	5.8	39.8				
Max Q Clear Time (g_c+I1), s	10.4	10.8	9.6	28.0	25.2	13.7	3.4	14.4				
Green Ext Time (p_c), s	0.1	0.8	0.0	3.8	1.1	0.7	0.0	1.8				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			36.2									
HCM 6th LOS			D									

Timings  
15: Indian Street & Nandina Avenue



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	44	103	526	171	43	161	675	19	1463
Future Volume (vph)	44	103	526	171	43	161	675	19	1463
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	5	3	8	5	2	1	6
Permitted Phases	4								
Detector Phase	7	4	5	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	24.8	9.6	9.6	29.8	9.6	26.8	9.6	26.8
Total Split (s)	11.1	24.8	20.0	18.0	31.7	20.0	66.7	10.5	57.2
Total Split (%)	9.3%	20.7%	16.7%	15.0%	26.4%	16.7%	55.6%	8.8%	47.7%
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	6.1	13.4	34.6	13.4	22.7	15.4	67.4	5.5	51.4
Actuated g/C Ratio	0.05	0.12	0.30	0.12	0.20	0.13	0.59	0.05	0.45
v/c Ratio	0.48	0.57	1.03	0.99	0.31	0.50	0.37	0.25	0.97
Control Delay	69.3	59.0	79.0	114.3	25.8	52.1	13.9	60.8	47.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.3	59.0	79.0	114.3	25.8	52.1	13.9	60.8	47.8
LOS	E	E	E	F	C	D	B	E	D
Approach Delay	75.3		82.3			20.7		48.0	
Approach LOS	E		F			C		D	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 114.5  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.03  
 Intersection Signal Delay: 48.8  
 Intersection LOS: D  
 Intersection Capacity Utilization 96.1%  
 ICU Level of Service F  
 Analysis Period (min) 15

Splits and Phases: 15: Indian Street & Nandina Avenue



























HCM 6th Signalized Intersection Summary  
 15: Indian Street & Nandina Avenue

Gateway Aviation TA (JN:13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	103	526	171	43	53	161	675	69	19	1463	34
Future Volume (veh/h)	44	103	526	171	43	53	161	675	69	19	1463	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1722	1604	1633	1500	1870	1218	1870	1841	1796	1870	1841
Adj Flow Rate, veh/h	48	112	192	186	47	22	175	734	37	21	1590	17
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	12	20	18	27	2	46	2	4	7	2	4
Cap, veh/h	63	252	325	188	224	105	215	1851	93	37	1673	18
Arrive On Green	0.03	0.15	0.15	0.12	0.23	0.23	0.09	0.66	0.52	0.02	0.57	0.45
Sat Flow, veh/h	1810	1722	1359	1555	966	452	2321	3531	178	1711	3694	39
Grp Volume(v), veh/h	48	112	192	186	0	69	175	389	382	21	804	803
Grp Sat Flow(s),veh/h/ln	1810	1722	1359	1555	0	1418	1160	1870	1838	1711	1870	1863
Q Serve(g_s), s	2.9	6.6	13.9	13.3	0.0	4.4	8.2	10.7	11.1	1.4	44.8	45.0
Cycle Q Clear(g_c), s	2.9	6.6	13.9	13.3	0.0	4.4	8.2	10.7	11.1	1.4	44.8	45.0
Prop In Lane	1.00		1.00	1.00		0.32	1.00		0.10	1.00		0.02
Lane Grp Cap(c), veh/h	63	252	325	188	0	329	215	981	964	37	847	844
V/C Ratio(X)	0.76	0.44	0.59	0.99	0.00	0.21	0.81	0.40	0.40	0.57	0.95	0.95
Avail Cap(c_a), veh/h	106	295	359	188	0	331	322	1025	1008	91	865	862
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.25	1.00	1.00	1.25	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.2	43.3	37.4	48.8	0.0	34.4	49.4	11.0	11.4	53.8	22.9	23.1
Incr Delay (d2), s/veh	6.9	1.2	2.1	63.0	0.0	0.3	5.5	0.3	0.3	5.1	19.2	19.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	2.8	4.6	8.3	0.0	1.5	2.5	3.7	3.8	0.6	19.6	19.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.1	44.5	39.6	111.8	0.0	34.7	54.9	11.2	11.7	59.0	42.1	42.6
LnGrp LOS	E	D	D	F	A	C	D	B	B	E	D	D
Approach Vol, veh/h		352			255			946			1628	
Approach Delay, s/veh		43.9			90.9			19.5			42.6	
Approach LOS		D			F			B			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.0	64.0	18.0	22.1	14.9	56.1	8.5	31.6				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	5.9	60.9	13.4	19.0	15.4	51.4	6.5	25.9				
Max Q Clear Time (g_c+I1), s	3.4	13.1	15.3	15.9	10.2	47.0	4.9	6.4				
Green Ext Time (p_c), s	0.0	4.6	0.0	0.4	0.1	3.3	0.0	0.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			39.8									
HCM 6th LOS			D									



Timings  
16: Indian Av. & Harley Knox Bl.

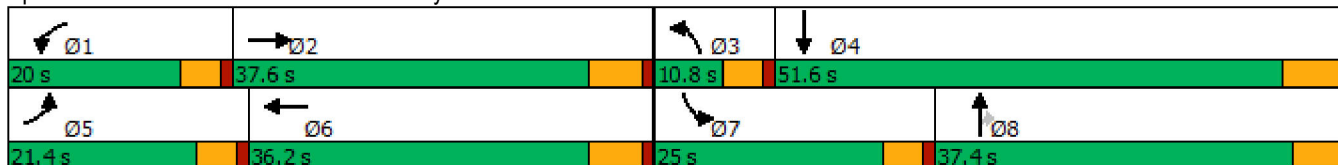


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↖↗	↖↗↘	↖	↖↗↘	↖↗	↖↗	↖	↖	↖↗
Traffic Volume (vph)	326	502	40	488	109	196	76	51	278
Future Volume (vph)	326	502	40	488	109	196	76	51	278
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	5	2	1	6	3	8		7	4
Permitted Phases							8		
Detector Phase	5	2	1	6	3	8	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2
Total Split (s)	21.4	37.6	20.0	36.2	10.8	37.4	37.4	25.0	51.6
Total Split (%)	17.8%	31.3%	16.7%	30.2%	9.0%	31.2%	31.2%	20.8%	43.0%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.4	4.4	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.4	5.4	4.6	6.2
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	17.0	30.3	7.5	18.4	6.3	38.8	38.8	8.2	37.5
Actuated g/C Ratio	0.17	0.30	0.07	0.18	0.06	0.39	0.39	0.08	0.37
v/c Ratio	0.85	0.44	0.38	0.64	0.70	0.20	0.14	0.44	1.06dr
Control Delay	60.1	30.4	55.9	41.5	69.2	23.0	1.2	56.5	28.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.1	30.4	55.9	41.5	69.2	23.0	1.2	56.5	28.2
LOS	E	C	E	D	E	C	A	E	C
Approach Delay		41.1		42.6		31.9			29.7
Approach LOS		D		D		C			C

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 100.7  
 Natural Cycle: 100  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.87  
 Intersection Signal Delay: 36.1  
 Intersection LOS: D  
 Intersection Capacity Utilization 69.7%  
 ICU Level of Service C  
 Analysis Period (min) 15  
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 16: Indian Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 16: Indian Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

05/10/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	326	502	73	40	488	14	109	196	76	51	278	654
Future Volume (veh/h)	326	502	73	40	488	14	109	196	76	51	278	654
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1559	1841	1707	1885	1811	1885	1707	1678	1870	1900	1856	1767
Adj Flow Rate, veh/h	408	628	-3	50	610	-76	136	245	-74	64	348	287
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	23	4	13	1	6	1	13	15	2	0	3	9
Cap, veh/h	500	1650	0	82	928	0	220	898	446	95	489	396
Arrive On Green	0.17	0.30	0.00	0.05	0.17	0.00	0.07	0.28	0.00	0.05	0.26	0.26
Sat Flow, veh/h	2881	5522	0	1795	5433	0	3155	3188	1585	1810	1849	1499
Grp Volume(v), veh/h	408	625	0	50	534	0	136	245	-74	64	331	304
Grp Sat Flow(s),veh/h/ln	1440	1841	0	1795	1811	0	1577	1594	1585	1810	1763	1586
Q Serve(g_s), s	9.0	5.9	0.0	1.8	6.0	0.0	2.8	3.9	0.0	2.3	11.2	11.5
Cycle Q Clear(g_c), s	9.0	5.9	0.0	1.8	6.0	0.0	2.8	3.9	0.0	2.3	11.2	11.5
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		0.95
Lane Grp Cap(c), veh/h	500	1650	0	82	928	0	220	898	446	95	466	419
V/C Ratio(X)	0.82	0.38	0.00	0.61	0.58	0.00	0.62	0.27	-0.17	0.68	0.71	0.72
Avail Cap(c_a), veh/h	735	2665	0	420	2507	0	297	1548	770	560	1215	1093
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.2	18.3	0.0	30.9	25.1	0.0	29.8	18.4	0.0	30.7	22.0	22.0
Incr Delay (d2), s/veh	2.8	0.1	0.0	2.7	0.6	0.0	1.1	0.2	0.0	3.1	2.0	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	2.1	0.0	0.8	2.3	0.0	1.0	1.3	0.0	1.0	4.3	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.1	18.4	0.0	33.6	25.7	0.0	30.9	18.6	0.0	33.8	24.0	24.4
LnGrp LOS	C	B	A	C	C	A	C	B	A	C	C	C
Approach Vol, veh/h		1033			584			307			699	
Approach Delay, s/veh		22.6			26.4			28.5			25.1	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.6	25.5	9.2	23.6	16.0	17.1	8.1	24.8				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	15.4	31.8	6.2	45.4	16.8	30.4	20.4	* 32				
Max Q Clear Time (g_c+I1), s	3.8	7.9	4.8	13.5	11.0	8.0	4.3	5.9				
Green Ext Time (p_c), s	0.0	3.9	0.0	3.9	0.4	3.3	0.0	1.4				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				24.8								
HCM 6th LOS				C								
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings

20: Perris Bl. & Harley Knox Bl.

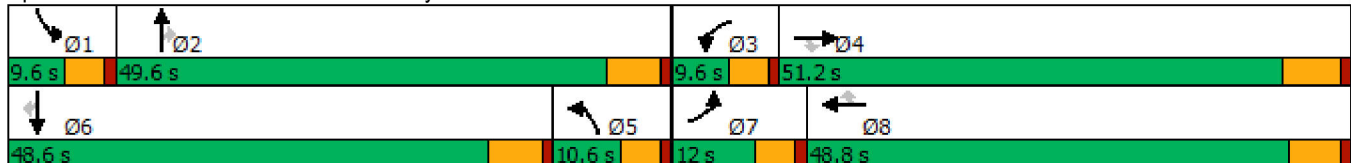
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	308	217	103	8	238	104	46	840	11	135	1089	290
Future Volume (vph)	308	217	103	8	238	104	46	840	11	135	1089	290
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	47.2	47.2	9.6	48.8	48.8	9.6	48.8	48.8	9.6	43.8	43.8
Total Split (s)	12.0	51.2	51.2	9.6	48.8	48.8	10.6	49.6	49.6	9.6	48.6	48.6
Total Split (%)	10.0%	42.7%	42.7%	8.0%	40.7%	40.7%	8.8%	41.3%	41.3%	8.0%	40.5%	40.5%
Yellow Time (s)	3.6	5.2	5.2	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 77.2  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

























Splits and Phases: 20: Perris Bl. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 20: Perris Bl. & Harley Knox Bl.

Gateway Aviation (JN 13445)

05/10/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	308	217	103	8	238	104	46	840	11	135	1089	290
Future Volume (veh/h)	308	217	103	8	238	104	46	840	11	135	1089	290
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1841	1811	1500	1841	1856	1589	1856	1604	1885	1856	1796
Adj Flow Rate, veh/h	338	238	71	9	262	66	51	923	8	148	1197	263
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	6	4	6	27	4	3	21	3	20	1	3	7
Cap, veh/h	361	848	372	32	733	226	133	1865	500	239	1894	569
Arrive On Green	0.11	0.24	0.24	0.01	0.15	0.15	0.05	0.37	0.37	0.07	0.37	0.37
Sat Flow, veh/h	3346	3497	1535	2771	5025	1551	2935	5066	1359	3483	5066	1521
Grp Volume(v), veh/h	338	238	71	9	262	66	51	923	8	148	1197	263
Grp Sat Flow(s),veh/h/ln	1673	1749	1535	1386	1675	1551	1468	1689	1359	1742	1689	1521
Q Serve(g_s), s	6.9	3.8	1.8	0.2	3.2	2.6	1.2	9.6	0.3	2.8	13.3	5.2
Cycle Q Clear(g_c), s	6.9	3.8	1.8	0.2	3.2	2.6	1.2	9.6	0.3	2.8	13.3	5.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	361	848	372	32	733	226	133	1865	500	239	1894	569
V/C Ratio(X)	0.94	0.28	0.19	0.28	0.36	0.29	0.38	0.49	0.02	0.62	0.63	0.46
Avail Cap(c_a), veh/h	361	2297	1008	202	3153	973	257	3238	869	254	3164	950
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.3	21.1	10.4	33.6	26.4	26.1	31.8	16.7	13.8	31.0	17.6	5.6
Incr Delay (d2), s/veh	30.8	0.2	0.2	1.8	0.3	0.7	0.7	0.2	0.0	2.8	0.4	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	1.4	0.8	0.1	1.2	0.9	0.4	3.2	0.1	1.2	4.4	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.2	21.3	10.6	35.4	26.7	26.8	32.5	16.9	13.8	33.8	17.9	6.1
LnGrp LOS	E	C	B	D	C	C	C	B	B	C	B	A
Approach Vol, veh/h		647			337			982			1608	
Approach Delay, s/veh		40.9			26.9			17.7			17.5	
Approach LOS		D			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.3	31.0	5.4	22.8	8.9	31.4	12.0	16.2				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	5.8	* 5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	5.0	43.8	5.0	45.0	6.0	* 43	7.4	* 43				
Max Q Clear Time (g_c+I1), s	4.8	11.6	2.2	5.8	3.2	15.3	8.9	5.2				
Green Ext Time (p_c), s	0.0	6.8	0.0	1.6	0.0	10.2	0.0	1.9				

Intersection Summary

HCM 6th Ctrl Delay	22.7
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

**APPENDIX 7.1:**

**HORIZON YEAR (2045) WITHOUT PROJECT WITHOUT HEACOCK STREET EXTENSION  
CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**

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Timings

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

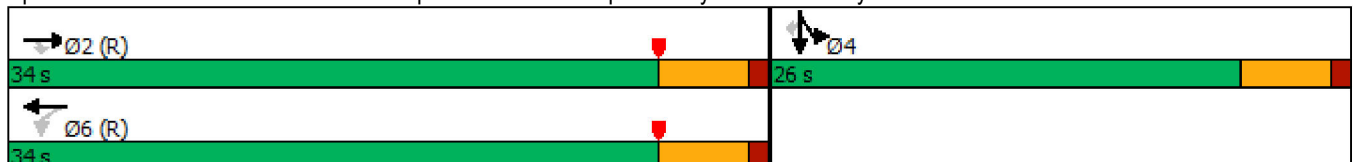


Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↑
Traffic Volume (vph)	1157	28	192	662	1	315
Future Volume (vph)	1157	28	192	662	1	315
Turn Type	NA	Perm	Perm	NA	NA	Perm
Protected Phases	2			6	4	
Permitted Phases		2	6			4
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	25.0	25.0	10.0	10.0
Total Split (s)	34.0	34.0	34.0	34.0	26.0	26.0
Total Split (%)	56.7%	56.7%	56.7%	56.7%	43.3%	43.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	29.0	29.0	29.0	29.0	21.0	21.0
Actuated g/C Ratio	0.48	0.48	0.48	0.48	0.35	0.35
v/c Ratio	0.76	0.04	2.03	0.42	1.90	0.55
Control Delay	16.3	3.1	511.2	18.5	430.5	12.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.3	3.1	511.2	18.5	430.5	12.3
LOS	B	A	F	B	F	B
Approach Delay	16.0			129.3	328.6	
Approach LOS	B			F	F	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 2.03  
 Intersection Signal Delay: 166.3  
 Intersection LOS: F  
 Intersection Capacity Utilization 181.0%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

11/09/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑						↑	↑
Traffic Volume (veh/h)	0	1157	28	192	662	0	0	0	0	976	1	315
Future Volume (veh/h)	0	1157	28	192	662	0	0	0	0	976	1	315
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1826	1826	1574	1870	0				1707	1900	1781
Adj Flow Rate, veh/h	0	1258	30	209	720	0				1061	1	282
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	5	5	22	2	0				13	0	8
Cap, veh/h	0	1677	748	188	1718	0				633	1	528
Arrive On Green	0.00	0.48	0.48	0.97	0.97	0.00				0.35	0.35	0.35
Sat Flow, veh/h	0	3561	1547	361	3647	0				1808	2	1510
Grp Volume(v), veh/h	0	1258	30	209	720	0				1062	0	282
Grp Sat Flow(s),veh/h/ln	0	1735	1547	361	1777	0				1810	0	1510
Q Serve(g_s), s	0.0	17.6	0.6	11.4	0.7	0.0				21.0	0.0	9.0
Cycle Q Clear(g_c), s	0.0	17.6	0.6	29.0	0.7	0.0				21.0	0.0	9.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1677	748	188	1718	0				633	0	528
V/C Ratio(X)	0.00	0.75	0.04	1.11	0.42	0.00				1.68	0.00	0.53
Avail Cap(c_a), veh/h	0	1677	748	188	1718	0				633	0	528
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.76	0.76	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	12.6	8.2	13.4	0.5	0.0				19.5	0.0	15.6
Incr Delay (d2), s/veh	0.0	3.1	0.1	89.8	0.6	0.0				311.4	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.7	0.2	6.5	0.3	0.0				61.9	0.0	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	15.7	8.3	103.2	1.1	0.0				330.9	0.0	16.6
LnGrp LOS	A	B	A	F	A	A				F	A	B
Approach Vol, veh/h		1288			929						1344	
Approach Delay, s/veh		15.5			24.1						265.0	
Approach LOS		B			C						F	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		34.0		26.0		34.0						
Change Period (Y+Rc), s		5.0		5.0		5.0						
Max Green Setting (Gmax), s		29.0		21.0		29.0						
Max Q Clear Time (g_c+I1), s		19.6		23.0		31.0						
Green Ext Time (p_c), s		4.1		0.0		0.0						
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				111.9								
HCM 6th LOS				F								



Timings

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

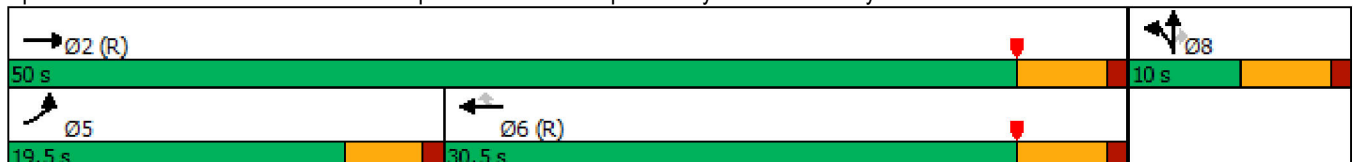


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	808	1325	796	1126	4	284
Future Volume (vph)	808	1325	796	1126	4	284
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	26.0	24.0	24.0	10.0	10.0
Total Split (s)	19.5	50.0	30.5	30.5	10.0	10.0
Total Split (%)	32.5%	83.3%	50.8%	50.8%	16.7%	16.7%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max
Act Effct Green (s)	15.0	45.0	25.5	25.5	5.0	5.0
Actuated g/C Ratio	0.25	0.75	0.42	0.42	0.08	0.08
v/c Ratio	2.02	0.59	0.60	1.60	0.45	1.31
Control Delay	483.1	3.3	15.6	292.7	36.5	186.7
Queue Delay	0.0	0.8	0.0	0.0	0.0	0.0
Total Delay	483.1	4.1	15.6	292.7	36.5	186.7
LOS	F	A	B	F	D	F
Approach Delay		185.5	178.0		159.9	
Approach LOS		F	F		F	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 29 (48%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 2.02  
 Intersection Signal Delay: 180.2  
 Intersection LOS: F  
 Intersection Capacity Utilization 181.0%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

11/09/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗↗			↗↗	↘		↗	↘			
Traffic Volume (veh/h)	808	1325	0	0	796	1126	58	4	284	0	0	0
Future Volume (veh/h)	808	1325	0	0	796	1126	58	4	284	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1841	1737	0	0	1796	1752	1870	1900	1826			
Adj Flow Rate, veh/h	878	1440	0	0	865	892	63	4	244			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	4	11	0	0	7	10	2	0	5			
Cap, veh/h	438	2475	0	0	1450	630	142	9	129			
Arrive On Green	0.50	1.00	0.00	0.00	0.43	0.43	0.08	0.08	0.08			
Sat Flow, veh/h	1753	3387	0	0	3503	1484	1706	108	1547			
Grp Volume(v), veh/h	878	1440	0	0	865	892	67	0	244			
Grp Sat Flow(s),veh/h/ln	1753	1650	0	0	1706	1484	1815	0	1547			
Q Serve(g_s), s	15.0	0.0	0.0	0.0	11.7	25.5	2.1	0.0	5.0			
Cycle Q Clear(g_c), s	15.0	0.0	0.0	0.0	11.7	25.5	2.1	0.0	5.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.94		1.00			
Lane Grp Cap(c), veh/h	438	2475	0	0	1450	630	151	0	129			
V/C Ratio(X)	2.00	0.58	0.00	0.00	0.60	1.41	0.44	0.00	1.89			
Avail Cap(c_a), veh/h	438	2475	0	0	1450	630	151	0	129			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.57	0.57	0.00	0.00	0.81	0.81	1.00	0.00	1.00			
Uniform Delay (d), s/veh	15.0	0.0	0.0	0.0	13.3	17.3	26.2	0.0	27.5			
Incr Delay (d2), s/veh	456.1	0.6	0.0	0.0	1.5	194.2	9.1	0.0	429.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	58.7	0.2	0.0	0.0	3.8	40.6	1.2	0.0	17.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	471.1	0.6	0.0	0.0	14.8	211.5	35.3	0.0	456.7			
LnGrp LOS	F	A	A	A	B	F	D	A	F			
Approach Vol, veh/h		2318			1757			311				
Approach Delay, s/veh		178.8			114.6			365.9				
Approach LOS		F			F			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		50.0			19.5	30.5		10.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		45.0			15.0	25.5		5.0				
Max Q Clear Time (g_c+I1), s		2.0			17.0	27.5		7.0				
Green Ext Time (p_c), s		8.3			0.0	0.0		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					166.4							
HCM 6th LOS					F							

Timings  
3: Western Way & Harley Knox Bl.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↶	↑↑↑	↷	↶	↑↑↑	↶	↷	↶	↷
Traffic Volume (vph)	105	1409	10	13	1536	1	0	7	0
Future Volume (vph)	105	1409	10	13	1536	1	0	7	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	NA
Protected Phases	5	2		1	6		8		4
Permitted Phases			2			8		4	
Detector Phase	5	2	2	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	21.8	21.8	9.6	21.8	32.6	32.6	32.6	32.6
Total Split (s)	22.0	75.4	75.4	9.6	63.0	35.0	35.0	35.0	35.0
Total Split (%)	18.3%	62.8%	62.8%	8.0%	52.5%	29.2%	29.2%	29.2%	29.2%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	11.6	57.6	57.6	6.4	45.1	15.0	15.0	15.0	15.0
Actuated g/C Ratio	0.16	0.81	0.81	0.09	0.64	0.21	0.21	0.21	0.21
v/c Ratio	0.43	0.40	0.01	0.09	0.56	0.00	0.00	0.04	0.13
Control Delay	40.9	5.9	0.0	46.3	14.0	33.0	0.0	33.4	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.9	5.9	0.0	46.3	14.0	33.0	0.0	33.4	0.7
LOS	D	A	A	D	B	C	A	C	A
Approach Delay		8.3			14.2		11.0		5.0
Approach LOS		A			B		B		A

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 70.7	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.56	
Intersection Signal Delay: 11.2	Intersection LOS: B
Intersection Capacity Utilization 57.8%	ICU Level of Service B
Analysis Period (min) 15	


























Splits and Phases: 3: Western Way & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 3: Western Way & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  							
Traffic Volume (veh/h)	105	1409	10	13	1536	46	1	0	2	7	0	49
Future Volume (veh/h)	105	1409	10	13	1536	46	1	0	2	7	0	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1722	1737	1900	1900	1767	1678	1900	1900	1900	1337	1900	1233
Adj Flow Rate, veh/h	113	1515	11	14	1652	47	1	0	2	8	0	41
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	12	11	0	0	9	15	0	0	0	38	0	45
Cap, veh/h	142	2930	995	32	2644	75	235	0	163	228	0	164
Arrive On Green	0.09	0.62	0.62	0.02	0.55	0.55	0.10	0.00	0.10	0.10	0.00	0.10
Sat Flow, veh/h	1640	4742	1610	1810	4820	137	1388	0	1607	1008	0	1610
Grp Volume(v), veh/h	113	1515	11	14	1102	597	1	0	2	8	0	41
Grp Sat Flow(s),veh/h/ln	1640	1581	1610	1810	1608	1742	1388	0	1607	1008	0	1610
Q Serve(g_s), s	3.9	10.2	0.1	0.4	13.4	13.4	0.0	0.0	0.1	0.4	0.0	1.3
Cycle Q Clear(g_c), s	3.9	10.2	0.1	0.4	13.4	13.4	1.4	0.0	0.1	0.5	0.0	1.3
Prop In Lane	1.00		1.00	1.00		0.08	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	142	2930	995	32	1764	956	235	0	163	228	0	164
V/C Ratio(X)	0.79	0.52	0.01	0.44	0.62	0.62	0.00	0.00	0.01	0.04	0.00	0.25
Avail Cap(c_a), veh/h	500	5788	1965	159	3225	1747	833	0	857	663	0	858
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.5	6.1	4.2	27.7	8.8	8.8	24.2	0.0	23.0	23.3	0.0	23.6
Incr Delay (d2), s/veh	3.7	0.1	0.0	3.6	0.4	0.7	0.0	0.0	0.0	0.1	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	1.9	0.0	0.2	3.1	3.4	0.0	0.0	0.0	0.1	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.3	6.3	4.2	31.3	9.2	9.5	24.3	0.0	23.1	23.3	0.0	24.4
LnGrp LOS	C	A	A	C	A	A	C	A	C	C	A	C
Approach Vol, veh/h		1639			1713			3				49
Approach Delay, s/veh		7.8			9.5			23.5				24.2
Approach LOS		A			A			C				C
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.6	41.0		10.4	9.6	37.1		10.4				
Change Period (Y+Rc), s	4.6	5.8		4.6	4.6	5.8		4.6				
Max Green Setting (Gmax), s	5.0	69.6		30.4	17.4	57.2		30.4				
Max Q Clear Time (g_c+I1), s	2.4	12.2		3.3	5.9	15.4		3.4				
Green Ext Time (p_c), s	0.0	15.4		0.2	0.1	15.8		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				8.9								
HCM 6th LOS				A								

Timings  
4: Patterson Av. & Harley Knox Bl.

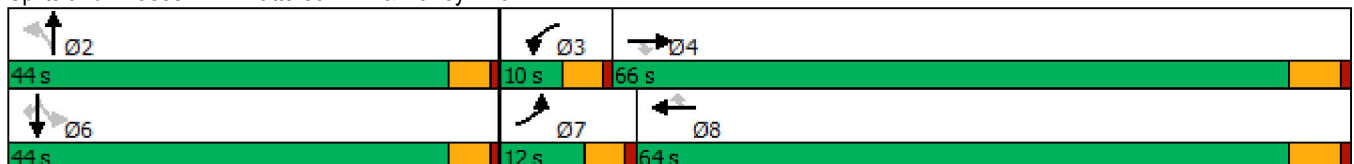


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑	↗	↖	↑↑	↗		↕		↕	↗
Traffic Volume (vph)	27	1272	83	46	1491	19	81	9	16	4	23
Future Volume (vph)	27	1272	83	46	1491	19	81	9	16	4	23
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	7	4		3	8			2		6	
Permitted Phases			4			8	2		6		6
Detector Phase	7	4	4	3	8	8	2	2	6	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	9.6	31.8	31.8	33.7	33.7	40.7	40.7	40.7
Total Split (s)	12.0	66.0	66.0	10.0	64.0	64.0	44.0	44.0	44.0	44.0	44.0
Total Split (%)	10.0%	55.0%	55.0%	8.3%	53.3%	53.3%	36.7%	36.7%	36.7%	36.7%	36.7%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8		4.7		4.7	4.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	6.3	55.5	55.5	5.6	57.3	57.3		17.0		17.0	17.0
Actuated g/C Ratio	0.07	0.61	0.61	0.06	0.63	0.63		0.19		0.19	0.19
v/c Ratio	0.30	0.47	0.09	0.55	0.77	0.03		0.59		0.12	0.09
Control Delay	55.0	12.1	3.0	70.5	19.0	0.1		38.7		33.3	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	55.0	12.1	3.0	70.5	19.0	0.1		38.7		33.3	0.7
LOS	E	B	A	E	B	A		D		C	A
Approach Delay		12.4			20.3			38.7		15.6	
Approach LOS		B			C			D		B	

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 91.4	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 17.5	Intersection LOS: B
Intersection Capacity Utilization 70.5%	ICU Level of Service C
Analysis Period (min) 15	


























Splits and Phases: 4: Patterson Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 4: Patterson Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			 			 				
Traffic Volume (veh/h)	27	1272	83	46	1491	19	81	9	48	16	4	23
Future Volume (veh/h)	27	1272	83	46	1491	19	81	9	48	16	4	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1455	1781	1870	1589	1781	1026	1589	1426	1811	863	952	1278
Adj Flow Rate, veh/h	29	1383	83	50	1621	13	88	10	50	17	4	9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	30	8	2	21	8	59	21	32	6	70	64	42
Cap, veh/h	42	2846	927	66	2025	520	173	27	62	177	27	177
Arrive On Green	0.03	0.59	0.59	0.04	0.60	0.60	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1386	4863	1585	1513	3385	869	574	167	378	535	164	1083
Grp Volume(v), veh/h	29	1383	83	50	1621	13	148	0	0	21	0	9
Grp Sat Flow(s),veh/h/ln	1386	1621	1585	1513	1692	869	1119	0	0	698	0	1083
Q Serve(g_s), s	1.5	12.0	1.7	2.4	26.8	0.4	7.6	0.0	0.0	0.0	0.0	0.5
Cycle Q Clear(g_c), s	1.5	12.0	1.7	2.4	26.8	0.4	9.3	0.0	0.0	1.7	0.0	0.5
Prop In Lane	1.00		1.00	1.00		1.00	0.59		0.34	0.81		1.00
Lane Grp Cap(c), veh/h	42	2846	927	66	2025	520	262	0	0	204	0	177
V/C Ratio(X)	0.69	0.49	0.09	0.76	0.80	0.02	0.57	0.00	0.00	0.10	0.00	0.05
Avail Cap(c_a), veh/h	141	4033	1314	113	2714	697	690	0	0	477	0	586
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.8	8.7	6.6	34.3	11.2	5.9	29.3	0.0	0.0	26.1	0.0	25.6
Incr Delay (d2), s/veh	7.1	0.1	0.0	6.4	1.3	0.0	1.9	0.0	0.0	0.2	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	3.1	0.4	0.9	7.4	0.1	2.5	0.0	0.0	0.3	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.0	8.9	6.6	40.7	12.5	6.0	31.3	0.0	0.0	26.3	0.0	25.8
LnGrp LOS	D	A	A	D	B	A	C	A	A	C	A	C
Approach Vol, veh/h		1495			1684			148				30
Approach Delay, s/veh		9.4			13.3			31.3				26.1
Approach LOS		A			B			C				C
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		16.5	7.8	48.3		16.5	6.8	49.2				
Change Period (Y+Rc), s		* 4.7	4.6	5.8		* 4.7	4.6	5.8				
Max Green Setting (Gmax), s		* 39	5.4	60.2		* 39	7.4	58.2				
Max Q Clear Time (g_c+I1), s		11.3	4.4	14.0		3.7	3.5	28.8				
Green Ext Time (p_c), s		0.9	0.0	13.2		0.1	0.0	14.6				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			12.5									
HCM 6th LOS			B									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings  
5: Heacock Street & Cactus Avenue

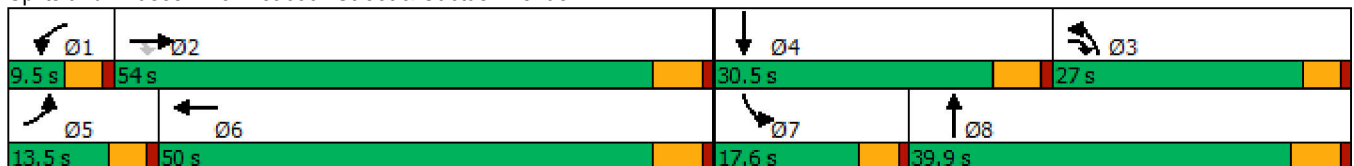


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↗	↘	↖	↗	↖	↗	↖	↗
Traffic Volume (vph)	176	1067	762	67	2068	854	719	139	372
Future Volume (vph)	176	1067	762	67	2068	854	719	139	372
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	3	1	6	3	8	7	4
Permitted Phases			2						
Detector Phase	5	2	3	1	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.5	30.5	9.5	9.5	30.5	9.5	30.5	9.5	30.5
Total Split (s)	13.5	54.0	27.0	9.5	50.0	27.0	39.9	17.6	30.5
Total Split (%)	11.2%	44.6%	22.3%	7.9%	41.3%	22.3%	33.0%	14.5%	25.2%
Yellow Time (s)	3.5	4.5	3.5	3.5	4.5	3.5	4.5	3.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	4.5	4.5	5.5	4.5	5.5	4.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None
Act Effct Green (s)	9.0	48.6	72.6	5.0	44.6	23.0	30.3	11.8	19.1
Actuated g/C Ratio	0.08	0.42	0.63	0.04	0.39	0.20	0.26	0.10	0.17
v/c Ratio	1.27	0.71	0.71	0.85	1.60	1.25	0.81	0.77	0.79
Control Delay	207.3	31.4	12.7	122.3	300.4	163.5	47.4	76.6	53.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	207.3	31.4	12.7	122.3	300.4	163.5	47.4	76.6	53.1
LOS	F	C	B	F	F	F	D	E	D
Approach Delay		39.7			295.2		109.5		58.4
Approach LOS		D			F		F		E

Intersection Summary

Cycle Length: 121  
 Actuated Cycle Length: 115.7  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.60  
 Intersection Signal Delay: 148.6  
 Intersection LOS: F  
 Intersection Capacity Utilization 126.6%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 5: Heacock Street & Cactus Avenue



























HCM 6th Signalized Intersection Summary  
5: Heacock Street & Cactus Avenue

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	176	1067	762	67	2068	159	854	719	23	139	372	105
Future Volume (veh/h)	176	1067	762	67	2068	159	854	719	23	139	372	105
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1752	1900	1885	1856	1811	1841	1811	1870	1841	1885
Adj Flow Rate, veh/h	183	1111	794	70	2154	166	890	749	24	145	388	109
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	10	0	1	3	6	4	6	2	4	1
Cap, veh/h	138	1563	908	78	1327	101	669	958	31	172	455	126
Arrive On Green	0.08	0.42	0.42	0.04	0.38	0.38	0.19	0.27	0.27	0.10	0.16	0.16
Sat Flow, veh/h	1781	3741	1485	1810	3460	263	3450	3547	114	1781	2773	770
Grp Volume(v), veh/h	183	1111	794	70	1160	1160	890	389	384	145	256	241
Grp Sat Flow(s),veh/h/ln	1781	1870	1485	1810	1885	1838	1725	1841	1820	1781	1841	1702
Q Serve(g_s), s	9.0	28.5	16.6	4.5	44.5	44.5	22.5	22.7	22.7	9.3	15.7	16.0
Cycle Q Clear(g_c), s	9.0	28.5	16.6	4.5	44.5	44.5	22.5	22.7	22.7	9.3	15.7	16.0
Prop In Lane	1.00		1.00	1.00		0.14	1.00		0.06	1.00		0.45
Lane Grp Cap(c), veh/h	138	1563	908	78	723	705	669	497	491	172	302	279
V/C Ratio(X)	1.32	0.71	0.87	0.90	1.60	1.65	1.33	0.78	0.78	0.84	0.85	0.86
Avail Cap(c_a), veh/h	138	1563	908	78	723	705	669	546	540	201	397	367
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.5	28.0	7.3	55.3	35.8	35.8	46.8	39.2	39.2	51.5	47.1	47.2
Incr Delay (d2), s/veh	187.5	1.3	9.1	67.0	278.5	297.0	158.9	5.8	5.8	21.0	10.0	12.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.1	12.1	7.9	3.4	75.0	76.8	24.1	10.6	10.5	5.0	7.8	7.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	241.0	29.3	16.4	122.3	314.3	332.8	205.7	45.0	45.0	72.5	57.1	59.7
LnGrp LOS	F	C	B	F	F	F	F	D	D	E	E	E
Approach Vol, veh/h		2088			2390			1663			642	
Approach Delay, s/veh		42.9			317.7			131.0			61.6	
Approach LOS		D			F			F			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.5	54.0	28.0	24.5	13.5	50.0	15.7	36.8				
Change Period (Y+Rc), s	4.5	5.5	5.5	* 5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	5.0	48.5	22.5	* 25	9.0	44.5	13.1	34.4				
Max Q Clear Time (g_c+I1), s	6.5	30.5	24.5	18.0	11.0	46.5	11.3	24.7				
Green Ext Time (p_c), s	0.0	6.4	0.0	1.0	0.0	0.0	0.0	2.0				

Intersection Summary

HCM 6th Ctrl Delay	163.1
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Timings  
6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

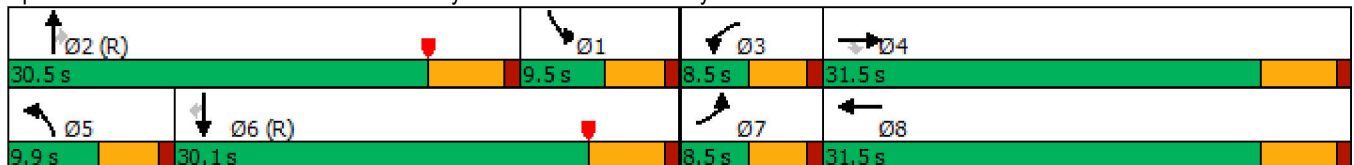
11/09/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	48	45	120	33	267	37	1054	58	127	804	24	
Future Volume (vph)	48	45	120	33	267	37	1054	58	127	804	24	
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	7	4		3	8	5	2		1	6		
Permitted Phases			4					2			6	
Detector Phase	7	4	4	3	8	5	2	2	1	6	6	
Switch Phase												
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	
Minimum Split (s)	8.5	23.5	23.5	8.5	31.5	8.5	30.5	30.5	8.5	23.5	23.5	
Total Split (s)	8.5	31.5	31.5	8.5	31.5	9.9	30.5	30.5	9.5	30.1	30.1	
Total Split (%)	10.6%	39.4%	39.4%	10.6%	39.4%	12.4%	38.1%	38.1%	11.9%	37.6%	37.6%	
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5	4.5	4.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	5.5	4.5	5.5	5.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max	
Act Effct Green (s)	4.0	15.5	15.5	4.0	13.8	5.7	38.9	38.9	5.0	41.9	41.9	
Actuated g/C Ratio	0.05	0.19	0.19	0.05	0.17	0.07	0.49	0.49	0.06	0.52	0.52	
v/c Ratio	0.62	0.14	0.23	0.39	0.66	0.31	0.63	0.07	1.15	0.46	0.03	
Control Delay	70.6	25.3	1.0	50.1	21.9	41.9	20.3	0.2	167.3	16.5	0.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	70.6	25.3	1.0	50.1	21.9	41.9	20.3	0.2	167.3	16.5	0.0	
LOS	E	C	A	D	C	D	C	A	F	B	A	
Approach Delay		21.8			23.6		20.0			36.1		
Approach LOS		C			C		C			D		

Intersection Summary

Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.15  
 Intersection Signal Delay: 26.2  
 Intersection LOS: C  
 Intersection Capacity Utilization 72.4%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 6: Heacock Street & Meyer Drive/John F. Kennedy Drive



HCM 6th Signalized Intersection Summary  
 6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

11/09/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	45	120	33	267	236	37	1054	58	127	804	24
Future Volume (veh/h)	48	45	120	33	267	236	37	1054	58	127	804	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.95	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1648	1767	1826	1781	1841	1885	1781	1811	1752	1856	1767	1648
Adj Flow Rate, veh/h	50	47	89	34	278	210	39	1098	50	132	838	15
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	17	9	5	8	4	1	8	6	10	3	9	17
Cap, veh/h	60	355	311	45	374	273	49	1132	439	349	1744	680
Arrive On Green	0.04	0.20	0.20	0.03	0.19	0.19	0.03	0.31	0.31	0.20	0.49	0.49
Sat Flow, veh/h	1570	1767	1547	1697	1971	1438	1697	3622	1405	1767	3533	1379
Grp Volume(v), veh/h	50	47	89	34	259	229	39	1098	50	132	838	15
Grp Sat Flow(s),veh/h/ln	1570	1767	1547	1697	1841	1568	1697	1811	1405	1767	1767	1379
Q Serve(g_s), s	2.5	1.7	3.9	1.6	10.6	11.1	1.8	23.9	1.6	5.2	12.6	0.4
Cycle Q Clear(g_c), s	2.5	1.7	3.9	1.6	10.6	11.1	1.8	23.9	1.6	5.2	12.6	0.4
Prop In Lane	1.00		1.00	1.00		0.92	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	60	355	311	45	349	297	49	1132	439	349	1744	680
V/C Ratio(X)	0.84	0.13	0.29	0.76	0.74	0.77	0.79	0.97	0.11	0.38	0.48	0.02
Avail Cap(c_a), veh/h	78	574	503	85	598	510	115	1132	439	349	1744	680
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.85	0.85	0.85	0.59	0.59	0.59
Uniform Delay (d), s/veh	38.2	26.2	27.1	38.7	30.6	30.8	38.6	27.1	11.9	27.8	13.5	10.4
Incr Delay (d2), s/veh	35.1	0.1	0.2	9.2	1.2	1.6	8.7	18.5	0.4	0.1	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.7	1.4	0.7	4.5	4.0	0.8	12.0	0.7	2.0	4.2	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	73.3	26.3	27.3	47.9	31.8	32.4	47.4	45.6	12.4	28.0	14.0	10.4
LnGrp LOS	E	C	C	D	C	C	D	D	B	C	B	B
Approach Vol, veh/h		186			522			1187			985	
Approach Delay, s/veh		39.4			33.1			44.3			15.8	
Approach LOS		D			C			D			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.3	30.5	6.6	21.6	6.8	45.0	7.5	20.7				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	5.0	* 25	4.0	26.0	5.4	24.6	4.0	26.0				
Max Q Clear Time (g_c+I1), s	7.2	25.9	3.6	5.9	3.8	14.6	4.5	13.1				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.3	0.0	2.6	0.0	1.4				













Intersection Summary

HCM 6th Ctrl Delay	32.2
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
7: Heacock Street & Gentian Avenue

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	17	24	946	11	112	882
Future Volume (vph)	17	24	946	11	112	882
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	27.6	27.6	27.2	27.2	9.6	16.2
Total Split (s)	28.0	28.0	65.0	65.0	27.0	92.0
Total Split (%)	23.3%	23.3%	54.2%	54.2%	22.5%	76.7%
Yellow Time (s)	3.6	3.6	5.2	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	6.2	6.2	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	12.9	12.9	34.3	34.3	9.4	47.2
Actuated g/C Ratio	0.22	0.22	0.58	0.58	0.16	0.80
v/c Ratio	0.04	0.06	0.52	0.01	0.40	0.35
Control Delay	25.8	12.0	14.2	10.2	32.5	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.8	12.0	14.2	10.2	32.5	4.9
LOS	C	B	B	B	C	A
Approach Delay	17.8		14.2			8.0
Approach LOS	B		B			A

Intersection Summary













Cycle Length: 120	
Actuated Cycle Length: 59.3	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.52	
Intersection Signal Delay: 11.2	Intersection LOS: B
Intersection Capacity Utilization 53.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 7: Heacock Street & Gentian Avenue



















HCM 6th Signalized Intersection Summary  
7: Heacock Street & Gentian Avenue

Gateway Aviation TA (JN:13445)  
11/09/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	17	24	946	11	112	882
Future Volume (veh/h)	17	24	946	11	112	882
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1811	1781	1900	1870	1767
Adj Flow Rate, veh/h	18	25	996	12	118	928
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	6	8	0	2	9
Cap, veh/h	169	144	1543	734	157	2190
Arrive On Green	0.09	0.09	0.46	0.46	0.09	0.65
Sat Flow, veh/h	1810	1535	3474	1610	1781	3445
Grp Volume(v), veh/h	18	25	996	12	118	928
Grp Sat Flow(s),veh/h/ln	1810	1535	1692	1610	1781	1678
Q Serve(g_s), s	0.4	0.6	9.7	0.2	2.8	5.6
Cycle Q Clear(g_c), s	0.4	0.6	9.7	0.2	2.8	5.6
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	169	144	1543	734	157	2190
V/C Ratio(X)	0.11	0.17	0.65	0.02	0.75	0.42
Avail Cap(c_a), veh/h	995	844	4678	2225	938	6770
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.6	17.8	8.9	6.3	18.9	3.6
Incr Delay (d2), s/veh	0.1	0.2	0.5	0.0	2.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.2	2.0	0.0	1.0	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	17.8	18.0	9.4	6.4	21.6	3.7
LnGrp LOS	B	B	A	A	C	A
Approach Vol, veh/h	43		1008			1046
Approach Delay, s/veh	17.9		9.3			5.7
Approach LOS	B		A			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	8.4	25.6			34.0	8.6
Change Period (Y+Rc), s	4.6	6.2			6.2	4.6
Max Green Setting (Gmax), s	22.4	58.8			85.8	23.4
Max Q Clear Time (g_c+I1), s	4.8	11.7			7.6	2.6
Green Ext Time (p_c), s	0.1	7.7			7.1	0.0
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			7.7			
HCM 6th LOS			A			

Timings  
8: Heacock Street & Iris Avenue

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 		 		 	 
Traffic Volume (vph)	381	509	522	244	328	632
Future Volume (vph)	381	509	522	244	328	632
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	15.8	15.8	33.2	33.2	9.6	16.2
Total Split (s)	48.0	48.0	46.0	46.0	26.0	72.0
Total Split (%)	40.0%	40.0%	38.3%	38.3%	21.7%	60.0%
Yellow Time (s)	4.8	4.8	5.2	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	6.2	6.2	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	15.2	15.2	18.8	18.8	11.5	35.1
Actuated g/C Ratio	0.24	0.24	0.30	0.30	0.18	0.56
v/c Ratio	0.47	0.69	0.59	0.40	0.54	0.38
Control Delay	23.4	10.2	22.3	4.9	28.4	8.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.4	10.2	22.3	4.9	28.4	8.7
LOS	C	B	C	A	C	A
Approach Delay	15.9		16.7			15.4
Approach LOS	B		B			B

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 62.9	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay: 15.9	Intersection LOS: B
Intersection Capacity Utilization 55.9%	ICU Level of Service B
Analysis Period (min) 15	













Splits and Phases: 8: Heacock Street & Iris Avenue



HCM 6th Signalized Intersection Summary  
8: Heacock Street & Iris Avenue

Gateway Aviation TA (JN:13445)

11/09/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	381	509	522	244	328	632
Future Volume (veh/h)	381	509	522	244	328	632
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1885	1885	1722	1885	1870	1737
Adj Flow Rate, veh/h	414	553	567	265	357	687
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	12	1	2	11
Cap, veh/h	1371	629	805	393	463	1461
Arrive On Green	0.39	0.39	0.25	0.25	0.13	0.44
Sat Flow, veh/h	3483	1598	3358	1598	3456	3387
Grp Volume(v), veh/h	414	553	567	265	357	687
Grp Sat Flow(s),veh/h/ln	1742	1598	1636	1598	1728	1650
Q Serve(g_s), s	6.0	23.6	11.6	11.0	7.3	10.8
Cycle Q Clear(g_c), s	6.0	23.6	11.6	11.0	7.3	10.8
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	1371	629	805	393	463	1461
V/C Ratio(X)	0.30	0.88	0.70	0.67	0.77	0.47
Avail Cap(c_a), veh/h	2003	919	1775	867	1008	2959
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.3	20.6	25.2	25.0	30.7	14.4
Incr Delay (d2), s/veh	0.1	6.9	1.1	2.0	1.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	8.6	4.1	3.9	2.8	3.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	15.4	27.6	26.4	27.0	31.7	14.6
LnGrp LOS	B	C	C	C	C	B
Approach Vol, veh/h	967		832			1044
Approach Delay, s/veh	22.4		26.6			20.5
Approach LOS	C		C			C
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	14.4	24.3			38.7	34.7
Change Period (Y+Rc), s	4.6	6.2			6.2	5.8
Max Green Setting (Gmax), s	21.4	39.8			65.8	42.2
Max Q Clear Time (g_c+I1), s	9.3	13.6			12.8	25.6
Green Ext Time (p_c), s	0.5	4.5			4.7	3.3
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			22.9			
HCM 6th LOS			C			

Timings  
9: Heacock Street & Krameria Avenue-North

	↙	↖	↑	↘	↓
Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations	↙	↖	↑↔	↘	↑↑
Traffic Volume (vph)	109	136	524	237	683
Future Volume (vph)	109	136	524	237	683
Turn Type	Prot	Perm	NA	Prot	NA
Protected Phases	8		2	1	6
Permitted Phases		8			
Detector Phase	8	8	2	1	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	29.1	29.1	29.2	9.6	16.2
Total Split (s)	39.0	39.0	56.0	25.0	81.0
Total Split (%)	32.5%	32.5%	46.7%	20.8%	67.5%
Yellow Time (s)	4.1	4.1	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	6.2	4.6	6.2
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	Min	Max	Min
Act Effct Green (s)	12.5	12.5	20.5	20.8	46.0
Actuated g/C Ratio	0.18	0.18	0.29	0.30	0.66
v/c Ratio	0.36	0.33	0.79	0.48	0.33
Control Delay	29.5	7.2	27.2	26.5	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	29.5	7.2	27.2	26.5	6.1
LOS	C	A	C	C	A
Approach Delay	17.1		27.2		11.4
Approach LOS	B		C		B

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 70	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 18.3	Intersection LOS: B
Intersection Capacity Utilization 56.2%	ICU Level of Service B
Analysis Period (min) 15	













Splits and Phases: 9: Heacock Street & Krameria Avenue-North



HCM 6th Signalized Intersection Summary  
 9: Heacock Street & Krameria Avenue-North

Gateway Aviation TA (JN:13445)

11/09/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	109	136	524	219	237	683
Future Volume (veh/h)	109	136	524	219	237	683
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1856	1870	1841	1885	1826	1841
Adj Flow Rate, veh/h	118	148	570	238	258	742
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	2	4	1	5	4
Cap, veh/h	268	240	709	295	541	2365
Arrive On Green	0.15	0.15	0.29	0.29	0.31	0.68
Sat Flow, veh/h	1767	1585	2498	1003	1739	3589
Grp Volume(v), veh/h	118	148	414	394	258	742
Grp Sat Flow(s),veh/h/ln	1767	1585	1749	1660	1739	1749
Q Serve(g_s), s	4.0	5.7	14.3	14.4	7.9	5.7
Cycle Q Clear(g_c), s	4.0	5.7	14.3	14.4	7.9	5.7
Prop In Lane	1.00	1.00		0.60	1.00	
Lane Grp Cap(c), veh/h	268	240	515	489	541	2365
V/C Ratio(X)	0.44	0.62	0.80	0.81	0.48	0.31
Avail Cap(c_a), veh/h	914	820	1329	1262	541	3993
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.3	26.0	21.4	21.4	18.2	4.4
Incr Delay (d2), s/veh	0.4	1.0	1.1	1.2	3.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	2.1	5.1	4.8	3.1	1.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	25.7	27.0	22.5	22.6	21.2	4.4
LnGrp LOS	C	C	C	C	C	A
Approach Vol, veh/h	266		808			1000
Approach Delay, s/veh	26.4		22.5			8.7
Approach LOS	C		C			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	25.0	25.5			50.5	15.0
Change Period (Y+Rc), s	4.6	6.2			6.2	5.1
Max Green Setting (Gmax), s	20.4	49.8			74.8	33.9
Max Q Clear Time (g_c+I1), s	9.9	16.4			7.7	7.7
Green Ext Time (p_c), s	0.3	2.9			3.1	0.4
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			16.4			
HCM 6th LOS			B			



Intersection												
Int Delay, s/veh	0											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕			↕		↕	↕	
Traffic Vol, veh/h	0	0	0	0	0	0	0	821	0	0	734	0
Future Vol, veh/h	0	0	0	0	0	0	0	821	0	0	734	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	3	0	0	5	0
Mvmt Flow	0	0	0	0	0	0	0	892	0	0	798	0

Major/Minor	Minor1		Major1			Major2			
Conflicting Flow All	1291	1690	446	-	0	0	892	0	0
Stage 1	892	892	-	-	-	-	-	-	-
Stage 2	399	798	-	-	-	-	-	-	-
Critical Hdwy	6.8	6.5	6.9	-	-	-	4.1	-	-
Critical Hdwy Stg 1	5.8	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.8	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	-	-	-	2.2	-	-
Pot Cap-1 Maneuver	158	94	565	0	-	-	769	-	0
Stage 1	366	363	-	0	-	-	-	-	0
Stage 2	652	401	-	0	-	-	-	-	0
Platoon blocked, %									
Mov Cap-1 Maneuver	158	0	565	-	-	-	769	-	-
Mov Cap-2 Maneuver	278	0	-	-	-	-	-	-	-
Stage 1	366	0	-	-	-	-	-	-	-
Stage 2	652	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	769
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	0	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↕	↗	↘	↕
Traffic Vol, veh/h	12	13	1069	61	52	924
Future Vol, veh/h	12	13	1069	61	52	924
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	0	140	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	23	31	8	2	8	13
Mvmt Flow	13	14	1162	66	57	1004

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1778	581	0	0	1228
Stage 1	1162	-	-	-	-
Stage 2	616	-	-	-	-
Critical Hdwy	7.26	7.52	-	-	4.26
Critical Hdwy Stg 1	6.26	-	-	-	-
Critical Hdwy Stg 2	6.26	-	-	-	-
Follow-up Hdwy	3.73	3.61	-	-	2.28
Pot Cap-1 Maneuver	59	391	-	-	531
Stage 1	220	-	-	-	-
Stage 2	447	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	53	391	-	-	531
Mov Cap-2 Maneuver	151	-	-	-	-
Stage 1	220	-	-	-	-
Stage 2	399	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	22.5	0	0.7
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	151	391	531	-
HCM Lane V/C Ratio	-	-	0.086	0.036	0.106	-
HCM Control Delay (s)	-	-	31.1	14.6	12.6	-
HCM Lane LOS	-	-	D	B	B	-
HCM 95th %tile Q(veh)	-	-	0.3	0.1	0.4	-

Timings  
12: Heacock Street & San Michele Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	31	82	5	39	341	762	2	57	484	126	52
Future Volume (vph)	31	82	5	39	341	762	2	57	484	126	52
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	1	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	4.0	5.0	4.0	5.0	5.0
Minimum Split (s)	9.5	30.5	30.5	8.5	30.5	8.5	8.5	34.5	8.5	34.5	34.5
Total Split (s)	13.0	41.0	41.0	13.0	41.0	28.0	12.0	38.0	28.0	54.0	54.0
Total Split (%)	10.8%	34.2%	34.2%	10.8%	34.2%	23.3%	10.0%	31.7%	23.3%	45.0%	45.0%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	3.5	4.5	3.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	4.5	5.5	4.5	5.5	5.5
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	None	Max	Max
Act Effct Green (s)	6.3	16.2	16.2	14.4	24.3	53.7	4.8	33.0	23.9	59.8	59.8
Actuated g/C Ratio	0.06	0.16	0.16	0.14	0.24	0.52	0.05	0.32	0.23	0.58	0.58
v/c Ratio	0.29	0.31	0.01	0.17	0.83	0.62	0.02	0.07	1.21	0.14	0.05
Control Delay	57.1	45.1	0.0	41.1	54.6	4.0	54.0	25.1	151.8	14.6	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.1	45.1	0.0	41.1	54.6	4.0	54.0	25.1	151.8	14.6	0.4
LOS	E	D	A	D	D	A	D	C	F	B	A
Approach Delay		46.5			20.4			25.9		113.7	
Approach LOS		D			C			C		F	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 103.4  
 Natural Cycle: 105  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.21  
 Intersection Signal Delay: 53.1  
 Intersection LOS: D  
 Intersection Capacity Utilization 67.7%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 12: Heacock Street & San Michele Road

Ø2	Ø1	Ø4	Ø3
38 s	28 s	41 s	13 s
Ø5	Ø6	Ø8	Ø7
12 s	54 s	41 s	13 s

HCM 6th Signalized Intersection Summary  
 12: Heacock Street & San Michele Road

Gateway Aviation TA (JN:13445)

04/19/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↑	↗	↖	↑↔		↖	↑	↗
Traffic Volume (veh/h)	31	82	5	39	341	762	2	57	11	484	126	52
Future Volume (veh/h)	31	82	5	39	341	762	2	57	11	484	126	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1856	1455	1796	1900	1885	1900	1707	1707	1885	1737	1856
Adj Flow Rate, veh/h	34	89	5	42	371	828	2	62	12	526	137	57
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	3	30	7	0	1	0	13	13	1	11	3
Cap, veh/h	43	124	83	453	585	818	4	768	145	366	855	774
Arrive On Green	0.02	0.07	0.07	0.26	0.31	0.31	0.00	0.28	0.28	0.20	0.49	0.49
Sat Flow, veh/h	1810	1856	1233	1711	1900	1598	1810	2724	513	1795	1737	1572
Grp Volume(v), veh/h	34	89	5	42	371	828	2	36	38	526	137	57
Grp Sat Flow(s),veh/h/ln	1810	1856	1233	1711	1900	1598	1810	1622	1615	1795	1737	1572
Q Serve(g_s), s	2.2	5.4	0.4	2.1	19.4	35.5	0.1	1.9	2.0	23.5	5.0	1.7
Cycle Q Clear(g_c), s	2.2	5.4	0.4	2.1	19.4	35.5	0.1	1.9	2.0	23.5	5.0	1.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.32	1.00		1.00
Lane Grp Cap(c), veh/h	43	124	83	453	585	818	4	457	455	366	855	774
V/C Ratio(X)	0.78	0.72	0.06	0.09	0.63	1.01	0.51	0.08	0.08	1.44	0.16	0.07
Avail Cap(c_a), veh/h	133	572	380	453	585	818	118	457	455	366	855	774
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.0	52.7	41.2	31.9	34.3	28.1	57.4	30.4	30.4	45.9	16.1	9.4
Incr Delay (d2), s/veh	10.9	2.9	0.1	0.0	1.7	34.6	33.9	0.3	0.4	211.6	0.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	2.6	0.1	0.9	8.8	17.6	0.1	0.8	0.8	31.5	1.9	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.9	55.6	41.3	32.0	36.0	62.7	91.3	30.7	30.8	257.5	16.5	9.6
LnGrp LOS	E	E	D	C	D	F	F	C	C	F	B	A
Approach Vol, veh/h		128			1241			76			720	
Approach Delay, s/veh		58.0			53.7			32.3			192.0	
Approach LOS		E			D			C			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	29.0	38.0	35.0	13.2	4.7	62.3	7.3	41.0				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	23.5	* 33	8.5	35.5	7.5	48.5	8.5	35.5				
Max Q Clear Time (g_c+I1), s	25.5	4.0	4.1	7.4	2.1	7.0	4.2	37.5				
Green Ext Time (p_c), s	0.0	0.2	0.0	0.3	0.0	0.5	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	99.2
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection					
Intersection Delay, s/veh 12.9					
Intersection LOS B					
Approach	EB	WB		NB	
Entry Lanes	3	2		2	
Conflicting Circle Lanes	2	2		2	
Adj Approach Flow, veh/h	0	1631		90	
Demand Flow Rate, veh/h	0	1776		98	
Vehicles Circulating, veh/h	15	81		1388	
Vehicles Exiting, veh/h	1842	1405		210	
Ped Vol Crossing Leg, #/h	0	0		0	
Ped Cap Adj	1.000	1.000		1.000	
Approach Delay, s/veh	0.0	13.0		11.7	
Approach LOS	-	B		B	
Lane	Left		Right		
Designated Moves	LT		TR		L LTR
Assumed Moves	LT		TR		L LTR
RT Channelized					
Lane Util	0.470	0.530	0.531	0.469	
Follow-Up Headway, s	2.667	2.535	2.667	2.535	
Critical Headway, s	4.645	4.328	4.645	4.328	
Entry Flow, veh/h	835	941	52	46	
Cap Entry Lane, veh/h	1253	1326	377	436	
Entry HV Adj Factor	0.918	0.918	0.917	0.920	
Flow Entry, veh/h	766	864	48	42	
Cap Entry, veh/h	1150	1217	345	401	
V/C Ratio	0.666	0.710	0.138	0.105	
Control Delay, s/veh	12.5	13.4	12.8	10.6	
LOS	B		B		B B
95th %tile Queue, veh	5	6	0	0	

Timings  
14: Indian Street & San Michele Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↖	↗	↖	↗	↖	↗	↗	↖	↗
Traffic Volume (vph)	15	205	186	894	1545	217	236	6	141
Future Volume (vph)	15	205	186	894	1545	217	236	6	141
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8	5	2		1	6
Permitted Phases							2		
Detector Phase	7	4	3	8	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	31.8	9.6	31.8	9.6	32.8	32.8	9.6	32.8
Total Split (s)	12.0	33.0	19.0	40.0	32.0	57.0	57.0	11.0	36.0
Total Split (%)	10.0%	27.5%	15.8%	33.3%	26.7%	47.5%	47.5%	9.2%	30.0%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	5.8	16.4	14.0	31.2	27.9	43.8	43.8	5.3	12.9
Actuated g/C Ratio	0.06	0.18	0.15	0.34	0.30	0.47	0.47	0.06	0.14
v/c Ratio	0.16	0.72	0.72	0.78	1.48	0.26	0.26	0.06	0.32
Control Delay	50.4	20.4	55.8	33.9	247.5	17.9	3.3	49.5	36.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.4	20.4	55.8	33.9	247.5	17.9	3.3	49.5	36.4
LOS	D	C	E	C	F	B	A	D	D
Approach Delay		21.2		37.6		193.7			36.9
Approach LOS		C		D		F			D

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 92.5  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.48  
 Intersection Signal Delay: 116.4  
 Intersection LOS: F  
 Intersection Capacity Utilization 107.9%  
 ICU Level of Service G  
 Analysis Period (min) 15























Splits and Phases: 14: Indian Street & San Michele Road



HCM 6th Signalized Intersection Summary  
 14: Indian Street & San Michele Road

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	205	363	186	894	11	1545	217	236	6	141	14
Future Volume (veh/h)	15	205	363	186	894	11	1545	217	236	6	141	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		0.94
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1618	1841	1885	1856	1885	1900	1885	1885	1841	1900	1870	1900
Adj Flow Rate, veh/h	16	223	395	202	972	12	1679	236	257	7	153	15
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	19	4	1	3	1	0	1	1	4	0	2	0
Cap, veh/h	27	446	397	231	1367	17	922	775	633	16	506	49
Arrive On Green	0.02	0.25	0.25	0.13	0.37	0.37	0.26	0.41	0.41	0.01	0.15	0.15
Sat Flow, veh/h	1541	1749	1560	1767	3716	46	3591	1885	1540	1810	3337	322
Grp Volume(v), veh/h	16	223	395	202	493	491	1679	236	257	7	85	83
Grp Sat Flow(s),veh/h/ln	1541	1749	1560	1767	1885	1876	1795	1885	1540	1810	1870	1789
Q Serve(g_s), s	1.1	11.6	27.0	12.0	23.9	23.9	27.4	9.0	12.6	0.4	4.3	4.4
Cycle Q Clear(g_c), s	1.1	11.6	27.0	12.0	23.9	23.9	27.4	9.0	12.6	0.4	4.3	4.4
Prop In Lane	1.00		1.00	1.00		0.02	1.00		1.00	1.00		0.18
Lane Grp Cap(c), veh/h	27	446	397	231	693	690	922	775	633	16	284	271
V/C Ratio(X)	0.59	0.50	0.99	0.87	0.71	0.71	1.82	0.30	0.41	0.44	0.30	0.31
Avail Cap(c_a), veh/h	107	446	397	238	693	690	922	904	738	108	529	506
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.0	34.0	39.7	45.5	28.9	28.9	39.7	21.2	22.2	52.6	40.2	40.3
Incr Delay (d2), s/veh	7.2	0.3	43.4	26.6	2.9	2.9	374.1	0.1	0.2	7.0	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	4.8	14.6	6.8	10.7	10.6	59.2	3.7	4.3	0.2	1.9	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.3	34.3	83.1	72.1	31.8	31.8	413.8	21.3	22.4	59.6	40.4	40.5
LnGrp LOS	E	C	F	E	C	C	F	C	C	E	D	D
Approach Vol, veh/h		634			1186			2172			175	
Approach Delay, s/veh		65.3			38.7			324.8			41.2	
Approach LOS		E			D			F			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.5	49.7	18.6	33.0	33.2	22.0	6.5	45.1				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	5.8	* 5.8	4.6	5.8				
Max Green Setting (Gmax), s	6.4	51.2	14.4	27.2	27.4	* 30	7.4	34.2				
Max Q Clear Time (g_c+I1), s	2.4	14.6	14.0	29.0	29.4	6.4	3.1	25.9				
Green Ext Time (p_c), s	0.0	1.1	0.0	0.0	0.0	0.4	0.0	2.5				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			192.0									
HCM 6th LOS			F									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings  
15: Indian Street & Nandina Avenue



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↑	↗	↖	↗	↖	↕	↖	↕
Traffic Volume (vph)	8	35	156	36	44	356	1770	13	489
Future Volume (vph)	8	35	156	36	44	356	1770	13	489
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	5	3	8	5	2	1	6
Permitted Phases	4								
Detector Phase	7	4	5	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	29.8	9.6	9.6	29.8	9.6	26.8	9.6	26.8
Total Split (s)	13.0	35.0	36.0	15.0	37.0	36.0	56.0	14.0	34.0
Total Split (%)	10.8%	29.2%	30.0%	12.5%	30.8%	30.0%	46.7%	11.7%	28.3%
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	5.5	12.6	36.5	7.0	17.8	22.4	56.0	5.9	28.8
Actuated g/C Ratio	0.07	0.15	0.44	0.08	0.21	0.27	0.67	0.07	0.35
v/c Ratio	0.07	0.19	0.22	0.30	0.24	0.82	0.80	0.14	0.44
Control Delay	47.0	38.0	2.8	48.1	24.3	45.6	19.6	47.8	27.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.0	38.0	2.8	48.1	24.3	45.6	19.6	47.8	27.8
LOS	D	D	A	D	C	D	B	D	C
Approach Delay	10.8		32.5			23.8		28.3	
Approach LOS	B		C			C		C	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 83  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.82  
 Intersection Signal Delay: 24.0  
 Intersection LOS: C  
 Intersection Capacity Utilization 77.7%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 15: Indian Street & Nandina Avenue



























HCM 6th Signalized Intersection Summary  
 15: Indian Street & Nandina Avenue

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	35	156	36	44	24	356	1770	76	13	489	27
Future Volume (veh/h)	8	35	156	36	44	24	356	1770	76	13	489	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1248	1559	1559	1441	1470	1767	1870	1707	1411	1856	1900
Adj Flow Rate, veh/h	9	38	170	39	48	26	387	1924	83	14	532	29
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	44	23	23	31	29	9	2	13	33	3	0
Cap, veh/h	20	154	496	53	130	70	424	2065	88	22	1204	65
Arrive On Green	0.01	0.12	0.12	0.04	0.15	0.15	0.25	0.58	0.58	0.02	0.35	0.35
Sat Flow, veh/h	1810	1248	1321	1485	879	476	1682	3557	152	1344	3487	190
Grp Volume(v), veh/h	9	38	170	39	0	74	387	1004	1004	14	283	278
Grp Sat Flow(s),veh/h/ln	1810	1248	1321	1485	0	1355	1682	1870	1839	1344	1856	1821
Q Serve(g_s), s	0.4	2.3	7.9	2.2	0.0	4.2	19.0	41.4	42.9	0.9	10.0	10.1
Cycle Q Clear(g_c), s	0.4	2.3	7.9	2.2	0.0	4.2	19.0	41.4	42.9	0.9	10.0	10.1
Prop In Lane	1.00		1.00	1.00		0.35	1.00		0.08	1.00		0.10
Lane Grp Cap(c), veh/h	20	154	496	53	0	200	424	1086	1068	22	640	629
V/C Ratio(X)	0.44	0.25	0.34	0.74	0.00	0.37	0.91	0.92	0.94	0.63	0.44	0.44
Avail Cap(c_a), veh/h	178	428	786	181	0	496	620	1102	1084	148	640	629
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.8	33.8	19.1	40.7	0.0	32.7	31.0	16.2	16.5	41.6	21.5	21.6
Incr Delay (d2), s/veh	5.5	0.8	0.4	7.5	0.0	1.1	10.8	12.7	15.0	10.4	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.7	2.2	0.9	0.0	1.4	8.3	17.1	18.0	0.3	4.0	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.3	34.6	19.5	48.1	0.0	33.9	41.7	28.8	31.5	52.0	22.0	22.0
LnGrp LOS	D	C	B	D	A	C	D	C	C	D	C	C
Approach Vol, veh/h		217			113			2394			575	
Approach Delay, s/veh		23.3			38.8			32.0			22.8	
Approach LOS		C			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.0	55.2	7.6	16.3	26.1	35.2	5.6	18.4				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	9.4	50.2	10.4	29.2	31.4	28.2	8.4	31.2				
Max Q Clear Time (g_c+I1), s	2.9	44.9	4.2	9.9	21.0	12.1	2.4	6.2				
Green Ext Time (p_c), s	0.0	4.5	0.0	0.7	0.4	2.6	0.0	0.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			30.1									
HCM 6th LOS			C									

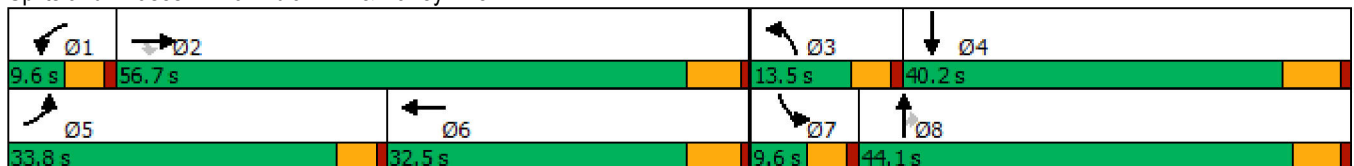
Timings  
16: Indian Av. & Harley Knox Bl.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	108	276	56	157	541	58	290	82	102	187
Future Volume (vph)	108	276	56	157	541	58	290	82	102	187
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	5	2		1	6	3	8		7	4
Permitted Phases			2					8		
Detector Phase	5	2	2	1	6	3	8	8	7	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	35.8	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2
Total Split (s)	33.8	56.7	56.7	9.6	32.5	13.5	44.1	44.1	9.6	40.2
Total Split (%)	28.2%	47.3%	47.3%	8.0%	27.1%	11.3%	36.8%	36.8%	8.0%	33.5%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.4	4.4	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	5.4	5.4	4.6	6.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	12.9	26.6	26.6	5.4	22.5	6.7	17.4	17.4	5.4	18.1
Actuated g/C Ratio	0.17	0.35	0.35	0.07	0.29	0.09	0.23	0.23	0.07	0.24
v/c Ratio	0.60	0.19	0.12	1.38	0.63	0.27	0.42	0.19	0.89	0.41
Control Delay	46.8	17.7	0.7	248.5	25.5	42.3	27.9	1.3	99.8	25.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.8	17.7	0.7	248.5	25.5	42.3	27.9	1.3	99.8	25.5
LOS	D	B	A	F	C	D	C	A	F	C
Approach Delay		22.7			60.6		24.8			46.6
Approach LOS		C			E		C			D

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 76.7	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.38	
Intersection Signal Delay: 44.0	Intersection LOS: D
Intersection Capacity Utilization 54.2%	ICU Level of Service A
Analysis Period (min) 15	































Splits and Phases: 16: Indian Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 16: Indian Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 			 	
Traffic Volume (veh/h)	108	276	56	157	541	302	58	290	82	102	187	71
Future Volume (veh/h)	108	276	56	157	541	302	58	290	82	102	187	71
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1085	1707	1530	1870	1811	1900	1470	1767	1796	1885	1811	685
Adj Flow Rate, veh/h	117	300	52	171	588	308	63	315	82	111	203	28
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	55	13	25	2	6	0	29	9	7	1	6	82
Cap, veh/h	131	1550	431	145	947	441	146	545	247	142	573	78
Arrive On Green	0.13	0.33	0.33	0.08	0.29	0.29	0.05	0.16	0.16	0.08	0.19	0.19
Sat Flow, veh/h	1033	4661	1296	1781	3296	1535	2716	3357	1522	1795	3043	414
Grp Volume(v), veh/h	117	300	52	171	588	308	63	315	82	111	114	117
Grp Sat Flow(s),veh/h/ln	1033	1554	1296	1781	1648	1535	1358	1678	1522	1795	1721	1737
Q Serve(g_s), s	6.9	2.8	1.7	5.0	9.5	11.0	1.4	5.3	2.9	3.7	3.5	3.6
Cycle Q Clear(g_c), s	6.9	2.8	1.7	5.0	9.5	11.0	1.4	5.3	2.9	3.7	3.5	3.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.24
Lane Grp Cap(c), veh/h	131	1550	431	145	947	441	146	545	247	142	324	327
V/C Ratio(X)	0.90	0.19	0.12	1.18	0.62	0.70	0.43	0.58	0.33	0.78	0.35	0.36
Avail Cap(c_a), veh/h	490	3855	1072	145	1430	666	393	2111	957	146	951	959
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.5	14.7	14.3	28.3	19.0	19.6	28.2	23.8	22.8	27.8	21.7	21.8
Incr Delay (d2), s/veh	8.1	0.1	0.1	131.8	0.7	2.0	0.8	1.0	0.8	20.8	0.6	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.8	0.4	7.2	3.2	3.6	0.4	1.9	1.0	2.3	1.3	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.5	14.7	14.4	160.1	19.7	21.6	29.0	24.8	23.6	48.6	22.4	22.4
LnGrp LOS	C	B	B	F	B	C	C	C	C	D	C	C
Approach Vol, veh/h		469			1067			460			342	
Approach Delay, s/veh		19.6			42.7			25.1			30.9	
Approach LOS		B			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.6	26.3	7.9	17.8	12.4	23.5	9.5	16.2				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	5.0	50.9	8.9	34.0	29.2	26.7	5.0	* 39				
Max Q Clear Time (g_c+I1), s	7.0	4.8	3.4	5.6	8.9	13.0	5.7	7.3				
Green Ext Time (p_c), s	0.0	2.1	0.0	1.2	0.1	4.7	0.0	2.2				

Intersection Summary

HCM 6th Ctrl Delay	32.9
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

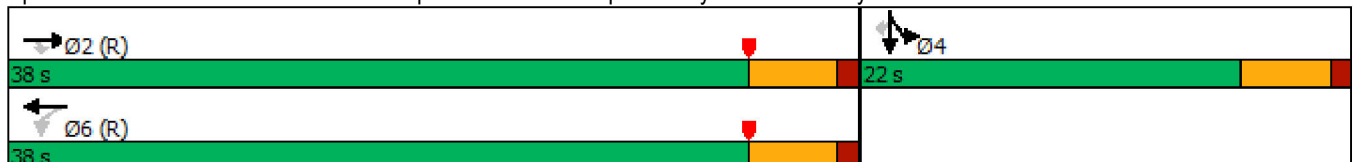


Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations	↑↑	↑	↙	↑↑	↙	↙
Traffic Volume (vph)	875	96	627	400	0	226
Future Volume (vph)	875	96	627	400	0	226
Turn Type	NA	Perm	Perm	NA	NA	Perm
Protected Phases	2			6	4	
Permitted Phases		2	6			4
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	25.0	25.0	10.0	10.0
Total Split (s)	38.0	38.0	38.0	38.0	22.0	22.0
Total Split (%)	63.3%	63.3%	63.3%	63.3%	36.7%	36.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	33.0	33.0	33.0	33.0	17.0	17.0
Actuated g/C Ratio	0.55	0.55	0.55	0.55	0.28	0.28
v/c Ratio	0.50	0.11	2.70	0.23	1.25	0.42
Control Delay	9.6	2.0	786.3	8.6	156.0	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.6	2.0	786.3	8.6	156.0	5.2
LOS	A	A	F	A	F	A
Approach Delay	8.8			483.4	110.4	
Approach LOS	A			F	F	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 2.70  
 Intersection Signal Delay: 214.1  
 Intersection LOS: F  
 Intersection Capacity Utilization 111.5%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

11/09/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↖	↑↑						↖	↗
Traffic Volume (veh/h)	0	875	96	627	400	0	0	0	0	522	0	226
Future Volume (veh/h)	0	875	96	627	400	0	0	0	0	522	0	226
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1826	1885	1841	1826	0				1707	1900	1752
Adj Flow Rate, veh/h	0	951	104	682	435	0				567	0	186
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	5	1	4	5	0				13	0	10
Cap, veh/h	0	1908	878	320	1908	0				513	0	421
Arrive On Green	0.00	0.55	0.55	0.92	0.92	0.00				0.28	0.00	0.28
Sat Flow, veh/h	0	3561	1597	526	3561	0				1810	0	1485
Grp Volume(v), veh/h	0	951	104	682	435	0				567	0	186
Grp Sat Flow(s),veh/h/ln	0	1735	1597	526	1735	0				1810	0	1485
Q Serve(g_s), s	0.0	10.2	1.9	22.8	0.8	0.0				17.0	0.0	6.2
Cycle Q Clear(g_c), s	0.0	10.2	1.9	33.0	0.8	0.0				17.0	0.0	6.2
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1908	878	320	1908	0				513	0	421
V/C Ratio(X)	0.00	0.50	0.12	2.13	0.23	0.00				1.11	0.00	0.44
Avail Cap(c_a), veh/h	0	1908	878	320	1908	0				513	0	421
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.44	0.44	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	8.4	6.5	11.8	1.1	0.0				21.5	0.0	17.6
Incr Delay (d2), s/veh	0.0	0.9	0.3	513.6	0.1	0.0				71.9	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.8	0.5	49.1	0.2	0.0				16.2	0.0	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	9.3	6.8	525.4	1.3	0.0				93.4	0.0	18.3
LnGrp LOS	A	A	A	F	A	A				F	A	B
Approach Vol, veh/h		1055			1117						753	
Approach Delay, s/veh		9.1			321.3						74.9	
Approach LOS		A			F						E	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		38.0		22.0		38.0						
Change Period (Y+Rc), s		5.0		5.0		5.0						
Max Green Setting (Gmax), s		33.0		17.0		33.0						
Max Q Clear Time (g_c+I1), s		12.2		19.0		35.0						
Green Ext Time (p_c), s		4.2		0.0		0.0						
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				145.2								
HCM 6th LOS				F								

Timings

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

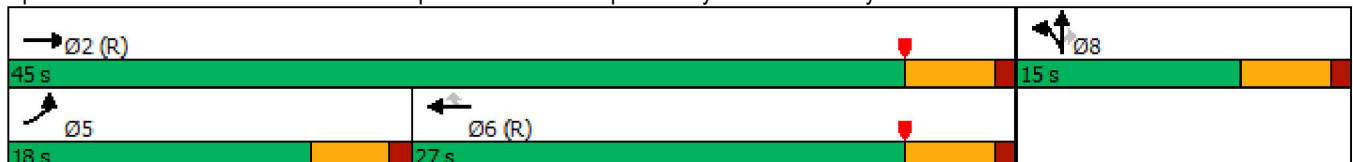


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	479	918	979	1110	4	340
Future Volume (vph)	479	918	979	1110	4	340
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	26.0	24.0	24.0	10.0	10.0
Total Split (s)	18.0	45.0	27.0	27.0	15.0	15.0
Total Split (%)	30.0%	75.0%	45.0%	45.0%	25.0%	25.0%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max
Act Effct Green (s)	13.5	40.0	22.0	22.0	10.0	10.0
Actuated g/C Ratio	0.22	0.67	0.37	0.37	0.17	0.17
v/c Ratio	1.34	0.46	0.84	1.42	0.20	1.03
Control Delay	186.5	4.4	25.1	212.5	23.7	74.4
Queue Delay	0.0	0.3	0.0	0.0	0.0	0.0
Total Delay	186.5	4.7	25.1	212.5	23.7	74.4
LOS	F	A	C	F	C	E
Approach Delay		67.0	124.7		67.7	
Approach LOS		E	F		E	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 29 (48%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.42  
 Intersection Signal Delay: 98.2  
 Intersection LOS: F  
 Intersection Capacity Utilization 111.5%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.























HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

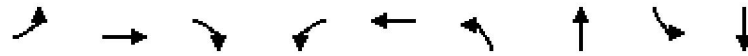
2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox Bl./Harley Knox Bl.

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 							
Traffic Volume (veh/h)	479	918	0	0	979	1110	48	4	340	0	0	0
Future Volume (veh/h)	479	918	0	0	979	1110	48	4	340	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1841	1752	0	0	1841	1781	1767	1900	1678			
Adj Flow Rate, veh/h	521	998	0	0	1064	1143	52	4	305			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	4	10	0	0	4	8	9	0	15			
Cap, veh/h	394	2219	0	0	1282	554	281	22	237			
Arrive On Green	0.07	0.22	0.00	0.00	0.37	0.37	0.17	0.17	0.17			
Sat Flow, veh/h	1753	3416	0	0	3589	1510	1686	130	1422			
Grp Volume(v), veh/h	521	998	0	0	1064	1143	56	0	305			
Grp Sat Flow(s),veh/h/ln	1753	1664	0	0	1749	1510	1816	0	1422			
Q Serve(g_s), s	13.5	15.6	0.0	0.0	16.6	22.0	1.6	0.0	10.0			
Cycle Q Clear(g_c), s	13.5	15.6	0.0	0.0	16.6	22.0	1.6	0.0	10.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.93		1.00			
Lane Grp Cap(c), veh/h	394	2219	0	0	1282	554	303	0	237			
V/C Ratio(X)	1.32	0.45	0.00	0.00	0.83	2.06	0.19	0.00	1.29			
Avail Cap(c_a), veh/h	394	2219	0	0	1282	554	303	0	237			
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.86	0.86	0.00	0.00	0.63	0.63	1.00	0.00	1.00			
Uniform Delay (d), s/veh	27.8	13.9	0.0	0.0	17.3	19.0	21.5	0.0	25.0			
Incr Delay (d2), s/veh	159.1	0.6	0.0	0.0	4.1	483.1	1.3	0.0	157.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	23.4	6.7	0.0	0.0	6.1	80.4	0.7	0.0	13.3			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	186.8	14.4	0.0	0.0	21.4	502.1	22.8	0.0	182.2			
LnGrp LOS	F	B	A	A	C	F	C	A	F			
Approach Vol, veh/h		1519			2207			361				
Approach Delay, s/veh		73.6			270.4			157.5				
Approach LOS		E			F			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		45.0			18.0	27.0		15.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		40.0			13.5	22.0		10.0				
Max Q Clear Time (g_c+1), s		17.6			15.5	24.0		12.0				
Green Ext Time (p_c), s		4.4			0.0	0.0		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					187.2							
HCM 6th LOS					F							



Timings  
3: Western Way & Harley Knox Bl.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↵	↑↑↑	↵	↵	↑↑↑	↵	↵	↵	↵
Traffic Volume (vph)	35	1223	1	2	1947	3	0	15	0
Future Volume (vph)	35	1223	1	2	1947	3	0	15	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	NA
Protected Phases	5	2		1	6		8		4
Permitted Phases			2			8		4	
Detector Phase	5	2	2	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	21.8	21.8	9.6	21.8	32.6	32.6	32.6	32.6
Total Split (s)	18.0	71.4	71.4	9.6	63.0	39.0	39.0	39.0	39.0
Total Split (%)	15.0%	59.5%	59.5%	8.0%	52.5%	32.5%	32.5%	32.5%	32.5%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	7.3	53.7	53.7	5.4	48.5	13.4	13.4	13.4	13.4
Actuated g/C Ratio	0.09	0.67	0.67	0.07	0.61	0.17	0.17	0.17	0.17
v/c Ratio	0.31	0.42	0.00	0.02	0.72	0.02	0.01	0.07	0.40
Control Delay	47.9	7.3	0.0	46.5	14.4	33.3	0.0	34.5	10.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.9	7.3	0.0	46.5	14.4	33.3	0.0	34.5	10.3
LOS	D	A	A	D	B	C	A	C	B
Approach Delay		8.4			14.4		14.3		12.6
Approach LOS		A			B		B		B

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 79.7	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 12.1	Intersection LOS: B
Intersection Capacity Utilization 55.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 3: Western Way & Harley Knox Bl.





HCM 6th Signalized Intersection Summary  
 3: Western Way & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/09/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	1223	1	2	1947	11	3	0	4	15	0	140
Future Volume (veh/h)	35	1223	1	2	1947	11	3	0	4	15	0	140
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1426	1737	1900	1900	1811	1515	1900	1900	1900	1767	1900	1811
Adj Flow Rate, veh/h	38	1329	1	2	2116	10	3	0	4	16	0	140
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	32	11	0	0	6	26	0	0	0	9	0	6
Cap, veh/h	51	3047	1035	5	3087	15	175	0	222	285	0	222
Arrive On Green	0.04	0.64	0.64	0.00	0.61	0.61	0.14	0.00	0.14	0.14	0.00	0.14
Sat Flow, veh/h	1358	4742	1610	1810	5079	24	1269	0	1610	1334	0	1610
Grp Volume(v), veh/h	38	1329	1	2	1373	753	3	0	4	16	0	140
Grp Sat Flow(s),veh/h/ln	1358	1581	1610	1810	1648	1807	1269	0	1610	1334	0	1610
Q Serve(g_s), s	1.9	9.6	0.0	0.1	19.4	19.4	0.2	0.0	0.1	0.7	0.0	5.7
Cycle Q Clear(g_c), s	1.9	9.6	0.0	0.1	19.4	19.4	5.8	0.0	0.1	0.9	0.0	5.7
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	51	3047	1035	5	2004	1098	175	0	222	285	0	222
V/C Ratio(X)	0.75	0.44	0.00	0.41	0.69	0.69	0.02	0.00	0.02	0.06	0.00	0.63
Avail Cap(c_a), veh/h	263	4492	1525	131	2722	1492	630	0	800	764	0	800
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.0	6.1	4.4	34.5	9.1	9.1	30.9	0.0	25.8	26.2	0.0	28.2
Incr Delay (d2), s/veh	7.9	0.1	0.0	18.7	0.4	0.8	0.0	0.0	0.0	0.1	0.0	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	2.1	0.0	0.1	4.8	5.4	0.0	0.0	0.1	0.2	0.0	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.9	6.2	4.4	53.2	9.6	9.9	31.0	0.0	25.8	26.2	0.0	31.1
LnGrp LOS	D	A	A	D	A	A	C	A	C	C	A	C
Approach Vol, veh/h		1368			2128			7				156
Approach Delay, s/veh		7.2			9.7			28.0				30.6
Approach LOS		A			A			C				C
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.8	50.3		14.2	7.2	47.9		14.2				
Change Period (Y+Rc), s	4.6	5.8		4.6	4.6	5.8		4.6				
Max Green Setting (Gmax), s	5.0	65.6		34.4	13.4	57.2		34.4				
Max Q Clear Time (g_c+I1), s	2.1	11.6		7.7	3.9	21.4		7.8				
Green Ext Time (p_c), s	0.0	12.3		0.9	0.0	20.7		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				9.7								
HCM 6th LOS				A								

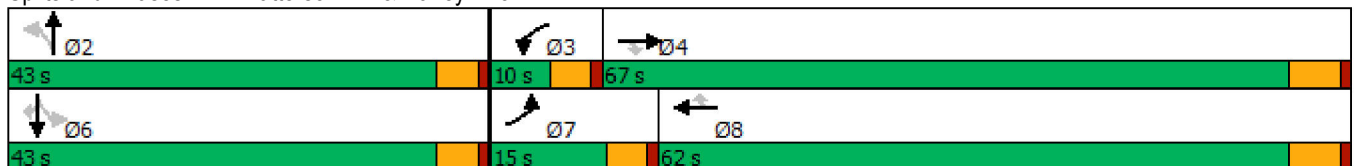
Timings  
4: Patterson Av. & Harley Knox Bl.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	27	967	46	46	1807	10	118	3	26	4	35
Future Volume (vph)	27	967	46	46	1807	10	118	3	26	4	35
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	7	4		3	8			2		6	
Permitted Phases			4			8	2		6		6
Detector Phase	7	4	4	3	8	8	2	2	6	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	9.6	31.8	31.8	33.7	33.7	40.7	40.7	40.7
Total Split (s)	15.0	67.0	67.0	10.0	62.0	62.0	43.0	43.0	43.0	43.0	43.0
Total Split (%)	12.5%	55.8%	55.8%	8.3%	51.7%	51.7%	35.8%	35.8%	35.8%	35.8%	35.8%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8		4.7		4.7	4.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	7.0	59.0	59.0	5.4	59.8	59.8		18.5		18.5	18.5
Actuated g/C Ratio	0.07	0.61	0.61	0.06	0.62	0.62		0.19		0.19	0.19
v/c Ratio	0.35	0.36	0.05	0.50	0.93	0.01		0.67		0.14	0.11
Control Delay	57.1	11.3	3.0	65.3	29.0	0.0		44.6		32.7	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	57.1	11.3	3.0	65.3	29.0	0.0		44.6		32.7	0.6
LOS	E	B	A	E	C	A		D		C	A
Approach Delay		12.1			29.7			44.6		15.3	
Approach LOS		B			C			D		B	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 96.2  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.93  
 Intersection Signal Delay: 24.4  
 Intersection LOS: C  
 Intersection Capacity Utilization 80.3%  
 ICU Level of Service D  
 Analysis Period (min) 15


























Splits and Phases: 4: Patterson Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
4: Patterson Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			 			 				
Traffic Volume (veh/h)	27	967	46	46	1807	10	118	3	44	26	4	35
Future Volume (veh/h)	27	967	46	46	1807	10	118	3	44	26	4	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1070	1752	1856	1900	1811	1292	1826	1900	1811	1663	1426	1604
Adj Flow Rate, veh/h	29	1051	50	50	1964	11	128	3	48	28	4	38
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	56	10	3	0	6	41	5	0	6	16	32	20
Cap, veh/h	30	2938	966	73	2153	671	222	12	60	235	27	231
Arrive On Green	0.03	0.61	0.61	0.04	0.63	0.63	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	1019	4782	1572	1810	3441	1073	887	73	351	922	159	1359
Grp Volume(v), veh/h	29	1051	50	50	1964	11	179	0	0	32	0	38
Grp Sat Flow(s),veh/h/ln	1019	1594	1572	1810	1721	1073	1311	0	0	1081	0	1359
Q Serve(g_s), s	2.5	9.4	1.1	2.4	42.9	0.3	9.6	0.0	0.0	0.0	0.0	2.1
Cycle Q Clear(g_c), s	2.5	9.4	1.1	2.4	42.9	0.3	11.7	0.0	0.0	2.1	0.0	2.1
Prop In Lane	1.00		1.00	1.00		1.00	0.72		0.27	0.87		1.00
Lane Grp Cap(c), veh/h	30	2938	966	73	2153	671	295	0	0	262	0	231
V/C Ratio(X)	0.98	0.36	0.05	0.68	0.91	0.02	0.61	0.00	0.00	0.12	0.00	0.16
Avail Cap(c_a), veh/h	123	3395	1116	113	2243	699	691	0	0	555	0	604
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.8	8.2	6.6	40.8	14.1	6.1	35.1	0.0	0.0	30.5	0.0	30.5
Incr Delay (d2), s/veh	42.1	0.1	0.0	4.1	6.1	0.0	2.0	0.0	0.0	0.2	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	2.6	0.3	1.1	14.2	0.1	3.7	0.0	0.0	0.6	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	83.9	8.3	6.6	44.9	20.1	6.1	37.1	0.0	0.0	30.7	0.0	30.9
LnGrp LOS	F	A	A	D	C	A	D	A	A	C	A	C
Approach Vol, veh/h		1130			2025			179				70
Approach Delay, s/veh		10.2			20.7			37.1				30.8
Approach LOS		B			C			D				C
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		19.4	8.1	58.8		19.4	7.1	59.7				
Change Period (Y+Rc), s		* 4.7	4.6	5.8		* 4.7	4.6	5.8				
Max Green Setting (Gmax), s		* 38	5.4	61.2		* 38	10.4	56.2				
Max Q Clear Time (g_c+I1), s		13.7	4.4	11.4		4.1	4.5	44.9				
Green Ext Time (p_c), s		1.0	0.0	8.8		0.3	0.0	9.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				18.2								
HCM 6th LOS				B								
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings  
5: Heacock Street & Cactus Avenue

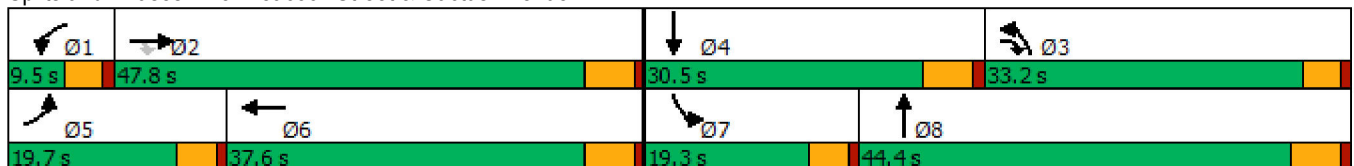


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	244	2146	1378	27	956	818	672	184	746
Future Volume (vph)	244	2146	1378	27	956	818	672	184	746
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	3	1	6	3	8	7	4
Permitted Phases			2						
Detector Phase	5	2	3	1	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.5	30.5	9.5	9.5	30.5	9.5	30.5	9.5	30.5
Total Split (s)	19.7	47.8	33.2	9.5	37.6	33.2	44.4	19.3	30.5
Total Split (%)	16.3%	39.5%	27.4%	7.9%	31.1%	27.4%	36.7%	16.0%	25.2%
Yellow Time (s)	3.5	4.5	3.5	3.5	4.5	3.5	4.5	3.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	4.5	4.5	5.5	4.5	5.5	4.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None
Act Effct Green (s)	15.2	46.1	75.8	5.0	32.1	28.7	39.5	14.2	25.0
Actuated g/C Ratio	0.13	0.38	0.63	0.04	0.27	0.24	0.33	0.12	0.21
v/c Ratio	1.07	1.56	1.25	0.38	1.13	1.00	0.63	0.86	1.10
Control Delay	127.4	284.4	139.2	71.2	110.7	77.7	36.9	86.2	106.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	127.4	284.4	139.2	71.2	110.7	77.7	36.9	86.2	106.0
LOS	F	F	F	E	F	E	D	F	F
Approach Delay		221.2			109.8		58.4		102.3
Approach LOS		F			F		E		F

Intersection Summary

Cycle Length: 121  
 Actuated Cycle Length: 121  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.56  
 Intersection Signal Delay: 154.6  
 Intersection LOS: F  
 Intersection Capacity Utilization 126.1%  
 ICU Level of Service H  
 Analysis Period (min) 15























Splits and Phases: 5: Heacock Street & Cactus Avenue



HCM 6th Signalized Intersection Summary  
5: Heacock Street & Cactus Avenue

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	244	2146	1378	27	956	132	818	672	61	184	746	61
Future Volume (veh/h)	244	2146	1378	27	956	132	818	672	61	184	746	61
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1811	1826	1885	1870	1811	1870	1870	1900	1856	1900
Adj Flow Rate, veh/h	254	2235	1435	28	996	138	852	700	64	192	777	64
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	1	6	5	1	2	6	2	2	0	3	0
Cap, veh/h	225	1367	916	44	853	118	812	1105	101	218	693	57
Arrive On Green	0.12	0.36	0.36	0.03	0.26	0.26	0.24	0.33	0.33	0.12	0.20	0.20
Sat Flow, veh/h	1810	3770	1531	1739	3241	449	3450	3371	308	1810	3382	278
Grp Volume(v), veh/h	254	2235	1435	28	579	555	852	388	376	192	426	415
Grp Sat Flow(s),veh/h/ln	1810	1885	1531	1739	1885	1804	1725	1870	1808	1810	1856	1804
Q Serve(g_s), s	15.2	44.2	27.8	1.9	32.1	32.1	28.7	21.5	21.5	12.7	25.0	25.0
Cycle Q Clear(g_c), s	15.2	44.2	27.8	1.9	32.1	32.1	28.7	21.5	21.5	12.7	25.0	25.0
Prop In Lane	1.00		1.00	1.00		0.25	1.00		0.17	1.00		0.15
Lane Grp Cap(c), veh/h	225	1367	916	44	496	475	812	613	593	218	380	370
V/C Ratio(X)	1.13	1.63	1.57	0.64	1.17	1.17	1.05	0.63	0.63	0.88	1.12	1.12
Avail Cap(c_a), veh/h	225	1367	916	71	496	475	812	613	593	220	380	370
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.4	38.9	11.8	58.9	44.9	45.0	46.7	34.8	34.8	52.8	48.5	48.5
Incr Delay (d2), s/veh	98.2	289.0	260.1	5.7	95.3	96.6	45.5	1.6	1.7	29.9	83.2	84.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.8	74.0	77.4	0.9	27.5	26.5	17.0	9.7	9.4	7.4	20.0	19.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	151.6	327.9	271.9	64.6	140.3	141.6	92.1	36.4	36.5	82.7	131.7	132.5
LnGrp LOS	F	F	F	E	F	F	F	D	D	F	F	F
Approach Vol, veh/h		3924			1162			1616			1033	
Approach Delay, s/veh		296.0			139.1			65.8			122.9	
Approach LOS		F			F			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.6	49.7	34.2	30.5	19.7	37.6	19.2	45.5				
Change Period (Y+Rc), s	4.5	5.5	5.5	* 5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	5.0	42.3	28.7	* 25	15.2	32.1	14.8	38.9				
Max Q Clear Time (g_c+I1), s	3.9	46.2	30.7	27.0	17.2	34.1	14.7	23.5				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			201.2									
HCM 6th LOS			F									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings  
6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

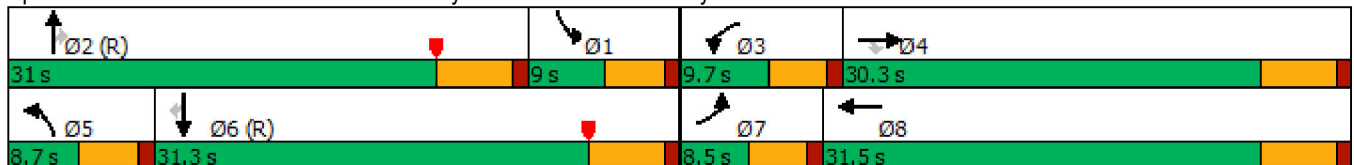
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Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	37	239	397	36	99	98	1045	87	362	1257	24	
Future Volume (vph)	37	239	397	36	99	98	1045	87	362	1257	24	
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	7	4		3	8	5	2		1	6		
Permitted Phases			4					2			6	
Detector Phase	7	4	4	3	8	5	2	2	1	6	6	
Switch Phase												
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	
Minimum Split (s)	8.5	23.5	23.5	8.5	31.5	8.5	30.5	30.5	8.5	23.5	23.5	
Total Split (s)	8.5	30.3	30.3	9.7	31.5	8.7	31.0	31.0	9.0	31.3	31.3	
Total Split (%)	10.6%	37.9%	37.9%	12.1%	39.4%	10.9%	38.8%	38.8%	11.3%	39.1%	39.1%	
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5	4.5	4.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	5.5	4.5	5.5	5.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max	
Act Effct Green (s)	4.0	16.5	16.5	5.0	17.2	9.2	37.7	37.7	4.5	33.0	33.0	
Actuated g/C Ratio	0.05	0.21	0.21	0.06	0.22	0.12	0.47	0.47	0.06	0.41	0.41	
v/c Ratio	0.42	0.67	0.75	0.33	0.33	0.49	0.68	0.10	3.85	0.93	0.03	
Control Delay	50.5	37.1	21.3	43.4	10.3	45.8	22.4	0.6	1321.3	39.4	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	50.5	37.1	21.3	43.4	10.3	45.8	22.4	0.6	1321.3	39.4	0.1	
LOS	D	D	C	D	B	D	C	A	F	D	A	
Approach Delay		28.5			13.9		22.8			321.0		
Approach LOS		C			B		C			F		

Intersection Summary

Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 110  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 3.85  
 Intersection Signal Delay: 149.4  
 Intersection LOS: F  
 Intersection Capacity Utilization 81.5%  
 ICU Level of Service D  
 Analysis Period (min) 15
























Splits and Phases: 6: Heacock Street & Meyer Drive/John F. Kennedy Drive



HCM 6th Signalized Intersection Summary  
 6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	239	397	36	99	194	98	1045	87	362	1257	24
Future Volume (veh/h)	37	239	397	36	99	194	98	1045	87	362	1257	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1900	1900	1885	1885	1900	1796	1900	1841	1796	1900
Adj Flow Rate, veh/h	40	260	432	39	108	211	107	1136	95	393	1366	26
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	1	0	0	1	1	0	7	0	4	7	0
Cap, veh/h	53	548	468	52	548	464	95	1145	513	173	1356	608
Arrive On Green	0.03	0.29	0.29	0.03	0.29	0.29	0.05	0.32	0.32	0.10	0.38	0.38
Sat Flow, veh/h	1810	1885	1610	1810	1885	1598	1810	3593	1610	1753	3593	1610
Grp Volume(v), veh/h	40	260	432	39	108	211	107	1136	95	393	1366	26
Grp Sat Flow(s),veh/h/ln	1810	1885	1610	1810	1885	1598	1810	1796	1610	1753	1796	1610
Q Serve(g_s), s	1.8	9.1	20.8	1.7	3.4	8.6	4.2	25.2	2.6	7.9	30.2	0.8
Cycle Q Clear(g_c), s	1.8	9.1	20.8	1.7	3.4	8.6	4.2	25.2	2.6	7.9	30.2	0.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	53	548	468	52	548	464	95	1145	513	173	1356	608
V/C Ratio(X)	0.75	0.47	0.92	0.74	0.20	0.45	1.13	0.99	0.19	2.27	1.01	0.04
Avail Cap(c_a), veh/h	90	584	499	118	613	519	95	1145	513	173	1356	608
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.63	0.63	0.63	0.09	0.09	0.09
Uniform Delay (d), s/veh	38.5	23.3	27.5	38.5	21.4	23.2	37.9	27.1	11.8	36.0	24.9	15.8
Incr Delay (d2), s/veh	7.6	0.2	21.3	7.5	0.1	0.3	111.2	19.3	0.5	572.4	9.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	3.8	10.0	0.8	1.4	3.0	4.7	12.5	1.2	30.7	12.6	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.2	23.6	48.8	46.0	21.4	23.5	149.1	46.5	12.3	608.4	34.0	15.8
LnGrp LOS	D	C	D	D	C	C	F	D	B	F	F	B
Approach Vol, veh/h		732			358			1338			1785	
Approach Delay, s/veh		39.7			25.3			52.2			160.2	
Approach LOS		D			C			D			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.4	31.0	6.8	28.8	8.7	35.7	6.9	28.7				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	4.5	* 26	5.2	24.8	4.2	25.8	4.0	26.0				
Max Q Clear Time (g_c+I1), s	9.9	27.2	3.7	22.8	6.2	32.2	3.8	10.6				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.5	0.0	0.0	0.0	1.0				

Intersection Summary













HCM 6th Ctrl Delay	93.5
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Timings  
7: Heacock Street & Gentian Avenue

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	8	122	1122	16	133	1451
Future Volume (vph)	8	122	1122	16	133	1451
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	27.6	27.6	27.2	27.2	9.6	16.2
Total Split (s)	31.0	31.0	62.0	62.0	27.0	89.0
Total Split (%)	25.8%	25.8%	51.7%	51.7%	22.5%	74.2%
Yellow Time (s)	3.6	3.6	5.2	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	6.2	6.2	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	12.3	12.3	35.9	35.9	11.5	52.3
Actuated g/C Ratio	0.16	0.16	0.47	0.47	0.15	0.69
v/c Ratio	0.03	0.32	0.76	0.02	0.53	0.67
Control Delay	32.8	9.0	20.5	10.3	40.5	8.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.8	9.0	20.5	10.3	40.5	8.5
LOS	C	A	C	B	D	A
Approach Delay	10.5		20.3			11.2
Approach LOS	B		C			B

Intersection Summary















Cycle Length: 120	
Actuated Cycle Length: 76	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 14.8	Intersection LOS: B
Intersection Capacity Utilization 59.6%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 7: Heacock Street & Gentian Avenue





















HCM 6th Signalized Intersection Summary  
7: Heacock Street & Gentian Avenue

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			 			 
Traffic Volume (veh/h)	8	122	1122	16	133	1451
Future Volume (veh/h)	8	122	1122	16	133	1451
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1811	1900	1826	1826
Adj Flow Rate, veh/h	9	133	1220	17	145	1577
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	6	0	5	5
Cap, veh/h	274	244	1668	780	185	2318
Arrive On Green	0.15	0.15	0.48	0.48	0.11	0.67
Sat Flow, veh/h	1810	1610	3532	1610	1739	3561
Grp Volume(v), veh/h	9	133	1220	17	145	1577
Grp Sat Flow(s),veh/h/ln	1810	1610	1721	1610	1739	1735
Q Serve(g_s), s	0.3	4.6	16.9	0.3	4.9	16.5
Cycle Q Clear(g_c), s	0.3	4.6	16.9	0.3	4.9	16.5
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	274	244	1668	780	185	2318
V/C Ratio(X)	0.03	0.55	0.73	0.02	0.78	0.68
Avail Cap(c_a), veh/h	798	710	3209	1502	651	4801
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.7	23.5	12.3	8.0	26.1	6.0
Incr Delay (d2), s/veh	0.0	0.7	0.6	0.0	2.7	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	1.6	4.7	0.1	1.9	2.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	21.7	24.2	12.9	8.0	28.8	6.4
LnGrp LOS	C	C	B	A	C	A
Approach Vol, veh/h	142		1237			1722
Approach Delay, s/veh	24.0		12.9			8.3
Approach LOS	C		B			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	11.0	35.2			46.2	13.7
Change Period (Y+Rc), s	4.6	6.2			6.2	4.6
Max Green Setting (Gmax), s	22.4	55.8			82.8	26.4
Max Q Clear Time (g_c+11), s	6.9	18.9			18.5	6.6
Green Ext Time (p_c), s	0.1	10.1			17.2	0.2
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			10.8			
HCM 6th LOS			B			

Timings  
8: Heacock Street & Iris Avenue

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 		 		 	 
Traffic Volume (vph)	271	344	849	410	577	952
Future Volume (vph)	271	344	849	410	577	952
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	15.8	15.8	33.2	33.2	9.6	16.2
Total Split (s)	35.0	35.0	47.0	47.0	38.0	85.0
Total Split (%)	29.2%	29.2%	39.2%	39.2%	31.7%	70.8%
Yellow Time (s)	4.8	4.8	5.2	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	6.2	6.2	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	13.3	13.3	31.7	31.7	19.4	55.9
Actuated g/C Ratio	0.16	0.16	0.39	0.39	0.24	0.69
v/c Ratio	0.49	0.60	0.71	0.55	0.72	0.45
Control Delay	36.2	8.6	25.1	9.5	35.0	6.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.2	8.6	25.1	9.5	35.0	6.5
LOS	D	A	C	A	C	A
Approach Delay	20.7		20.0			17.2
Approach LOS	C		C			B

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 81.6	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 18.9	Intersection LOS: B
Intersection Capacity Utilization 62.1%	ICU Level of Service B
Analysis Period (min) 15	













Splits and Phases: 8: Heacock Street & Iris Avenue



HCM 6th Signalized Intersection Summary  
8: Heacock Street & Iris Avenue

Gateway Aviation TA (JN:13445)

11/09/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	271	344	849	410	577	952
Future Volume (veh/h)	271	344	849	410	577	952
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1781	1900	1885	1796
Adj Flow Rate, veh/h	295	374	923	446	627	1035
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	8	0	1	7
Cap, veh/h	919	421	1176	559	724	2068
Arrive On Green	0.26	0.26	0.35	0.35	0.21	0.61
Sat Flow, veh/h	3510	1610	3474	1610	3483	3503
Grp Volume(v), veh/h	295	374	923	446	627	1035
Grp Sat Flow(s),veh/h/ln	1755	1610	1692	1610	1742	1706
Q Serve(g_s), s	6.1	20.2	22.2	22.6	15.8	15.5
Cycle Q Clear(g_c), s	6.1	20.2	22.2	22.6	15.8	15.5
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	919	421	1176	559	724	2068
V/C Ratio(X)	0.32	0.89	0.78	0.80	0.87	0.50
Avail Cap(c_a), veh/h	1132	519	1524	725	1284	2969
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.0	32.2	26.5	26.7	34.7	10.1
Incr Delay (d2), s/veh	0.2	14.7	2.1	4.8	1.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	9.0	8.4	8.5	6.3	4.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	27.2	46.9	28.6	31.5	35.9	10.3
LnGrp LOS	C	D	C	C	D	B
Approach Vol, veh/h	669		1369			1662
Approach Delay, s/veh	38.2		29.5			20.0
Approach LOS	D		C			B
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	23.4	37.7			61.1	29.5
Change Period (Y+Rc), s	4.6	6.2			6.2	5.8
Max Green Setting (Gmax), s	33.4	40.8			78.8	29.2
Max Q Clear Time (g_c+I1), s	17.8	24.6			17.5	22.2
Green Ext Time (p_c), s	1.1	6.8			8.3	1.5
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			26.8			
HCM 6th LOS			C			

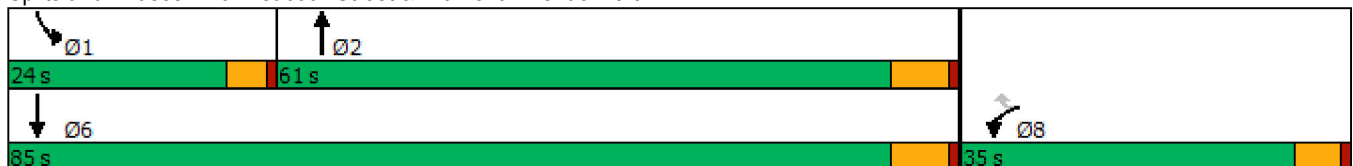
Timings  
9: Heacock Street & Krameria Avenue-North

	↙	↖	↑	↘	↓
Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations	↙	↖	↑↔	↘	↑↑
Traffic Volume (vph)	248	274	864	123	819
Future Volume (vph)	248	274	864	123	819
Turn Type	Prot	Perm	NA	Prot	NA
Protected Phases	8		2	1	6
Permitted Phases		8			
Detector Phase	8	8	2	1	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	29.1	29.1	29.2	9.6	16.2
Total Split (s)	35.0	35.0	61.0	24.0	85.0
Total Split (%)	29.2%	29.2%	50.8%	20.0%	70.8%
Yellow Time (s)	4.1	4.1	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	6.2	4.6	6.2
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	Min	Max	Min
Act Effct Green (s)	17.1	17.1	32.0	19.9	56.6
Actuated g/C Ratio	0.20	0.20	0.38	0.23	0.66
v/c Ratio	0.72	0.49	0.82	0.32	0.39
Control Delay	44.5	7.0	29.4	34.1	7.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	44.5	7.0	29.4	34.1	7.5
LOS	D	A	C	C	A
Approach Delay	24.8		29.4		10.9
Approach LOS	C		C		B

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 85.3  
 Natural Cycle: 75  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.82  
 Intersection Signal Delay: 21.3  
 Intersection LOS: C  
 Intersection Capacity Utilization 61.5%  
 ICU Level of Service B  
 Analysis Period (min) 15













Splits and Phases: 9: Heacock Street & Krameria Avenue-North



HCM 6th Signalized Intersection Summary  
 9: Heacock Street & Krameria Avenue-North

Gateway Aviation TA (JN:13445)

11/09/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	248	274	864	120	123	819
Future Volume (veh/h)	248	274	864	120	123	819
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1885	1841	1870	1900	1811	1841
Adj Flow Rate, veh/h	270	298	939	130	134	890
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	4	2	0	6	4
Cap, veh/h	394	342	1100	152	407	2249
Arrive On Green	0.22	0.22	0.35	0.35	0.24	0.64
Sat Flow, veh/h	1795	1560	3228	434	1725	3589
Grp Volume(v), veh/h	270	298	532	537	134	890
Grp Sat Flow(s),veh/h/ln	1795	1560	1777	1792	1725	1749
Q Serve(g_s), s	11.3	15.1	22.8	22.8	5.3	10.0
Cycle Q Clear(g_c), s	11.3	15.1	22.8	22.8	5.3	10.0
Prop In Lane	1.00	1.00		0.24	1.00	
Lane Grp Cap(c), veh/h	394	342	623	629	407	2249
V/C Ratio(X)	0.69	0.87	0.85	0.85	0.33	0.40
Avail Cap(c_a), veh/h	654	568	1186	1195	407	3355
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.5	30.9	24.7	24.7	26.0	7.0
Incr Delay (d2), s/veh	0.8	4.2	1.3	1.3	2.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	6.0	8.6	8.7	2.2	2.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	30.3	35.1	26.0	26.0	28.1	7.1
LnGrp LOS	C	D	C	C	C	A
Approach Vol, veh/h	568		1069			1024
Approach Delay, s/veh	32.8		26.0			9.8
Approach LOS	C		C			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	24.0	35.0			59.0	23.1
Change Period (Y+Rc), s	4.6	6.2			6.2	5.1
Max Green Setting (Gmax), s	19.4	54.8			78.8	29.9
Max Q Clear Time (g_c+1), s	7.3	24.8			12.0	17.1
Green Ext Time (p_c), s	0.1	4.0			3.9	0.9
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			21.2			
HCM 6th LOS			C			

Intersection												
Int Delay, s/veh	0											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕			↕		↕	↕	
Traffic Vol, veh/h	0	0	0	0	0	0	0	913	0	0	1134	0
Future Vol, veh/h	0	0	0	0	0	0	0	913	0	0	1134	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	2	0	0	3	0
Mvmt Flow	0	0	0	0	0	0	0	992	0	0	1233	0

Major/Minor	Minor1		Major1			Major2			
Conflicting Flow All	1609	2225	496	-	0	0	992	0	0
Stage 1	992	992	-	-	-	-	-	-	-
Stage 2	617	1233	-	-	-	-	-	-	-
Critical Hdwy	6.8	6.5	6.9	-	-	-	4.1	-	-
Critical Hdwy Stg 1	5.8	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.8	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	-	-	-	2.2	-	-
Pot Cap-1 Maneuver	97	44	525	0	-	-	705	-	0
Stage 1	324	326	-	0	-	-	-	-	0
Stage 2	506	251	-	0	-	-	-	-	0
Platoon blocked, %									
Mov Cap-1 Maneuver	97	0	525	-	-	-	705	-	-
Mov Cap-2 Maneuver	222	0	-	-	-	-	-	-	-
Stage 1	324	0	-	-	-	-	-	-	-
Stage 2	506	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	705
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	0	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0

Intersection						
Int Delay, s/veh	1.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↑↑	↗	↘	↑↑
Traffic Vol, veh/h	61	57	1059	20	18	1542
Future Vol, veh/h	61	57	1059	20	18	1542
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	0	140	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	10	6	14	8	9
Mvmt Flow	66	62	1151	22	20	1676

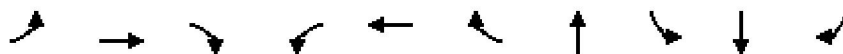
Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	2029	576	0	0	1173
Stage 1	1151	-	-	-	-
Stage 2	878	-	-	-	-
Critical Hdwy	6.84	7.1	-	-	4.26
Critical Hdwy Stg 1	5.84	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-
Follow-up Hdwy	3.52	3.4	-	-	2.28
Pot Cap-1 Maneuver	~ 50	441	-	-	558
Stage 1	263	-	-	-	-
Stage 2	367	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	~ 48	441	-	-	558
Mov Cap-2 Maneuver	159	-	-	-	-
Stage 1	263	-	-	-	-
Stage 2	354	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	29.2	0	0.1
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	159	441	558	-
HCM Lane V/C Ratio	-	-	0.417	0.14	0.035	-
HCM Control Delay (s)	-	-	42.9	14.5	11.7	-
HCM Lane LOS	-	-	E	B	B	-
HCM 95th %tile Q(veh)	-	-	1.9	0.5	0.1	-

Notes  
 ~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Timings  
12: Heacock Street & San Michele Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBL	SBT	SBR	Ø5
Lane Configurations	↖	↗	↘	↖	↗	↘	↕	↖	↗	↘	
Traffic Volume (vph)	59	348	8	23	102	698	116	901	322	36	
Future Volume (vph)	59	348	8	23	102	698	116	901	322	36	
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	NA	Prot	NA	Perm	
Protected Phases	7	4		3	8	1	2	1	6		5
Permitted Phases			4			8				6	
Detector Phase	7	4	4	3	8	1	2	1	6	6	
Switch Phase											
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0
Minimum Split (s)	9.5	30.5	30.5	8.5	30.5	8.5	34.5	8.5	34.5	34.5	8.5
Total Split (s)	12.0	37.4	37.4	9.6	35.0	36.0	37.0	36.0	64.5	64.5	8.5
Total Split (%)	10.0%	31.2%	31.2%	8.0%	29.2%	30.0%	30.8%	30.0%	53.8%	53.8%	7%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5	5.5	
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	None	Max	Max	None
Act Effct Green (s)	13.4	25.3	25.3	5.0	14.9	52.2	31.8	31.8	68.2	68.2	
Actuated g/C Ratio	0.12	0.23	0.23	0.05	0.14	0.47	0.29	0.29	0.62	0.62	
v/c Ratio	0.28	0.86	0.02	0.29	0.43	0.65	0.17	1.78	0.32	0.03	
Control Delay	48.0	61.2	0.0	63.4	50.8	9.0	24.9	386.1	12.6	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	48.0	61.2	0.0	63.4	50.8	9.0	24.9	386.1	12.6	0.1	
LOS	D	E	A	E	D	A	C	F	B	A	
Approach Delay		58.1			15.7		24.9		279.5		
Approach LOS		E			B		C		F		

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 109.9  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.78  
 Intersection Signal Delay: 148.0  
 Intersection LOS: F  
 Intersection Capacity Utilization 86.4%  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 12: Heacock Street & San Michele Road





HCM 6th Signalized Intersection Summary  
12: Heacock Street & San Michele Road

Gateway Aviation TA (JN:13445)

04/19/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	348	8	23	102	698	0	116	40	901	322	36
Future Volume (veh/h)	59	348	8	23	102	698	0	116	40	901	322	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1870	1900	1885	1900	1900	1811	1900
Adj Flow Rate, veh/h	64	378	9	25	111	759	0	126	43	979	350	39
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	2	0	1	0	0	6	0
Cap, veh/h	83	418	345	77	413	782	2	733	240	500	1089	968
Arrive On Green	0.05	0.22	0.22	0.04	0.22	0.22	0.00	0.28	0.28	0.28	0.60	0.60
Sat Flow, veh/h	1810	1900	1569	1810	1900	1585	1810	2650	870	1810	1811	1610
Grp Volume(v), veh/h	64	378	9	25	111	759	0	84	85	979	350	39
Grp Sat Flow(s),veh/h/ln	1810	1900	1569	1810	1900	1585	1810	1791	1729	1810	1811	1610
Q Serve(g_s), s	4.0	22.1	0.5	1.5	5.5	21.5	0.0	4.0	4.3	31.5	10.9	0.8
Cycle Q Clear(g_c), s	4.0	22.1	0.5	1.5	5.5	21.5	0.0	4.0	4.3	31.5	10.9	0.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.50	1.00		1.00
Lane Grp Cap(c), veh/h	83	418	345	77	413	782	2	495	478	500	1089	968
V/C Ratio(X)	0.77	0.90	0.03	0.32	0.27	0.97	0.00	0.17	0.18	1.96	0.32	0.04
Avail Cap(c_a), veh/h	119	532	439	81	492	849	64	495	478	500	1089	968
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.8	43.3	30.7	52.9	37.1	28.0	0.0	31.3	31.4	41.2	11.2	4.1
Incr Delay (d2), s/veh	10.1	14.2	0.0	0.9	0.1	22.5	0.0	0.7	0.8	437.9	0.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	12.0	0.2	0.7	2.5	9.2	0.0	1.8	1.8	74.1	4.1	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.9	57.5	30.7	53.8	37.2	50.5	0.0	32.0	32.2	479.2	12.0	4.2
LnGrp LOS	E	E	C	D	D	D	A	C	C	F	B	A
Approach Vol, veh/h		451			895			169			1368	
Approach Delay, s/veh		57.9			49.0			32.1			346.1	
Approach LOS		E			D			C			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	37.0	37.0	9.4	30.6	0.0	74.0	9.7	30.2				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	31.5	* 32	5.1	31.9	4.0	59.0	7.5	29.5				
Max Q Clear Time (g_c+I1), s	33.5	6.3	3.5	24.1	0.0	12.9	6.0	23.5				
Green Ext Time (p_c), s	0.0	0.5	0.0	1.0	0.0	1.2	0.0	1.2				

Intersection Summary

HCM 6th Ctrl Delay	190.4
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection					
Intersection Delay, s/veh 18.9					
Intersection LOS C					
Approach	EB	WB	NB		
Entry Lanes	3	2	2		
Conflicting Circle Lanes	2	2	2		
Adj Approach Flow, veh/h	0	1921	130		
Demand Flow Rate, veh/h	0	2038	138		
Vehicles Circulating, veh/h	12	123	1120		
Vehicles Exiting, veh/h	2149	1135	134		
Ped Vol Crossing Leg, #/h	0	0	0		
Ped Cap Adj	1.000	1.000	1.000		
Approach Delay, s/veh	0.0	19.5	9.3		
Approach LOS	-	C	A		
Lane	Left	Right	Left	Right	
Designated Moves	LT	TR	L	LTR	
Assumed Moves	LT	TR	L	LTR	
RT Channelized					
Lane Util	0.470	0.530	0.529	0.471	
Follow-Up Headway, s	2.667	2.535	2.667	2.535	
Critical Headway, s	4.645	4.328	4.645	4.328	
Entry Flow, veh/h	958	1080	73	65	
Cap Entry Lane, veh/h	1205	1279	482	548	
Entry HV Adj Factor	0.943	0.943	0.944	0.940	
Flow Entry, veh/h	903	1018	69	61	
Cap Entry, veh/h	1136	1206	455	515	
V/C Ratio	0.795	0.844	0.152	0.119	
Control Delay, s/veh	18.1	20.8	10.1	8.5	
LOS	C	C	B	A	
95th %tile Queue, veh	9	11	1	0	

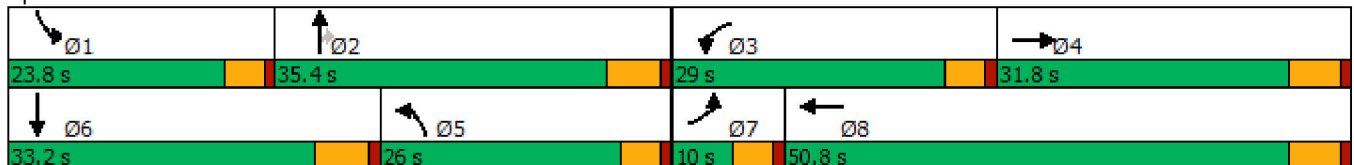
Timings  
14: Indian Street & San Michele Road

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	23	876	248	505	762	196	223	155	380
Future Volume (vph)	23	876	248	505	762	196	223	155	380
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8	5	2		1	6
Permitted Phases							2		
Detector Phase	7	4	3	8	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	31.8	9.6	31.8	9.6	32.8	32.8	9.6	32.8
Total Split (s)	10.0	31.8	29.0	50.8	26.0	35.4	35.4	23.8	33.2
Total Split (%)	8.3%	26.5%	24.2%	42.3%	21.7%	29.5%	29.5%	19.8%	27.7%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	5.3	26.2	18.9	44.1	21.6	25.9	25.9	13.5	17.9
Actuated g/C Ratio	0.05	0.25	0.18	0.42	0.20	0.25	0.25	0.13	0.17
v/c Ratio	0.28	2.62dr	0.81	0.41	1.11	0.48	0.38	0.70	0.73
Control Delay	60.3	713.1	61.4	23.4	107.2	39.8	6.4	60.6	48.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.3	713.1	61.4	23.4	107.2	39.8	6.4	60.6	48.3
LOS	E	F	E	C	F	D	A	E	D
Approach Delay		706.9		34.9		77.0			51.7
Approach LOS		F		C		E			D

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 105.5  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 2.54  
 Intersection Signal Delay: 373.1  
 Intersection LOS: F  
 Intersection Capacity Utilization 149.9%  
 ICU Level of Service H  
 Analysis Period (min) 15  
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.























Splits and Phases: 14: Indian Street & San Michele Road



HCM 6th Signalized Intersection Summary  
 14: Indian Street & San Michele Road

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	876	1526	248	505	69	762	196	223	155	380	32
Future Volume (veh/h)	23	876	1526	248	505	69	762	196	223	155	380	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		1.00	1.00		0.67
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1885	1870	1870	1870	1900	1841	1841	1870	1885	1870	1767
Adj Flow Rate, veh/h	25	952	1659	270	549	75	828	213	242	168	413	35
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	6	1	2	2	2	0	4	4	2	1	2	9
Cap, veh/h	41	402	349	298	1183	161	648	586	504	197	760	63
Arrive On Green	0.02	0.22	0.22	0.17	0.37	0.37	0.18	0.32	0.32	0.11	0.23	0.23
Sat Flow, veh/h	1725	1791	1555	1781	3211	437	3506	1841	1584	1795	3263	271
Grp Volume(v), veh/h	25	952	1659	270	319	305	828	213	242	168	233	215
Grp Sat Flow(s),veh/h/ln	1725	1791	1555	1781	1870	1778	1753	1841	1584	1795	1870	1664
Q Serve(g_s), s	1.7	26.0	26.0	17.2	15.0	15.1	21.4	10.3	14.2	10.6	12.7	13.1
Cycle Q Clear(g_c), s	1.7	26.0	26.0	17.2	15.0	15.1	21.4	10.3	14.2	10.6	12.7	13.1
Prop In Lane	1.00		1.00	1.00		0.25	1.00		1.00	1.00		0.16
Lane Grp Cap(c), veh/h	41	402	349	298	689	655	648	586	504	197	435	387
V/C Ratio(X)	0.61	2.37	4.75	0.90	0.46	0.47	1.28	0.36	0.48	0.85	0.54	0.55
Avail Cap(c_a), veh/h	80	402	349	376	727	691	648	586	504	298	443	394
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.0	44.9	44.9	47.3	27.8	27.9	47.2	30.4	31.7	50.6	38.9	39.1
Incr Delay (d2), s/veh	5.3	622.5	1693.8	19.1	0.2	0.2	136.5	0.1	0.3	9.3	0.6	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	80.7	174.0	9.0	6.5	6.2	21.2	4.4	5.3	5.1	5.6	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.2	667.4	1738.7	66.4	28.0	28.1	183.6	30.5	32.0	59.9	39.5	40.0
LnGrp LOS	E	F	F	E	C	C	F	C	C	E	D	D
Approach Vol, veh/h		2636			894			1283			616	
Approach Delay, s/veh		1335.9			39.6			129.6			45.3	
Approach LOS		F			D			F			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.3	42.7	24.0	31.8	27.2	32.7	7.4	48.4				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	5.8	* 5.8	4.6	5.8				
Max Green Setting (Gmax), s	19.2	29.6	24.4	26.0	21.4	* 27	5.4	45.0				
Max Q Clear Time (g_c+I1), s	12.6	16.2	19.2	28.0	23.4	15.1	3.7	17.1				
Green Ext Time (p_c), s	0.1	0.9	0.2	0.0	0.0	1.2	0.0	2.1				

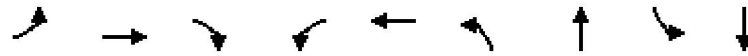
Intersection Summary

HCM 6th Ctrl Delay	690.9
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
15: Indian Street & Nandina Avenue

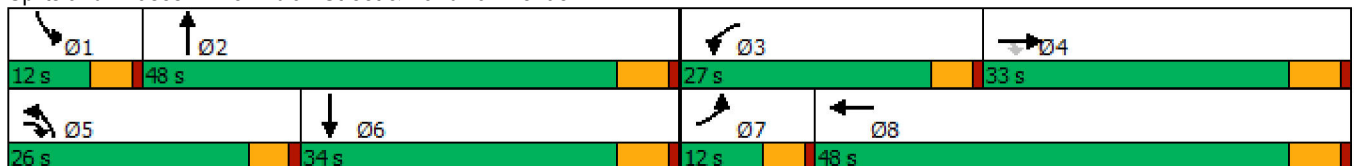


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	
Lane Configurations										
Traffic Volume (vph)	48	116	538	186	46	147	736	24	1575	
Future Volume (vph)	48	116	538	186	46	147	736	24	1575	
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA	
Protected Phases	7	4	5	3	8	5	2	1	6	
Permitted Phases	4									
Detector Phase	7	4	5	3	8	5	2	1	6	
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0	
Minimum Split (s)	9.6	29.8	9.6	9.6	29.8	9.6	26.8	9.6	26.8	
Total Split (s)	12.0	33.0	26.0	27.0	48.0	26.0	48.0	12.0	34.0	
Total Split (%)	10.0%	27.5%	21.7%	22.5%	40.0%	21.7%	40.0%	10.0%	28.3%	
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	3.6	4.8	3.6	4.8	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	4.6	5.8	4.6	5.8	
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	Min	None	Min	
Act Effct Green (s)	6.5	13.9	35.5	15.6	25.4	15.7	45.2	6.0	28.8	
Actuated g/C Ratio	0.07	0.15	0.37	0.16	0.27	0.16	0.47	0.06	0.30	
v/c Ratio	0.40	0.51	0.79	0.77	0.27	0.59	0.50	0.23	1.54	
Control Delay	56.7	47.1	29.8	59.1	16.1	47.5	21.0	52.9	273.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	56.7	47.1	29.8	59.1	16.1	47.5	21.0	52.9	273.8	
LOS	E	D	C	E	B	D	C	D	F	
Approach Delay	34.5					42.9		25.1		270.6
Approach LOS	C					D		C		F

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 95.3  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.54  
 Intersection Signal Delay: 140.1  
 Intersection LOS: F  
 Intersection Capacity Utilization 100.8%  
 ICU Level of Service G  
 Analysis Period (min) 15























Splits and Phases: 15: Indian Street & Nandina Avenue



HCM 6th Signalized Intersection Summary  
 15: Indian Street & Nandina Avenue

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	116	538	186	46	66	147	736	75	24	1575	36
Future Volume (veh/h)	48	116	538	186	46	66	147	736	75	24	1575	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1722	1826	1633	1500	1870	1693	1870	1841	1811	1885	1841
Adj Flow Rate, veh/h	52	126	585	202	50	72	160	800	82	26	1712	39
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	12	5	18	27	2	14	2	4	6	1	4
Cap, veh/h	68	452	587	230	207	298	188	1213	124	44	1000	23
Arrive On Green	0.04	0.26	0.26	0.15	0.37	0.37	0.12	0.36	0.36	0.03	0.27	0.27
Sat Flow, veh/h	1810	1722	1547	1555	556	800	1612	3337	342	1725	3672	83
Grp Volume(v), veh/h	52	126	585	202	0	122	160	448	434	26	877	874
Grp Sat Flow(s),veh/h/ln	1810	1722	1547	1555	0	1356	1612	1870	1809	1725	1885	1870
Q Serve(g_s), s	2.9	6.0	27.2	13.2	0.0	6.4	10.1	20.8	20.8	1.5	28.2	28.2
Cycle Q Clear(g_c), s	2.9	6.0	27.2	13.2	0.0	6.4	10.1	20.8	20.8	1.5	28.2	28.2
Prop In Lane	1.00		1.00	1.00		0.59	1.00		0.19	1.00		0.04
Lane Grp Cap(c), veh/h	68	452	587	230	0	505	188	680	658	44	513	509
V/C Ratio(X)	0.77	0.28	1.00	0.88	0.00	0.24	0.85	0.66	0.66	0.59	1.71	1.72
Avail Cap(c_a), veh/h	129	452	587	336	0	552	333	762	737	123	513	509
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.4	30.4	32.1	43.2	0.0	22.4	44.9	27.6	27.6	49.9	37.7	37.7
Incr Delay (d2), s/veh	6.6	0.3	36.3	12.4	0.0	0.2	4.1	1.8	1.9	4.7	327.0	331.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	2.4	19.3	5.7	0.0	2.0	4.1	8.9	8.6	0.7	58.7	58.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.0	30.7	68.3	55.6	0.0	22.6	49.0	29.4	29.5	54.6	364.7	368.6
LnGrp LOS	E	C	E	E	A	C	D	C	C	D	F	F
Approach Vol, veh/h		763			324			1042			1777	
Approach Delay, s/veh		61.3			43.2			32.4			362.1	
Approach LOS		E			D			C			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.2	43.5	19.9	33.0	16.7	34.0	8.5	44.4				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	7.4	42.2	22.4	27.2	21.4	28.2	7.4	42.2				
Max Q Clear Time (g_c+I1), s	3.5	22.8	15.2	29.2	12.1	30.2	4.9	8.4				
Green Ext Time (p_c), s	0.0	4.8	0.2	0.0	0.1	0.0	0.0	0.7				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			188.9									
HCM 6th LOS			F									

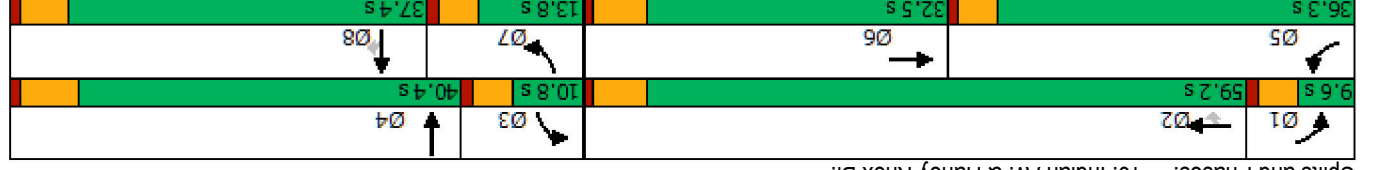


Lane Group	EBL	EBT	EBR	WBL	WBT	WBL	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔↔↔	↔	↔	↔↔↔	↔	↔↔↔	↔	↔	↔	↔↔
Traffic Volume (vph)	76	568	108	242	421	81	295	246	326	559	559
Future Volume (vph)	76	568	108	242	421	81	295	246	326	559	559
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	NA
Protected Phases	5	2	2	1	6	3	8	8	7	4	4
Permitted Phases	2	2	2	1	6	3	8	8	7	4	4
Detector Phase	5	2	2	1	6	3	8	8	7	4	4
Switch Phase	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	35.8	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2	40.2
Total Split (s)	36.3	59.2	59.2	9.6	32.5	10.8	37.4	37.4	13.8	40.4	40.4
Total Split (%)	30.3%	49.3%	49.3%	8.0%	27.1%	9.0%	31.2%	31.2%	11.5%	33.7%	33.7%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.4	4.4	3.6	5.2	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	5.4	5.4	4.6	6.2	6.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effort Green (s)	11.5	23.5	23.5	5.2	20.1	6.1	20.9	20.9	9.7	26.4	26.4
Actuated g/C Ratio	0.14	0.29	0.29	0.06	0.25	0.08	0.26	0.26	0.12	0.33	0.33
v/c Ratio	0.56	0.43	0.23	2.27	0.53	0.39	0.39	0.39	1.65	0.67	0.67
Control Delay	51.1	23.9	5.7	622.6	27.2	46.9	26.9	26.9	337.7	28.5	28.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.1	23.9	5.7	622.6	27.2	46.9	26.9	26.9	337.7	28.5	28.5
LOS	D	C	A	F	C	D	C	C	A	F	C
Approach Delay	24.1	200.3	22.2	129.9	22.2	129.9	22.2	22.2	129.9	22.2	22.2
Approach LOS	C	F	C	F	C	D	C	C	A	F	C

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 80.7  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 2.27  
 Intersection Signal Delay: 102.4  
 Intersection LOS: F  
 Intersection Capacity Utilization 67.8%  
 Analysis Period (min) 15

Splits and Phases: 16: Indian Av. & Harley Knox Bl.



































HCM 6th Signalized Intersection Summary  
 16: Indian Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 			 	
Traffic Volume (veh/h)	76	568	108	242	421	169	81	295	246	326	559	108
Future Volume (veh/h)	76	568	108	242	421	169	81	295	246	326	559	108
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	788	1826	1707	1885	1737	1885	1618	1678	1870	1900	1856	1441
Adj Flow Rate, veh/h	83	617	108	263	458	164	88	321	260	354	608	68
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	75	5	13	1	11	1	19	15	2	0	3	31
Cap, veh/h	84	1209	351	135	719	248	181	717	352	251	968	108
Arrive On Green	0.11	0.24	0.24	0.08	0.21	0.21	0.06	0.22	0.22	0.14	0.30	0.30
Sat Flow, veh/h	751	4985	1447	1795	3482	1200	2990	3188	1564	1810	3197	357
Grp Volume(v), veh/h	83	617	108	263	414	208	88	321	260	354	335	341
Grp Sat Flow(s),veh/h/ln	751	1662	1447	1795	1581	1521	1495	1594	1564	1810	1763	1791
Q Serve(g_s), s	7.3	7.1	4.1	5.0	8.0	8.3	1.9	5.8	10.3	9.2	10.9	10.9
Cycle Q Clear(g_c), s	7.3	7.1	4.1	5.0	8.0	8.3	1.9	5.8	10.3	9.2	10.9	10.9
Prop In Lane	1.00		1.00	1.00		0.79	1.00		1.00	1.00		0.20
Lane Grp Cap(c), veh/h	84	1209	351	135	653	314	181	717	352	251	534	542
V/C Ratio(X)	0.99	0.51	0.31	1.95	0.63	0.66	0.49	0.45	0.74	1.41	0.63	0.63
Avail Cap(c_a), veh/h	358	4006	1163	135	1270	611	279	1535	753	251	907	922
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.5	21.8	20.6	30.7	24.1	24.2	30.2	22.2	23.9	28.6	19.9	20.0
Incr Delay (d2), s/veh	26.3	0.3	0.5	451.9	1.0	2.4	0.8	0.4	3.1	207.9	1.2	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	2.4	1.3	18.9	2.7	2.9	0.6	2.0	3.6	18.0	4.0	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.8	22.1	21.1	482.6	25.1	26.6	31.0	22.6	27.0	236.5	21.2	21.2
LnGrp LOS	E	C	C	F	C	C	C	C	C	F	C	C
Approach Vol, veh/h		808			885			669			1030	
Approach Delay, s/veh		25.4			161.4			25.4			95.2	
Approach LOS		C			F			C			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.6	21.9	8.6	26.3	12.0	19.5	13.8	21.1				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	5.0	53.4	6.2	34.2	31.7	26.7	9.2	* 32				
Max Q Clear Time (g_c+I1), s	7.0	9.1	3.9	12.9	9.3	10.3	11.2	12.3				
Green Ext Time (p_c), s	0.0	4.5	0.0	3.7	0.1	3.4	0.0	2.7				

Intersection Summary

HCM 6th Ctrl Delay	82.1
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



**APPENDIX 7.2:**

**HORIZON YEAR (2045) WITH PROJECT (NON-PEAK) WITHOUT HEACOCK STREET  
EXTENSION CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**

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Timings

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

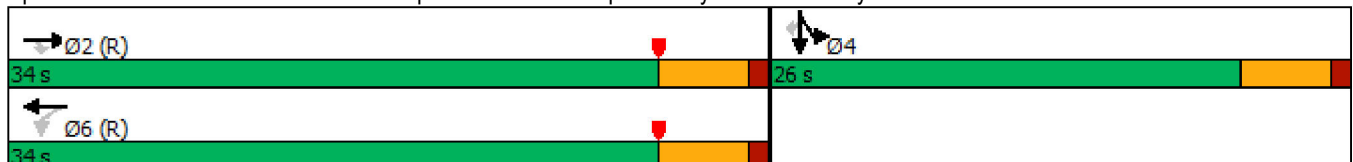


Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↑
Traffic Volume (vph)	1157	28	202	662	1	315
Future Volume (vph)	1157	28	202	662	1	315
Turn Type	NA	Perm	Perm	NA	NA	Perm
Protected Phases	2			6	4	
Permitted Phases		2	6			4
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	25.0	25.0	10.0	10.0
Total Split (s)	34.0	34.0	34.0	34.0	26.0	26.0
Total Split (%)	56.7%	56.7%	56.7%	56.7%	43.3%	43.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	29.0	29.0	29.0	29.0	21.0	21.0
Actuated g/C Ratio	0.48	0.48	0.48	0.48	0.35	0.35
v/c Ratio	0.76	0.04	2.12	0.42	1.95	0.55
Control Delay	16.3	3.1	548.1	18.4	453.2	12.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.3	3.1	548.1	18.4	453.2	12.3
LOS	B	A	F	B	F	B
Approach Delay	16.0			142.4	347.2	
Approach LOS	B			F	F	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection  
 Natural Cycle: 110  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 2.12  
 Intersection Signal Delay: 177.6  
 Intersection LOS: F  
 Intersection Capacity Utilization 183.9%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

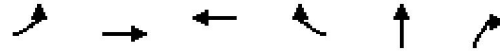
11/09/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑						↑	↑
Traffic Volume (veh/h)	0	1157	28	202	662	0	0	0	0	994	1	315
Future Volume (veh/h)	0	1157	28	202	662	0	0	0	0	994	1	315
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1826	1826	1589	1870	0				1693	1900	1781
Adj Flow Rate, veh/h	0	1258	30	220	720	0				1080	1	282
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	5	5	21	2	0				14	0	8
Cap, veh/h	0	1677	748	189	1718	0				633	1	528
Arrive On Green	0.00	0.48	0.48	0.97	0.97	0.00				0.35	0.35	0.35
Sat Flow, veh/h	0	3561	1547	364	3647	0				1808	2	1510
Grp Volume(v), veh/h	0	1258	30	220	720	0				1081	0	282
Grp Sat Flow(s),veh/h/ln	0	1735	1547	364	1777	0				1810	0	1510
Q Serve(g_s), s	0.0	17.6	0.6	11.4	0.7	0.0				21.0	0.0	9.0
Cycle Q Clear(g_c), s	0.0	17.6	0.6	29.0	0.7	0.0				21.0	0.0	9.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1677	748	189	1718	0				633	0	528
V/C Ratio(X)	0.00	0.75	0.04	1.16	0.42	0.00				1.71	0.00	0.53
Avail Cap(c_a), veh/h	0	1677	748	189	1718	0				633	0	528
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.76	0.76	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	12.6	8.2	13.4	0.5	0.0				19.5	0.0	15.6
Incr Delay (d2), s/veh	0.0	3.1	0.1	108.8	0.6	0.0				324.8	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.7	0.2	7.5	0.3	0.0				64.2	0.0	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	15.7	8.3	122.2	1.1	0.0				344.3	0.0	16.6
LnGrp LOS	A	B	A	F	A	A				F	A	B
Approach Vol, veh/h		1288			940						1363	
Approach Delay, s/veh		15.5			29.4						276.5	
Approach LOS		B			C						F	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		34.0		26.0		34.0						
Change Period (Y+Rc), s		5.0		5.0		5.0						
Max Green Setting (Gmax), s		29.0		21.0		29.0						
Max Q Clear Time (g_c+I1), s		19.6		23.0		31.0						
Green Ext Time (p_c), s		4.1		0.0		0.0						
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				118.2								
HCM 6th LOS				F								

Timings

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

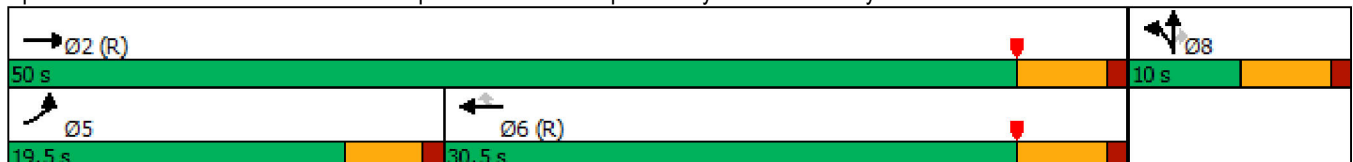


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	808	1343	806	1139	4	301
Future Volume (vph)	808	1343	806	1139	4	301
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	26.0	24.0	24.0	10.0	10.0
Total Split (s)	19.5	50.0	30.5	30.5	10.0	10.0
Total Split (%)	32.5%	83.3%	50.8%	50.8%	16.7%	16.7%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max
Act Effct Green (s)	15.0	45.0	25.5	25.5	5.0	5.0
Actuated g/C Ratio	0.25	0.75	0.42	0.42	0.08	0.08
v/c Ratio	2.02	0.60	0.61	1.61	0.45	1.39
Control Delay	483.1	3.5	15.7	300.9	36.5	218.0
Queue Delay	0.0	0.9	0.0	0.0	0.0	0.0
Total Delay	483.1	4.4	15.7	300.9	36.5	218.0
LOS	F	A	B	F	D	F
Approach Delay		184.2	182.7		187.2	
Approach LOS		F	F		F	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 29 (48%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 2.02  
 Intersection Signal Delay: 183.8  
 Intersection LOS: F  
 Intersection Capacity Utilization 183.9%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

11/09/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗↗			↗↗	↘		↗	↘			
Traffic Volume (veh/h)	808	1343	0	0	806	1139	58	4	301	0	0	0
Future Volume (veh/h)	808	1343	0	0	806	1139	58	4	301	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1841	1722	0	0	1796	1752	1870	1900	1826			
Adj Flow Rate, veh/h	878	1460	0	0	876	906	63	4	262			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	4	12	0	0	7	10	2	0	5			
Cap, veh/h	438	2454	0	0	1450	630	142	9	129			
Arrive On Green	0.50	1.00	0.00	0.00	0.43	0.43	0.08	0.08	0.08			
Sat Flow, veh/h	1753	3358	0	0	3503	1484	1706	108	1547			
Grp Volume(v), veh/h	878	1460	0	0	876	906	67	0	262			
Grp Sat Flow(s),veh/h/ln	1753	1636	0	0	1706	1484	1815	0	1547			
Q Serve(g_s), s	15.0	0.0	0.0	0.0	11.9	25.5	2.1	0.0	5.0			
Cycle Q Clear(g_c), s	15.0	0.0	0.0	0.0	11.9	25.5	2.1	0.0	5.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.94		1.00			
Lane Grp Cap(c), veh/h	438	2454	0	0	1450	630	151	0	129			
V/C Ratio(X)	2.00	0.59	0.00	0.00	0.60	1.44	0.44	0.00	2.03			
Avail Cap(c_a), veh/h	438	2454	0	0	1450	630	151	0	129			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.57	0.57	0.00	0.00	0.80	0.80	1.00	0.00	1.00			
Uniform Delay (d), s/veh	15.0	0.0	0.0	0.0	13.3	17.3	26.2	0.0	27.5			
Incr Delay (d2), s/veh	456.1	0.6	0.0	0.0	1.5	203.9	9.1	0.0	490.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	58.7	0.2	0.0	0.0	3.8	42.3	1.2	0.0	19.2			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	471.1	0.6	0.0	0.0	14.8	221.1	35.3	0.0	517.9			
LnGrp LOS	F	A	A	A	B	F	D	A	F			
Approach Vol, veh/h		2338			1782			329				
Approach Delay, s/veh		177.3			119.7			419.6				
Approach LOS		F			F			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		50.0			19.5	30.5		10.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		45.0			15.0	25.5		5.0				
Max Q Clear Time (g_c+I1), s		2.0			17.0	27.5		7.0				
Green Ext Time (p_c), s		8.5			0.0	0.0		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					172.2							
HCM 6th LOS					F							

Timings  
3: Western Way & Harley Knox Bl.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↑↑↑	↗	↖	↑↑↑	↖	↗	↖	↗
Traffic Volume (vph)	105	1444	10	13	1559	1	0	7	0
Future Volume (vph)	105	1444	10	13	1559	1	0	7	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	NA
Protected Phases	5	2		1	6		8		4
Permitted Phases			2			8		4	
Detector Phase	5	2	2	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	21.8	21.8	9.6	21.8	32.6	32.6	32.6	32.6
Total Split (s)	22.0	75.4	75.4	9.6	63.0	35.0	35.0	35.0	35.0
Total Split (%)	18.3%	62.8%	62.8%	8.0%	52.5%	29.2%	29.2%	29.2%	29.2%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	11.7	58.1	58.1	6.4	45.7	15.0	15.0	15.0	15.0
Actuated g/C Ratio	0.16	0.81	0.81	0.09	0.64	0.21	0.21	0.21	0.21
v/c Ratio	0.43	0.41	0.01	0.09	0.57	0.00	0.00	0.04	0.13
Control Delay	41.2	6.0	0.0	46.6	14.1	33.0	0.0	33.7	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.2	6.0	0.0	46.6	14.1	33.0	0.0	33.7	0.7
LOS	D	A	A	D	B	C	A	C	A
Approach Delay		8.3			14.4		11.0		5.0
Approach LOS		A			B		B		A

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 71.3	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.57	
Intersection Signal Delay: 11.3	Intersection LOS: B
Intersection Capacity Utilization 58.3%	ICU Level of Service B
Analysis Period (min) 15	


























Splits and Phases: 3: Western Way & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 3: Western Way & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  							
Traffic Volume (veh/h)	105	1444	10	13	1559	46	1	0	2	7	0	49
Future Volume (veh/h)	105	1444	10	13	1559	46	1	0	2	7	0	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1722	1737	1900	1900	1752	1678	1900	1900	1900	1337	1900	1233
Adj Flow Rate, veh/h	113	1553	11	14	1676	47	1	0	2	8	0	41
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	12	11	0	0	10	15	0	0	0	38	0	45
Cap, veh/h	142	2955	1004	31	2648	74	232	0	162	225	0	163
Arrive On Green	0.09	0.62	0.62	0.02	0.55	0.55	0.10	0.00	0.10	0.10	0.00	0.10
Sat Flow, veh/h	1640	4742	1610	1810	4782	134	1388	0	1607	1008	0	1610
Grp Volume(v), veh/h	113	1553	11	14	1117	606	1	0	2	8	0	41
Grp Sat Flow(s),veh/h/ln	1640	1581	1610	1810	1594	1728	1388	0	1607	1008	0	1610
Q Serve(g_s), s	3.9	10.7	0.2	0.4	14.0	14.0	0.0	0.0	0.1	0.4	0.0	1.4
Cycle Q Clear(g_c), s	3.9	10.7	0.2	0.4	14.0	14.0	1.4	0.0	0.1	0.5	0.0	1.4
Prop In Lane	1.00		1.00	1.00		0.08	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	142	2955	1004	31	1766	957	232	0	162	225	0	163
V/C Ratio(X)	0.79	0.53	0.01	0.44	0.63	0.63	0.00	0.00	0.01	0.04	0.00	0.25
Avail Cap(c_a), veh/h	492	5686	1931	156	3142	1703	818	0	842	651	0	843
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.0	6.1	4.1	28.2	8.9	8.9	24.7	0.0	23.5	23.7	0.0	24.1
Incr Delay (d2), s/veh	3.7	0.1	0.0	3.6	0.4	0.7	0.0	0.0	0.0	0.1	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	2.0	0.0	0.2	3.2	3.6	0.0	0.0	0.0	0.1	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.7	6.3	4.2	31.9	9.3	9.6	24.7	0.0	23.5	23.8	0.0	24.9
LnGrp LOS	C	A	A	C	A	A	C	A	C	C	A	C
Approach Vol, veh/h		1677			1737			3				49
Approach Delay, s/veh		7.8			9.6			23.9				24.7
Approach LOS		A			A			C				C
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.6	42.0		10.5	9.6	37.9		10.5				
Change Period (Y+Rc), s	4.6	5.8		4.6	4.6	5.8		4.6				
Max Green Setting (Gmax), s	5.0	69.6		30.4	17.4	57.2		30.4				
Max Q Clear Time (g_c+I1), s	2.4	12.7		3.4	5.9	16.0		3.4				
Green Ext Time (p_c), s	0.0	16.1		0.2	0.1	16.2		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				9.0								
HCM 6th LOS				A								



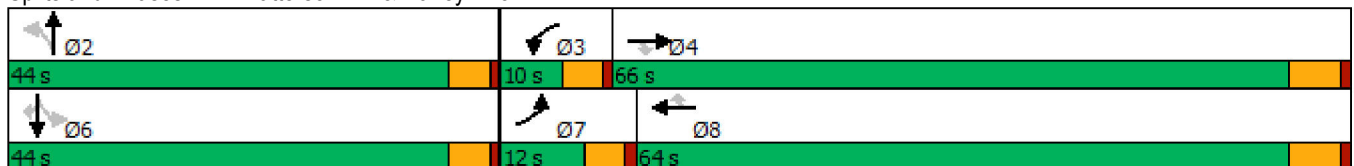
Timings  
4: Patterson Av. & Harley Knox Bl.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	27	1307	83	49	1514	19	81	9	16	4	23
Future Volume (vph)	27	1307	83	49	1514	19	81	9	16	4	23
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	7	4		3	8			2		6	
Permitted Phases			4			8	2		6		6
Detector Phase	7	4	4	3	8	8	2	2	6	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	9.6	31.8	31.8	33.7	33.7	40.7	40.7	40.7
Total Split (s)	12.0	66.0	66.0	10.0	64.0	64.0	44.0	44.0	44.0	44.0	44.0
Total Split (%)	10.0%	55.0%	55.0%	8.3%	53.3%	53.3%	36.7%	36.7%	36.7%	36.7%	36.7%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8		4.7		4.7	4.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	6.3	58.8	58.8	5.5	60.4	60.4		17.3		17.3	17.3
Actuated g/C Ratio	0.07	0.62	0.62	0.06	0.64	0.64		0.18		0.18	0.18
v/c Ratio	0.32	0.48	0.09	0.61	0.78	0.03		0.62		0.13	0.10
Control Delay	56.0	12.1	2.9	76.8	19.3	0.1		40.1		33.4	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	56.0	12.1	2.9	76.8	19.3	0.1		40.1		33.4	0.7
LOS	E	B	A	E	B	A		D		C	A
Approach Delay		12.4			20.9			40.1		15.7	
Approach LOS		B			C			D		B	

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 94.9	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 17.9	Intersection LOS: B
Intersection Capacity Utilization 71.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 4: Patterson Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 4: Patterson Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/09/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	1307	83	49	1514	19	81	9	53	16	4	23
Future Volume (veh/h)	27	1307	83	49	1514	19	81	9	53	16	4	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1455	1767	1870	1604	1767	1026	1589	1426	1826	863	952	1278
Adj Flow Rate, veh/h	29	1421	83	53	1646	13	88	10	56	17	4	9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	30	9	2	20	9	59	21	32	5	70	64	42
Cap, veh/h	42	2833	931	68	2019	523	168	27	69	174	26	181
Arrive On Green	0.03	0.59	0.59	0.04	0.60	0.60	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	1386	4823	1585	1527	3357	869	553	164	409	521	158	1083
Grp Volume(v), veh/h	29	1421	83	53	1646	13	154	0	0	21	0	9
Grp Sat Flow(s),veh/h/ln	1386	1608	1585	1527	1678	869	1126	0	0	679	0	1083
Q Serve(g_s), s	1.6	13.0	1.7	2.6	28.8	0.5	8.1	0.0	0.0	0.0	0.0	0.5
Cycle Q Clear(g_c), s	1.6	13.0	1.7	2.6	28.8	0.5	9.9	0.0	0.0	1.9	0.0	0.5
Prop In Lane	1.00		1.00	1.00		1.00	0.57		0.36	0.81		1.00
Lane Grp Cap(c), veh/h	42	2833	931	68	2019	523	264	0	0	200	0	181
V/C Ratio(X)	0.69	0.50	0.09	0.78	0.82	0.02	0.58	0.00	0.00	0.10	0.00	0.05
Avail Cap(c_a), veh/h	136	3860	1269	110	2597	673	666	0	0	455	0	566
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.1	9.1	6.8	35.6	11.7	6.1	30.2	0.0	0.0	26.8	0.0	26.3
Incr Delay (d2), s/veh	7.4	0.1	0.0	7.0	1.6	0.0	2.0	0.0	0.0	0.2	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	3.4	0.5	1.0	8.1	0.1	2.7	0.0	0.0	0.3	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.5	9.2	6.8	42.6	13.4	6.1	32.3	0.0	0.0	27.0	0.0	26.4
LnGrp LOS	D	A	A	D	B	A	C	A	A	C	A	C
Approach Vol, veh/h		1533			1712			154				30
Approach Delay, s/veh		9.7			14.2			32.3				26.8
Approach LOS		A			B			C				C
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		17.3	7.9	50.0		17.3	6.9	51.0				
Change Period (Y+Rc), s		* 4.7	4.6	5.8		* 4.7	4.6	5.8				
Max Green Setting (Gmax), s		* 39	5.4	60.2		* 39	7.4	58.2				
Max Q Clear Time (g_c+I1), s		11.9	4.6	15.0		3.9	3.6	30.8				
Green Ext Time (p_c), s		0.9	0.0	13.7		0.1	0.0	14.4				

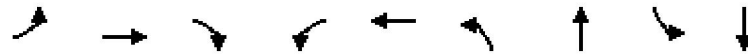
Intersection Summary

HCM 6th Ctrl Delay	13.1
HCM 6th LOS	B

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
5: Heacock Street & Cactus Avenue

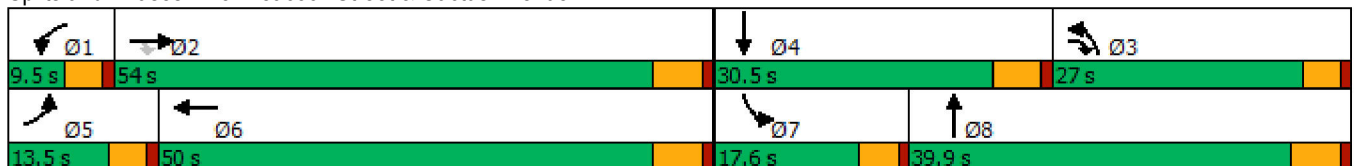


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↗	↘	↖	↗	↖	↗	↖	↗
Traffic Volume (vph)	176	1067	783	81	2068	865	721	139	376
Future Volume (vph)	176	1067	783	81	2068	865	721	139	376
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	3	1	6	3	8	7	4
Permitted Phases			2						
Detector Phase	5	2	3	1	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.5	30.5	9.5	9.5	30.5	9.5	30.5	9.5	30.5
Total Split (s)	13.5	54.0	27.0	9.5	50.0	27.0	39.9	17.6	30.5
Total Split (%)	11.2%	44.6%	22.3%	7.9%	41.3%	22.3%	33.0%	14.5%	25.2%
Yellow Time (s)	3.5	4.5	3.5	3.5	4.5	3.5	4.5	3.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	4.5	4.5	5.5	4.5	5.5	4.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None
Act Effct Green (s)	9.0	48.6	72.6	5.0	44.6	23.0	30.5	11.8	19.3
Actuated g/C Ratio	0.08	0.42	0.63	0.04	0.38	0.20	0.26	0.10	0.17
v/c Ratio	1.27	0.71	0.73	1.02	1.60	1.25	0.81	0.77	0.79
Control Delay	207.3	31.5	13.5	163.2	301.6	164.6	47.5	76.8	53.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	207.3	31.5	13.5	163.2	301.6	164.6	47.5	76.8	53.2
LOS	F	C	B	F	F	F	D	E	D
Approach Delay		39.8			296.8		110.2		58.5
Approach LOS		D			F		F		E

Intersection Summary

Cycle Length: 121  
 Actuated Cycle Length: 115.9  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.60  
 Intersection Signal Delay: 149.2  
 Intersection LOS: F  
 Intersection Capacity Utilization 127.1%  
 ICU Level of Service H  
 Analysis Period (min) 15























Splits and Phases: 5: Heacock Street & Cactus Avenue



HCM 6th Signalized Intersection Summary  
5: Heacock Street & Cactus Avenue

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	176	1067	783	81	2068	159	865	721	30	139	376	105
Future Volume (veh/h)	176	1067	783	81	2068	159	865	721	30	139	376	105
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1752	1900	1885	1856	1826	1841	1826	1870	1841	1885
Adj Flow Rate, veh/h	183	1111	816	84	2154	166	901	751	31	145	392	109
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	10	0	1	3	5	4	5	2	4	1
Cap, veh/h	138	1562	907	78	1325	101	674	950	39	172	459	126
Arrive On Green	0.08	0.42	0.42	0.04	0.38	0.38	0.19	0.27	0.27	0.10	0.17	0.17
Sat Flow, veh/h	1781	3741	1485	1810	3460	263	3478	3510	145	1781	2780	764
Grp Volume(v), veh/h	183	1111	816	84	1160	1160	901	394	388	145	258	243
Grp Sat Flow(s),veh/h/ln	1781	1870	1485	1810	1885	1838	1739	1841	1815	1781	1841	1703
Q Serve(g_s), s	9.0	28.6	19.2	5.0	44.5	44.5	22.5	23.1	23.1	9.3	15.8	16.1
Cycle Q Clear(g_c), s	9.0	28.6	19.2	5.0	44.5	44.5	22.5	23.1	23.1	9.3	15.8	16.1
Prop In Lane	1.00		1.00	1.00		0.14	1.00		0.08	1.00		0.45
Lane Grp Cap(c), veh/h	138	1562	907	78	722	704	674	498	491	172	304	281
V/C Ratio(X)	1.33	0.71	0.90	1.08	1.61	1.65	1.34	0.79	0.79	0.84	0.85	0.86
Avail Cap(c_a), veh/h	138	1562	907	78	722	704	674	545	537	201	396	366
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.6	28.0	7.8	55.6	35.8	35.8	46.8	39.3	39.3	51.6	47.1	47.2
Incr Delay (d2), s/veh	188.2	1.3	11.5	125.1	279.4	297.9	161.9	6.2	6.3	21.1	10.4	12.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.1	12.1	8.9	4.9	75.2	76.9	24.5	10.9	10.7	5.0	7.9	7.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	241.8	29.4	19.3	180.7	315.2	333.8	208.8	45.5	45.6	72.7	57.5	60.0
LnGrp LOS	F	C	B	F	F	F	F	D	D	E	E	E
Approach Vol, veh/h		2110			2404			1683			646	
Approach Delay, s/veh		43.9			319.5			132.9			61.8	
Approach LOS		D			F			F			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.5	54.0	28.0	24.7	13.5	50.0	15.7	37.0				
Change Period (Y+Rc), s	4.5	5.5	5.5	* 5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	5.0	48.5	22.5	* 25	9.0	44.5	13.1	34.4				
Max Q Clear Time (g_c+I1), s	7.0	30.6	24.5	18.1	11.0	46.5	11.3	25.1				
Green Ext Time (p_c), s	0.0	6.5	0.0	1.0	0.0	0.0	0.0	2.0				

Intersection Summary

HCM 6th Ctrl Delay	164.3
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

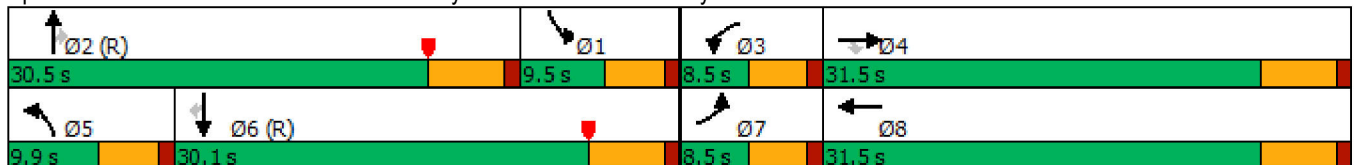
Timings  
6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	48	45	120	36	267	37	1075	60	127	842	24	
Future Volume (vph)	48	45	120	36	267	37	1075	60	127	842	24	
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	7	4		3	8	5	2		1	6		
Permitted Phases			4					2			6	
Detector Phase	7	4	4	3	8	5	2	2	1	6	6	
Switch Phase												
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	
Minimum Split (s)	8.5	23.5	23.5	8.5	31.5	8.5	30.5	30.5	8.5	23.5	23.5	
Total Split (s)	8.5	31.5	31.5	8.5	31.5	9.9	30.5	30.5	9.5	30.1	30.1	
Total Split (%)	10.6%	39.4%	39.4%	10.6%	39.4%	12.4%	38.1%	38.1%	11.9%	37.6%	37.6%	
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5	4.5	4.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	5.5	4.5	5.5	5.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max	
Act Effct Green (s)	4.0	15.5	15.5	4.0	13.8	5.7	38.9	38.9	5.0	41.9	41.9	
Actuated g/C Ratio	0.05	0.19	0.19	0.05	0.17	0.07	0.49	0.49	0.06	0.52	0.52	
v/c Ratio	0.62	0.14	0.23	0.44	0.66	0.31	0.64	0.07	1.15	0.48	0.03	
Control Delay	70.6	25.3	1.0	53.0	22.0	41.9	20.6	0.1	167.3	17.0	0.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	70.6	25.3	1.0	53.0	22.0	41.9	20.6	0.1	167.3	17.0	0.0	
LOS	E	C	A	D	C	D	C	A	F	B	A	
Approach Delay		21.8			24.1		20.2			35.8		
Approach LOS		C			C		C			D		

Intersection Summary

Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.15	
Intersection Signal Delay: 26.3	Intersection LOS: C
Intersection Capacity Utilization 73.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 6: Heacock Street & Meyer Drive/John F. Kennedy Drive



HCM 6th Signalized Intersection Summary  
 6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

11/09/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↕		↖	↕	↗	↖	↕	↗
Traffic Volume (veh/h)	48	45	120	36	267	236	37	1075	60	127	842	24
Future Volume (veh/h)	48	45	120	36	267	236	37	1075	60	127	842	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.95	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1648	1767	1826	1781	1841	1885	1781	1811	1767	1856	1767	1648
Adj Flow Rate, veh/h	50	47	89	38	278	210	39	1120	52	132	877	15
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	17	9	5	8	4	1	8	6	9	3	9	17
Cap, veh/h	60	352	308	48	374	273	49	1132	443	349	1744	680
Arrive On Green	0.04	0.20	0.20	0.03	0.19	0.19	0.03	0.31	0.31	0.20	0.49	0.49
Sat Flow, veh/h	1570	1767	1547	1697	1971	1438	1697	3622	1417	1767	3533	1379
Grp Volume(v), veh/h	50	47	89	38	259	229	39	1120	52	132	877	15
Grp Sat Flow(s),veh/h/ln	1570	1767	1547	1697	1841	1568	1697	1811	1417	1767	1767	1379
Q Serve(g_s), s	2.5	1.8	3.9	1.8	10.6	11.1	1.8	24.6	1.6	5.2	13.4	0.4
Cycle Q Clear(g_c), s	2.5	1.8	3.9	1.8	10.6	11.1	1.8	24.6	1.6	5.2	13.4	0.4
Prop In Lane	1.00		1.00	1.00		0.92	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	60	352	308	48	349	297	49	1132	443	349	1744	680
V/C Ratio(X)	0.84	0.13	0.29	0.79	0.74	0.77	0.79	0.99	0.12	0.38	0.50	0.02
Avail Cap(c_a), veh/h	78	574	503	85	598	510	115	1132	443	349	1744	680
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.85	0.85	0.85	0.55	0.55	0.55
Uniform Delay (d), s/veh	38.2	26.4	27.2	38.6	30.6	30.8	38.6	27.4	11.8	27.8	13.7	10.4
Incr Delay (d2), s/veh	35.1	0.1	0.2	9.9	1.2	1.6	8.7	22.3	0.5	0.1	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.7	1.4	0.8	4.5	4.0	0.8	12.8	0.7	2.0	4.5	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	73.3	26.4	27.4	48.5	31.8	32.4	47.4	49.6	12.3	28.0	14.2	10.4
LnGrp LOS	E	C	C	D	C	C	D	D	B	C	B	B
Approach Vol, veh/h		186			526			1211			1024	
Approach Delay, s/veh		39.5			33.2			48.0			15.9	
Approach LOS		D			C			D			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.3	30.5	6.8	21.4	6.8	45.0	7.5	20.7				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	5.0	* 25	4.0	26.0	5.4	24.6	4.0	26.0				
Max Q Clear Time (g_c+I1), s	7.2	26.6	3.8	5.9	3.8	15.4	4.5	13.1				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.3	0.0	2.6	0.0	1.4				















Intersection Summary

HCM 6th Ctrl Delay	33.7
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
7: Heacock Street & Gentian Avenue

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			 			 
Traffic Volume (vph)	17	24	968	11	112	924
Future Volume (vph)	17	24	968	11	112	924
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	27.6	27.6	27.2	27.2	9.6	16.2
Total Split (s)	28.0	28.0	65.0	65.0	27.0	92.0
Total Split (%)	23.3%	23.3%	54.2%	54.2%	22.5%	76.7%
Yellow Time (s)	3.6	3.6	5.2	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	6.2	6.2	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	13.0	13.0	34.9	34.9	9.5	47.8
Actuated g/C Ratio	0.22	0.22	0.58	0.58	0.16	0.80
v/c Ratio	0.04	0.06	0.52	0.01	0.40	0.37
Control Delay	26.2	12.1	14.3	10.1	32.9	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.2	12.1	14.3	10.1	32.9	5.0
LOS	C	B	B	B	C	A
Approach Delay	18.0		14.2			8.0
Approach LOS	B		B			A

Intersection Summary













Cycle Length: 120	
Actuated Cycle Length: 59.9	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.52	
Intersection Signal Delay: 11.2	Intersection LOS: B
Intersection Capacity Utilization 54.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 7: Heacock Street & Gentian Avenue





















HCM 6th Signalized Intersection Summary  
 7: Heacock Street & Gentian Avenue

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	17	24	968	11	112	924
Future Volume (veh/h)	17	24	968	11	112	924
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1811	1781	1900	1870	1767
Adj Flow Rate, veh/h	18	25	1019	12	118	973
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	6	8	0	2	9
Cap, veh/h	169	143	1566	745	156	2205
Arrive On Green	0.09	0.09	0.46	0.46	0.09	0.66
Sat Flow, veh/h	1810	1535	3474	1610	1781	3445
Grp Volume(v), veh/h	18	25	1019	12	118	973
Grp Sat Flow(s),veh/h/ln	1810	1535	1692	1610	1781	1678
Q Serve(g_s), s	0.4	0.6	10.0	0.2	2.8	6.1
Cycle Q Clear(g_c), s	0.4	0.6	10.0	0.2	2.8	6.1
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	169	143	1566	745	156	2205
V/C Ratio(X)	0.11	0.17	0.65	0.02	0.76	0.44
Avail Cap(c_a), veh/h	980	831	4604	2190	923	6663
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.9	18.1	8.9	6.3	19.3	3.6
Incr Delay (d2), s/veh	0.1	0.2	0.5	0.0	2.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.2	2.0	0.0	1.0	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	18.0	18.3	9.4	6.3	22.1	3.7
LnGrp LOS	B	B	A	A	C	A
Approach Vol, veh/h	43		1031			1091
Approach Delay, s/veh	18.2		9.3			5.7
Approach LOS	B		A			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	8.4	26.2			34.6	8.6
Change Period (Y+Rc), s	4.6	6.2			6.2	4.6
Max Green Setting (Gmax), s	22.4	58.8			85.8	23.4
Max Q Clear Time (g_c+1), s	4.8	12.0			8.1	2.6
Green Ext Time (p_c), s	0.1	8.0			7.6	0.0
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			7.7			
HCM 6th LOS			A			



Timings  
8: Heacock Street & Iris Avenue

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 		 		 	 
Traffic Volume (vph)	391	509	544	250	328	674
Future Volume (vph)	391	509	544	250	328	674
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	15.8	15.8	33.2	33.2	9.6	16.2
Total Split (s)	48.0	48.0	46.0	46.0	26.0	72.0
Total Split (%)	40.0%	40.0%	38.3%	38.3%	21.7%	60.0%
Yellow Time (s)	4.8	4.8	5.2	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	6.2	6.2	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	15.5	15.5	19.6	19.6	11.6	36.0
Actuated g/C Ratio	0.24	0.24	0.31	0.31	0.18	0.56
v/c Ratio	0.48	0.70	0.60	0.40	0.55	0.40
Control Delay	23.8	10.6	22.4	4.8	29.0	8.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.8	10.6	22.4	4.8	29.0	8.9
LOS	C	B	C	A	C	A
Approach Delay	16.4		16.9			15.5
Approach LOS	B		B			B

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 64.1	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.70	
Intersection Signal Delay: 16.2	Intersection LOS: B
Intersection Capacity Utilization 56.6%	ICU Level of Service B
Analysis Period (min) 15	

















Splits and Phases: 8: Heacock Street & Iris Avenue



HCM 6th Signalized Intersection Summary  
8: Heacock Street & Iris Avenue

Gateway Aviation TA (JN:13445)

11/09/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 		 		 	 
Traffic Volume (veh/h)	391	509	544	250	328	674
Future Volume (veh/h)	391	509	544	250	328	674
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1885	1885	1737	1885	1870	1752
Adj Flow Rate, veh/h	425	553	591	272	357	733
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	11	1	2	10
Cap, veh/h	1369	628	832	403	461	1487
Arrive On Green	0.39	0.39	0.25	0.25	0.13	0.45
Sat Flow, veh/h	3483	1598	3387	1598	3456	3416
Grp Volume(v), veh/h	425	553	591	272	357	733
Grp Sat Flow(s),veh/h/ln	1742	1598	1650	1598	1728	1664
Q Serve(g_s), s	6.3	24.1	12.2	11.5	7.5	11.7
Cycle Q Clear(g_c), s	6.3	24.1	12.2	11.5	7.5	11.7
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	1369	628	832	403	461	1487
V/C Ratio(X)	0.31	0.88	0.71	0.68	0.77	0.49
Avail Cap(c_a), veh/h	1964	901	1755	850	988	2926
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.7	21.1	25.5	25.2	31.3	14.7
Incr Delay (d2), s/veh	0.1	7.4	1.1	2.0	1.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	8.9	4.4	4.1	2.9	3.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	15.8	28.5	26.6	27.2	32.4	14.9
LnGrp LOS	B	C	C	C	C	B
Approach Vol, veh/h	978		863			1090
Approach Delay, s/veh	23.0		26.8			20.7
Approach LOS	C		C			C
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	14.6	25.1			39.6	35.2
Change Period (Y+Rc), s	4.6	6.2			6.2	5.8
Max Green Setting (Gmax), s	21.4	39.8			65.8	42.2
Max Q Clear Time (g_c+11), s	9.5	14.2			13.7	26.1
Green Ext Time (p_c), s	0.5	4.6			5.1	3.4
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			23.3			
HCM 6th LOS			C			

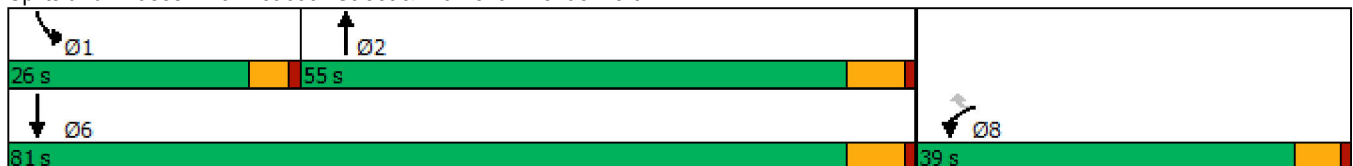
Timings  
9: Heacock Street & Krameria Avenue-North

	↙	↖	↑	↘	↓
Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations	↙	↖	↑↔	↘	↑↑
Traffic Volume (vph)	114	136	552	237	735
Future Volume (vph)	114	136	552	237	735
Turn Type	Prot	Perm	NA	Prot	NA
Protected Phases	8		2	1	6
Permitted Phases		8			
Detector Phase	8	8	2	1	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	29.1	29.1	29.2	9.6	16.2
Total Split (s)	39.0	39.0	55.0	26.0	81.0
Total Split (%)	32.5%	32.5%	45.8%	21.7%	67.5%
Yellow Time (s)	4.1	4.1	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	6.2	4.6	6.2
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	Min	Max	Min
Act Effct Green (s)	12.6	12.6	22.2	21.9	48.8
Actuated g/C Ratio	0.17	0.17	0.30	0.30	0.67
v/c Ratio	0.39	0.33	0.79	0.48	0.34
Control Delay	31.5	7.5	27.7	27.2	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	31.5	7.5	27.7	27.2	6.1
LOS	C	A	C	C	A
Approach Delay	18.4		27.7		11.2
Approach LOS	B		C		B

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 72.9	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 18.5	Intersection LOS: B
Intersection Capacity Utilization 57.1%	ICU Level of Service B
Analysis Period (min) 15	













Splits and Phases: 9: Heacock Street & Krameria Avenue-North



HCM 6th Signalized Intersection Summary  
 9: Heacock Street & Krameria Avenue-North

Gateway Aviation TA (JN:13445)

11/10/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	114	136	552	222	237	735
Future Volume (veh/h)	114	136	552	222	237	735
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1841	1841	1826	1841
Adj Flow Rate, veh/h	124	148	600	241	258	799
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	4	4	5	4
Cap, veh/h	261	233	737	296	549	2401
Arrive On Green	0.15	0.15	0.30	0.30	0.32	0.69
Sat Flow, veh/h	1781	1585	2528	977	1739	3589
Grp Volume(v), veh/h	124	148	430	411	258	799
Grp Sat Flow(s),veh/h/ln	1781	1585	1749	1665	1739	1749
Q Serve(g_s), s	4.3	6.0	15.4	15.5	8.1	6.3
Cycle Q Clear(g_c), s	4.3	6.0	15.4	15.5	8.1	6.3
Prop In Lane	1.00	1.00		0.59	1.00	
Lane Grp Cap(c), veh/h	261	233	529	504	549	2401
V/C Ratio(X)	0.47	0.64	0.81	0.81	0.47	0.33
Avail Cap(c_a), veh/h	891	793	1260	1199	549	3861
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.5	27.2	21.8	21.9	18.6	4.3
Incr Delay (d2), s/veh	0.5	1.1	1.2	1.2	2.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	2.3	5.5	5.3	3.2	1.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	27.0	28.3	23.0	23.1	21.5	4.3
LnGrp LOS	C	C	C	C	C	A
Approach Vol, veh/h	272		841			1057
Approach Delay, s/veh	27.7		23.1			8.5
Approach LOS	C		C			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	26.0	26.7			52.7	15.0
Change Period (Y+Rc), s	4.6	6.2			6.2	5.1
Max Green Setting (Gmax), s	21.4	48.8			74.8	33.9
Max Q Clear Time (g_c+I1), s	10.1	17.5			8.3	8.0
Green Ext Time (p_c), s	0.3	3.0			3.4	0.4
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			16.6			
HCM 6th LOS			B			

Timings  
10: Heacock Street & Driveway 1



Lane Group	EBL	EBT	NBL	NBT	SBT	SBR	Ø1	Ø8
Lane Configurations								
Traffic Volume (vph)	31	0	56	821	734	57		
Future Volume (vph)	31	0	56	821	734	57		
Turn Type	Perm	NA	Prot	NA	NA	Perm		
Protected Phases		4	5	2	6		1	8
Permitted Phases	4					6		
Detector Phase	4	4	5	2	6	6		
Switch Phase								
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	26.7	26.7	9.6	23.2	23.2	23.2	9.6	26.7
Total Split (s)	30.0	30.0	22.0	80.4	68.0	68.0	9.6	30.0
Total Split (%)	25.0%	25.0%	18.3%	67.0%	56.7%	56.7%	8%	25%
Yellow Time (s)	3.7	3.7	3.6	5.2	5.2	5.2	3.6	3.7
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.7	4.7	4.6	6.2	6.2	6.2		
Lead/Lag			Lead	Lag	Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	Min	Min	Min	None	None
Act Effct Green (s)	12.6	12.6	7.3	38.3	31.8	31.8		
Actuated g/C Ratio	0.25	0.25	0.14	0.76	0.63	0.63		
v/c Ratio	0.09	0.07	0.27	0.34	0.37	0.06		
Control Delay	20.1	0.2	28.1	5.6	12.1	1.6		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay	20.1	0.2	28.1	5.6	12.1	1.6		
LOS	C	A	C	A	B	A		
Approach Delay		9.8		7.0	11.3			
Approach LOS		A		A	B			

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 50.5	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.37	
Intersection Signal Delay: 9.1	Intersection LOS: A
Intersection Capacity Utilization 48.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 10: Heacock Street & Driveway 1



HCM 6th Signalized Intersection Summary  
 10: Heacock Street & Driveway 1

Gateway Aviation TA (JN:13445)

11/17/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	0	34	0	0	0	56	821	0	0	734	57
Future Volume (veh/h)	31	0	34	0	0	0	56	821	0	0	734	57
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1663	1856	1856	1900	1826	1900
Adj Flow Rate, veh/h	34	0	37	0	0	0	61	892	0	0	798	62
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	16	3	3	0	5	0
Cap, veh/h	441	0	224	0	264	0	99	2024	0	5	1355	629
Arrive On Green	0.14	0.00	0.14	0.00	0.00	0.00	0.06	0.57	0.00	0.00	0.39	0.39
Sat Flow, veh/h	1810	0	1610	0	1900	0	1584	3618	0	1810	3469	1610
Grp Volume(v), veh/h	34	0	37	0	0	0	61	892	0	0	798	62
Grp Sat Flow(s),veh/h/ln	1810	0	1610	0	1900	0	1584	1763	0	1810	1735	1610
Q Serve(g_s), s	0.6	0.0	0.8	0.0	0.0	0.0	1.4	5.5	0.0	0.0	6.9	0.9
Cycle Q Clear(g_c), s	0.6	0.0	0.8	0.0	0.0	0.0	1.4	5.5	0.0	0.0	6.9	0.9
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	441	0	224	0	264	0	99	2024	0	5	1355	629
V/C Ratio(X)	0.08	0.00	0.17	0.00	0.00	0.00	0.62	0.44	0.00	0.00	0.59	0.10
Avail Cap(c_a), veh/h	1395	0	1073	0	1266	0	726	6888	0	238	5646	2620
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	14.4	0.0	14.4	0.0	0.0	0.0	17.4	4.6	0.0	0.0	9.2	7.3
Incr Delay (d2), s/veh	0.1	0.0	0.3	0.0	0.0	0.0	2.3	0.2	0.0	0.0	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.3	0.0	0.0	0.0	0.4	0.5	0.0	0.0	1.4	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.4	0.0	14.8	0.0	0.0	0.0	19.7	4.8	0.0	0.0	9.6	7.4
LnGrp LOS	B	A	B	A	A	A	B	A	A	A	A	A
Approach Vol, veh/h		71			0			953			860	
Approach Delay, s/veh		14.6			0.0			5.7			9.4	
Approach LOS		B						A			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	28.0		10.0	7.0	21.0		10.0				
Change Period (Y+Rc), s	4.6	6.2		* 4.7	4.6	6.2		* 4.7				
Max Green Setting (Gmax), s	5.0	74.2		* 25	17.4	61.8		* 25				
Max Q Clear Time (g_c+I1), s	0.0	7.5		2.8	3.4	8.9		0.0				
Green Ext Time (p_c), s	0.0	6.6		0.2	0.0	5.9		0.0				

Intersection Summary

HCM 6th Ctrl Delay	7.7
HCM 6th LOS	A

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↕	↗	↘	↕
Traffic Vol, veh/h	12	13	1125	61	52	958
Future Vol, veh/h	12	13	1125	61	52	958
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	0	140	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	23	31	8	2	8	14
Mvmt Flow	13	14	1223	66	57	1041

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1858	612	0	0	1289
Stage 1	1223	-	-	-	-
Stage 2	635	-	-	-	-
Critical Hdwy	7.26	7.52	-	-	4.26
Critical Hdwy Stg 1	6.26	-	-	-	-
Critical Hdwy Stg 2	6.26	-	-	-	-
Follow-up Hdwy	3.73	3.61	-	-	2.28
Pot Cap-1 Maneuver	51	372	-	-	503
Stage 1	203	-	-	-	-
Stage 2	437	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	45	372	-	-	503
Mov Cap-2 Maneuver	140	-	-	-	-
Stage 1	203	-	-	-	-
Stage 2	388	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	23.8	0	0.7
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	140	372	503	-
HCM Lane V/C Ratio	-	-	0.093	0.038	0.112	-
HCM Control Delay (s)	-	-	33.3	15.1	13.1	-
HCM Lane LOS	-	-	D	C	B	-
HCM 95th %tile Q(veh)	-	-	0.3	0.1	0.4	-

Timings  
12: Heacock Street & San Michele Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	31	82	5	39	341	809	2	66	509	135	52
Future Volume (vph)	31	82	5	39	341	809	2	66	509	135	52
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	1	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	4.0	5.0	4.0	5.0	5.0
Minimum Split (s)	9.5	30.5	30.5	8.5	30.5	8.5	8.5	34.5	8.5	34.5	34.5
Total Split (s)	13.0	41.0	41.0	13.0	41.0	28.0	12.0	38.0	28.0	54.0	54.0
Total Split (%)	10.8%	34.2%	34.2%	10.8%	34.2%	23.3%	10.0%	31.7%	23.3%	45.0%	45.0%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	3.5	4.5	3.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	4.5	5.5	4.5	5.5	5.5
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	None	Max	Max
Act Effct Green (s)	6.3	16.2	16.2	14.4	24.3	53.7	4.8	33.0	23.9	59.8	59.8
Actuated g/C Ratio	0.06	0.16	0.16	0.14	0.24	0.52	0.05	0.32	0.23	0.58	0.58
v/c Ratio	0.29	0.31	0.01	0.17	0.83	0.66	0.02	0.09	1.27	0.16	0.05
Control Delay	57.1	45.1	0.0	41.1	54.6	5.6	54.0	25.4	175.6	14.7	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.1	45.1	0.0	41.1	54.6	5.6	54.0	25.4	175.6	14.7	0.4
LOS	E	D	A	D	D	A	D	C	F	B	A
Approach Delay		46.5			20.8			26.0		131.2	
Approach LOS		D			C			C		F	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 103.4  
 Natural Cycle: 105  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.27  
 Intersection Signal Delay: 59.4  
 Intersection LOS: E  
 Intersection Capacity Utilization 69.7%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 12: Heacock Street & San Michele Road

Ø2	Ø1	Ø4	Ø3
38 s	28 s	41 s	13 s
Ø5	Ø6	Ø8	Ø7
12 s	54 s	41 s	13 s



HCM 6th Signalized Intersection Summary  
 12: Heacock Street & San Michele Road

Gateway Aviation TA (JN:13445)

04/19/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗↘		↖	↗	↘
Traffic Volume (veh/h)	31	82	5	39	341	809	2	66	11	509	135	52
Future Volume (veh/h)	31	82	5	39	341	809	2	66	11	509	135	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1856	1455	1796	1900	1885	1900	1530	1707	1885	1648	1856
Adj Flow Rate, veh/h	34	89	5	42	371	879	2	72	12	553	147	57
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	3	30	7	0	1	0	25	13	1	17	3
Cap, veh/h	43	124	83	453	585	818	4	705	115	366	811	774
Arrive On Green	0.02	0.07	0.07	0.26	0.31	0.31	0.00	0.28	0.28	0.20	0.49	0.49
Sat Flow, veh/h	1810	1856	1233	1711	1900	1598	1810	2502	407	1795	1648	1572
Grp Volume(v), veh/h	34	89	5	42	371	879	2	41	43	553	147	57
Grp Sat Flow(s),veh/h/ln	1810	1856	1233	1711	1900	1598	1810	1453	1456	1795	1648	1572
Q Serve(g_s), s	2.2	5.4	0.4	2.1	19.4	35.5	0.1	2.4	2.5	23.5	5.7	1.7
Cycle Q Clear(g_c), s	2.2	5.4	0.4	2.1	19.4	35.5	0.1	2.4	2.5	23.5	5.7	1.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.28	1.00		1.00
Lane Grp Cap(c), veh/h	43	124	83	453	585	818	4	410	411	366	811	774
V/C Ratio(X)	0.78	0.72	0.06	0.09	0.63	1.07	0.51	0.10	0.10	1.51	0.18	0.07
Avail Cap(c_a), veh/h	133	572	380	453	585	818	118	410	411	366	811	774
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.0	52.7	41.2	31.9	34.3	28.1	57.4	30.6	30.6	45.9	16.3	9.4
Incr Delay (d2), s/veh	10.9	2.9	0.1	0.0	1.7	53.6	33.9	0.5	0.5	243.5	0.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	2.6	0.1	0.9	8.8	21.9	0.1	0.9	0.9	34.7	2.1	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.9	55.6	41.3	32.0	36.0	81.7	91.3	31.1	31.1	289.4	16.8	9.6
LnGrp LOS	E	E	D	C	D	F	F	C	C	F	B	A
Approach Vol, veh/h		128			1292			86			757	
Approach Delay, s/veh		58.0			67.0			32.5			215.4	
Approach LOS		E			E			C			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	29.0	38.0	35.0	13.2	4.7	62.3	7.3	41.0				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	23.5	* 33	8.5	35.5	7.5	48.5	8.5	35.5				
Max Q Clear Time (g_c+I1), s	25.5	4.5	4.1	7.4	2.1	7.7	4.2	37.5				
Green Ext Time (p_c), s	0.0	0.2	0.0	0.3	0.0	0.5	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	114.8
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection					
Intersection Delay, s/veh 13.6					
Intersection LOS B					
Approach	EB	WB		NB	
Entry Lanes	3	2		2	
Conflicting Circle Lanes	2	2		2	
Adj Approach Flow, veh/h	0	1660		90	
Demand Flow Rate, veh/h	0	1825		98	
Vehicles Circulating, veh/h	15	81		1435	
Vehicles Exiting, veh/h	1890	1452		210	
Ped Vol Crossing Leg, #/h	0	0		0	
Ped Cap Adj	1.000	1.000		1.000	
Approach Delay, s/veh	0.0	13.7		12.3	
Approach LOS	-	B		B	
Lane	Left		Right		
Designated Moves	LT		TR		L LTR
Assumed Moves	LT		TR		L LTR
RT Channelized					
Lane Util	0.470	0.530	0.531	0.469	
Follow-Up Headway, s	2.667	2.535	2.667	2.535	
Critical Headway, s	4.645	4.328	4.645	4.328	
Entry Flow, veh/h	858	967	52	46	
Cap Entry Lane, veh/h	1253	1326	361	419	
Entry HV Adj Factor	0.910	0.910	0.917	0.920	
Flow Entry, veh/h	780	880	48	42	
Cap Entry, veh/h	1140	1206	331	386	
V/C Ratio	0.685	0.729	0.144	0.110	
Control Delay, s/veh	13.1	14.2	13.4	11.0	
LOS	B		B		B B
95th %tile Queue, veh	6	7	0	0	

Timings  
14: Indian Street & San Michele Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↖	↗	↖	↗	↖	↗	↗	↖	↗
Traffic Volume (vph)	15	211	186	904	1581	217	236	6	141
Future Volume (vph)	15	211	186	904	1581	217	236	6	141
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8	5	2		1	6
Permitted Phases							2		
Detector Phase	7	4	3	8	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	31.8	9.6	31.8	9.6	32.8	32.8	9.6	32.8
Total Split (s)	12.0	33.0	19.0	40.0	32.0	57.0	57.0	11.0	36.0
Total Split (%)	10.0%	27.5%	15.8%	33.3%	26.7%	47.5%	47.5%	9.2%	30.0%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	5.8	16.7	14.0	31.5	27.9	43.9	43.9	5.3	12.9
Actuated g/C Ratio	0.06	0.18	0.15	0.34	0.30	0.47	0.47	0.06	0.14
v/c Ratio	0.16	0.74	0.72	0.78	1.52	0.27	0.26	0.06	0.32
Control Delay	50.5	21.1	56.1	34.0	264.5	18.0	3.3	49.5	36.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.5	21.1	56.1	34.0	264.5	18.0	3.3	49.5	36.5
LOS	D	C	E	C	F	B	A	D	D
Approach Delay		21.8		37.7		207.8			37.0
Approach LOS		C		D		F			D

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 92.8	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.52	
Intersection Signal Delay: 123.8	Intersection LOS: F
Intersection Capacity Utilization 109.2%	ICU Level of Service H
Analysis Period (min) 15	























Splits and Phases: 14: Indian Street & San Michele Road



HCM 6th Signalized Intersection Summary  
 14: Indian Street & San Michele Road

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	211	383	186	904	11	1581	217	236	6	141	14
Future Volume (veh/h)	15	211	383	186	904	11	1581	217	236	6	141	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		0.94
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1618	1841	1885	1856	1885	1900	1885	1885	1841	1900	1870	1900
Adj Flow Rate, veh/h	16	229	416	202	983	12	1718	236	257	7	153	15
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	19	4	1	3	1	0	1	1	4	0	2	0
Cap, veh/h	27	446	397	231	1367	17	922	775	633	16	506	49
Arrive On Green	0.02	0.25	0.25	0.13	0.37	0.37	0.26	0.41	0.41	0.01	0.15	0.15
Sat Flow, veh/h	1541	1749	1560	1767	3716	45	3591	1885	1540	1810	3337	322
Grp Volume(v), veh/h	16	229	416	202	499	496	1718	236	257	7	85	83
Grp Sat Flow(s),veh/h/ln	1541	1749	1560	1767	1885	1876	1795	1885	1540	1810	1870	1789
Q Serve(g_s), s	1.1	12.0	27.2	12.0	24.3	24.3	27.4	9.0	12.6	0.4	4.3	4.4
Cycle Q Clear(g_c), s	1.1	12.0	27.2	12.0	24.3	24.3	27.4	9.0	12.6	0.4	4.3	4.4
Prop In Lane	1.00		1.00	1.00		0.02	1.00		1.00	1.00		0.18
Lane Grp Cap(c), veh/h	27	446	397	231	693	690	922	775	633	16	284	271
V/C Ratio(X)	0.59	0.51	1.05	0.87	0.72	0.72	1.86	0.30	0.41	0.44	0.30	0.31
Avail Cap(c_a), veh/h	107	446	397	238	693	690	922	904	738	108	529	506
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.0	34.1	39.8	45.5	29.0	29.0	39.7	21.2	22.2	52.6	40.2	40.3
Incr Delay (d2), s/veh	7.2	0.5	57.9	26.6	3.1	3.2	393.0	0.1	0.2	7.0	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	4.9	16.3	6.8	10.9	10.8	61.6	3.7	4.3	0.2	1.9	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.3	34.6	97.6	72.1	32.1	32.2	432.7	21.3	22.4	59.6	40.4	40.5
LnGrp LOS	E	C	F	E	C	C	F	C	C	E	D	D
Approach Vol, veh/h		661			1197			2211			175	
Approach Delay, s/veh		74.9			38.9			341.1			41.2	
Approach LOS		E			D			F			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.5	49.7	18.6	33.0	33.2	22.0	6.5	45.1				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	5.8	* 5.8	4.6	5.8				
Max Green Setting (Gmax), s	6.4	51.2	14.4	27.2	27.4	* 30	7.4	34.2				
Max Q Clear Time (g_c+I1), s	2.4	14.6	14.0	29.2	29.4	6.4	3.1	26.3				
Green Ext Time (p_c), s	0.0	1.1	0.0	0.0	0.0	0.4	0.0	2.5				

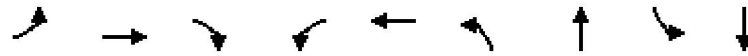
Intersection Summary

HCM 6th Ctrl Delay	202.0
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
15: Indian Street & Nandina Avenue



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	8	35	165	36	44	365	1806	13	509
Future Volume (vph)	8	35	165	36	44	365	1806	13	509
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	5	3	8	5	2	1	6
Permitted Phases	4								
Detector Phase	7	4	5	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	29.8	9.6	9.6	29.8	9.6	26.8	9.6	26.8
Total Split (s)	13.0	35.0	36.0	15.0	37.0	36.0	56.0	14.0	34.0
Total Split (%)	10.8%	29.2%	30.0%	12.5%	30.8%	30.0%	46.7%	11.7%	28.3%
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	5.5	12.6	38.3	7.1	17.8	24.2	56.8	5.9	27.8
Actuated g/C Ratio	0.07	0.15	0.46	0.08	0.21	0.29	0.68	0.07	0.33
v/c Ratio	0.07	0.19	0.23	0.30	0.24	0.80	0.81	0.14	0.47
Control Delay	47.5	38.6	2.9	48.8	24.7	43.2	19.8	48.5	29.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.5	38.6	2.9	48.8	24.7	43.2	19.8	48.5	29.3
LOS	D	D	A	D	C	D	B	D	C
Approach Delay	10.7		33.0			23.6		29.7	
Approach LOS	B		C			C		C	

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 83.8	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.81	
Intersection Signal Delay: 24.1	Intersection LOS: C
Intersection Capacity Utilization 78.7%	ICU Level of Service D
Analysis Period (min) 15	























Splits and Phases: 15: Indian Street & Nandina Avenue



HCM 6th Signalized Intersection Summary  
15: Indian Street & Nandina Avenue

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	35	165	36	44	24	365	1806	76	13	509	27
Future Volume (veh/h)	8	35	165	36	44	24	365	1806	76	13	509	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1248	1500	1559	1441	1470	1737	1870	1707	1411	1856	1900
Adj Flow Rate, veh/h	9	38	179	39	48	26	397	1963	83	14	553	29
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	44	27	23	31	29	11	2	13	33	3	0
Cap, veh/h	20	163	498	52	136	74	432	2056	86	22	1163	61
Arrive On Green	0.01	0.13	0.13	0.04	0.15	0.15	0.26	0.58	0.58	0.02	0.33	0.33
Sat Flow, veh/h	1810	1248	1271	1485	879	476	1654	3561	149	1344	3495	183
Grp Volume(v), veh/h	9	38	179	39	0	74	397	1023	1023	14	293	289
Grp Sat Flow(s),veh/h/ln	1810	1248	1271	1485	0	1355	1654	1870	1840	1344	1856	1823
Q Serve(g_s), s	0.4	2.4	8.6	2.3	0.0	4.2	20.2	44.2	45.8	0.9	10.8	10.9
Cycle Q Clear(g_c), s	0.4	2.4	8.6	2.3	0.0	4.2	20.2	44.2	45.8	0.9	10.8	10.9
Prop In Lane	1.00		1.00	1.00		0.35	1.00		0.08	1.00		0.10
Lane Grp Cap(c), veh/h	20	163	498	52	0	209	432	1080	1062	22	617	606
V/C Ratio(X)	0.44	0.23	0.36	0.75	0.00	0.35	0.92	0.95	0.96	0.63	0.48	0.48
Avail Cap(c_a), veh/h	176	421	761	178	0	488	600	1085	1067	146	617	606
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.5	33.7	18.6	41.4	0.0	32.7	31.1	17.1	17.4	42.3	22.9	22.9
Incr Delay (d2), s/veh	5.5	0.7	0.4	7.7	0.0	1.0	13.1	16.2	19.2	10.5	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.7	2.4	0.9	0.0	1.4	8.9	19.2	20.4	0.3	4.4	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.0	34.5	19.1	49.0	0.0	33.7	44.1	33.3	36.6	52.8	23.5	23.5
LnGrp LOS	D	C	B	D	A	C	D	C	D	D	C	C
Approach Vol, veh/h		226			113			2443			596	
Approach Delay, s/veh		22.8			39.0			36.4			24.2	
Approach LOS		C			D			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.0	55.8	7.6	17.1	27.2	34.6	5.6	19.2				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	9.4	50.2	10.4	29.2	31.4	28.2	8.4	31.2				
Max Q Clear Time (g_c+I1), s	2.9	47.8	4.3	10.6	22.2	12.9	2.4	6.2				
Green Ext Time (p_c), s	0.0	2.1	0.0	0.7	0.4	2.7	0.0	0.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			33.4									
HCM 6th LOS			C									

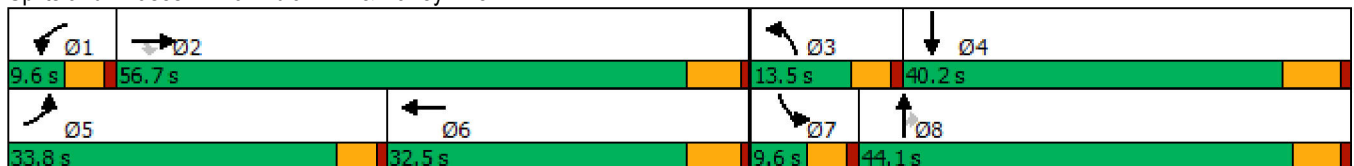
Timings  
16: Indian Av. & Harley Knox Bl.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	148	276	56	157	541	58	295	82	102	190
Future Volume (vph)	148	276	56	157	541	58	295	82	102	190
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	5	2		1	6	3	8		7	4
Permitted Phases			2					8		
Detector Phase	5	2	2	1	6	3	8	8	7	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	35.8	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2
Total Split (s)	33.8	56.7	56.7	9.6	32.5	13.5	44.1	44.1	9.6	40.2
Total Split (%)	28.2%	47.3%	47.3%	8.0%	27.1%	11.3%	36.8%	36.8%	8.0%	33.5%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.4	4.4	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	5.4	5.4	4.6	6.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	15.8	31.6	31.6	5.3	21.1	6.7	17.8	17.8	5.3	18.3
Actuated g/C Ratio	0.19	0.39	0.39	0.06	0.26	0.08	0.22	0.22	0.06	0.22
v/c Ratio	0.68	0.17	0.11	1.49	0.70	0.28	0.44	0.20	0.96	0.47
Control Delay	48.1	16.9	0.6	293.9	29.2	45.1	30.2	1.3	119.0	25.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.1	16.9	0.6	293.9	29.2	45.1	30.2	1.3	119.0	25.7
LOS	D	B	A	F	C	D	C	A	F	C
Approach Delay		24.6			70.8		26.7			50.2
Approach LOS		C			E		C			D

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 81.7  
 Natural Cycle: 100  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.49  
 Intersection Signal Delay: 49.4  
 Intersection LOS: D  
 Intersection Capacity Utilization 56.4%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 16: Indian Av. & Harley Knox Bl.



































HCM 6th Signalized Intersection Summary  
 16: Indian Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 			 	
Traffic Volume (veh/h)	148	276	56	157	541	302	58	295	82	102	190	97
Future Volume (veh/h)	148	276	56	157	541	302	58	295	82	102	190	97
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1218	1707	1530	1870	1811	1900	1470	1781	1796	1885	1811	877
Adj Flow Rate, veh/h	161	300	52	171	588	308	63	321	82	111	207	56
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	46	13	25	2	6	0	29	8	7	1	6	69
Cap, veh/h	185	1697	472	137	928	432	142	522	235	139	482	127
Arrive On Green	0.16	0.36	0.36	0.08	0.28	0.28	0.05	0.15	0.15	0.08	0.18	0.18
Sat Flow, veh/h	1160	4661	1296	1781	3296	1535	2716	3385	1522	1795	2693	711
Grp Volume(v), veh/h	161	300	52	171	588	308	63	321	82	111	130	133
Grp Sat Flow(s),veh/h/ln	1160	1554	1296	1781	1648	1535	1358	1692	1522	1795	1721	1683
Q Serve(g_s), s	8.8	2.8	1.7	5.0	10.1	11.7	1.5	5.7	3.1	3.9	4.4	4.5
Cycle Q Clear(g_c), s	8.8	2.8	1.7	5.0	10.1	11.7	1.5	5.7	3.1	3.9	4.4	4.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.42
Lane Grp Cap(c), veh/h	185	1697	472	137	928	432	142	522	235	139	308	302
V/C Ratio(X)	0.87	0.18	0.11	1.24	0.63	0.71	0.44	0.61	0.35	0.80	0.42	0.44
Avail Cap(c_a), veh/h	523	3662	1018	137	1358	632	373	2022	909	139	903	883
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.5	14.0	13.6	29.9	20.4	20.9	29.8	25.6	24.5	29.4	23.6	23.7
Incr Delay (d2), s/veh	4.7	0.0	0.1	156.6	0.7	2.2	0.8	1.2	0.9	25.8	0.9	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.8	0.4	7.9	3.4	3.9	0.5	2.2	1.1	2.5	1.7	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.3	14.0	13.7	186.5	21.1	23.1	30.6	26.8	25.4	55.2	24.5	24.7
LnGrp LOS	C	B	B	F	C	C	C	C	C	E	C	C
Approach Vol, veh/h		513			1067			466			374	
Approach Delay, s/veh		19.4			48.2			27.0			33.7	
Approach LOS		B			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.6	29.4	8.0	17.8	15.0	24.0	9.6	16.2				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	5.0	50.9	8.9	34.0	29.2	26.7	5.0	* 39				
Max Q Clear Time (g_c+I1), s	7.0	4.8	3.5	6.5	10.8	13.7	5.9	7.7				
Green Ext Time (p_c), s	0.0	2.1	0.0	1.4	0.2	4.5	0.0	2.2				

Intersection Summary

HCM 6th Ctrl Delay	35.8
HCM 6th LOS	D

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Timings

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

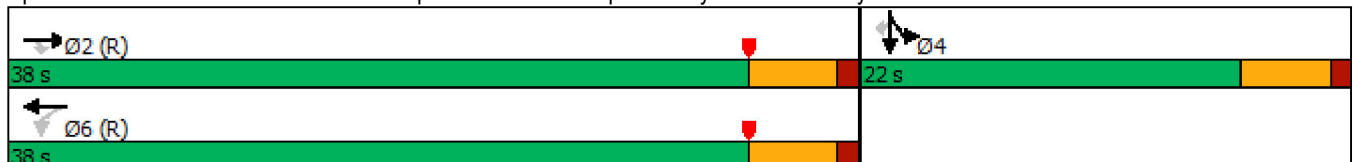


Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↑
Traffic Volume (vph)	875	96	639	400	0	226
Future Volume (vph)	875	96	639	400	0	226
Turn Type	NA	Perm	Perm	NA	NA	Perm
Protected Phases	2			6	4	
Permitted Phases		2	6			4
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	25.0	25.0	10.0	10.0
Total Split (s)	38.0	38.0	38.0	38.0	22.0	22.0
Total Split (%)	63.3%	63.3%	63.3%	63.3%	36.7%	36.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	33.0	33.0	33.0	33.0	17.0	17.0
Actuated g/C Ratio	0.55	0.55	0.55	0.55	0.28	0.28
v/c Ratio	0.50	0.11	2.75	0.23	1.33	0.42
Control Delay	9.6	2.0	808.9	8.5	186.5	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.6	2.0	808.9	8.5	186.5	5.2
LOS	A	A	F	A	F	A
Approach Delay	8.8			500.8	132.7	
Approach LOS	A			F	F	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 2.75  
 Intersection Signal Delay: 227.3  
 Intersection LOS: F  
 Intersection Capacity Utilization 152.9%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

11/09/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑						↑	↑
Traffic Volume (veh/h)	0	875	96	639	400	0	0	0	0	537	0	226
Future Volume (veh/h)	0	875	96	639	400	0	0	0	0	537	0	226
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1826	1885	1841	1826	0				1663	1900	1752
Adj Flow Rate, veh/h	0	951	104	695	435	0				584	0	186
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	5	1	4	5	0				16	0	10
Cap, veh/h	0	1908	878	320	1908	0				513	0	421
Arrive On Green	0.00	0.55	0.55	0.92	0.92	0.00				0.28	0.00	0.28
Sat Flow, veh/h	0	3561	1597	526	3561	0				1810	0	1485
Grp Volume(v), veh/h	0	951	104	695	435	0				584	0	186
Grp Sat Flow(s),veh/h/ln	0	1735	1597	526	1735	0				1810	0	1485
Q Serve(g_s), s	0.0	10.2	1.9	22.8	0.8	0.0				17.0	0.0	6.2
Cycle Q Clear(g_c), s	0.0	10.2	1.9	33.0	0.8	0.0				17.0	0.0	6.2
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1908	878	320	1908	0				513	0	421
V/C Ratio(X)	0.00	0.50	0.12	2.17	0.23	0.00				1.14	0.00	0.44
Avail Cap(c_a), veh/h	0	1908	878	320	1908	0				513	0	421
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.42	0.42	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	8.4	6.5	11.8	1.1	0.0				21.5	0.0	17.6
Incr Delay (d2), s/veh	0.0	0.9	0.3	531.6	0.1	0.0				84.0	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.8	0.5	50.7	0.2	0.0				18.0	0.0	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	9.3	6.8	543.4	1.2	0.0				105.5	0.0	18.3
LnGrp LOS	A	A	A	F	A	A				F	A	B
Approach Vol, veh/h		1055			1130						770	
Approach Delay, s/veh		9.1			334.7						84.5	
Approach LOS		A			F						F	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		38.0		22.0		38.0						
Change Period (Y+Rc), s		5.0		5.0		5.0						
Max Green Setting (Gmax), s		33.0		17.0		33.0						
Max Q Clear Time (g_c+1), s		12.2		19.0		35.0						
Green Ext Time (p_c), s		4.2		0.0		0.0						
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				153.2								
HCM 6th LOS				F								

Timings

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.



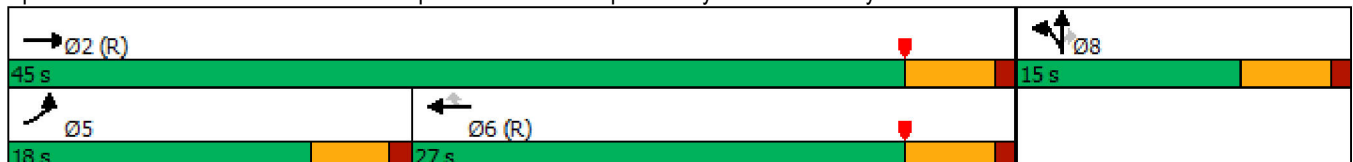
Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	479	933	991	1134	4	343
Future Volume (vph)	479	933	991	1134	4	343
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	26.0	24.0	24.0	10.0	10.0
Total Split (s)	18.0	45.0	27.0	27.0	15.0	15.0
Total Split (%)	30.0%	75.0%	45.0%	45.0%	25.0%	25.0%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max
Act Effct Green (s)	13.5	40.0	22.0	22.0	10.0	10.0
Actuated g/C Ratio	0.22	0.67	0.37	0.37	0.17	0.17
v/c Ratio	1.34	0.47	0.85	1.47	0.20	1.05
Control Delay	186.5	4.3	25.7	233.1	23.7	82.7
Queue Delay	0.0	0.3	0.0	0.0	0.0	0.0
Total Delay	186.5	4.6	25.7	233.1	23.7	82.7
LOS	F	A	C	F	C	F
Approach Delay		66.3	136.4		75.0	
Approach LOS		E	F		E	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 29 (48%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.47  
 Intersection Signal Delay: 105.1  
 Intersection Capacity Utilization 152.9%  
 Analysis Period (min) 15

Intersection LOS: F  
 ICU Level of Service H

Splits and Phases: 2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.



HCM 6th Signalized Intersection Summary

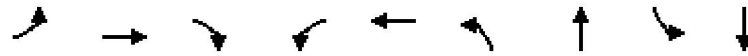
Gateway Aviation TA (JN:13445)

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

11/09/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	479	933	0	0	991	1134	48	4	343	0	0	0
Future Volume (veh/h)	479	933	0	0	991	1134	48	4	343	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1841	1722	0	0	1841	1752	1767	1900	1663			
Adj Flow Rate, veh/h	521	1014	0	0	1077	1169	52	4	308			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	4	12	0	0	4	10	9	0	16			
Cap, veh/h	394	2181	0	0	1282	544	281	22	235			
Arrive On Green	0.07	0.22	0.00	0.00	0.37	0.37	0.17	0.17	0.17			
Sat Flow, veh/h	1753	3358	0	0	3589	1485	1686	130	1409			
Grp Volume(v), veh/h	521	1014	0	0	1077	1169	56	0	308			
Grp Sat Flow(s),veh/h/ln	1753	1636	0	0	1749	1485	1816	0	1409			
Q Serve(g_s), s	13.5	16.2	0.0	0.0	16.9	22.0	1.6	0.0	10.0			
Cycle Q Clear(g_c), s	13.5	16.2	0.0	0.0	16.9	22.0	1.6	0.0	10.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.93		1.00			
Lane Grp Cap(c), veh/h	394	2181	0	0	1282	544	303	0	235			
V/C Ratio(X)	1.32	0.46	0.00	0.00	0.84	2.15	0.19	0.00	1.31			
Avail Cap(c_a), veh/h	394	2181	0	0	1282	544	303	0	235			
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.86	0.86	0.00	0.00	0.62	0.62	1.00	0.00	1.00			
Uniform Delay (d), s/veh	27.8	14.1	0.0	0.0	17.4	19.0	21.5	0.0	25.0			
Incr Delay (d2), s/veh	159.1	0.6	0.0	0.0	4.3	520.2	1.3	0.0	167.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	23.4	6.9	0.0	0.0	6.2	84.6	0.7	0.0	13.8			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	186.8	14.7	0.0	0.0	21.7	539.2	22.8	0.0	192.2			
LnGrp LOS	F	B	A	A	C	F	C	A	F			
Approach Vol, veh/h		1535			2246			364				
Approach Delay, s/veh		73.1			291.0			166.1				
Approach LOS		E			F			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		45.0			18.0	27.0		15.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		40.0			13.5	22.0		10.0				
Max Q Clear Time (g_c+I1), s		18.2			15.5	24.0		12.0				
Green Ext Time (p_c), s		4.5			0.0	0.0		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					199.4							
HCM 6th LOS					F							

Timings  
3: Western Way & Harley Knox Bl.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↑↑↑	↗	↖	↑↑↑	↖	↗	↖	↗
Traffic Volume (vph)	35	1241	1	2	1982	3	0	15	0
Future Volume (vph)	35	1241	1	2	1982	3	0	15	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	NA
Protected Phases	5	2		1	6		8		4
Permitted Phases			2			8		4	
Detector Phase	5	2	2	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	21.8	21.8	9.6	21.8	32.6	32.6	32.6	32.6
Total Split (s)	18.0	71.4	71.4	9.6	63.0	39.0	39.0	39.0	39.0
Total Split (%)	15.0%	59.5%	59.5%	8.0%	52.5%	32.5%	32.5%	32.5%	32.5%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	7.3	55.7	55.7	5.3	50.5	13.3	13.3	13.3	13.3
Actuated g/C Ratio	0.09	0.68	0.68	0.06	0.62	0.16	0.16	0.16	0.16
v/c Ratio	0.31	0.43	0.00	0.02	0.72	0.02	0.01	0.07	0.41
Control Delay	48.7	7.3	0.0	46.5	14.5	33.7	0.0	34.8	10.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.7	7.3	0.0	46.5	14.5	33.7	0.0	34.8	10.4
LOS	D	A	A	D	B	C	A	C	B
Approach Delay		8.4			14.6		14.4		12.7
Approach LOS		A			B		B		B

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 81.6	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 12.2	Intersection LOS: B
Intersection Capacity Utilization 55.9%	ICU Level of Service B
Analysis Period (min) 15	


























Splits and Phases: 3: Western Way & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 3: Western Way & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  							
Traffic Volume (veh/h)	35	1241	1	2	1982	11	3	0	4	15	0	140
Future Volume (veh/h)	35	1241	1	2	1982	11	3	0	4	15	0	140
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1426	1722	1900	1900	1796	1515	1900	1900	1900	1767	1900	1811
Adj Flow Rate, veh/h	38	1349	1	2	2154	10	3	0	4	16	0	140
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	32	12	0	0	7	26	0	0	0	9	0	6
Cap, veh/h	51	3048	1044	5	3092	14	170	0	219	281	0	219
Arrive On Green	0.04	0.65	0.65	0.00	0.61	0.61	0.14	0.00	0.14	0.14	0.00	0.14
Sat Flow, veh/h	1358	4701	1610	1810	5038	23	1269	0	1610	1334	0	1610
Grp Volume(v), veh/h	38	1349	1	2	1398	766	3	0	4	16	0	140
Grp Sat Flow(s),veh/h/ln	1358	1567	1610	1810	1635	1792	1269	0	1610	1334	0	1610
Q Serve(g_s), s	2.0	10.0	0.0	0.1	20.3	20.3	0.2	0.0	0.2	0.7	0.0	5.8
Cycle Q Clear(g_c), s	2.0	10.0	0.0	0.1	20.3	20.3	6.0	0.0	0.2	0.9	0.0	5.8
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	51	3048	1044	5	2006	1100	170	0	219	281	0	219
V/C Ratio(X)	0.75	0.44	0.00	0.41	0.70	0.70	0.02	0.00	0.02	0.06	0.00	0.64
Avail Cap(c_a), veh/h	258	4378	1499	128	2654	1455	617	0	786	751	0	786
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.6	6.1	4.4	35.1	9.2	9.2	31.6	0.0	26.4	26.7	0.0	28.8
Incr Delay (d2), s/veh	8.1	0.1	0.0	18.7	0.5	1.0	0.0	0.0	0.0	0.1	0.0	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	2.1	0.0	0.1	5.0	5.7	0.0	0.0	0.1	0.2	0.0	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.7	6.2	4.4	53.8	9.7	10.1	31.7	0.0	26.4	26.8	0.0	31.9
LnGrp LOS	D	A	A	D	A	B	C	A	C	C	A	C
Approach Vol, veh/h		1388			2166			7				156
Approach Delay, s/veh		7.2			9.9			28.6				31.4
Approach LOS		A			A			C				C
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.8	51.5		14.2	7.2	49.0		14.2				
Change Period (Y+Rc), s	4.6	5.8		4.6	4.6	5.8		4.6				
Max Green Setting (Gmax), s	5.0	65.6		34.4	13.4	57.2		34.4				
Max Q Clear Time (g_c+I1), s	2.1	12.0		7.8	4.0	22.3		8.0				
Green Ext Time (p_c), s	0.0	12.6		0.9	0.0	20.9		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				9.8								
HCM 6th LOS				A								

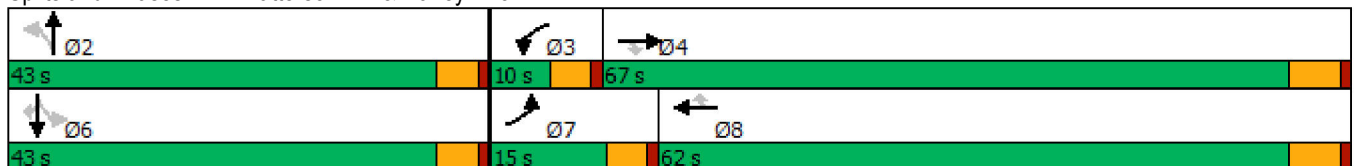
Timings  
4: Patterson Av. & Harley Knox Bl.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	27	985	46	49	1842	10	118	3	26	4	35
Future Volume (vph)	27	985	46	49	1842	10	118	3	26	4	35
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	7	4		3	8			2		6	
Permitted Phases			4			8	2		6		6
Detector Phase	7	4	4	3	8	8	2	2	6	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	9.6	31.8	31.8	33.7	33.7	40.7	40.7	40.7
Total Split (s)	15.0	67.0	67.0	10.0	62.0	62.0	43.0	43.0	43.0	43.0	43.0
Total Split (%)	12.5%	55.8%	55.8%	8.3%	51.7%	51.7%	35.8%	35.8%	35.8%	35.8%	35.8%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8		4.7		4.7	4.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	7.0	59.0	59.0	5.4	59.7	59.7		18.5		18.5	18.5
Actuated g/C Ratio	0.07	0.61	0.61	0.06	0.62	0.62		0.19		0.19	0.19
v/c Ratio	0.35	0.38	0.05	0.52	0.95	0.01		0.67		0.14	0.11
Control Delay	57.1	11.4	3.0	67.1	32.5	0.0		44.5		32.7	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	57.1	11.4	3.0	67.1	32.5	0.0		44.5		32.7	0.6
LOS	E	B	A	E	C	A		D		C	A
Approach Delay		12.2			33.2			44.5		15.3	
Approach LOS		B			C			D		B	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 96.1  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.95  
 Intersection Signal Delay: 26.5  
 Intersection LOS: C  
 Intersection Capacity Utilization 81.3%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 4: Patterson Av. & Harley Knox Bl.





HCM 6th Signalized Intersection Summary  
 4: Patterson Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/09/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	985	46	49	1842	10	118	3	44	26	4	35
Future Volume (veh/h)	27	985	46	49	1842	10	118	3	44	26	4	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1070	1722	1856	1900	1796	1292	1826	1900	1811	1663	1426	1604
Adj Flow Rate, veh/h	29	1071	50	53	2002	11	128	3	48	28	4	38
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	56	12	3	0	7	41	5	0	6	16	32	20
Cap, veh/h	29	2896	969	75	2145	674	221	12	60	234	27	231
Arrive On Green	0.03	0.62	0.62	0.04	0.63	0.63	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	1019	4701	1572	1810	3413	1073	886	72	351	921	159	1359
Grp Volume(v), veh/h	29	1071	50	53	2002	11	179	0	0	32	0	38
Grp Sat Flow(s),veh/h/ln	1019	1567	1572	1810	1706	1073	1309	0	0	1080	0	1359
Q Serve(g_s), s	2.5	9.9	1.1	2.5	46.1	0.3	9.7	0.0	0.0	0.0	0.0	2.1
Cycle Q Clear(g_c), s	2.5	9.9	1.1	2.5	46.1	0.3	11.9	0.0	0.0	2.1	0.0	2.1
Prop In Lane	1.00		1.00	1.00		1.00	0.72		0.27	0.87		1.00
Lane Grp Cap(c), veh/h	29	2896	969	75	2145	674	293	0	0	261	0	231
V/C Ratio(X)	0.98	0.37	0.05	0.71	0.93	0.02	0.61	0.00	0.00	0.12	0.00	0.16
Avail Cap(c_a), veh/h	121	3292	1101	112	2194	690	681	0	0	547	0	595
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	42.4	8.3	6.7	41.4	14.6	6.1	35.6	0.0	0.0	31.0	0.0	31.0
Incr Delay (d2), s/veh	43.2	0.1	0.0	4.5	8.0	0.0	2.1	0.0	0.0	0.2	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	2.7	0.3	1.2	15.6	0.1	3.8	0.0	0.0	0.6	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	85.6	8.4	6.7	45.9	22.6	6.1	37.7	0.0	0.0	31.2	0.0	31.3
LnGrp LOS	F	A	A	D	C	A	D	A	A	C	A	C
Approach Vol, veh/h		1150			2066			179				70
Approach Delay, s/veh		10.3			23.1			37.7				31.3
Approach LOS		B			C			D				C
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		19.6	8.2	59.6		19.6	7.1	60.7				
Change Period (Y+Rc), s		* 4.7	4.6	5.8		* 4.7	4.6	5.8				
Max Green Setting (Gmax), s		* 38	5.4	61.2		* 38	10.4	56.2				
Max Q Clear Time (g_c+I1), s		13.9	4.5	11.9		4.1	4.5	48.1				
Green Ext Time (p_c), s		1.0	0.0	9.0		0.3	0.0	6.8				

Intersection Summary

HCM 6th Ctrl Delay	19.8
HCM 6th LOS	B

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



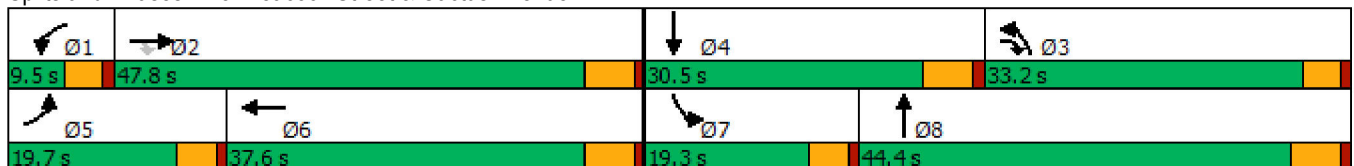
Timings  
5: Heacock Street & Cactus Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	244	2146	1379	27	956	829	674	184	746
Future Volume (vph)	244	2146	1379	27	956	829	674	184	746
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	3	1	6	3	8	7	4
Permitted Phases			2						
Detector Phase	5	2	3	1	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.5	30.5	9.5	9.5	30.5	9.5	30.5	9.5	30.5
Total Split (s)	19.7	47.8	33.2	9.5	37.6	33.2	44.4	19.3	30.5
Total Split (%)	16.3%	39.5%	27.4%	7.9%	31.1%	27.4%	36.7%	16.0%	25.2%
Yellow Time (s)	3.5	4.5	3.5	3.5	4.5	3.5	4.5	3.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	4.5	4.5	5.5	4.5	5.5	4.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None
Act Effct Green (s)	15.2	46.1	75.8	5.0	32.1	28.7	39.5	14.2	25.0
Actuated g/C Ratio	0.13	0.38	0.63	0.04	0.27	0.24	0.33	0.12	0.21
v/c Ratio	1.07	1.56	1.25	0.38	1.13	1.02	0.63	0.86	1.10
Control Delay	127.4	284.4	139.6	71.2	110.7	80.8	37.1	86.2	106.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	127.4	284.4	139.6	71.2	110.7	80.8	37.1	86.2	106.0
LOS	F	F	F	E	F	F	D	F	F
Approach Delay		221.3			109.8		60.2		102.3
Approach LOS		F			F		E		F

Intersection Summary

Cycle Length: 121  
 Actuated Cycle Length: 121  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.56  
 Intersection Signal Delay: 154.7  
 Intersection LOS: F  
 Intersection Capacity Utilization 126.4%  
 ICU Level of Service H  
 Analysis Period (min) 15























Splits and Phases: 5: Heacock Street & Cactus Avenue



HCM 6th Signalized Intersection Summary  
5: Heacock Street & Cactus Avenue

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	244	2146	1379	27	956	132	829	674	68	184	746	61
Future Volume (veh/h)	244	2146	1379	27	956	132	829	674	68	184	746	61
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1811	1826	1885	1870	1811	1870	1870	1900	1856	1900
Adj Flow Rate, veh/h	254	2235	1436	28	996	138	864	702	71	192	777	64
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	1	6	5	1	2	6	2	2	0	3	0
Cap, veh/h	225	1367	916	44	853	118	812	1093	110	218	693	57
Arrive On Green	0.12	0.36	0.36	0.03	0.26	0.26	0.24	0.33	0.33	0.12	0.20	0.20
Sat Flow, veh/h	1810	3770	1531	1739	3241	449	3450	3335	337	1810	3382	278
Grp Volume(v), veh/h	254	2235	1436	28	579	555	864	393	380	192	426	415
Grp Sat Flow(s),veh/h/ln	1810	1885	1531	1739	1885	1804	1725	1870	1802	1810	1856	1804
Q Serve(g_s), s	15.2	44.2	27.8	1.9	32.1	32.1	28.7	21.8	21.9	12.7	25.0	25.0
Cycle Q Clear(g_c), s	15.2	44.2	27.8	1.9	32.1	32.1	28.7	21.8	21.9	12.7	25.0	25.0
Prop In Lane	1.00		1.00	1.00		0.25	1.00		0.19	1.00		0.15
Lane Grp Cap(c), veh/h	225	1367	916	44	496	475	812	613	591	218	380	370
V/C Ratio(X)	1.13	1.63	1.57	0.64	1.17	1.17	1.06	0.64	0.64	0.88	1.12	1.12
Avail Cap(c_a), veh/h	225	1367	916	71	496	475	812	613	591	220	380	370
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.4	38.9	11.8	58.9	44.9	45.0	46.7	34.9	34.9	52.8	48.5	48.5
Incr Delay (d2), s/veh	98.2	289.0	260.6	5.7	95.3	96.6	50.2	1.8	1.9	29.9	83.2	84.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.8	74.0	77.5	0.9	27.5	26.5	17.5	9.9	9.5	7.4	20.0	19.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	151.6	327.9	272.4	64.6	140.3	141.6	96.9	36.7	36.8	82.7	131.7	132.5
LnGrp LOS	F	F	F	E	F	F	F	D	D	F	F	F
Approach Vol, veh/h		3925			1162			1637			1033	
Approach Delay, s/veh		296.2			139.1			68.5			122.9	
Approach LOS		F			F			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.6	49.7	34.2	30.5	19.7	37.6	19.2	45.5				
Change Period (Y+Rc), s	4.5	5.5	5.5	* 5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	5.0	42.3	28.7	* 25	15.2	32.1	14.8	38.9				
Max Q Clear Time (g_c+I1), s	3.9	46.2	30.7	27.0	17.2	34.1	14.7	23.9				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5				

Intersection Summary

HCM 6th Ctrl Delay	201.5
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

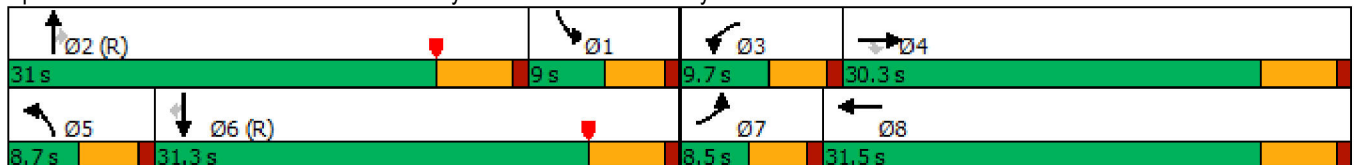
Timings  
6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	37	239	397	36	99	98	1066	89	362	1258	24
Future Volume (vph)	37	239	397	36	99	98	1066	89	362	1258	24
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4					2			6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Minimum Split (s)	8.5	23.5	23.5	8.5	31.5	8.5	30.5	30.5	8.5	23.5	23.5
Total Split (s)	8.5	30.3	30.3	9.7	31.5	8.7	31.0	31.0	9.0	31.3	31.3
Total Split (%)	10.6%	37.9%	37.9%	12.1%	39.4%	10.9%	38.8%	38.8%	11.3%	39.1%	39.1%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	5.5	4.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	4.0	16.5	16.5	5.0	17.2	9.2	37.7	37.7	4.5	33.0	33.0
Actuated g/C Ratio	0.05	0.21	0.21	0.06	0.22	0.12	0.47	0.47	0.06	0.41	0.41
v/c Ratio	0.42	0.67	0.75	0.33	0.33	0.49	0.69	0.10	3.85	0.93	0.03
Control Delay	50.5	37.1	21.3	43.4	10.3	45.8	22.8	0.7	1321.3	39.5	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.5	37.1	21.3	43.4	10.3	45.8	22.8	0.7	1321.3	39.5	0.1
LOS	D	D	C	D	B	D	C	A	F	D	A
Approach Delay		28.5			13.9		23.0			321.0	
Approach LOS		C			B		C			F	

Intersection Summary

Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 110  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 3.85  
 Intersection Signal Delay: 148.7  
 Intersection LOS: F  
 Intersection Capacity Utilization 82.1%  
 ICU Level of Service E  
 Analysis Period (min) 15
























Splits and Phases: 6: Heacock Street & Meyer Drive/John F. Kennedy Drive



HCM 6th Signalized Intersection Summary  
 6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	239	397	36	99	194	98	1066	89	362	1258	24
Future Volume (veh/h)	37	239	397	36	99	194	98	1066	89	362	1258	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1900	1900	1885	1885	1900	1796	1900	1841	1796	1900
Adj Flow Rate, veh/h	40	260	432	39	108	211	107	1159	97	393	1367	26
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	1	0	0	1	1	0	7	0	4	7	0
Cap, veh/h	53	548	468	52	548	464	95	1145	513	173	1356	608
Arrive On Green	0.03	0.29	0.29	0.03	0.29	0.29	0.05	0.32	0.32	0.10	0.38	0.38
Sat Flow, veh/h	1810	1885	1610	1810	1885	1598	1810	3593	1610	1753	3593	1610
Grp Volume(v), veh/h	40	260	432	39	108	211	107	1159	97	393	1367	26
Grp Sat Flow(s),veh/h/ln	1810	1885	1610	1810	1885	1598	1810	1796	1610	1753	1796	1610
Q Serve(g_s), s	1.8	9.1	20.8	1.7	3.4	8.6	4.2	25.5	2.7	7.9	30.2	0.8
Cycle Q Clear(g_c), s	1.8	9.1	20.8	1.7	3.4	8.6	4.2	25.5	2.7	7.9	30.2	0.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	53	548	468	52	548	464	95	1145	513	173	1356	608
V/C Ratio(X)	0.75	0.47	0.92	0.74	0.20	0.45	1.13	1.01	0.19	2.27	1.01	0.04
Avail Cap(c_a), veh/h	90	584	499	118	613	519	95	1145	513	173	1356	608
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.62	0.62	0.62	0.09	0.09	0.09
Uniform Delay (d), s/veh	38.5	23.3	27.5	38.5	21.4	23.2	37.9	27.2	11.8	36.0	24.9	15.8
Incr Delay (d2), s/veh	7.6	0.2	21.3	7.5	0.1	0.3	110.7	24.0	0.5	572.4	9.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	3.8	10.0	0.8	1.4	3.0	4.7	13.4	1.2	30.7	12.7	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.2	23.6	48.8	46.0	21.4	23.5	148.6	51.2	12.3	608.4	34.2	15.8
LnGrp LOS	D	C	D	D	C	C	F	F	B	F	F	B
Approach Vol, veh/h		732			358			1363			1786	
Approach Delay, s/veh		39.7			25.3			56.1			160.3	
Approach LOS		D			C			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.4	31.0	6.8	28.8	8.7	35.7	6.9	28.7				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	4.5	* 26	5.2	24.8	4.2	25.8	4.0	26.0				
Max Q Clear Time (g_c+I1), s	9.9	27.5	3.7	22.8	6.2	32.2	3.8	10.6				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.5	0.0	0.0	0.0	1.0				













Intersection Summary

HCM 6th Ctrl Delay	94.6
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
7: Heacock Street & Gentian Avenue

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	8	122	1145	16	133	1452
Future Volume (vph)	8	122	1145	16	133	1452
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	27.6	27.6	27.2	27.2	9.6	16.2
Total Split (s)	31.0	31.0	62.0	62.0	27.0	89.0
Total Split (%)	25.8%	25.8%	51.7%	51.7%	22.5%	74.2%
Yellow Time (s)	3.6	3.6	5.2	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	6.2	6.2	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	12.3	12.3	36.5	36.5	11.5	52.9
Actuated g/C Ratio	0.16	0.16	0.48	0.48	0.15	0.69
v/c Ratio	0.03	0.32	0.77	0.02	0.53	0.66
Control Delay	33.0	9.0	20.8	10.3	40.8	8.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.0	9.0	20.8	10.3	40.8	8.4
LOS	C	A	C	B	D	A
Approach Delay	10.6		20.6			11.2
Approach LOS	B		C			B

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 76.6	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 15.0	Intersection LOS: B
Intersection Capacity Utilization 60.2%	ICU Level of Service B
Analysis Period (min) 15	













Splits and Phases: 7: Heacock Street & Gentian Avenue



















HCM 6th Signalized Intersection Summary  
7: Heacock Street & Gentian Avenue

Gateway Aviation TA (JN:13445)

11/09/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	8	122	1145	16	133	1452
Future Volume (veh/h)	8	122	1145	16	133	1452
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1811	1900	1826	1826
Adj Flow Rate, veh/h	9	133	1245	17	145	1578
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	6	0	5	5
Cap, veh/h	270	241	1690	791	185	2335
Arrive On Green	0.15	0.15	0.49	0.49	0.11	0.67
Sat Flow, veh/h	1810	1610	3532	1610	1739	3561
Grp Volume(v), veh/h	9	133	1245	17	145	1578
Grp Sat Flow(s),veh/h/ln	1810	1610	1721	1610	1739	1735
Q Serve(g_s), s	0.3	4.7	17.6	0.3	4.9	16.6
Cycle Q Clear(g_c), s	0.3	4.7	17.6	0.3	4.9	16.6
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	270	241	1690	791	185	2335
V/C Ratio(X)	0.03	0.55	0.74	0.02	0.78	0.68
Avail Cap(c_a), veh/h	785	698	3154	1476	640	4719
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.1	24.0	12.3	8.0	26.5	6.0
Incr Delay (d2), s/veh	0.0	0.7	0.6	0.0	2.7	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	1.6	4.8	0.1	1.9	2.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	22.1	24.7	13.0	8.0	29.3	6.3
LnGrp LOS	C	C	B	A	C	A
Approach Vol, veh/h	142		1262			1723
Approach Delay, s/veh	24.6		12.9			8.2
Approach LOS	C		B			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	11.1	36.1			47.2	13.7
Change Period (Y+Rc), s	4.6	6.2			6.2	4.6
Max Green Setting (Gmax), s	22.4	55.8			82.8	26.4
Max Q Clear Time (g_c+1), s	6.9	19.6			18.6	6.7
Green Ext Time (p_c), s	0.1	10.3			17.2	0.2
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			10.9			
HCM 6th LOS			B			

Timings  
8: Heacock Street & Iris Avenue

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 		 		 	 
Traffic Volume (vph)	271	344	872	416	577	953
Future Volume (vph)	271	344	872	416	577	953
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	15.8	15.8	33.2	33.2	9.6	16.2
Total Split (s)	35.0	35.0	47.0	47.0	38.0	85.0
Total Split (%)	29.2%	29.2%	39.2%	39.2%	31.7%	70.8%
Yellow Time (s)	4.8	4.8	5.2	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	6.2	6.2	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	13.3	13.3	32.6	32.6	19.5	56.9
Actuated g/C Ratio	0.16	0.16	0.39	0.39	0.24	0.69
v/c Ratio	0.50	0.60	0.71	0.55	0.73	0.45
Control Delay	36.8	8.6	25.0	9.8	35.7	6.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.8	8.6	25.0	9.8	35.7	6.4
LOS	D	A	C	A	D	A
Approach Delay	21.0		20.1			17.4
Approach LOS	C		C			B

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 82.6	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 19.1	Intersection LOS: B
Intersection Capacity Utilization 62.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 8: Heacock Street & Iris Avenue





















HCM 6th Signalized Intersection Summary  
8: Heacock Street & Iris Avenue

Gateway Aviation TA (JN:13445)

11/09/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 		 		 	 
Traffic Volume (veh/h)	271	344	872	416	577	953
Future Volume (veh/h)	271	344	872	416	577	953
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1796	1900	1885	1796
Adj Flow Rate, veh/h	295	374	948	452	627	1036
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	7	0	1	7
Cap, veh/h	916	420	1196	564	722	2075
Arrive On Green	0.26	0.26	0.35	0.35	0.21	0.61
Sat Flow, veh/h	3510	1610	3503	1610	3483	3503
Grp Volume(v), veh/h	295	374	948	452	627	1036
Grp Sat Flow(s),veh/h/ln	1755	1610	1706	1610	1742	1706
Q Serve(g_s), s	6.2	20.5	22.9	23.2	15.9	15.7
Cycle Q Clear(g_c), s	6.2	20.5	22.9	23.2	15.9	15.7
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	916	420	1196	564	722	2075
V/C Ratio(X)	0.32	0.89	0.79	0.80	0.87	0.50
Avail Cap(c_a), veh/h	1119	513	1520	717	1270	2936
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.3	32.6	26.8	26.9	35.1	10.1
Incr Delay (d2), s/veh	0.2	15.2	2.3	5.1	1.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	9.2	8.7	8.8	6.4	4.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	27.5	47.8	29.1	32.0	36.4	10.3
LnGrp LOS	C	D	C	C	D	B
Approach Vol, veh/h	669		1400			1663
Approach Delay, s/veh	38.8		30.0			20.1
Approach LOS	D		C			C
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	23.6	38.3			61.9	29.7
Change Period (Y+Rc), s	4.6	6.2			6.2	5.8
Max Green Setting (Gmax), s	33.4	40.8			78.8	29.2
Max Q Clear Time (g_c+I1), s	17.9	25.2			17.7	22.5
Green Ext Time (p_c), s	1.1	6.9			8.3	1.4
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			27.2			
HCM 6th LOS			C			



Timings  
9: Heacock Street & Krameria Avenue-North

	↙	↖	↑	↘	↓
Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations	↙	↖	↑↓	↘	↑↑
Traffic Volume (vph)	248	274	893	123	821
Future Volume (vph)	248	274	893	123	821
Turn Type	Prot	Perm	NA	Prot	NA
Protected Phases	8		2	1	6
Permitted Phases		8			
Detector Phase	8	8	2	1	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	29.1	29.1	29.2	9.6	16.2
Total Split (s)	35.0	35.0	61.0	24.0	85.0
Total Split (%)	29.2%	29.2%	50.8%	20.0%	70.8%
Yellow Time (s)	4.1	4.1	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	6.2	4.6	6.2
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	Min	Max	Min
Act Effct Green (s)	17.3	17.3	33.3	20.0	58.0
Actuated g/C Ratio	0.20	0.20	0.38	0.23	0.67
v/c Ratio	0.72	0.50	0.82	0.33	0.39
Control Delay	45.4	7.0	29.8	35.1	7.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	45.4	7.0	29.8	35.1	7.5
LOS	D	A	C	D	A
Approach Delay	25.3		29.8		11.1
Approach LOS	C		C		B

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 86.9  
 Natural Cycle: 75  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.82  
 Intersection Signal Delay: 21.7  
 Intersection LOS: C  
 Intersection Capacity Utilization 62.4%  
 ICU Level of Service B  
 Analysis Period (min) 15













Splits and Phases: 9: Heacock Street & Krameria Avenue-North



HCM 6th Signalized Intersection Summary  
 9: Heacock Street & Krameria Avenue-North

Gateway Aviation TA (JN:13445)

11/09/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	248	274	893	123	123	821
Future Volume (veh/h)	248	274	893	123	123	821
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1885	1841	1870	1900	1811	1841
Adj Flow Rate, veh/h	270	298	971	134	134	892
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	4	2	0	6	4
Cap, veh/h	393	341	1131	156	399	2262
Arrive On Green	0.22	0.22	0.36	0.36	0.23	0.65
Sat Flow, veh/h	1795	1560	3230	433	1725	3589
Grp Volume(v), veh/h	270	298	550	555	134	892
Grp Sat Flow(s),veh/h/ln	1795	1560	1777	1792	1725	1749
Q Serve(g_s), s	11.6	15.5	24.0	24.1	5.4	10.2
Cycle Q Clear(g_c), s	11.6	15.5	24.0	24.1	5.4	10.2
Prop In Lane	1.00	1.00		0.24	1.00	
Lane Grp Cap(c), veh/h	393	341	641	646	399	2262
V/C Ratio(X)	0.69	0.87	0.86	0.86	0.34	0.39
Avail Cap(c_a), veh/h	640	556	1160	1170	399	3284
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.1	31.7	24.8	24.8	26.9	7.0
Incr Delay (d2), s/veh	0.8	4.9	1.3	1.3	2.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	6.2	9.1	9.2	2.3	2.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	30.9	36.6	26.2	26.2	29.2	7.1
LnGrp LOS	C	D	C	C	C	A
Approach Vol, veh/h	568		1105			1026
Approach Delay, s/veh	33.9		26.2			10.0
Approach LOS	C		C			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	24.0	36.5			60.5	23.4
Change Period (Y+Rc), s	4.6	6.2			6.2	5.1
Max Green Setting (Gmax), s	19.4	54.8			78.8	29.9
Max Q Clear Time (g_c+1), s	7.4	26.1			12.2	17.5
Green Ext Time (p_c), s	0.1	4.2			3.9	0.9
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			21.6			
HCM 6th LOS			C			

Timings  
10: Heacock Street & Driveway 1



Lane Group	EBL	EBT	NBL	NBT	SBT	SBR	Ø1	Ø8
Lane Configurations								
Traffic Volume (vph)	31	0	18	913	1134	2		
Future Volume (vph)	31	0	18	913	1134	2		
Turn Type	Perm	NA	Prot	NA	NA	Perm		
Protected Phases		4	5	2	6		1	8
Permitted Phases	4					6		
Detector Phase	4	4	5	2	6	6		
Switch Phase								
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	26.7	26.7	9.6	23.2	23.2	23.2	9.6	26.7
Total Split (s)	28.0	28.0	17.0	82.4	75.0	75.0	9.6	28.0
Total Split (%)	23.3%	23.3%	14.2%	68.7%	62.5%	62.5%	8%	23%
Yellow Time (s)	3.7	3.7	3.6	5.2	5.2	5.2	3.6	3.7
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.7	4.7	4.6	6.2	6.2	6.2		
Lead/Lag			Lead	Lag	Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	Min	Min	Min	None	None
Act Effct Green (s)	12.7	12.7	6.8	41.5	39.7	39.7		
Actuated g/C Ratio	0.22	0.22	0.12	0.70	0.67	0.67		
v/c Ratio	0.11	0.11	0.19	0.40	0.52	0.00		
Control Delay	24.7	0.4	35.1	6.1	9.7	0.0		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay	24.7	0.4	35.1	6.1	9.7	0.0		
LOS	C	A	D	A	A	A		
Approach Delay		10.2		6.7	9.7			
Approach LOS		B		A	A			

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 59	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.52	
Intersection Signal Delay: 8.4	Intersection LOS: A
Intersection Capacity Utilization 48.8%	ICU Level of Service A
Analysis Period (min) 15	






















Splits and Phases: 10: Heacock Street & Driveway 1



HCM 6th Signalized Intersection Summary  
 10: Heacock Street & Driveway 1

Gateway Aviation TA (JN:13445)

11/17/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	0	47	0	0	0	18	913	0	0	1134	2
Future Volume (veh/h)	31	0	47	0	0	0	18	913	0	0	1134	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1233	1233	1900	1900	1900	507	1870	1870	1900	1856	1900
Adj Flow Rate, veh/h	34	0	51	0	0	0	20	992	0	0	1233	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	45	45	0	0	0	94	2	2	0	3	0
Cap, veh/h	400	0	146	0	266	0	12	2265	0	4	1830	836
Arrive On Green	0.14	0.00	0.14	0.00	0.00	0.00	0.02	0.64	0.00	0.00	0.52	0.52
Sat Flow, veh/h	1810	0	1045	0	1900	0	483	3647	0	1810	3526	1610
Grp Volume(v), veh/h	34	0	51	0	0	0	20	992	0	0	1233	2
Grp Sat Flow(s),veh/h/ln	1810	0	1045	0	1900	0	483	1777	0	1810	1763	1610
Q Serve(g_s), s	0.8	0.0	2.2	0.0	0.0	0.0	1.2	6.9	0.0	0.0	12.7	0.0
Cycle Q Clear(g_c), s	0.8	0.0	2.2	0.0	0.0	0.0	1.2	6.9	0.0	0.0	12.7	0.0
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	400	0	146	0	266	0	12	2265	0	4	1830	836
V/C Ratio(X)	0.08	0.00	0.35	0.00	0.00	0.00	1.70	0.44	0.00	0.00	0.67	0.00
Avail Cap(c_a), veh/h	1008	0	497	0	904	0	122	5531	0	185	4955	2263
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	18.5	0.0	19.0	0.0	0.0	0.0	23.9	4.5	0.0	0.0	8.7	5.7
Incr Delay (d2), s/veh	0.1	0.0	1.4	0.0	0.0	0.0	343.9	0.1	0.0	0.0	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.5	0.0	0.0	0.0	1.2	0.8	0.0	0.0	2.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.5	0.0	20.5	0.0	0.0	0.0	367.8	4.6	0.0	0.0	9.1	5.7
LnGrp LOS	B	A	C	A	A	A	F	A	A	A	A	A
Approach Vol, veh/h		85			0			1012			1235	
Approach Delay, s/veh		19.7			0.0			11.8			9.1	
Approach LOS		B						B			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	37.4		11.6	5.8	31.6		11.6				
Change Period (Y+Rc), s	4.6	6.2		* 4.7	4.6	6.2		* 4.7				
Max Green Setting (Gmax), s	5.0	76.2		* 23	12.4	68.8		* 23				
Max Q Clear Time (g_c+I1), s	0.0	8.9		4.2	3.2	14.7		0.0				
Green Ext Time (p_c), s	0.0	7.7		0.3	0.0	10.7		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				10.7								
HCM 6th LOS				B								
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Intersection						
Int Delay, s/veh	1.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↕	↗	↘	↕
Traffic Vol, veh/h	61	57	1077	20	18	1589
Future Vol, veh/h	61	57	1077	20	18	1589
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	0	140	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	10	7	14	8	10
Mvmt Flow	66	62	1171	22	20	1727

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	2075	586	0	0	1193
Stage 1	1171	-	-	-	-
Stage 2	904	-	-	-	-
Critical Hdwy	6.84	7.1	-	-	4.26
Critical Hdwy Stg 1	5.84	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-
Follow-up Hdwy	3.52	3.4	-	-	2.28
Pot Cap-1 Maneuver	~ 46	434	-	-	548
Stage 1	257	-	-	-	-
Stage 2	355	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	~ 44	434	-	-	548
Mov Cap-2 Maneuver	154	-	-	-	-
Stage 1	257	-	-	-	-
Stage 2	342	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	30.4	0	0.1
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	154	434	548
HCM Lane V/C Ratio	-	-	0.431	0.143	0.036
HCM Control Delay (s)	-	-	45	14.7	11.8
HCM Lane LOS	-	-	E	B	B
HCM 95th %tile Q(veh)	-	-	1.9	0.5	0.1

Notes  
 ~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Timings  
12: Heacock Street & San Michele Road

											Ø5
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBL	SBT	SBR	Ø5
Lane Configurations											
Traffic Volume (vph)	59	348	8	23	102	699	133	927	343	36	
Future Volume (vph)	59	348	8	23	102	699	133	927	343	36	
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	NA	Prot	NA	Perm	
Protected Phases	7	4		3	8	1	2	1	6		5
Permitted Phases			4			8				6	
Detector Phase	7	4	4	3	8	1	2	1	6	6	
Switch Phase											
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0
Minimum Split (s)	9.5	30.5	30.5	8.5	30.5	8.5	34.5	8.5	34.5	34.5	8.5
Total Split (s)	12.0	37.4	37.4	9.6	35.0	36.0	37.0	36.0	64.5	64.5	8.5
Total Split (%)	10.0%	31.2%	31.2%	8.0%	29.2%	30.0%	30.8%	30.0%	53.8%	53.8%	7%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5	5.5	
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	None	Max	Max	None
Act Effct Green (s)	13.4	25.3	25.3	5.0	14.9	52.2	31.8	31.8	68.2	68.2	
Actuated g/C Ratio	0.12	0.23	0.23	0.05	0.14	0.47	0.29	0.29	0.62	0.62	
v/c Ratio	0.28	0.86	0.02	0.29	0.43	0.66	0.20	1.84	0.35	0.03	
Control Delay	48.0	61.2	0.0	63.4	50.8	10.6	27.1	409.0	13.2	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	48.0	61.2	0.0	63.4	50.8	10.6	27.1	409.0	13.2	0.1	
LOS	D	E	A	E	D	B	C	F	B	A	
Approach Delay		58.1			17.1		27.1		293.8		
Approach LOS		E			B		C		F		

Intersection Summary

























Cycle Length: 120	
Actuated Cycle Length: 109.9	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.84	
Intersection Signal Delay: 156.9	Intersection LOS: F
Intersection Capacity Utilization 88.3%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 12: Heacock Street & San Michele Road



HCM 6th Signalized Intersection Summary  
 12: Heacock Street & San Michele Road

Gateway Aviation TA (JN:13445)  
 04/19/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	348	8	23	102	699	0	133	40	927	343	36
Future Volume (veh/h)	59	348	8	23	102	699	0	133	40	927	343	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1870	1900	1678	1900	1900	1722	1900
Adj Flow Rate, veh/h	64	378	9	25	111	760	0	145	43	1008	373	39
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	2	0	15	0	0	12	0
Cap, veh/h	83	418	345	79	414	783	2	675	194	500	1034	967
Arrive On Green	0.05	0.22	0.22	0.04	0.22	0.22	0.00	0.28	0.28	0.28	0.60	0.60
Sat Flow, veh/h	1810	1900	1569	1810	1900	1585	1810	2444	702	1810	1722	1610
Grp Volume(v), veh/h	64	378	9	25	111	760	0	93	95	1008	373	39
Grp Sat Flow(s),veh/h/ln	1810	1900	1569	1810	1900	1585	1810	1594	1551	1810	1722	1610
Q Serve(g_s), s	4.0	22.1	0.5	1.5	5.5	21.7	0.0	5.1	5.4	31.5	12.6	0.8
Cycle Q Clear(g_c), s	4.0	22.1	0.5	1.5	5.5	21.7	0.0	5.1	5.4	31.5	12.6	0.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.45	1.00		1.00
Lane Grp Cap(c), veh/h	83	418	345	79	414	783	2	440	428	500	1034	967
V/C Ratio(X)	0.77	0.90	0.03	0.32	0.27	0.97	0.00	0.21	0.22	2.02	0.36	0.04
Avail Cap(c_a), veh/h	119	531	439	81	491	848	63	440	428	500	1034	967
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.9	43.3	30.7	52.9	37.0	28.0	0.0	31.7	31.8	41.3	11.6	4.1
Incr Delay (d2), s/veh	10.2	14.3	0.0	0.8	0.1	22.6	0.0	1.1	1.2	464.9	1.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	12.1	0.2	0.7	2.5	9.3	0.0	2.0	2.1	77.7	4.5	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.1	57.6	30.7	53.8	37.2	50.7	0.0	32.8	33.0	506.1	12.6	4.2
LnGrp LOS	E	E	C	D	D	D	A	C	C	F	B	A
Approach Vol, veh/h		451			896			188			1420	
Approach Delay, s/veh		58.0			49.1			32.9			362.7	
Approach LOS		E			D			C			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	37.0	37.0	9.5	30.6	0.0	74.0	9.7	30.4				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	31.5	* 32	5.1	31.9	4.0	59.0	7.5	29.5				
Max Q Clear Time (g_c+I1), s	33.5	7.4	3.5	24.1	0.0	14.6	6.0	23.7				
Green Ext Time (p_c), s	0.0	0.5	0.0	1.0	0.0	1.3	0.0	1.2				

Intersection Summary

HCM 6th Ctrl Delay	200.1
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection					
Intersection Delay, s/veh20.9					
Intersection LOS C					
Approach	EB	WB	NB		
Entry Lanes	3	2	2		
Conflicting Circle Lanes	2	2	2		
Adj Approach Flow, veh/h	0	1962	130		
Demand Flow Rate, veh/h	0	2101	138		
Vehicles Circulating, veh/h	12	123	1162		
Vehicles Exiting, veh/h	2212	1177	134		
Ped Vol Crossing Leg, #/h	0	0	0		
Ped Cap Adj	1.000	1.000	1.000		
Approach Delay, s/veh	0.0	21.7	9.8		
Approach LOS	-	C	A		
Lane	Left	Right	Left	Right	
Designated Moves	LT	TR	L	LTR	
Assumed Moves	LT	TR	L	LTR	
RT Channelized					
Lane Util	0.470	0.530	0.529	0.471	
Follow-Up Headway, s	2.667	2.535	2.667	2.535	
Critical Headway, s	4.645	4.328	4.645	4.328	
Entry Flow, veh/h	987	1114	73	65	
Cap Entry Lane, veh/h	1205	1279	464	529	
Entry HV Adj Factor	0.934	0.934	0.944	0.940	
Flow Entry, veh/h	922	1040	69	61	
Cap Entry, veh/h	1126	1194	437	497	
V/C Ratio	0.819	0.871	0.157	0.123	
Control Delay, s/veh	19.8	23.3	10.5	8.9	
LOS	C	C	B	A	
95th %tile Queue, veh	10	12	1	0	



Timings  
14: Indian Street & San Michele Road

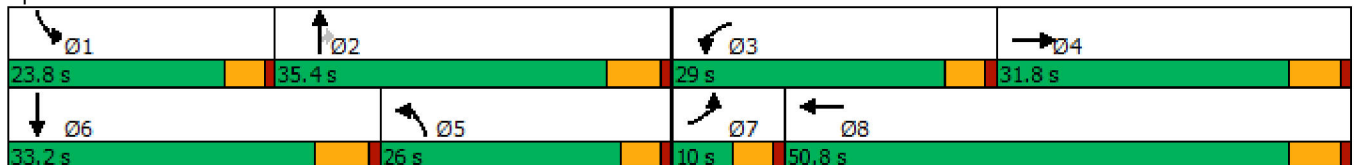


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	23	882	248	505	763	196	223	155	380
Future Volume (vph)	23	882	248	505	763	196	223	155	380
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8	5	2		1	6
Permitted Phases							2		
Detector Phase	7	4	3	8	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	31.8	9.6	31.8	9.6	32.8	32.8	9.6	32.8
Total Split (s)	10.0	31.8	29.0	50.8	26.0	35.4	35.4	23.8	33.2
Total Split (%)	8.3%	26.5%	24.2%	42.3%	21.7%	29.5%	29.5%	19.8%	27.7%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	5.3	26.2	18.9	44.1	21.6	25.9	25.9	13.5	17.9
Actuated g/C Ratio	0.05	0.25	0.18	0.42	0.20	0.25	0.25	0.13	0.17
v/c Ratio	0.28	2.64dr	0.81	0.41	1.11	0.48	0.38	0.70	0.73
Control Delay	60.3	723.0	61.4	23.4	107.7	39.8	6.4	60.6	48.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.3	723.0	61.4	23.4	107.7	39.8	6.4	60.6	48.3
LOS	E	F	E	C	F	D	A	E	D
Approach Delay		716.8		34.9		77.4			51.7
Approach LOS		F		C		E			D

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 105.5  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 2.56  
 Intersection Signal Delay: 379.6  
 Intersection LOS: F  
 Intersection Capacity Utilization 150.8%  
 ICU Level of Service H  
 Analysis Period (min) 15  
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.























Splits and Phases: 14: Indian Street & San Michele Road



HCM 6th Signalized Intersection Summary  
 14: Indian Street & San Michele Road

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	882	1546	248	505	69	763	196	223	155	380	32
Future Volume (veh/h)	23	882	1546	248	505	69	763	196	223	155	380	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		1.00	1.00		0.67
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1885	1870	1870	1870	1900	1841	1841	1870	1885	1870	1767
Adj Flow Rate, veh/h	25	959	1680	270	549	75	829	213	242	168	413	35
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	6	1	2	2	2	0	4	4	2	1	2	9
Cap, veh/h	41	402	349	298	1183	161	648	586	504	197	760	63
Arrive On Green	0.02	0.22	0.22	0.17	0.37	0.37	0.18	0.32	0.32	0.11	0.23	0.23
Sat Flow, veh/h	1725	1791	1555	1781	3211	437	3506	1841	1584	1795	3263	271
Grp Volume(v), veh/h	25	959	1680	270	319	305	829	213	242	168	233	215
Grp Sat Flow(s),veh/h/ln	1725	1791	1555	1781	1870	1778	1753	1841	1584	1795	1870	1664
Q Serve(g_s), s	1.7	26.0	26.0	17.2	15.0	15.1	21.4	10.3	14.2	10.6	12.7	13.1
Cycle Q Clear(g_c), s	1.7	26.0	26.0	17.2	15.0	15.1	21.4	10.3	14.2	10.6	12.7	13.1
Prop In Lane	1.00		1.00	1.00		0.25	1.00		1.00	1.00		0.16
Lane Grp Cap(c), veh/h	41	402	349	298	689	655	648	586	504	197	435	387
V/C Ratio(X)	0.61	2.38	4.81	0.90	0.46	0.47	1.28	0.36	0.48	0.85	0.54	0.55
Avail Cap(c_a), veh/h	80	402	349	376	727	691	648	586	504	298	443	394
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.0	44.9	44.9	47.3	27.8	27.9	47.2	30.4	31.7	50.6	38.9	39.1
Incr Delay (d2), s/veh	5.3	630.3	1720.8	19.1	0.2	0.2	137.1	0.1	0.3	9.3	0.6	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	81.5	176.6	9.0	6.5	6.2	21.3	4.4	5.3	5.1	5.6	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.2	675.2	1765.7	66.4	28.0	28.1	184.3	30.5	32.0	59.9	39.5	40.0
LnGrp LOS	E	F	F	E	C	C	F	C	C	E	D	D
Approach Vol, veh/h		2664			894			1284			616	
Approach Delay, s/veh		1357.1			39.6			130.1			45.3	
Approach LOS		F			D			F			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.3	42.7	24.0	31.8	27.2	32.7	7.4	48.4				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	5.8	* 5.8	4.6	5.8				
Max Green Setting (Gmax), s	19.2	29.6	24.4	26.0	21.4	* 27	5.4	45.0				
Max Q Clear Time (g_c+I1), s	12.6	16.2	19.2	28.0	23.4	15.1	3.7	17.1				
Green Ext Time (p_c), s	0.1	0.9	0.2	0.0	0.0	1.2	0.0	2.1				

Intersection Summary

HCM 6th Ctrl Delay	704.6
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

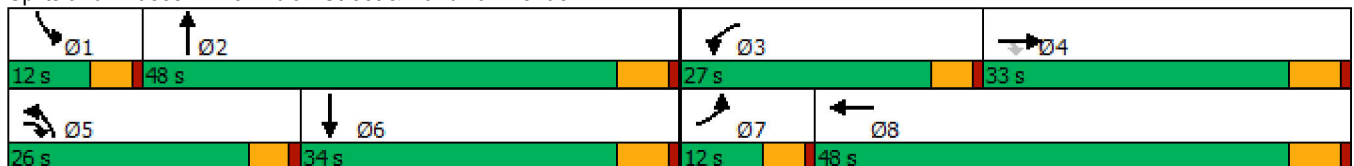
Timings  
15: Indian Street & Nandina Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	
Lane Configurations										
Traffic Volume (vph)	48	116	559	186	46	164	737	24	1595	
Future Volume (vph)	48	116	559	186	46	164	737	24	1595	
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA	
Protected Phases	7	4	5	3	8	5	2	1	6	
Permitted Phases	4									
Detector Phase	7	4	5	3	8	5	2	1	6	
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0	
Minimum Split (s)	9.6	29.8	9.6	9.6	29.8	9.6	26.8	9.6	26.8	
Total Split (s)	12.0	33.0	26.0	27.0	48.0	26.0	48.0	12.0	34.0	
Total Split (%)	10.0%	27.5%	21.7%	22.5%	40.0%	21.7%	40.0%	10.0%	28.3%	
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	3.6	4.8	3.6	4.8	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	4.6	5.8	4.6	5.8	
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	Min	None	Min	
Act Effct Green (s)	6.6	14.0	37.1	15.9	25.8	17.2	46.6	6.0	28.8	
Actuated g/C Ratio	0.07	0.14	0.38	0.16	0.27	0.18	0.48	0.06	0.30	
v/c Ratio	0.41	0.51	0.83	0.77	0.27	0.65	0.49	0.24	1.59	
Control Delay	57.7	48.0	32.9	60.1	16.3	50.8	21.0	53.7	296.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	57.7	48.0	32.9	60.1	16.3	50.8	21.0	53.7	296.7	
LOS	E	D	C	E	B	D	C	D	F	
Approach Delay	36.9						26.0		293.2	
Approach LOS	D						C		F	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 97.1  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.59  
 Intersection Signal Delay: 150.7  
 Intersection LOS: F  
 Intersection Capacity Utilization 102.7%  
 ICU Level of Service G  
 Analysis Period (min) 15
























Splits and Phases: 15: Indian Street & Nandina Avenue



HCM 6th Signalized Intersection Summary  
 15: Indian Street & Nandina Avenue

Gateway Aviation TA (JN:13445)

11/09/2020

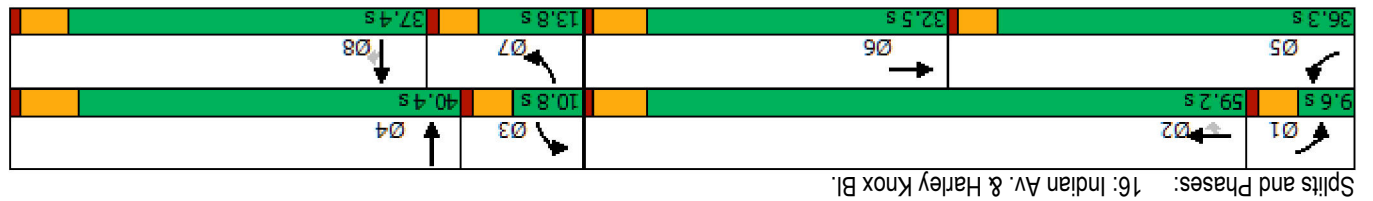
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	116	559	186	46	66	164	737	75	24	1595	36
Future Volume (veh/h)	48	116	559	186	46	66	164	737	75	24	1595	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1722	1767	1633	1500	1870	1559	1870	1841	1811	1885	1841
Adj Flow Rate, veh/h	52	126	608	202	50	72	178	801	82	26	1734	39
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	12	9	18	27	2	23	2	4	6	1	4
Cap, veh/h	67	440	588	229	203	293	203	1257	129	43	973	22
Arrive On Green	0.04	0.26	0.26	0.15	0.37	0.37	0.14	0.38	0.38	0.03	0.26	0.26
Sat Flow, veh/h	1810	1722	1497	1555	556	800	1485	3338	342	1725	3673	82
Grp Volume(v), veh/h	52	126	608	202	0	122	178	449	434	26	888	885
Grp Sat Flow(s),veh/h/ln	1810	1722	1497	1555	0	1356	1485	1870	1809	1725	1885	1870
Q Serve(g_s), s	3.0	6.3	27.2	13.5	0.0	6.7	12.5	20.9	21.0	1.6	28.2	28.2
Cycle Q Clear(g_c), s	3.0	6.3	27.2	13.5	0.0	6.7	12.5	20.9	21.0	1.6	28.2	28.2
Prop In Lane	1.00		1.00	1.00		0.59	1.00		0.19	1.00		0.04
Lane Grp Cap(c), veh/h	67	440	588	229	0	496	203	704	681	43	500	496
V/C Ratio(X)	0.77	0.29	1.03	0.88	0.00	0.25	0.88	0.64	0.64	0.60	1.78	1.79
Avail Cap(c_a), veh/h	126	440	588	327	0	538	299	742	717	120	500	496
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.8	31.8	32.3	44.5	0.0	23.5	45.0	27.2	27.2	51.3	39.1	39.1
Incr Delay (d2), s/veh	6.9	0.4	46.4	13.8	0.0	0.3	13.0	1.7	1.8	4.8	357.7	362.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	2.5	21.5	5.9	0.0	2.1	5.1	9.0	8.7	0.7	61.8	61.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.6	32.2	78.8	58.3	0.0	23.8	58.1	28.9	29.0	56.2	396.8	401.1
LnGrp LOS	E	C	F	E	A	C	E	C	C	E	F	F
Approach Vol, veh/h		786			324			1061			1799	
Approach Delay, s/veh		69.9			45.3			33.8			394.0	
Approach LOS		E			D			C			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.3	45.9	20.3	33.0	19.2	34.0	8.6	44.7				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	7.4	42.2	22.4	27.2	21.4	28.2	7.4	42.2				
Max Q Clear Time (g_c+I1), s	3.6	23.0	15.5	29.2	14.5	30.2	5.0	8.7				
Green Ext Time (p_c), s	0.0	4.8	0.2	0.0	0.1	0.0	0.0	0.7				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay	205.1											
HCM 6th LOS	F											



Lane Group	EBL	EBT	EBR	WBL	WBT	WBL	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	94	568	108	242	421	81	295	246	326	562	562
Future Volume (vph)	94	568	108	242	421	81	295	246	326	562	562
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	NA
Protected Phases	5	2	2	1	6	3	8	8	7	4	4
Permitted Phases	2	2	2	1	6	3	8	8	7	4	4
Detector Phase	5	2	2	1	6	3	8	8	7	4	4
Switch Phase	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	35.8	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2	40.2
Total Split (s)	36.3	59.2	59.2	9.6	32.5	10.8	37.4	37.4	37.4	40.4	40.4
Total Split (%)	30.3%	49.3%	49.3%	8.0%	27.1%	9.0%	31.2%	31.2%	31.2%	33.7%	33.7%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.4	4.4	4.4	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	5.4	5.4	5.4	4.6	6.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effort Green (s)	13.7	25.8	25.8	5.3	20.8	6.2	23.0	23.0	23.0	9.7	28.6
Actuated g/C Ratio	0.16	0.30	0.30	0.06	0.24	0.07	0.27	0.27	0.27	0.11	0.33
v/c Ratio	0.63	0.41	0.23	2.39	0.55	0.41	0.38	0.45	1.73	0.71	30.5
Control Delay	54.6	24.2	24.2	5.5	676.6	29.5	50.4	27.6	8.4	374.7	30.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.6	24.2	24.2	5.5	676.6	29.5	50.4	27.6	8.4	374.7	30.5
LOS	D	C	C	A	F	C	D	C	A	F	C
Approach Delay	25.3	217.5	23.0	138.9	23.0	138.9	23.0	138.9	23.0	138.9	23.0
Approach LOS	C	F	C	F	C	F	C	F	C	F	C

Intersection Summary































Cycle Length: 120  
 Actuated Cycle Length: 85.4  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 2.39  
 Intersection Signal Delay: 110.0  
 Intersection LOS: F  
 Intersection Capacity Utilization 67.8%  
 ICU Level of Service C  
 Analysis Period (min) 15



HCM 6th Signalized Intersection Summary  
 16: Indian Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 			 	
Traffic Volume (veh/h)	94	568	108	242	421	169	81	295	246	326	562	146
Future Volume (veh/h)	94	568	108	242	421	169	81	295	246	326	562	146
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	729	1826	1707	1885	1737	1885	1618	1678	1870	1900	1856	1352
Adj Flow Rate, veh/h	102	617	108	263	458	164	88	321	260	354	611	110
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	79	5	13	1	11	1	19	15	2	0	3	37
Cap, veh/h	106	1412	410	126	700	241	173	703	345	233	870	156
Arrive On Green	0.15	0.28	0.28	0.07	0.20	0.20	0.06	0.22	0.22	0.13	0.29	0.29
Sat Flow, veh/h	694	4985	1447	1795	3482	1200	2990	3188	1564	1810	2985	536
Grp Volume(v), veh/h	102	617	108	263	414	208	88	321	260	354	360	361
Grp Sat Flow(s),veh/h/ln	694	1662	1447	1795	1581	1521	1495	1594	1564	1810	1763	1759
Q Serve(g_s), s	10.4	7.2	4.1	5.0	8.6	9.0	2.0	6.2	11.1	9.2	13.0	13.0
Cycle Q Clear(g_c), s	10.4	7.2	4.1	5.0	8.6	9.0	2.0	6.2	11.1	9.2	13.0	13.0
Prop In Lane	1.00		1.00	1.00		0.79	1.00		1.00	1.00		0.30
Lane Grp Cap(c), veh/h	106	1412	410	126	635	306	173	703	345	233	514	513
V/C Ratio(X)	0.96	0.44	0.26	2.09	0.65	0.68	0.51	0.46	0.75	1.52	0.70	0.70
Avail Cap(c_a), veh/h	309	3732	1083	126	1183	569	260	1430	702	233	845	843
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.0	20.9	19.8	33.2	26.2	26.4	32.6	24.1	26.0	31.1	22.5	22.5
Incr Delay (d2), s/veh	17.5	0.2	0.3	516.4	1.1	2.7	0.9	0.5	3.4	253.3	1.8	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	2.5	1.3	20.1	3.0	3.2	0.7	2.2	4.0	20.1	5.0	5.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.6	21.1	20.1	549.5	27.3	29.0	33.5	24.6	29.3	284.3	24.2	24.3
LnGrp LOS	D	C	C	F	C	C	C	C	C	F	C	C
Approach Vol, veh/h		827			885			669			1075	
Approach Delay, s/veh		24.3			182.9			27.6			109.9	
Approach LOS		C			F			C			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.6	26.0	8.7	27.0	15.5	20.1	13.8	21.9				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	5.0	53.4	6.2	34.2	31.7	26.7	9.2	* 32				
Max Q Clear Time (g_c+I1), s	7.0	9.2	4.0	15.0	12.4	11.0	11.2	13.1				
Green Ext Time (p_c), s	0.0	4.5	0.0	3.9	0.1	3.3	0.0	2.6				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				92.2								
HCM 6th LOS				F								
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

**APPENDIX 7.3:**

**HORIZON YEAR (2045) WITH PROJECT (PEAK) WITHOUT HEACOCK STREET  
EXTENSION CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**

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Timings

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

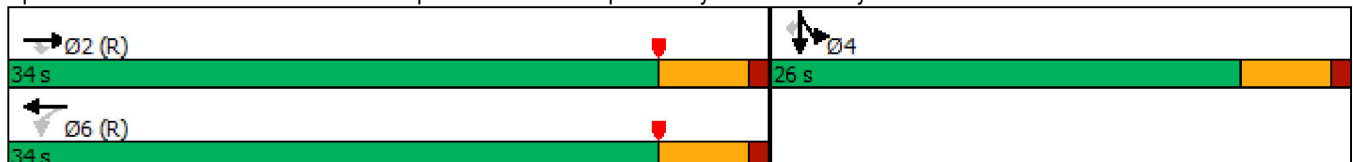


Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↑
Traffic Volume (vph)	1157	28	206	662	1	315
Future Volume (vph)	1157	28	206	662	1	315
Turn Type	NA	Perm	Perm	NA	NA	Perm
Protected Phases	2			6	4	
Permitted Phases		2	6			4
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	25.0	25.0	10.0	10.0
Total Split (s)	34.0	34.0	34.0	34.0	26.0	26.0
Total Split (%)	56.7%	56.7%	56.7%	56.7%	43.3%	43.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	29.0	29.0	29.0	29.0	21.0	21.0
Actuated g/C Ratio	0.48	0.48	0.48	0.48	0.35	0.35
v/c Ratio	0.76	0.04	2.13	0.42	1.96	0.55
Control Delay	16.3	3.1	555.6	18.4	460.3	12.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.3	3.1	555.6	18.4	460.3	12.3
LOS	B	A	F	B	F	B
Approach Delay	16.0			145.9	353.3	
Approach LOS	B			F	F	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection  
 Natural Cycle: 110  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 2.13  
 Intersection Signal Delay: 181.3  
 Intersection LOS: F  
 Intersection Capacity Utilization 185.2%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

11/09/2020



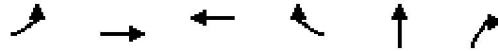
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑						↑	↑
Traffic Volume (veh/h)	0	1157	28	206	662	0	0	0	0	1002	1	315
Future Volume (veh/h)	0	1157	28	206	662	0	0	0	0	1002	1	315
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1826	1826	1604	1870	0				1693	1900	1781
Adj Flow Rate, veh/h	0	1258	30	224	720	0				1089	1	282
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	5	5	20	2	0				14	0	8
Cap, veh/h	0	1677	748	190	1718	0				633	1	528
Arrive On Green	0.00	0.48	0.48	0.97	0.97	0.00				0.35	0.35	0.35
Sat Flow, veh/h	0	3561	1547	368	3647	0				1808	2	1510
Grp Volume(v), veh/h	0	1258	30	224	720	0				1090	0	282
Grp Sat Flow(s),veh/h/ln	0	1735	1547	368	1777	0				1810	0	1510
Q Serve(g_s), s	0.0	17.6	0.6	11.4	0.7	0.0				21.0	0.0	9.0
Cycle Q Clear(g_c), s	0.0	17.6	0.6	29.0	0.7	0.0				21.0	0.0	9.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1677	748	190	1718	0				633	0	528
V/C Ratio(X)	0.00	0.75	0.04	1.18	0.42	0.00				1.72	0.00	0.53
Avail Cap(c_a), veh/h	0	1677	748	190	1718	0				633	0	528
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.75	0.75	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	12.6	8.2	13.4	0.5	0.0				19.5	0.0	15.6
Incr Delay (d2), s/veh	0.0	3.1	0.1	114.6	0.6	0.0				331.1	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.7	0.2	7.8	0.3	0.0				65.3	0.0	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	15.7	8.3	128.0	1.1	0.0				350.6	0.0	16.6
LnGrp LOS	A	B	A	F	A	A				F	A	B
Approach Vol, veh/h		1288			944						1372	
Approach Delay, s/veh		15.5			31.2						281.9	
Approach LOS		B			C						F	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		34.0		26.0		34.0						
Change Period (Y+Rc), s		5.0		5.0		5.0						
Max Green Setting (Gmax), s		29.0		21.0		29.0						
Max Q Clear Time (g_c+I1), s		19.6		23.0		31.0						
Green Ext Time (p_c), s		4.1		0.0		0.0						

Intersection Summary

HCM 6th Ctrl Delay	121.1
HCM 6th LOS	F

Timings

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

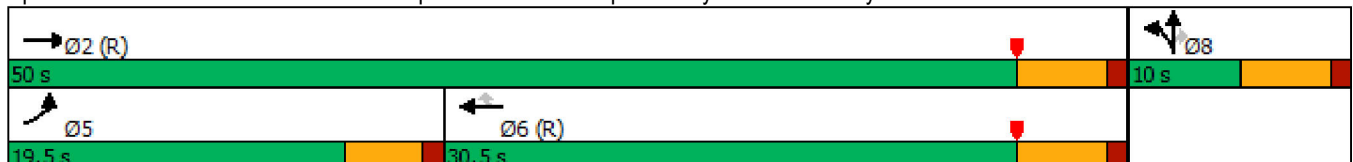


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	808	1351	810	1145	4	309
Future Volume (vph)	808	1351	810	1145	4	309
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	26.0	24.0	24.0	10.0	10.0
Total Split (s)	19.5	50.0	30.5	30.5	10.0	10.0
Total Split (%)	32.5%	83.3%	50.8%	50.8%	16.7%	16.7%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max
Act Effect Green (s)	15.0	45.0	25.5	25.5	5.0	5.0
Actuated g/C Ratio	0.25	0.75	0.42	0.42	0.08	0.08
v/c Ratio	2.02	0.61	0.61	1.62	0.45	1.43
Control Delay	483.1	3.6	15.7	304.9	36.5	236.6
Queue Delay	0.0	0.9	0.0	0.0	0.0	0.0
Total Delay	483.1	4.6	15.7	304.9	36.5	236.6
LOS	F	A	B	F	D	F
Approach Delay		183.7	185.2		203.3	
Approach LOS		F	F		F	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 29 (48%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 2.02  
 Intersection Signal Delay: 185.9  
 Intersection LOS: F  
 Intersection Capacity Utilization 185.2%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

11/09/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗			↗	↘		↗	↘			
Traffic Volume (veh/h)	808	1351	0	0	810	1145	58	4	309	0	0	0
Future Volume (veh/h)	808	1351	0	0	810	1145	58	4	309	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1841	1722	0	0	1796	1752	1870	1900	1811			
Adj Flow Rate, veh/h	878	1468	0	0	880	913	63	4	271			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	4	12	0	0	7	10	2	0	6			
Cap, veh/h	438	2454	0	0	1450	630	142	9	128			
Arrive On Green	0.50	1.00	0.00	0.00	0.43	0.43	0.08	0.08	0.08			
Sat Flow, veh/h	1753	3358	0	0	3503	1484	1706	108	1535			
Grp Volume(v), veh/h	878	1468	0	0	880	913	67	0	271			
Grp Sat Flow(s),veh/h/ln	1753	1636	0	0	1706	1484	1815	0	1535			
Q Serve(g_s), s	15.0	0.0	0.0	0.0	12.0	25.5	2.1	0.0	5.0			
Cycle Q Clear(g_c), s	15.0	0.0	0.0	0.0	12.0	25.5	2.1	0.0	5.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.94		1.00			
Lane Grp Cap(c), veh/h	438	2454	0	0	1450	630	151	0	128			
V/C Ratio(X)	2.00	0.60	0.00	0.00	0.61	1.45	0.44	0.00	2.12			
Avail Cap(c_a), veh/h	438	2454	0	0	1450	630	151	0	128			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.57	0.57	0.00	0.00	0.79	0.79	1.00	0.00	1.00			
Uniform Delay (d), s/veh	15.0	0.0	0.0	0.0	13.4	17.3	26.2	0.0	27.5			
Incr Delay (d2), s/veh	456.1	0.6	0.0	0.0	1.5	208.7	9.1	0.0	528.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	58.7	0.2	0.0	0.0	3.9	43.1	1.2	0.0	20.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	471.1	0.6	0.0	0.0	14.9	225.9	35.3	0.0	556.3			
LnGrp LOS	F	A	A	A	B	F	D	A	F			
Approach Vol, veh/h		2346			1793			338				
Approach Delay, s/veh		176.7			122.3			453.1				
Approach LOS		F			F			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		50.0			19.5	30.5		10.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		45.0			15.0	25.5		5.0				
Max Q Clear Time (g_c+I1), s		2.0			17.0	27.5		7.0				
Green Ext Time (p_c), s		8.6			0.0	0.0		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					175.8							
HCM 6th LOS					F							

Timings  
3: Western Way & Harley Knox Bl.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↑↑↑	↗	↖	↑↑↑	↖	↗	↖	↗
Traffic Volume (vph)	105	1460	10	13	1570	1	0	7	0
Future Volume (vph)	105	1460	10	13	1570	1	0	7	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	NA
Protected Phases	5	2		1	6		8		4
Permitted Phases			2			8		4	
Detector Phase	5	2	2	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	21.8	21.8	9.6	21.8	32.6	32.6	32.6	32.6
Total Split (s)	22.0	75.4	75.4	9.6	63.0	35.0	35.0	35.0	35.0
Total Split (%)	18.3%	62.8%	62.8%	8.0%	52.5%	29.2%	29.2%	29.2%	29.2%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	11.7	58.3	58.3	6.4	45.9	15.0	15.0	15.0	15.0
Actuated g/C Ratio	0.16	0.82	0.82	0.09	0.64	0.21	0.21	0.21	0.21
v/c Ratio	0.43	0.41	0.01	0.09	0.58	0.00	0.00	0.04	0.13
Control Delay	41.3	6.0	0.0	46.7	14.2	33.0	0.0	33.7	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.3	6.0	0.0	46.7	14.2	33.0	0.0	33.7	0.7
LOS	D	A	A	D	B	C	A	C	A
Approach Delay		8.3			14.5		11.0		5.0
Approach LOS		A			B		B		A

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 71.5	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.58	
Intersection Signal Delay: 11.3	Intersection LOS: B
Intersection Capacity Utilization 58.5%	ICU Level of Service B
Analysis Period (min) 15	


























Splits and Phases: 3: Western Way & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 3: Western Way & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  							
Traffic Volume (veh/h)	105	1460	10	13	1570	46	1	0	2	7	0	49
Future Volume (veh/h)	105	1460	10	13	1570	46	1	0	2	7	0	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1722	1737	1900	1900	1752	1663	1900	1900	1900	1322	1900	1233
Adj Flow Rate, veh/h	113	1570	11	14	1688	47	1	0	2	8	0	41
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	12	11	0	0	10	16	0	0	0	39	0	45
Cap, veh/h	142	2965	1007	31	2658	74	230	0	162	222	0	162
Arrive On Green	0.09	0.63	0.63	0.02	0.56	0.56	0.10	0.00	0.10	0.10	0.00	0.10
Sat Flow, veh/h	1640	4742	1610	1810	4783	133	1388	0	1607	997	0	1610
Grp Volume(v), veh/h	113	1570	11	14	1125	610	1	0	2	8	0	41
Grp Sat Flow(s),veh/h/ln	1640	1581	1610	1810	1594	1728	1388	0	1607	997	0	1610
Q Serve(g_s), s	3.9	10.8	0.2	0.4	14.2	14.2	0.0	0.0	0.1	0.4	0.0	1.4
Cycle Q Clear(g_c), s	3.9	10.8	0.2	0.4	14.2	14.2	1.4	0.0	0.1	0.5	0.0	1.4
Prop In Lane	1.00		1.00	1.00		0.08	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	142	2965	1007	31	1772	960	230	0	162	222	0	162
V/C Ratio(X)	0.79	0.53	0.01	0.44	0.63	0.64	0.00	0.00	0.01	0.04	0.00	0.25
Avail Cap(c_a), veh/h	488	5647	1918	155	3120	1691	812	0	836	641	0	838
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.2	6.1	4.1	28.4	8.9	8.9	24.9	0.0	23.7	23.9	0.0	24.3
Incr Delay (d2), s/veh	3.7	0.1	0.0	3.6	0.4	0.7	0.0	0.0	0.0	0.1	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	2.0	0.0	0.2	3.3	3.6	0.0	0.0	0.0	0.1	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.9	6.3	4.1	32.1	9.3	9.6	24.9	0.0	23.7	23.9	0.0	25.1
LnGrp LOS	C	A	A	C	A	A	C	A	C	C	A	C
Approach Vol, veh/h		1694			1749			3				49
Approach Delay, s/veh		7.8			9.6			24.1				24.9
Approach LOS		A			A			C				C
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.6	42.3		10.5	9.7	38.3		10.5				
Change Period (Y+Rc), s	4.6	5.8		4.6	4.6	5.8		4.6				
Max Green Setting (Gmax), s	5.0	69.6		30.4	17.4	57.2		30.4				
Max Q Clear Time (g_c+I1), s	2.4	12.8		3.4	5.9	16.2		3.4				
Green Ext Time (p_c), s	0.0	16.4		0.2	0.1	16.3		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				9.0								
HCM 6th LOS				A								

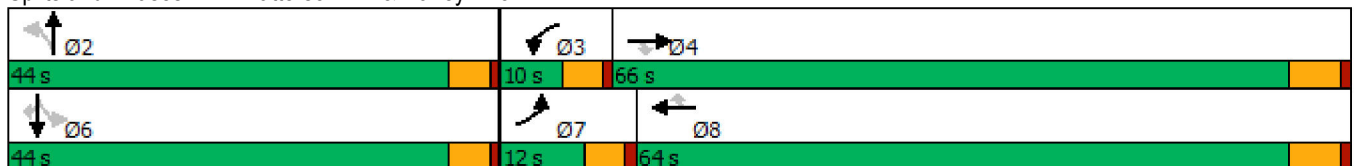
Timings  
4: Patterson Av. & Harley Knox Bl.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	27	1323	83	50	1525	19	81	9	16	4	23
Future Volume (vph)	27	1323	83	50	1525	19	81	9	16	4	23
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	7	4		3	8			2		6	
Permitted Phases			4			8	2		6		6
Detector Phase	7	4	4	3	8	8	2	2	6	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	9.6	31.8	31.8	33.7	33.7	40.7	40.7	40.7
Total Split (s)	12.0	66.0	66.0	10.0	64.0	64.0	44.0	44.0	44.0	44.0	44.0
Total Split (%)	10.0%	55.0%	55.0%	8.3%	53.3%	53.3%	36.7%	36.7%	36.7%	36.7%	36.7%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8		4.7		4.7	4.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	6.3	59.8	59.8	5.5	61.4	61.4		17.4		17.4	17.4
Actuated g/C Ratio	0.07	0.62	0.62	0.06	0.64	0.64		0.18		0.18	0.18
v/c Ratio	0.33	0.49	0.09	0.63	0.78	0.03		0.63		0.13	0.10
Control Delay	56.9	12.2	2.9	78.4	19.4	0.1		40.4		33.5	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	56.9	12.2	2.9	78.4	19.4	0.1		40.4		33.5	0.8
LOS	E	B	A	E	B	A		D		C	A
Approach Delay		12.5			21.0			40.4		15.7	
Approach LOS		B			C			D		B	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 96  
 Natural Cycle: 105  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.78  
 Intersection Signal Delay: 18.0  
 Intersection LOS: B  
 Intersection Capacity Utilization 71.5%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 4: Patterson Av. & Harley Knox Bl.






























HCM 6th Signalized Intersection Summary  
 4: Patterson Av. & Harley Knox Bl.

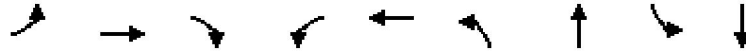
Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			 			 				
Traffic Volume (veh/h)	27	1323	83	50	1525	19	81	9	56	16	4	23
Future Volume (veh/h)	27	1323	83	50	1525	19	81	9	56	16	4	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1396	1767	1870	1618	1767	981	1589	1381	1826	877	774	1159
Adj Flow Rate, veh/h	29	1438	83	54	1658	13	88	10	59	17	4	9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	34	9	2	19	9	62	21	35	5	69	76	50
Cap, veh/h	40	2810	924	68	2004	496	163	27	71	157	22	177
Arrive On Green	0.03	0.58	0.58	0.04	0.60	0.60	0.18	0.18	0.18	0.18	0.18	0.18
Sat Flow, veh/h	1330	4823	1585	1541	3357	831	508	147	394	410	122	982
Grp Volume(v), veh/h	29	1438	83	54	1658	13	157	0	0	21	0	9
Grp Sat Flow(s),veh/h/ln	1330	1608	1585	1541	1678	831	1048	0	0	532	0	982
Q Serve(g_s), s	1.7	13.9	1.8	2.7	30.8	0.5	9.0	0.0	0.0	0.0	0.0	0.6
Cycle Q Clear(g_c), s	1.7	13.9	1.8	2.7	30.8	0.5	11.5	0.0	0.0	2.5	0.0	0.6
Prop In Lane	1.00		1.00	1.00		1.00	0.56		0.38	0.81		1.00
Lane Grp Cap(c), veh/h	40	2810	924	68	2004	496	261	0	0	179	0	177
V/C Ratio(X)	0.73	0.51	0.09	0.79	0.83	0.03	0.60	0.00	0.00	0.12	0.00	0.05
Avail Cap(c_a), veh/h	126	3704	1217	106	2493	617	614	0	0	366	0	493
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.7	9.7	7.2	37.1	12.6	6.5	31.2	0.0	0.0	27.3	0.0	26.6
Incr Delay (d2), s/veh	9.2	0.1	0.0	8.9	2.0	0.0	2.2	0.0	0.0	0.3	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	3.8	0.5	1.1	9.1	0.1	2.9	0.0	0.0	0.3	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.9	9.9	7.2	46.0	14.6	6.5	33.4	0.0	0.0	27.6	0.0	26.7
LnGrp LOS	D	A	A	D	B	A	C	A	A	C	A	C
Approach Vol, veh/h		1550			1725			157				30
Approach Delay, s/veh		10.4			15.5			33.4				27.3
Approach LOS		B			B			C				C
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		18.9	8.1	51.5		18.9	6.9	52.6				
Change Period (Y+Rc), s		* 4.7	4.6	5.8		* 4.7	4.6	5.8				
Max Green Setting (Gmax), s		* 39	5.4	60.2		* 39	7.4	58.2				
Max Q Clear Time (g_c+I1), s		13.5	4.7	15.9		4.5	3.7	32.8				
Green Ext Time (p_c), s		0.9	0.0	13.9		0.1	0.0	13.9				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			14.1									
HCM 6th LOS			B									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												



Timings  
5: Heacock Street & Cactus Avenue

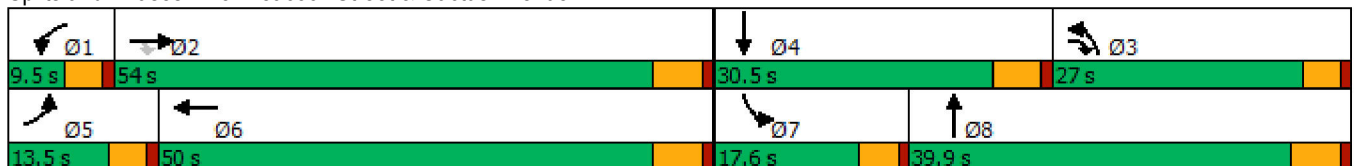


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↗	↘	↖	↗	↖	↗	↖	↗
Traffic Volume (vph)	176	1067	793	87	2068	870	722	139	378
Future Volume (vph)	176	1067	793	87	2068	870	722	139	378
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	3	1	6	3	8	7	4
Permitted Phases			2						
Detector Phase	5	2	3	1	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.5	30.5	9.5	9.5	30.5	9.5	30.5	9.5	30.5
Total Split (s)	13.5	54.0	27.0	9.5	50.0	27.0	39.9	17.6	30.5
Total Split (%)	11.2%	44.6%	22.3%	7.9%	41.3%	22.3%	33.0%	14.5%	25.2%
Yellow Time (s)	3.5	4.5	3.5	3.5	4.5	3.5	4.5	3.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	4.5	4.5	5.5	4.5	5.5	4.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None
Act Effct Green (s)	9.0	48.5	72.6	5.0	44.5	23.1	30.5	11.8	19.3
Actuated g/C Ratio	0.08	0.42	0.63	0.04	0.38	0.20	0.26	0.10	0.17
v/c Ratio	1.27	0.71	0.74	1.11	1.60	1.26	0.82	0.77	0.79
Control Delay	207.3	31.6	13.9	185.4	302.0	166.6	47.7	76.9	53.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	207.3	31.6	13.9	185.4	302.0	166.6	47.7	76.9	53.4
LOS	F	C	B	F	F	F	D	E	D
Approach Delay		39.9			297.6		111.3		58.7
Approach LOS		D			F		F		E

Intersection Summary

Cycle Length: 121  
 Actuated Cycle Length: 115.9  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.60  
 Intersection Signal Delay: 149.7  
 Intersection LOS: F  
 Intersection Capacity Utilization 127.3%  
 ICU Level of Service H  
 Analysis Period (min) 15























Splits and Phases: 5: Heacock Street & Cactus Avenue



HCM 6th Signalized Intersection Summary  
5: Heacock Street & Cactus Avenue

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	176	1067	793	87	2068	159	870	722	34	139	378	105
Future Volume (veh/h)	176	1067	793	87	2068	159	870	722	34	139	378	105
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1752	1900	1885	1856	1826	1841	1841	1870	1841	1885
Adj Flow Rate, veh/h	183	1111	826	91	2154	166	906	752	35	145	394	109
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	10	0	1	3	5	4	4	2	4	1
Cap, veh/h	138	1561	907	78	1324	101	673	946	44	172	461	126
Arrive On Green	0.08	0.42	0.42	0.04	0.38	0.38	0.19	0.27	0.27	0.10	0.17	0.17
Sat Flow, veh/h	1781	3741	1485	1810	3460	263	3478	3490	162	1781	2783	761
Grp Volume(v), veh/h	183	1111	826	91	1160	1160	906	397	390	145	259	244
Grp Sat Flow(s),veh/h/ln	1781	1870	1485	1810	1885	1838	1739	1841	1811	1781	1841	1704
Q Serve(g_s), s	9.0	28.6	20.5	5.0	44.5	44.5	22.5	23.3	23.3	9.3	15.9	16.2
Cycle Q Clear(g_c), s	9.0	28.6	20.5	5.0	44.5	44.5	22.5	23.3	23.3	9.3	15.9	16.2
Prop In Lane	1.00		1.00	1.00		0.14	1.00		0.09	1.00		0.45
Lane Grp Cap(c), veh/h	138	1561	907	78	722	704	673	499	491	172	305	282
V/C Ratio(X)	1.33	0.71	0.91	1.17	1.61	1.65	1.35	0.79	0.79	0.84	0.85	0.86
Avail Cap(c_a), veh/h	138	1561	907	78	722	704	673	545	536	201	396	366
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.6	28.1	8.1	55.6	35.9	35.9	46.9	39.4	39.4	51.6	47.1	47.2
Incr Delay (d2), s/veh	188.5	1.3	12.9	154.8	279.8	298.4	165.5	6.5	6.6	21.1	10.5	13.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.1	12.2	9.4	5.6	75.2	76.9	24.8	11.0	10.8	5.0	7.9	7.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	242.1	29.4	20.9	210.4	315.7	334.2	212.3	45.9	46.0	72.7	57.6	60.2
LnGrp LOS	F	C	C	F	F	F	F	D	D	E	E	E
Approach Vol, veh/h		2120			2411			1693			648	
Approach Delay, s/veh		44.5			320.6			135.0			62.0	
Approach LOS		D			F			F			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.5	54.0	28.0	24.8	13.5	50.0	15.7	37.0				
Change Period (Y+Rc), s	4.5	5.5	5.5	* 5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	5.0	48.5	22.5	* 25	9.0	44.5	13.1	34.4				
Max Q Clear Time (g_c+I1), s	7.0	30.6	24.5	18.2	11.0	46.5	11.3	25.3				
Green Ext Time (p_c), s	0.0	6.5	0.0	1.0	0.0	0.0	0.0	2.0				

Intersection Summary

HCM 6th Ctrl Delay	165.3
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

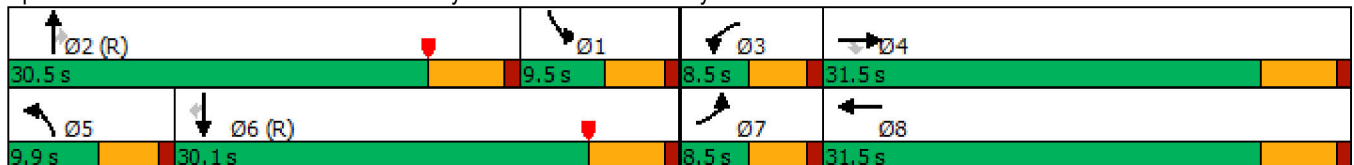
Timings  
6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	48	45	120	38	267	37	1084	60	127	861	24
Future Volume (vph)	48	45	120	38	267	37	1084	60	127	861	24
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4					2			6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Minimum Split (s)	8.5	23.5	23.5	8.5	31.5	8.5	30.5	30.5	8.5	23.5	23.5
Total Split (s)	8.5	31.5	31.5	8.5	31.5	9.9	30.5	30.5	9.5	30.1	30.1
Total Split (%)	10.6%	39.4%	39.4%	10.6%	39.4%	12.4%	38.1%	38.1%	11.9%	37.6%	37.6%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	5.5	4.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	4.0	15.5	15.5	4.0	13.8	5.7	38.9	38.9	5.0	41.9	41.9
Actuated g/C Ratio	0.05	0.19	0.19	0.05	0.17	0.07	0.49	0.49	0.06	0.52	0.52
v/c Ratio	0.62	0.14	0.23	0.45	0.66	0.31	0.65	0.07	1.15	0.49	0.03
Control Delay	70.6	25.3	1.0	54.1	22.0	41.9	20.7	0.1	167.3	17.2	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	70.6	25.3	1.0	54.1	22.0	41.9	20.7	0.1	167.3	17.2	0.0
LOS	E	C	A	D	C	D	C	A	F	B	A
Approach Delay		21.8			24.2		20.4			35.6	
Approach LOS		C			C		C			D	

Intersection Summary

Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.15  
 Intersection Signal Delay: 26.4  
 Intersection LOS: C  
 Intersection Capacity Utilization 73.2%  
 ICU Level of Service D  
 Analysis Period (min) 15
























Splits and Phases: 6: Heacock Street & Meyer Drive/John F. Kennedy Drive



HCM 6th Signalized Intersection Summary  
 6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	45	120	38	267	236	37	1084	60	127	861	24
Future Volume (veh/h)	48	45	120	38	267	236	37	1084	60	127	861	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.95	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1648	1767	1811	1796	1841	1885	1781	1811	1767	1856	1767	1618
Adj Flow Rate, veh/h	50	47	89	40	278	210	39	1129	52	132	897	15
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	17	9	6	7	4	1	8	6	9	3	9	19
Cap, veh/h	60	350	304	50	374	273	49	1132	443	349	1744	668
Arrive On Green	0.04	0.20	0.20	0.03	0.19	0.19	0.03	0.31	0.31	0.20	0.49	0.49
Sat Flow, veh/h	1570	1767	1535	1711	1971	1438	1697	3622	1417	1767	3533	1354
Grp Volume(v), veh/h	50	47	89	40	259	229	39	1129	52	132	897	15
Grp Sat Flow(s),veh/h/ln	1570	1767	1535	1711	1841	1568	1697	1811	1417	1767	1767	1354
Q Serve(g_s), s	2.5	1.8	3.9	1.9	10.6	11.1	1.8	24.9	1.6	5.2	13.8	0.5
Cycle Q Clear(g_c), s	2.5	1.8	3.9	1.9	10.6	11.1	1.8	24.9	1.6	5.2	13.8	0.5
Prop In Lane	1.00		1.00	1.00		0.92	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	60	350	304	50	349	297	49	1132	443	349	1744	668
V/C Ratio(X)	0.84	0.13	0.29	0.79	0.74	0.77	0.79	1.00	0.12	0.38	0.51	0.02
Avail Cap(c_a), veh/h	78	574	499	86	598	510	115	1132	443	349	1744	668
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.84	0.84	0.84	0.53	0.53	0.53
Uniform Delay (d), s/veh	38.2	26.4	27.3	38.6	30.6	30.8	38.6	27.5	11.8	27.8	13.8	10.4
Incr Delay (d2), s/veh	35.1	0.1	0.2	10.0	1.2	1.6	8.7	23.9	0.5	0.1	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.7	1.4	0.9	4.5	4.0	0.8	13.2	0.7	2.0	4.6	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	73.3	26.5	27.5	48.6	31.8	32.4	47.3	51.4	12.3	28.0	14.3	10.4
LnGrp LOS	E	C	C	D	C	C	D	D	B	C	B	B
Approach Vol, veh/h		186			528			1220			1044	
Approach Delay, s/veh		39.6			33.3			49.6			16.0	
Approach LOS		D			C			D			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.3	30.5	6.9	21.3	6.8	45.0	7.5	20.7				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	5.0	* 25	4.0	26.0	5.4	24.6	4.0	26.0				
Max Q Clear Time (g_c+I1), s	7.2	26.9	3.9	5.9	3.8	15.8	4.5	13.1				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.3	0.0	2.6	0.0	1.4				













Intersection Summary

HCM 6th Ctrl Delay	34.3
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
7: Heacock Street & Gentian Avenue

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	17	24	979	11	112	943
Future Volume (vph)	17	24	979	11	112	943
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	27.6	27.6	27.2	27.2	9.6	16.2
Total Split (s)	28.0	28.0	65.0	65.0	27.0	92.0
Total Split (%)	23.3%	23.3%	54.2%	54.2%	22.5%	76.7%
Yellow Time (s)	3.6	3.6	5.2	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	6.2	6.2	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	13.0	13.0	35.2	35.2	9.5	48.1
Actuated g/C Ratio	0.22	0.22	0.58	0.58	0.16	0.80
v/c Ratio	0.04	0.06	0.53	0.01	0.40	0.38
Control Delay	26.5	12.2	14.3	10.1	33.1	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.5	12.2	14.3	10.1	33.1	5.0
LOS	C	B	B	B	C	A
Approach Delay	18.2		14.3			8.0
Approach LOS	B		B			A

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 60.2	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.53	
Intersection Signal Delay: 11.2	Intersection LOS: B
Intersection Capacity Utilization 54.4%	ICU Level of Service A
Analysis Period (min) 15	













Splits and Phases: 7: Heacock Street & Gentian Avenue



HCM 6th Signalized Intersection Summary  
 7: Heacock Street & Gentian Avenue

Gateway Aviation TA (JN:13445)

11/09/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	17	24	979	11	112	943
Future Volume (veh/h)	17	24	979	11	112	943
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1870	1781	1900	1870	1767
Adj Flow Rate, veh/h	18	25	1031	12	118	993
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	2	8	0	2	9
Cap, veh/h	168	148	1578	751	155	2212
Arrive On Green	0.09	0.09	0.47	0.47	0.09	0.66
Sat Flow, veh/h	1810	1585	3474	1610	1781	3445
Grp Volume(v), veh/h	18	25	1031	12	118	993
Grp Sat Flow(s),veh/h/ln	1810	1585	1692	1610	1781	1678
Q Serve(g_s), s	0.4	0.6	10.2	0.2	2.8	6.2
Cycle Q Clear(g_c), s	0.4	0.6	10.2	0.2	2.8	6.2
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	168	148	1578	751	155	2212
V/C Ratio(X)	0.11	0.17	0.65	0.02	0.76	0.45
Avail Cap(c_a), veh/h	971	851	4566	2172	915	6607
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.1	18.2	8.9	6.3	19.4	3.6
Incr Delay (d2), s/veh	0.1	0.2	0.5	0.0	2.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.2	2.1	0.0	1.0	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	18.2	18.4	9.4	6.3	22.3	3.7
LnGrp LOS	B	B	A	A	C	A
Approach Vol, veh/h	43		1043			1111
Approach Delay, s/veh	18.3		9.4			5.7
Approach LOS	B		A			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	8.4	26.5			34.9	8.7
Change Period (Y+Rc), s	4.6	6.2			6.2	4.6
Max Green Setting (Gmax), s	22.4	58.8			85.8	23.4
Max Q Clear Time (g_c+I1), s	4.8	12.2			8.2	2.6
Green Ext Time (p_c), s	0.1	8.1			7.8	0.0
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			7.7			
HCM 6th LOS			A			

Timings  
8: Heacock Street & Iris Avenue

	↙	↖	↑	↗	↘	↓
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↗↗	↗	↗↗	↗	↗↗	↗↗
Traffic Volume (vph)	396	509	555	252	328	693
Future Volume (vph)	396	509	555	252	328	693
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	15.8	15.8	33.2	33.2	9.6	16.2
Total Split (s)	48.0	48.0	46.0	46.0	26.0	72.0
Total Split (%)	40.0%	40.0%	38.3%	38.3%	21.7%	60.0%
Yellow Time (s)	4.8	4.8	5.2	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	6.2	6.2	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	15.7	15.7	19.9	19.9	11.7	36.4
Actuated g/C Ratio	0.24	0.24	0.31	0.31	0.18	0.56
v/c Ratio	0.49	0.70	0.60	0.40	0.55	0.41
Control Delay	24.1	10.8	22.6	4.8	29.3	9.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.1	10.8	22.6	4.8	29.3	9.0
LOS	C	B	C	A	C	A
Approach Delay	16.6		17.1			15.5
Approach LOS	B		B			B

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 64.7	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.70	
Intersection Signal Delay: 16.3	Intersection LOS: B
Intersection Capacity Utilization 56.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 8: Heacock Street & Iris Avenue





















HCM 6th Signalized Intersection Summary  
8: Heacock Street & Iris Avenue

Gateway Aviation TA (JN:13445)

11/09/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 		 		 	 
Traffic Volume (veh/h)	396	509	555	252	328	693
Future Volume (veh/h)	396	509	555	252	328	693
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1885	1885	1737	1885	1870	1752
Adj Flow Rate, veh/h	430	553	603	274	357	753
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	11	1	2	10
Cap, veh/h	1367	627	843	408	460	1495
Arrive On Green	0.39	0.39	0.26	0.26	0.13	0.45
Sat Flow, veh/h	3483	1598	3387	1598	3456	3416
Grp Volume(v), veh/h	430	553	603	274	357	753
Grp Sat Flow(s),veh/h/ln	1742	1598	1650	1598	1728	1664
Q Serve(g_s), s	6.5	24.4	12.6	11.7	7.6	12.2
Cycle Q Clear(g_c), s	6.5	24.4	12.6	11.7	7.6	12.2
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	1367	627	843	408	460	1495
V/C Ratio(X)	0.31	0.88	0.72	0.67	0.78	0.50
Avail Cap(c_a), veh/h	1942	891	1735	840	977	2893
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.9	21.4	25.7	25.3	31.7	14.8
Incr Delay (d2), s/veh	0.1	7.6	1.2	1.9	1.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	9.1	4.5	4.1	2.9	3.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	16.1	29.0	26.8	27.3	32.8	15.1
LnGrp LOS	B	C	C	C	C	B
Approach Vol, veh/h	983		877			1110
Approach Delay, s/veh	23.3		27.0			20.8
Approach LOS	C		C			C
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	14.7	25.5			40.2	35.5
Change Period (Y+Rc), s	4.6	6.2			6.2	5.8
Max Green Setting (Gmax), s	21.4	39.8			65.8	42.2
Max Q Clear Time (g_c+1), s	9.6	14.6			14.2	26.4
Green Ext Time (p_c), s	0.5	4.7			5.3	3.4
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			23.5			
HCM 6th LOS			C			



Timings  
9: Heacock Street & Krameria Avenue-North

	↙	↖	↑	↘	↓
Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations	↙	↖	↑↓	↘	↑↑
Traffic Volume (vph)	117	136	565	237	760
Future Volume (vph)	117	136	565	237	760
Turn Type	Prot	Perm	NA	Prot	NA
Protected Phases	8		2	1	6
Permitted Phases		8			
Detector Phase	8	8	2	1	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	29.1	29.1	29.2	9.6	16.2
Total Split (s)	39.0	39.0	54.0	27.0	81.0
Total Split (%)	32.5%	32.5%	45.0%	22.5%	67.5%
Yellow Time (s)	4.1	4.1	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	6.2	4.6	6.2
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	Min	Max	Min
Act Effct Green (s)	12.6	12.6	22.8	22.9	50.4
Actuated g/C Ratio	0.17	0.17	0.31	0.31	0.68
v/c Ratio	0.40	0.34	0.80	0.46	0.35
Control Delay	32.7	7.6	28.4	27.1	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	32.7	7.6	28.4	27.1	6.0
LOS	C	A	C	C	A
Approach Delay	19.2		28.4		11.0
Approach LOS	B		C		B

Intersection Summary













Cycle Length: 120	
Actuated Cycle Length: 74.6	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay: 18.8	Intersection LOS: B
Intersection Capacity Utilization 57.5%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 9: Heacock Street & Krameria Avenue-North



HCM 6th Signalized Intersection Summary  
 9: Heacock Street & Krameria Avenue-North

Gateway Aviation TA (JN:13445)  
 11/10/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	117	136	565	223	237	760
Future Volume (veh/h)	117	136	565	223	237	760
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1856	1856	1826	1841
Adj Flow Rate, veh/h	127	148	614	242	258	826
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	3	3	5	4
Cap, veh/h	256	227	751	296	562	2425
Arrive On Green	0.14	0.14	0.30	0.30	0.32	0.69
Sat Flow, veh/h	1781	1585	2563	973	1739	3589
Grp Volume(v), veh/h	127	148	438	418	258	826
Grp Sat Flow(s),veh/h/ln	1781	1585	1763	1680	1739	1749
Q Serve(g_s), s	4.6	6.1	15.9	16.0	8.2	6.6
Cycle Q Clear(g_c), s	4.6	6.1	15.9	16.0	8.2	6.6
Prop In Lane	1.00	1.00		0.58	1.00	
Lane Grp Cap(c), veh/h	256	227	536	511	562	2425
V/C Ratio(X)	0.50	0.65	0.82	0.82	0.46	0.34
Avail Cap(c_a), veh/h	871	775	1215	1159	562	3774
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.4	28.0	22.3	22.4	18.6	4.3
Incr Delay (d2), s/veh	0.6	1.2	1.2	1.3	2.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	2.3	5.8	5.5	3.2	1.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	27.9	29.2	23.5	23.6	21.3	4.3
LnGrp LOS	C	C	C	C	C	A
Approach Vol, veh/h	275		856			1084
Approach Delay, s/veh	28.6		23.6			8.4
Approach LOS	C		C			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	27.0	27.3			54.3	15.0
Change Period (Y+Rc), s	4.6	6.2			6.2	5.1
Max Green Setting (Gmax), s	22.4	47.8			74.8	33.9
Max Q Clear Time (g_c+I1), s	10.2	18.0			8.6	8.1
Green Ext Time (p_c), s	0.3	3.1			3.5	0.4
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			16.7			
HCM 6th LOS			B			

Timings  
10: Heacock Street & Driveway 1



Lane Group	EBL	EBT	NBL	NBT	SBT	SBR	Ø1	Ø8
Lane Configurations								
Traffic Volume (vph)	45	0	82	821	734	84		
Future Volume (vph)	45	0	82	821	734	84		
Turn Type	Perm	NA	Prot	NA	NA	Perm		
Protected Phases		4	5	2	6		1	8
Permitted Phases	4					6		
Detector Phase	4	4	5	2	6	6		
Switch Phase								
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	26.7	26.7	9.6	23.2	23.2	23.2	9.6	26.7
Total Split (s)	30.0	30.0	25.0	80.4	65.0	65.0	9.6	30.0
Total Split (%)	25.0%	25.0%	20.8%	67.0%	54.2%	54.2%	8%	25%
Yellow Time (s)	3.7	3.7	3.6	5.2	5.2	5.2	3.6	3.7
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.7	4.7	4.6	6.2	6.2	6.2		
Lead/Lag			Lead	Lag	Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	Min	Min	Min	None	None
Act Effct Green (s)	12.6	12.6	8.2	37.1	27.2	27.2		
Actuated g/C Ratio	0.23	0.23	0.15	0.68	0.50	0.50		
v/c Ratio	0.15	0.10	0.37	0.37	0.46	0.11		
Control Delay	22.0	0.4	30.0	6.4	15.2	3.7		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay	22.0	0.4	30.0	6.4	15.2	3.7		
LOS	C	A	C	A	B	A		
Approach Delay		10.6		8.6	14.0			
Approach LOS		B		A	B			

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 54.4	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.46	
Intersection Signal Delay: 11.1	Intersection LOS: B
Intersection Capacity Utilization 48.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 10: Heacock Street & Driveway 1



HCM 6th Signalized Intersection Summary  
 10: Heacock Street & Driveway 1

Gateway Aviation TA (JN:13445)

11/17/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	0	50	0	0	0	82	821	0	0	734	84
Future Volume (veh/h)	45	0	50	0	0	0	82	821	0	0	734	84
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1693	1856	1856	1900	1826	1900
Adj Flow Rate, veh/h	49	0	54	0	0	0	89	892	0	0	798	91
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	14	3	3	0	5	0
Cap, veh/h	478	0	270	0	319	0	125	2003	0	4	1316	611
Arrive On Green	0.17	0.00	0.17	0.00	0.00	0.00	0.08	0.57	0.00	0.00	0.38	0.38
Sat Flow, veh/h	1810	0	1610	0	1900	0	1612	3618	0	1810	3469	1610
Grp Volume(v), veh/h	49	0	54	0	0	0	89	892	0	0	798	91
Grp Sat Flow(s),veh/h/ln	1810	0	1610	0	1900	0	1612	1763	0	1810	1735	1610
Q Serve(g_s), s	1.0	0.0	1.2	0.0	0.0	0.0	2.2	6.0	0.0	0.0	7.7	1.5
Cycle Q Clear(g_c), s	1.0	0.0	1.2	0.0	0.0	0.0	2.2	6.0	0.0	0.0	7.7	1.5
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	478	0	270	0	319	0	125	2003	0	4	1316	611
V/C Ratio(X)	0.10	0.00	0.20	0.00	0.00	0.00	0.71	0.45	0.00	0.00	0.61	0.15
Avail Cap(c_a), veh/h	1283	0	986	0	1164	0	796	6333	0	219	4939	2292
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	14.7	0.0	14.8	0.0	0.0	0.0	18.6	5.2	0.0	0.0	10.3	8.4
Incr Delay (d2), s/veh	0.1	0.0	0.4	0.0	0.0	0.0	2.8	0.2	0.0	0.0	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.4	0.0	0.0	0.0	0.7	0.7	0.0	0.0	1.8	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.8	0.0	15.2	0.0	0.0	0.0	21.4	5.3	0.0	0.0	10.8	8.5
LnGrp LOS	B	A	B	A	A	A	C	A	A	A	B	A
Approach Vol, veh/h		103			0			981			889	
Approach Delay, s/veh		15.0			0.0			6.8			10.6	
Approach LOS		B						A			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	29.7		11.6	7.8	21.9		11.6				
Change Period (Y+Rc), s	4.6	6.2		* 4.7	4.6	6.2		* 4.7				
Max Green Setting (Gmax), s	5.0	74.2		* 25	20.4	58.8		* 25				
Max Q Clear Time (g_c+I1), s	0.0	8.0		3.2	4.2	9.7		0.0				
Green Ext Time (p_c), s	0.0	6.6		0.4	0.1	6.0		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				8.9								
HCM 6th LOS				A								
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↕	↗	↘	↕
Traffic Vol, veh/h	12	13	1151	61	52	974
Future Vol, veh/h	12	13	1151	61	52	974
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	0	140	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	23	31	8	2	8	14
Mvmt Flow	13	14	1251	66	57	1059

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1895	626	0	0	1317
Stage 1	1251	-	-	-	-
Stage 2	644	-	-	-	-
Critical Hdwy	7.26	7.52	-	-	4.26
Critical Hdwy Stg 1	6.26	-	-	-	-
Critical Hdwy Stg 2	6.26	-	-	-	-
Follow-up Hdwy	3.73	3.61	-	-	2.28
Pot Cap-1 Maneuver	48	363	-	-	490
Stage 1	196	-	-	-	-
Stage 2	432	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	42	363	-	-	490
Mov Cap-2 Maneuver	135	-	-	-	-
Stage 1	196	-	-	-	-
Stage 2	382	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	24.5	0	0.7
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	135	363	490	-
HCM Lane V/C Ratio	-	-	0.097	0.039	0.115	-
HCM Control Delay (s)	-	-	34.5	15.3	13.3	-
HCM Lane LOS	-	-	D	C	B	-
HCM 95th %tile Q(veh)	-	-	0.3	0.1	0.4	-

Timings  
12: Heacock Street & San Michele Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	31	82	5	39	341	831	2	70	521	139	52
Future Volume (vph)	31	82	5	39	341	831	2	70	521	139	52
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	1	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	4.0	5.0	4.0	5.0	5.0
Minimum Split (s)	9.5	30.5	30.5	8.5	30.5	8.5	8.5	34.5	8.5	34.5	34.5
Total Split (s)	13.0	41.0	41.0	13.0	41.0	28.0	12.0	38.0	28.0	54.0	54.0
Total Split (%)	10.8%	34.2%	34.2%	10.8%	34.2%	23.3%	10.0%	31.7%	23.3%	45.0%	45.0%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	3.5	4.5	3.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	4.5	5.5	4.5	5.5	5.5
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	None	Max	Max
Act Effct Green (s)	6.3	16.2	16.2	14.4	24.3	53.7	4.8	33.0	23.9	59.8	59.8
Actuated g/C Ratio	0.06	0.16	0.16	0.14	0.24	0.52	0.05	0.32	0.23	0.58	0.58
v/c Ratio	0.29	0.31	0.01	0.17	0.83	0.69	0.02	0.08	1.37	0.14	0.05
Control Delay	57.1	45.1	0.0	41.1	54.6	6.6	54.0	25.2	214.4	14.5	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.1	45.1	0.0	41.1	54.6	6.6	54.0	25.2	214.4	14.5	0.4
LOS	E	D	A	D	D	A	D	C	F	B	A
Approach Delay		46.5			21.2			25.9		159.6	
Approach LOS		D			C			C		F	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 103.4  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.37  
 Intersection Signal Delay: 69.2  
 Intersection Capacity Utilization 71.0%  
 Analysis Period (min) 15  
 Intersection LOS: E  
 ICU Level of Service C

Splits and Phases: 12: Heacock Street & San Michele Road

Ø2	Ø1	Ø4	Ø3
38 s	28 s	41 s	13 s
Ø5	Ø6	Ø8	Ø7
12 s	54 s	41 s	13 s

HCM 6th Signalized Intersection Summary  
 12: Heacock Street & San Michele Road

Gateway Aviation TA (JN:13445)

04/19/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	82	5	39	341	831	2	70	11	521	139	52
Future Volume (veh/h)	31	82	5	39	341	831	2	70	11	521	139	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1856	1366	1796	1900	1856	1900	1856	1707	1811	1826	1856
Adj Flow Rate, veh/h	34	89	5	42	371	903	2	76	12	566	151	57
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	3	36	7	0	3	0	3	13	6	5	3
Cap, veh/h	43	124	78	453	585	805	4	863	133	352	899	774
Arrive On Green	0.02	0.07	0.07	0.26	0.31	0.31	0.00	0.28	0.28	0.20	0.49	0.49
Sat Flow, veh/h	1810	1856	1158	1711	1900	1572	1810	3061	473	1725	1826	1572
Grp Volume(v), veh/h	34	89	5	42	371	903	2	43	45	566	151	57
Grp Sat Flow(s),veh/h/ln	1810	1856	1158	1711	1900	1572	1810	1763	1770	1725	1826	1572
Q Serve(g_s), s	2.2	5.4	0.4	2.1	19.4	35.5	0.1	2.1	2.2	23.5	5.3	1.7
Cycle Q Clear(g_c), s	2.2	5.4	0.4	2.1	19.4	35.5	0.1	2.1	2.2	23.5	5.3	1.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.27	1.00		1.00
Lane Grp Cap(c), veh/h	43	124	78	453	585	805	4	497	499	352	899	774
V/C Ratio(X)	0.78	0.72	0.06	0.09	0.63	1.12	0.51	0.09	0.09	1.61	0.17	0.07
Avail Cap(c_a), veh/h	133	572	357	453	585	805	118	497	499	352	899	774
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.0	52.7	41.2	31.9	34.3	28.1	57.4	30.5	30.5	45.9	16.2	9.4
Incr Delay (d2), s/veh	10.9	2.9	0.1	0.0	1.7	70.8	33.9	0.3	0.4	287.2	0.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	2.6	0.1	0.9	8.8	25.5	0.1	0.9	0.9	37.6	2.2	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.9	55.6	41.4	32.0	36.0	98.9	91.3	30.8	30.8	333.0	16.6	9.6
LnGrp LOS	E	E	D	C	D	F	F	C	C	F	B	A
Approach Vol, veh/h		128			1316			90			774	
Approach Delay, s/veh		58.0			79.0			32.2			247.5	
Approach LOS		E			E			C			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	29.0	38.0	35.0	13.2	4.7	62.3	7.3	41.0				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	23.5	* 33	8.5	35.5	7.5	48.5	8.5	35.5				
Max Q Clear Time (g_c+I1), s	25.5	4.2	4.1	7.4	2.1	7.3	4.2	37.5				
Green Ext Time (p_c), s	0.0	0.2	0.0	0.3	0.0	0.5	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	132.5
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection					
Intersection Delay, s/veh14.0					
Intersection LOS B					
Approach	EB	WB		NB	
Entry Lanes	3	2		2	
Conflicting Circle Lanes	2	2		2	
Adj Approach Flow, veh/h	0	1673		90	
Demand Flow Rate, veh/h	0	1855		92	
Vehicles Circulating, veh/h	15	78		1485	
Vehicles Exiting, veh/h	1918	1499		210	
Ped Vol Crossing Leg, #/h	0	0		0	
Ped Cap Adj	1.000	1.000		1.000	
Approach Delay, s/veh	0.0	14.1		12.1	
Approach LOS	-	B		B	
Lane	Left		Right		
Designated Moves	LT		TR		L LTR
Assumed Moves	LT		TR		L LTR
RT Channelized					
Lane Util	0.470	0.530	0.533	0.467	
Follow-Up Headway, s	2.667	2.535	2.667	2.535	
Critical Headway, s	4.645	4.328	4.645	4.328	
Entry Flow, veh/h	872	983	49	43	
Cap Entry Lane, veh/h	1256	1329	344	402	
Entry HV Adj Factor	0.902	0.902	0.973	0.984	
Flow Entry, veh/h	786	887	48	42	
Cap Entry, veh/h	1133	1199	335	395	
V/C Ratio	0.694	0.740	0.142	0.107	
Control Delay, s/veh	13.5	14.7	13.2	10.7	
LOS	B		B		B B
95th %tile Queue, veh	6	7	0	0	



Timings  
14: Indian Street & San Michele Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↖	↗	↖	↗	↖	↗	↗	↖	↗
Traffic Volume (vph)	15	213	186	909	1599	217	236	6	141
Future Volume (vph)	15	213	186	909	1599	217	236	6	141
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8	5	2		1	6
Permitted Phases							2		
Detector Phase	7	4	3	8	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	31.8	9.6	31.8	9.6	32.8	32.8	9.6	32.8
Total Split (s)	12.0	33.0	19.0	40.0	32.0	57.0	57.0	11.0	36.0
Total Split (%)	10.0%	27.5%	15.8%	33.3%	26.7%	47.5%	47.5%	9.2%	30.0%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	5.9	17.3	14.2	32.2	27.9	43.8	43.8	5.3	12.9
Actuated g/C Ratio	0.06	0.19	0.15	0.34	0.30	0.47	0.47	0.06	0.14
v/c Ratio	0.20	0.79	0.74	0.80	1.58	0.29	0.27	0.07	0.35
Control Delay	52.7	23.6	57.4	35.2	292.3	18.8	3.4	49.7	37.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.7	23.6	57.4	35.2	292.3	18.8	3.4	49.7	37.4
LOS	D	C	E	D	F	B	A	D	D
Approach Delay		24.3		38.9		230.0			37.9
Approach LOS		C		D		F			D

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 93.5  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.58  
 Intersection Signal Delay: 136.1  
 Intersection LOS: F  
 Intersection Capacity Utilization 109.9%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 14: Indian Street & San Michele Road



HCM 6th Signalized Intersection Summary  
 14: Indian Street & San Michele Road

Gateway Aviation TA (JN:13445)

11/09/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	213	392	186	909	11	1599	217	236	6	141	14
Future Volume (veh/h)	15	213	392	186	909	11	1599	217	236	6	141	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		0.94
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1218	1470	1870	1826	1826	1900	1856	1752	1767	1900	1707	1900
Adj Flow Rate, veh/h	16	232	426	202	988	12	1738	236	257	7	153	15
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	46	29	2	5	5	0	3	10	9	0	13	0
Cap, veh/h	21	355	317	230	1328	16	905	718	606	16	462	44
Arrive On Green	0.02	0.25	0.25	0.13	0.37	0.37	0.26	0.41	0.41	0.01	0.15	0.15
Sat Flow, veh/h	1160	1397	1246	1739	3600	44	3534	1752	1478	1810	3046	294
Grp Volume(v), veh/h	16	232	426	202	501	499	1738	236	257	7	85	83
Grp Sat Flow(s),veh/h/ln	1160	1397	1246	1739	1826	1817	1767	1752	1478	1810	1707	1633
Q Serve(g_s), s	1.5	15.9	27.2	12.2	25.5	25.5	27.4	9.8	13.3	0.4	4.7	4.9
Cycle Q Clear(g_c), s	1.5	15.9	27.2	12.2	25.5	25.5	27.4	9.8	13.3	0.4	4.7	4.9
Prop In Lane	1.00		1.00	1.00		0.02	1.00		1.00	1.00		0.18
Lane Grp Cap(c), veh/h	21	355	317	230	674	671	905	718	606	16	259	247
V/C Ratio(X)	0.78	0.65	1.34	0.88	0.74	0.74	1.92	0.33	0.42	0.44	0.33	0.34
Avail Cap(c_a), veh/h	80	355	317	234	674	671	905	838	707	108	482	461
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.3	35.7	39.9	45.6	29.4	29.4	39.8	21.5	22.5	52.8	40.5	40.6
Incr Delay (d2), s/veh	20.6	3.4	174.8	27.8	4.0	4.0	418.1	0.1	0.2	7.0	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	5.5	23.3	6.9	11.2	11.2	63.7	3.8	4.4	0.2	1.9	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	73.0	39.1	214.7	73.3	33.3	33.3	457.9	21.6	22.7	59.7	40.8	40.9
LnGrp LOS	E	D	F	E	C	C	F	C	C	E	D	D
Approach Vol, veh/h		674			1202			2231			175	
Approach Delay, s/veh		150.9			40.0			361.6			41.6	
Approach LOS		F			D			F			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.5	49.7	18.8	33.0	33.2	22.0	6.5	45.3				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	5.8	* 5.8	4.6	5.8				
Max Green Setting (Gmax), s	6.4	51.2	14.4	27.2	27.4	* 30	7.4	34.2				
Max Q Clear Time (g_c+I1), s	2.4	15.3	14.2	29.2	29.4	6.9	3.5	27.5				
Green Ext Time (p_c), s	0.0	1.1	0.0	0.0	0.0	0.5	0.0	2.2				

Intersection Summary

HCM 6th Ctrl Delay	225.1
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
15: Indian Street & Nandina Avenue



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↑	↗	↖	↗	↖	↕	↖	↕
Traffic Volume (vph)	8	35	169	36	44	369	1824	13	518
Future Volume (vph)	8	35	169	36	44	369	1824	13	518
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	5	3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	5	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	29.8	9.6	9.6	29.8	9.6	26.8	9.6	26.8
Total Split (s)	13.0	35.0	36.0	15.0	37.0	36.0	56.0	14.0	34.0
Total Split (%)	10.8%	29.2%	30.0%	12.5%	30.8%	30.0%	46.7%	11.7%	28.3%
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	5.6	12.7	44.0	7.1	17.8	29.9	58.1	6.0	23.4
Actuated g/C Ratio	0.07	0.15	0.52	0.08	0.21	0.35	0.68	0.07	0.27
v/c Ratio	0.07	0.19	0.25	0.30	0.24	0.74	0.83	0.14	0.60
Control Delay	48.1	39.3	3.4	49.5	25.3	37.9	20.4	49.2	33.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.1	39.3	3.4	49.5	25.3	37.9	20.4	49.2	33.1
LOS	D	D	A	D	C	D	C	D	C
Approach Delay		11.1			33.6		23.3		33.5
Approach LOS		B			C		C		C

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 85.1  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.83  
 Intersection Signal Delay: 24.6  
 Intersection LOS: C  
 Intersection Capacity Utilization 79.2%  
 ICU Level of Service D  
 Analysis Period (min) 15























Splits and Phases: 15: Indian Street & Nandina Avenue



HCM 6th Signalized Intersection Summary  
 15: Indian Street & Nandina Avenue

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	35	169	36	44	24	369	1824	76	13	518	27
Future Volume (veh/h)	8	35	169	36	44	24	369	1824	76	13	518	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1248	1100	1559	1441	1455	1559	1841	1707	1411	1811	1900
Adj Flow Rate, veh/h	9	38	184	39	48	26	401	1983	83	14	563	29
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	44	54	23	31	30	23	4	13	33	6	0
Cap, veh/h	20	205	422	51	165	89	429	1946	81	22	965	50
Arrive On Green	0.01	0.16	0.16	0.03	0.19	0.19	0.29	0.56	0.56	0.02	0.28	0.28
Sat Flow, veh/h	1810	1248	932	1485	879	476	1485	3506	145	1344	3415	176
Grp Volume(v), veh/h	9	38	184	39	0	74	401	1033	1033	14	298	294
Grp Sat Flow(s),veh/h/ln	1810	1248	932	1485	0	1355	1485	1841	1811	1344	1811	1779
Q Serve(g_s), s	0.4	2.4	12.2	2.4	0.0	4.2	23.8	50.2	50.2	0.9	12.8	12.8
Cycle Q Clear(g_c), s	0.4	2.4	12.2	2.4	0.0	4.2	23.8	50.2	50.2	0.9	12.8	12.8
Prop In Lane	1.00		1.00	1.00		0.35	1.00		0.08	1.00		0.10
Lane Grp Cap(c), veh/h	20	205	422	51	0	254	429	1022	1005	22	512	503
V/C Ratio(X)	0.44	0.19	0.44	0.76	0.00	0.29	0.93	1.01	1.03	0.64	0.58	0.58
Avail Cap(c_a), veh/h	168	403	570	171	0	467	516	1022	1005	140	565	555
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.4	32.6	16.9	43.3	0.0	31.6	31.3	20.1	20.1	44.2	27.9	27.9
Incr Delay (d2), s/veh	5.6	0.4	0.7	8.3	0.0	0.6	20.8	30.9	35.7	10.7	1.3	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.7	2.4	0.9	0.0	1.4	10.2	25.8	26.7	0.4	5.3	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.0	33.0	17.6	51.6	0.0	32.2	52.1	51.0	55.8	54.9	29.1	29.2
LnGrp LOS	D	C	B	D	A	C	D	F	F	D	C	C
Approach Vol, veh/h		231			113			2467			606	
Approach Delay, s/veh		21.4			38.9			53.2			29.8	
Approach LOS		C			D			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.1	56.0	7.7	20.6	30.7	31.3	5.6	22.7				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	9.4	50.2	10.4	29.2	31.4	28.2	8.4	31.2				
Max Q Clear Time (g_c+I1), s	2.9	52.2	4.4	14.2	25.8	14.8	2.4	6.2				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.7	0.3	2.6	0.0	0.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			46.4									
HCM 6th LOS			D									

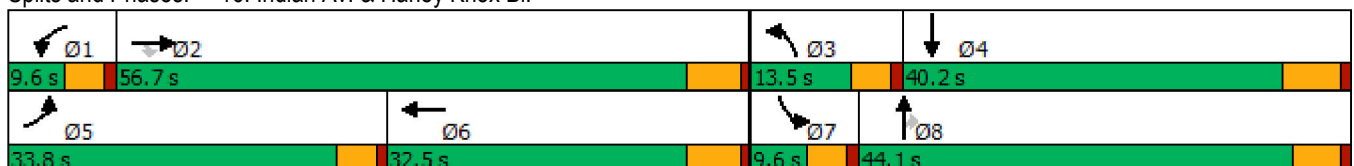
Timings  
16: Indian Av. & Harley Knox Bl.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	167	276	56	157	541	58	298	82	102	191
Future Volume (vph)	167	276	56	157	541	58	298	82	102	191
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	5	2		1	6	3	8		7	4
Permitted Phases			2					8		
Detector Phase	5	2	2	1	6	3	8	8	7	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	35.8	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2
Total Split (s)	33.8	56.7	56.7	9.6	32.5	13.5	44.1	44.1	9.6	40.2
Total Split (%)	28.2%	47.3%	47.3%	8.0%	27.1%	11.3%	36.8%	36.8%	8.0%	33.5%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.4	4.4	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	5.4	5.4	4.6	6.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	18.1	34.1	34.1	5.3	21.3	6.6	17.5	17.5	5.3	18.1
Actuated g/C Ratio	0.22	0.41	0.41	0.06	0.25	0.08	0.21	0.21	0.06	0.22
v/c Ratio	0.75	0.15	0.09	1.54	0.70	0.25	0.46	0.21	0.98	0.46
Control Delay	52.9	16.2	0.5	312.3	30.0	45.4	31.9	1.3	128.4	24.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.9	16.2	0.5	312.3	30.0	45.4	31.9	1.3	128.4	24.9
LOS	D	B	A	F	C	D	C	A	F	C
Approach Delay		26.8			74.4		28.0			51.2
Approach LOS		C			E		C			D

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 83.8	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.54	
Intersection Signal Delay: 51.5	Intersection LOS: D
Intersection Capacity Utilization 57.4%	ICU Level of Service B
Analysis Period (min) 15	































Splits and Phases: 16: Indian Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 16: Indian Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 			 	
Traffic Volume (veh/h)	167	276	56	157	541	302	58	298	82	102	191	109
Future Volume (veh/h)	167	276	56	157	541	302	58	298	82	102	191	109
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1011	1811	1707	1870	1856	1900	1737	1781	1796	1885	1811	1366
Adj Flow Rate, veh/h	182	300	52	171	588	308	63	324	82	111	208	69
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	60	6	13	2	3	0	11	8	7	1	6	36
Cap, veh/h	202	2013	589	126	907	422	161	508	228	127	437	141
Arrive On Green	0.21	0.41	0.41	0.07	0.27	0.27	0.05	0.15	0.15	0.07	0.17	0.17
Sat Flow, veh/h	963	4944	1447	1781	3377	1572	3209	3385	1522	1795	2558	825
Grp Volume(v), veh/h	182	300	52	171	588	308	63	324	82	111	138	139
Grp Sat Flow(s),veh/h/ln	963	1648	1447	1781	1689	1572	1605	1692	1522	1795	1721	1663
Q Serve(g_s), s	13.0	2.7	1.6	5.0	10.9	12.6	1.3	6.3	3.4	4.3	5.1	5.3
Cycle Q Clear(g_c), s	13.0	2.7	1.6	5.0	10.9	12.6	1.3	6.3	3.4	4.3	5.1	5.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.50
Lane Grp Cap(c), veh/h	202	2013	589	126	907	422	161	508	228	127	294	284
V/C Ratio(X)	0.90	0.15	0.09	1.35	0.65	0.73	0.39	0.64	0.36	0.87	0.47	0.49
Avail Cap(c_a), veh/h	399	3572	1045	126	1280	596	405	1859	836	127	830	802
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.1	13.2	12.8	32.7	22.8	23.4	32.4	28.1	26.9	32.4	26.3	26.4
Incr Delay (d2), s/veh	5.8	0.0	0.1	201.7	0.8	2.7	0.6	1.3	1.0	42.2	1.2	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	0.8	0.4	9.1	3.9	4.4	0.5	2.4	1.2	3.2	2.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.0	13.2	12.9	234.4	23.6	26.2	33.0	29.5	27.8	74.6	27.5	27.7
LnGrp LOS	C	B	B	F	C	C	C	C	C	E	C	C
Approach Vol, veh/h		534			1067			469			388	
Approach Delay, s/veh		19.9			58.1			29.7			41.1	
Approach LOS		B			E			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.6	34.5	8.1	18.2	19.4	24.7	9.6	16.8				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	5.0	50.9	8.9	34.0	29.2	26.7	5.0	* 39				
Max Q Clear Time (g_c+I1), s	7.0	4.7	3.3	7.3	15.0	14.6	6.3	8.3				
Green Ext Time (p_c), s	0.0	2.0	0.0	1.4	0.2	4.4	0.0	2.2				

Intersection Summary

HCM 6th Ctrl Delay	41.7
HCM 6th LOS	D

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

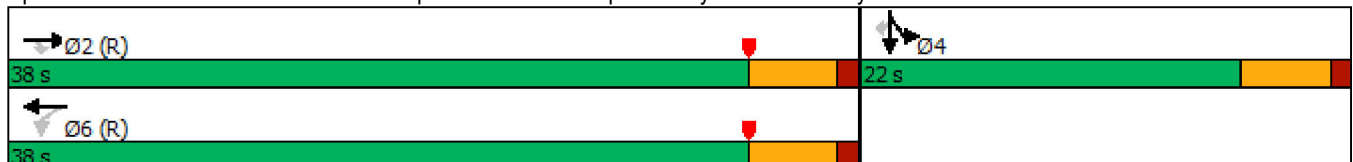


Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↑
Traffic Volume (vph)	875	96	644	400	0	226
Future Volume (vph)	875	96	644	400	0	226
Turn Type	NA	Perm	Perm	NA	NA	Perm
Protected Phases	2			6	4	
Permitted Phases		2	6			4
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	25.0	25.0	10.0	10.0
Total Split (s)	38.0	38.0	38.0	38.0	22.0	22.0
Total Split (%)	63.3%	63.3%	63.3%	63.3%	36.7%	36.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	33.0	33.0	33.0	33.0	17.0	17.0
Actuated g/C Ratio	0.55	0.55	0.55	0.55	0.28	0.28
v/c Ratio	0.50	0.11	2.77	0.23	1.35	0.41
Control Delay	9.6	2.0	817.6	8.5	197.1	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.6	2.0	817.6	8.5	197.1	5.2
LOS	A	A	F	A	F	A
Approach Delay	8.8			507.5	140.7	
Approach LOS	A			F	F	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 2.77  
 Intersection Signal Delay: 232.3  
 Intersection LOS: F  
 Intersection Capacity Utilization 154.0%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.





HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

11/09/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑						↑	↑
Traffic Volume (veh/h)	0	875	96	644	400	0	0	0	0	544	0	226
Future Volume (veh/h)	0	875	96	644	400	0	0	0	0	544	0	226
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1826	1885	1841	1826	0				1648	1900	1767
Adj Flow Rate, veh/h	0	951	104	700	435	0				591	0	186
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	5	1	4	5	0				17	0	9
Cap, veh/h	0	1908	878	320	1908	0				513	0	424
Arrive On Green	0.00	0.55	0.55	0.92	0.92	0.00				0.28	0.00	0.28
Sat Flow, veh/h	0	3561	1597	526	3561	0				1810	0	1497
Grp Volume(v), veh/h	0	951	104	700	435	0				591	0	186
Grp Sat Flow(s),veh/h/ln	0	1735	1597	526	1735	0				1810	0	1497
Q Serve(g_s), s	0.0	10.2	1.9	22.8	0.8	0.0				17.0	0.0	6.1
Cycle Q Clear(g_c), s	0.0	10.2	1.9	33.0	0.8	0.0				17.0	0.0	6.1
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1908	878	320	1908	0				513	0	424
V/C Ratio(X)	0.00	0.50	0.12	2.19	0.23	0.00				1.15	0.00	0.44
Avail Cap(c_a), veh/h	0	1908	878	320	1908	0				513	0	424
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.41	0.41	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	8.4	6.5	11.8	1.1	0.0				21.5	0.0	17.6
Incr Delay (d2), s/veh	0.0	0.9	0.3	538.5	0.1	0.0				89.2	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.8	0.5	51.3	0.2	0.0				18.7	0.0	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	9.3	6.8	550.3	1.2	0.0				110.7	0.0	18.3
LnGrp LOS	A	A	A	F	A	A				F	A	B
Approach Vol, veh/h		1055			1135						777	
Approach Delay, s/veh		9.1			339.9						88.5	
Approach LOS		A			F						F	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		38.0		22.0		38.0						
Change Period (Y+Rc), s		5.0		5.0		5.0						
Max Green Setting (Gmax), s		33.0		17.0		33.0						
Max Q Clear Time (g_c+I1), s		12.2		19.0		35.0						
Green Ext Time (p_c), s		4.2		0.0		0.0						
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				156.4								
HCM 6th LOS				F								



Timings

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

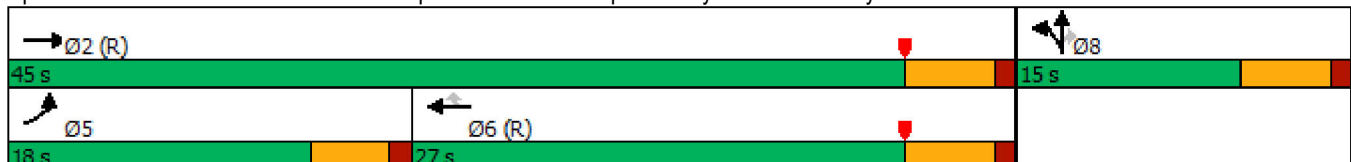


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	479	940	996	1145	4	344
Future Volume (vph)	479	940	996	1145	4	344
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	26.0	24.0	24.0	10.0	10.0
Total Split (s)	18.0	45.0	27.0	27.0	15.0	15.0
Total Split (%)	30.0%	75.0%	45.0%	45.0%	25.0%	25.0%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max
Act Effct Green (s)	13.5	40.0	22.0	22.0	10.0	10.0
Actuated g/C Ratio	0.22	0.67	0.37	0.37	0.17	0.17
v/c Ratio	1.34	0.48	0.85	1.48	0.20	1.06
Control Delay	186.5	4.3	26.0	239.5	23.6	85.6
Queue Delay	0.0	0.3	0.0	0.0	0.0	0.0
Total Delay	186.5	4.6	26.0	239.5	23.6	85.6
LOS	F	A	C	F	C	F
Approach Delay		66.0	140.2		77.6	
Approach LOS		E	F		E	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 29 (48%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.48  
 Intersection Signal Delay: 107.3  
 Intersection LOS: F  
 Intersection Capacity Utilization 154.0%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.























HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 							
Traffic Volume (veh/h)	479	940	0	0	996	1145	48	4	344	0	0	0
Future Volume (veh/h)	479	940	0	0	996	1145	48	4	344	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1841	1722	0	0	1841	1752	1796	1900	1663			
Adj Flow Rate, veh/h	521	1022	0	0	1083	1181	52	4	309			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	4	12	0	0	4	10	7	0	16			
Cap, veh/h	394	2181	0	0	1282	544	281	22	235			
Arrive On Green	0.07	0.22	0.00	0.00	0.37	0.37	0.17	0.17	0.17			
Sat Flow, veh/h	1753	3358	0	0	3589	1485	1686	130	1409			
Grp Volume(v), veh/h	521	1022	0	0	1083	1181	56	0	309			
Grp Sat Flow(s),veh/h/ln	1753	1636	0	0	1749	1485	1816	0	1409			
Q Serve(g_s), s	13.5	16.3	0.0	0.0	17.0	22.0	1.6	0.0	10.0			
Cycle Q Clear(g_c), s	13.5	16.3	0.0	0.0	17.0	22.0	1.6	0.0	10.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.93		1.00			
Lane Grp Cap(c), veh/h	394	2181	0	0	1282	544	303	0	235			
V/C Ratio(X)	1.32	0.47	0.00	0.00	0.84	2.17	0.19	0.00	1.32			
Avail Cap(c_a), veh/h	394	2181	0	0	1282	544	303	0	235			
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.86	0.86	0.00	0.00	0.61	0.61	1.00	0.00	1.00			
Uniform Delay (d), s/veh	27.8	14.2	0.0	0.0	17.4	19.0	21.5	0.0	25.0			
Incr Delay (d2), s/veh	159.1	0.6	0.0	0.0	4.4	530.0	1.3	0.0	168.9			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	23.4	6.9	0.0	0.0	6.3	86.1	0.7	0.0	13.9			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	186.8	14.8	0.0	0.0	21.8	549.0	22.8	0.0	193.9			
LnGrp LOS	F	B	A	A	C	F	C	A	F			
Approach Vol, veh/h		1543			2264			365				
Approach Delay, s/veh		72.9			296.8			167.6				
Approach LOS		E			F			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		45.0			18.0	27.0		15.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		40.0			13.5	22.0		10.0				
Max Q Clear Time (g_c+1), s		18.3			15.5	24.0		12.0				
Green Ext Time (p_c), s		4.5			0.0	0.0		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					202.7							
HCM 6th LOS					F							

Timings  
3: Western Way & Harley Knox Bl.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↑↑↑	↗	↖	↑↑↑	↖	↗	↖	↗
Traffic Volume (vph)	35	1249	1	2	1999	3	0	15	0
Future Volume (vph)	35	1249	1	2	1999	3	0	15	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	NA
Protected Phases	5	2		1	6		8		4
Permitted Phases			2			8		4	
Detector Phase	5	2	2	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	21.8	21.8	9.6	21.8	32.6	32.6	32.6	32.6
Total Split (s)	18.0	71.4	71.4	9.6	63.0	39.0	39.0	39.0	39.0
Total Split (%)	15.0%	59.5%	59.5%	8.0%	52.5%	32.5%	32.5%	32.5%	32.5%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	7.2	56.7	56.7	5.3	51.4	13.3	13.3	13.3	13.3
Actuated g/C Ratio	0.09	0.69	0.69	0.06	0.62	0.16	0.16	0.16	0.16
v/c Ratio	0.32	0.43	0.00	0.02	0.73	0.02	0.01	0.08	0.41
Control Delay	48.9	7.3	0.0	46.5	14.7	33.7	0.0	34.9	10.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.9	7.3	0.0	46.5	14.7	33.7	0.0	34.9	10.4
LOS	D	A	A	D	B	C	A	C	B
Approach Delay		8.4			14.8		14.4		12.7
Approach LOS		A			B		B		B

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 82.4	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 12.3	Intersection LOS: B
Intersection Capacity Utilization 56.2%	ICU Level of Service B
Analysis Period (min) 15	


























Splits and Phases: 3: Western Way & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 3: Western Way & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  							
Traffic Volume (veh/h)	35	1249	1	2	1999	11	3	0	4	15	0	140
Future Volume (veh/h)	35	1249	1	2	1999	11	3	0	4	15	0	140
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1426	1707	1900	1900	1781	1515	1900	1900	1900	1767	1900	1811
Adj Flow Rate, veh/h	38	1358	1	2	2173	10	3	0	4	16	0	140
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	32	13	0	0	8	26	0	0	0	9	0	6
Cap, veh/h	50	3037	1049	5	3084	14	168	0	217	278	0	217
Arrive On Green	0.04	0.65	0.65	0.00	0.62	0.62	0.13	0.00	0.13	0.13	0.00	0.13
Sat Flow, veh/h	1358	4661	1610	1810	4997	23	1269	0	1610	1334	0	1610
Grp Volume(v), veh/h	38	1358	1	2	1410	773	3	0	4	16	0	140
Grp Sat Flow(s),veh/h/ln	1358	1554	1610	1810	1621	1777	1269	0	1610	1334	0	1610
Q Serve(g_s), s	2.0	10.2	0.0	0.1	21.0	21.0	0.2	0.0	0.2	0.7	0.0	5.9
Cycle Q Clear(g_c), s	2.0	10.2	0.0	0.1	21.0	21.0	6.0	0.0	0.2	0.9	0.0	5.9
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	50	3037	1049	5	2001	1097	168	0	217	278	0	217
V/C Ratio(X)	0.75	0.45	0.00	0.41	0.70	0.70	0.02	0.00	0.02	0.06	0.00	0.64
Avail Cap(c_a), veh/h	256	4297	1484	127	2606	1429	610	0	778	743	0	778
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.9	6.1	4.3	35.4	9.2	9.2	32.0	0.0	26.7	27.1	0.0	29.2
Incr Delay (d2), s/veh	8.2	0.1	0.0	18.7	0.6	1.1	0.0	0.0	0.0	0.1	0.0	3.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	2.1	0.0	0.1	5.2	5.8	0.1	0.0	0.1	0.2	0.0	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.1	6.2	4.3	54.1	9.8	10.3	32.1	0.0	26.7	27.2	0.0	32.3
LnGrp LOS	D	A	A	D	A	B	C	A	C	C	A	C
Approach Vol, veh/h		1397			2185			7				156
Approach Delay, s/veh		7.2			10.0			29.0				31.8
Approach LOS		A			B			C				C
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.8	52.2		14.2	7.2	49.7		14.2				
Change Period (Y+Rc), s	4.6	5.8		4.6	4.6	5.8		4.6				
Max Green Setting (Gmax), s	5.0	65.6		34.4	13.4	57.2		34.4				
Max Q Clear Time (g_c+1), s	2.1	12.2		7.9	4.0	23.0		8.0				
Green Ext Time (p_c), s	0.0	12.7		0.9	0.0	20.9		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				9.9								
HCM 6th LOS				A								

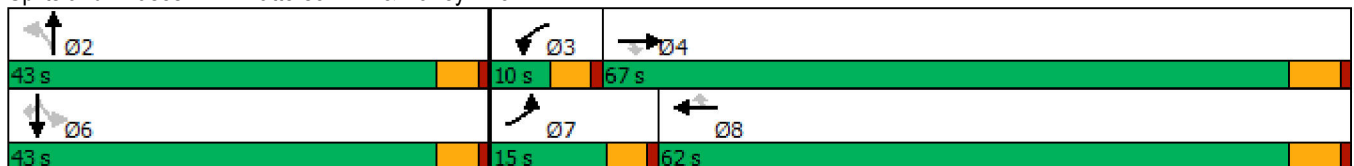
Timings  
4: Patterson Av. & Harley Knox Bl.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	27	993	46	50	1859	10	118	3	26	4	35
Future Volume (vph)	27	993	46	50	1859	10	118	3	26	4	35
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	7	4		3	8			2		6	
Permitted Phases			4			8	2		6		6
Detector Phase	7	4	4	3	8	8	2	2	6	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	9.6	31.8	31.8	33.7	33.7	40.7	40.7	40.7
Total Split (s)	15.0	67.0	67.0	10.0	62.0	62.0	43.0	43.0	43.0	43.0	43.0
Total Split (%)	12.5%	55.8%	55.8%	8.3%	51.7%	51.7%	35.8%	35.8%	35.8%	35.8%	35.8%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8		4.7		4.7	4.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	7.1	59.0	59.0	5.4	59.7	59.7		18.4		18.4	18.4
Actuated g/C Ratio	0.07	0.61	0.61	0.06	0.62	0.62		0.19		0.19	0.19
v/c Ratio	0.36	0.38	0.05	0.53	0.97	0.01		0.67		0.13	0.11
Control Delay	58.7	11.4	3.0	67.7	35.8	0.0		44.6		32.5	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	58.7	11.4	3.0	67.7	35.8	0.0		44.6		32.5	0.7
LOS	E	B	A	E	D	A		D		C	A
Approach Delay		12.3			36.4			44.6		15.2	
Approach LOS		B			D			D		B	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 96.1  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.97  
 Intersection Signal Delay: 28.4  
 Intersection LOS: C  
 Intersection Capacity Utilization 81.8%  
 ICU Level of Service D  
 Analysis Period (min) 15



























Splits and Phases: 4: Patterson Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 4: Patterson Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/09/2020

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		  			 			 				 	
Traffic Volume (veh/h)	27	993	46	50	1859	10	118	3	44	26	4	35	
Future Volume (veh/h)	27	993	46	50	1859	10	118	3	44	26	4	35	
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No			No			No			No		
Adj Sat Flow, veh/h/ln	922	1722	1856	1900	1781	1574	1826	1900	1811	1781	1337	1544	
Adj Flow Rate, veh/h	29	1079	50	54	2021	11	128	3	48	28	4	38	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Percent Heavy Veh, %	66	12	3	0	8	22	5	0	6	8	38	24	
Cap, veh/h	25	2897	969	75	2128	822	220	12	59	224	25	224	
Arrive On Green	0.03	0.62	0.62	0.04	0.63	0.63	0.17	0.17	0.17	0.17	0.17	0.17	
Sat Flow, veh/h	878	4701	1572	1810	3385	1306	877	72	348	863	149	1309	
Grp Volume(v), veh/h	29	1079	50	54	2021	11	179	0	0	32	0	38	
Grp Sat Flow(s),veh/h/ln	878	1567	1572	1810	1692	1306	1296	0	0	1011	0	1309	
Q Serve(g_s), s	2.5	10.1	1.1	2.6	48.5	0.3	9.8	0.0	0.0	0.0	0.0	2.2	
Cycle Q Clear(g_c), s	2.5	10.1	1.1	2.6	48.5	0.3	12.1	0.0	0.0	2.3	0.0	2.2	
Prop In Lane	1.00		1.00	1.00		1.00	0.72		0.27	0.87		1.00	
Lane Grp Cap(c), veh/h	25	2897	969	75	2128	822	292	0	0	250	0	224	
V/C Ratio(X)	1.15	0.37	0.05	0.72	0.95	0.01	0.61	0.00	0.00	0.13	0.00	0.17	
Avail Cap(c_a), veh/h	103	3261	1091	111	2156	832	672	0	0	513	0	568	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	
Uniform Delay (d), s/veh	42.8	8.4	6.7	41.8	15.1	6.1	36.0	0.0	0.0	31.2	0.0	31.2	
Incr Delay (d2), s/veh	96.2	0.1	0.0	4.7	10.0	0.0	2.1	0.0	0.0	0.2	0.0	0.4	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	1.2	2.7	0.3	1.2	16.8	0.1	3.8	0.0	0.0	0.6	0.0	0.7	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	139.0	8.5	6.7	46.5	25.1	6.1	38.1	0.0	0.0	31.5	0.0	31.6	
LnGrp LOS	F	A	A	D	C	A	D	A	A	C	A	C	
Approach Vol, veh/h		1158			2086			179				70	
Approach Delay, s/veh		11.7			25.5			38.1				31.5	
Approach LOS		B			C			D				C	
Timer - Assigned Phs		2	3	4		6	7	8					
Phs Duration (G+Y+Rc), s		19.8	8.3	60.2		19.8	7.1	61.3					
Change Period (Y+Rc), s		* 4.7	4.6	5.8		* 4.7	4.6	5.8					
Max Green Setting (Gmax), s		* 38	5.4	61.2		* 38	10.4	56.2					
Max Q Clear Time (g_c+I1), s		14.1	4.6	12.1		4.3	4.5	50.5					
Green Ext Time (p_c), s		1.0	0.0	9.1		0.3	0.0	5.0					
<b>Intersection Summary</b>													
HCM 6th Ctrl Delay				21.7									
HCM 6th LOS				C									
<b>Notes</b>													
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.													

Timings  
5: Heacock Street & Cactus Avenue

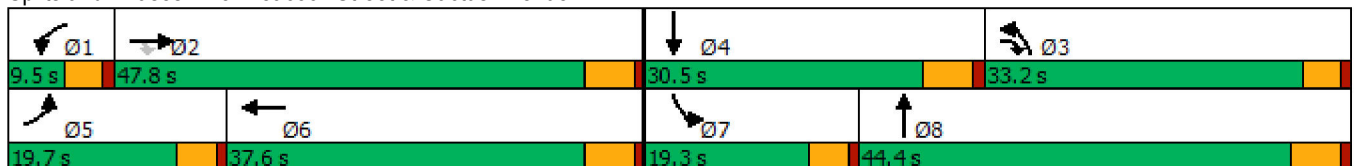


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↙	↕	↘	↙	↕	↘	↕	↙	↕
Traffic Volume (vph)	244	2146	1379	28	956	835	675	184	746
Future Volume (vph)	244	2146	1379	28	956	835	675	184	746
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	3	1	6	3	8	7	4
Permitted Phases			2						
Detector Phase	5	2	3	1	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.5	30.5	9.5	9.5	30.5	9.5	30.5	9.5	30.5
Total Split (s)	19.7	47.8	33.2	9.5	37.6	33.2	44.4	19.3	30.5
Total Split (%)	16.3%	39.5%	27.4%	7.9%	31.1%	27.4%	36.7%	16.0%	25.2%
Yellow Time (s)	3.5	4.5	3.5	3.5	4.5	3.5	4.5	3.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	4.5	4.5	5.5	4.5	5.5	4.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None
Act Effct Green (s)	15.2	46.1	75.8	5.0	32.1	28.7	39.5	14.2	25.0
Actuated g/C Ratio	0.13	0.38	0.63	0.04	0.27	0.24	0.33	0.12	0.21
v/c Ratio	1.07	1.56	1.25	0.39	1.13	1.02	0.64	0.86	1.10
Control Delay	127.4	284.4	139.6	72.0	110.7	82.5	37.2	86.2	106.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	127.4	284.4	139.6	72.0	110.7	82.5	37.2	86.2	106.0
LOS	F	F	F	E	F	F	D	F	F
Approach Delay		221.3			109.8		61.1		102.3
Approach LOS		F			F		E		F

Intersection Summary

Cycle Length: 121  
 Actuated Cycle Length: 121  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.56  
 Intersection Signal Delay: 154.8  
 Intersection LOS: F  
 Intersection Capacity Utilization 126.6%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 5: Heacock Street & Cactus Avenue
































HCM 6th Signalized Intersection Summary  
5: Heacock Street & Cactus Avenue

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 		 	 			 	
Traffic Volume (veh/h)	244	2146	1379	28	956	132	835	675	72	184	746	61
Future Volume (veh/h)	244	2146	1379	28	956	132	835	675	72	184	746	61
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1811	1826	1885	1870	1811	1870	1870	1900	1856	1900
Adj Flow Rate, veh/h	254	2235	1436	29	996	138	870	703	75	192	777	64
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	1	6	5	1	2	6	2	2	0	3	0
Cap, veh/h	225	1365	915	45	853	118	812	1087	116	218	693	57
Arrive On Green	0.12	0.36	0.36	0.03	0.26	0.26	0.24	0.33	0.33	0.12	0.20	0.20
Sat Flow, veh/h	1810	3770	1531	1739	3241	449	3450	3316	353	1810	3382	278
Grp Volume(v), veh/h	254	2235	1436	29	579	555	870	396	382	192	426	415
Grp Sat Flow(s),veh/h/ln	1810	1885	1531	1739	1885	1804	1725	1870	1799	1810	1856	1804
Q Serve(g_s), s	15.2	44.2	27.8	2.0	32.1	32.1	28.7	22.0	22.1	12.7	25.0	25.0
Cycle Q Clear(g_c), s	15.2	44.2	27.8	2.0	32.1	32.1	28.7	22.0	22.1	12.7	25.0	25.0
Prop In Lane	1.00		1.00	1.00		0.25	1.00		0.20	1.00		0.15
Lane Grp Cap(c), veh/h	225	1365	915	45	496	475	812	613	590	218	380	370
V/C Ratio(X)	1.13	1.64	1.57	0.65	1.17	1.17	1.07	0.65	0.65	0.88	1.12	1.12
Avail Cap(c_a), veh/h	225	1365	915	71	496	475	812	613	590	220	380	370
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.4	38.9	11.8	58.9	44.9	45.0	46.7	35.0	35.0	52.8	48.5	48.5
Incr Delay (d2), s/veh	98.2	290.1	261.3	5.8	95.3	96.6	52.7	1.9	1.9	29.9	83.2	84.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.8	74.1	77.6	0.9	27.5	26.5	17.8	10.0	9.6	7.4	20.0	19.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	151.6	329.0	273.0	64.7	140.3	141.6	99.4	36.8	36.9	82.7	131.7	132.5
LnGrp LOS	F	F	F	E	F	F	F	D	D	F	F	F
Approach Vol, veh/h		3925			1163			1648			1033	
Approach Delay, s/veh		297.1			139.0			69.9			122.9	
Approach LOS		F			F			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.6	49.7	34.2	30.5	19.7	37.6	19.2	45.5				
Change Period (Y+Rc), s	4.5	5.5	5.5	* 5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	5.0	42.3	28.7	* 25	15.2	32.1	14.8	38.9				
Max Q Clear Time (g_c+I1), s	4.0	46.2	30.7	27.0	17.2	34.1	14.7	24.1				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5				

Intersection Summary

HCM 6th Ctrl Delay	202.0
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Timings  
6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

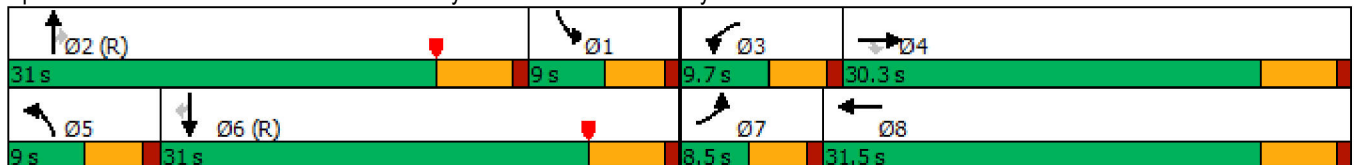
11/10/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	37	239	397	36	99	98	1076	90	362	1258	24
Future Volume (vph)	37	239	397	36	99	98	1076	90	362	1258	24
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4					2			6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Minimum Split (s)	8.5	23.5	23.5	8.5	31.5	8.5	30.5	30.5	8.5	23.5	23.5
Total Split (s)	8.5	30.3	30.3	9.7	31.5	9.0	31.0	31.0	9.0	31.0	31.0
Total Split (%)	10.6%	37.9%	37.9%	12.1%	39.4%	11.3%	38.8%	38.8%	11.3%	38.8%	38.8%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	5.5	4.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	4.0	16.5	16.5	5.0	17.2	9.0	37.7	37.7	4.5	33.2	33.2
Actuated g/C Ratio	0.05	0.21	0.21	0.06	0.22	0.11	0.47	0.47	0.06	0.42	0.42
v/c Ratio	0.42	0.67	0.74	0.33	0.33	0.50	0.69	0.10	3.85	0.93	0.03
Control Delay	50.5	37.1	19.8	43.4	10.3	46.2	22.8	0.7	1321.3	38.6	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.5	37.1	19.8	43.4	10.3	46.2	22.8	0.7	1321.3	38.6	0.0
LOS	D	D	B	D	B	D	C	A	F	D	A
Approach Delay		27.6			13.9		23.0			320.3	
Approach LOS		C			B		C			F	

Intersection Summary

Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 110  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 3.85  
 Intersection Signal Delay: 147.9  
 Intersection Capacity Utilization 82.4%  
 Analysis Period (min) 15  
 Intersection LOS: F  
 ICU Level of Service E
























Splits and Phases: 6: Heacock Street & Meyer Drive/John F. Kennedy Drive



HCM 6th Signalized Intersection Summary  
 6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	239	397	36	99	194	98	1076	90	362	1258	24
Future Volume (veh/h)	37	239	397	36	99	194	98	1076	90	362	1258	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1900	1900	1885	1885	1900	1811	1900	1841	1796	1900
Adj Flow Rate, veh/h	40	260	432	39	108	211	107	1170	98	393	1367	26
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	1	0	0	1	1	0	6	0	4	7	0
Cap, veh/h	53	548	468	52	548	464	102	1155	513	173	1343	602
Arrive On Green	0.03	0.29	0.29	0.03	0.29	0.29	0.06	0.32	0.32	0.10	0.37	0.37
Sat Flow, veh/h	1810	1885	1610	1810	1885	1598	1810	3622	1610	1753	3593	1610
Grp Volume(v), veh/h	40	260	432	39	108	211	107	1170	98	393	1367	26
Grp Sat Flow(s),veh/h/ln	1810	1885	1610	1810	1885	1598	1810	1811	1610	1753	1796	1610
Q Serve(g_s), s	1.8	9.1	20.8	1.7	3.4	8.6	4.5	25.5	2.7	7.9	29.9	0.8
Cycle Q Clear(g_c), s	1.8	9.1	20.8	1.7	3.4	8.6	4.5	25.5	2.7	7.9	29.9	0.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	53	548	468	52	548	464	102	1155	513	173	1343	602
V/C Ratio(X)	0.75	0.47	0.92	0.74	0.20	0.45	1.05	1.01	0.19	2.27	1.02	0.04
Avail Cap(c_a), veh/h	90	584	499	118	613	519	102	1155	513	173	1343	602
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.61	0.61	0.61	0.09	0.09	0.09
Uniform Delay (d), s/veh	38.5	23.3	27.5	38.5	21.4	23.2	37.8	27.3	11.8	36.0	25.0	15.9
Incr Delay (d2), s/veh	7.6	0.2	21.3	7.5	0.1	0.3	83.9	24.0	0.5	572.4	12.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	3.8	10.0	0.8	1.4	3.0	4.2	13.5	1.3	30.7	13.2	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.2	23.6	48.8	46.0	21.4	23.5	121.6	51.3	12.3	608.4	37.5	16.0
LnGrp LOS	D	C	D	D	C	C	F	F	B	F	F	B
Approach Vol, veh/h		732			358			1375			1786	
Approach Delay, s/veh		39.7			25.3			54.0			162.8	
Approach LOS		D			C			D			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.4	31.0	6.8	28.8	9.0	35.4	6.9	28.7				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	4.5	* 26	5.2	24.8	4.5	25.5	4.0	26.0				
Max Q Clear Time (g_c+I1), s	9.9	27.5	3.7	22.8	6.5	31.9	3.8	10.6				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.5	0.0	0.0	0.0	1.0				













Intersection Summary

HCM 6th Ctrl Delay	94.8
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
7: Heacock Street & Gentian Avenue

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	8	122	1156	16	133	1453
Future Volume (vph)	8	122	1156	16	133	1453
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	27.6	27.6	27.2	27.2	9.6	16.2
Total Split (s)	31.0	31.0	62.0	62.0	27.0	89.0
Total Split (%)	25.8%	25.8%	51.7%	51.7%	22.5%	74.2%
Yellow Time (s)	3.6	3.6	5.2	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	6.2	6.2	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	12.3	12.3	36.7	36.7	11.5	53.0
Actuated g/C Ratio	0.16	0.16	0.48	0.48	0.15	0.69
v/c Ratio	0.03	0.32	0.77	0.02	0.53	0.66
Control Delay	32.9	9.0	20.8	10.2	40.7	8.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.9	9.0	20.8	10.2	40.7	8.4
LOS	C	A	C	B	D	A
Approach Delay	10.5		20.7			11.2
Approach LOS	B		C			B

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 76.7	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 15.0	Intersection LOS: B
Intersection Capacity Utilization 60.5%	ICU Level of Service B
Analysis Period (min) 15	













Splits and Phases: 7: Heacock Street & Gentian Avenue















HCM 6th Signalized Intersection Summary  
 7: Heacock Street & Gentian Avenue

Gateway Aviation TA (JN:13445)

11/09/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	8	122	1156	16	133	1453
Future Volume (veh/h)	8	122	1156	16	133	1453
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1811	1900	1856	1826
Adj Flow Rate, veh/h	9	133	1257	17	145	1579
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	6	0	3	5
Cap, veh/h	269	239	1702	796	186	2341
Arrive On Green	0.15	0.15	0.49	0.49	0.11	0.67
Sat Flow, veh/h	1810	1610	3532	1610	1767	3561
Grp Volume(v), veh/h	9	133	1257	17	145	1579
Grp Sat Flow(s),veh/h/ln	1810	1610	1721	1610	1767	1735
Q Serve(g_s), s	0.3	4.7	17.8	0.3	4.9	16.6
Cycle Q Clear(g_c), s	0.3	4.7	17.8	0.3	4.9	16.6
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	269	239	1702	796	186	2341
V/C Ratio(X)	0.03	0.56	0.74	0.02	0.78	0.67
Avail Cap(c_a), veh/h	780	694	3136	1467	647	4692
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.3	24.2	12.3	7.9	26.7	5.9
Incr Delay (d2), s/veh	0.0	0.8	0.6	0.0	2.7	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	1.7	4.9	0.1	1.9	2.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	22.3	24.9	13.0	7.9	29.4	6.3
LnGrp LOS	C	C	B	A	C	A
Approach Vol, veh/h	142		1274			1724
Approach Delay, s/veh	24.8		12.9			8.2
Approach LOS	C		B			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	11.0	36.5			47.5	13.7
Change Period (Y+Rc), s	4.6	6.2			6.2	4.6
Max Green Setting (Gmax), s	22.4	55.8			82.8	26.4
Max Q Clear Time (g_c+1), s	6.9	19.8			18.6	6.7
Green Ext Time (p_c), s	0.1	10.5			17.2	0.2
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			10.9			
HCM 6th LOS			B			

Timings  
8: Heacock Street & Iris Avenue

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	271	344	883	418	577	954
Future Volume (vph)	271	344	883	418	577	954
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	15.8	15.8	33.2	33.2	9.6	16.2
Total Split (s)	35.0	35.0	47.0	47.0	38.0	85.0
Total Split (%)	29.2%	29.2%	39.2%	39.2%	31.7%	70.8%
Yellow Time (s)	4.8	4.8	5.2	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	6.2	6.2	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	13.3	13.3	33.0	33.0	19.6	57.3
Actuated g/C Ratio	0.16	0.16	0.40	0.40	0.24	0.69
v/c Ratio	0.50	0.60	0.72	0.56	0.73	0.44
Control Delay	36.9	8.7	25.1	9.9	35.9	6.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.9	8.7	25.1	9.9	35.9	6.4
LOS	D	A	C	A	D	A
Approach Delay	21.1		20.2			17.5
Approach LOS	C		C			B

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 83	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 19.2	Intersection LOS: B
Intersection Capacity Utilization 63.0%	ICU Level of Service B
Analysis Period (min) 15	

















Splits and Phases: 8: Heacock Street & Iris Avenue



HCM 6th Signalized Intersection Summary  
8: Heacock Street & Iris Avenue

Gateway Aviation TA (JN:13445)

11/09/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 		 		 	 
Traffic Volume (veh/h)	271	344	883	418	577	954
Future Volume (veh/h)	271	344	883	418	577	954
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1796	1900	1885	1811
Adj Flow Rate, veh/h	295	374	960	454	627	1037
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	7	0	1	6
Cap, veh/h	916	420	1199	566	722	2095
Arrive On Green	0.26	0.26	0.35	0.35	0.21	0.61
Sat Flow, veh/h	3510	1610	3503	1610	3483	3532
Grp Volume(v), veh/h	295	374	960	454	627	1037
Grp Sat Flow(s),veh/h/ln	1755	1610	1706	1610	1742	1721
Q Serve(g_s), s	6.2	20.6	23.4	23.4	16.0	15.5
Cycle Q Clear(g_c), s	6.2	20.6	23.4	23.4	16.0	15.5
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	916	420	1199	566	722	2095
V/C Ratio(X)	0.32	0.89	0.80	0.80	0.87	0.50
Avail Cap(c_a), veh/h	1114	511	1514	714	1265	2948
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.4	32.7	26.9	26.9	35.3	10.1
Incr Delay (d2), s/veh	0.2	15.4	2.5	5.2	1.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	9.3	9.0	8.9	6.4	4.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	27.6	48.1	29.4	32.2	36.5	10.3
LnGrp LOS	C	D	C	C	D	B
Approach Vol, veh/h	669		1414			1664
Approach Delay, s/veh	39.1		30.3			20.2
Approach LOS	D		C			C
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	23.7	38.5			62.2	29.8
Change Period (Y+Rc), s	4.6	6.2			6.2	5.8
Max Green Setting (Gmax), s	33.4	40.8			78.8	29.2
Max Q Clear Time (g_c+1), s	18.0	25.4			17.5	22.6
Green Ext Time (p_c), s	1.1	6.9			8.3	1.4
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			27.4			
HCM 6th LOS			C			

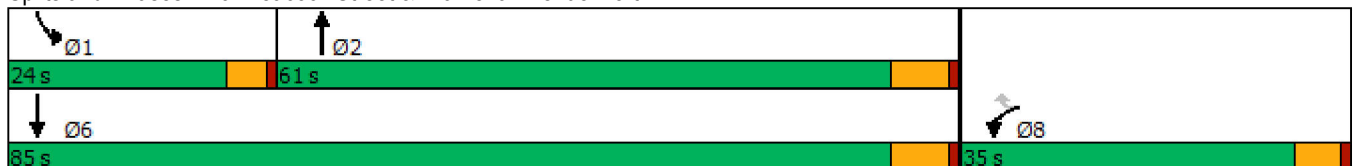
Timings  
9: Heacock Street & Krameria Avenue-North

	↙	↖	↑	↘	↓
Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations	↙	↖	↑↔	↘	↑↑
Traffic Volume (vph)	248	274	906	123	821
Future Volume (vph)	248	274	906	123	821
Turn Type	Prot	Perm	NA	Prot	NA
Protected Phases	8		2	1	6
Permitted Phases		8			
Detector Phase	8	8	2	1	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	29.1	29.1	29.2	9.6	16.2
Total Split (s)	35.0	35.0	61.0	24.0	85.0
Total Split (%)	29.2%	29.2%	50.8%	20.0%	70.8%
Yellow Time (s)	4.1	4.1	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	6.2	4.6	6.2
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	Min	Max	Min
Act Effct Green (s)	17.4	17.4	34.1	19.9	58.7
Actuated g/C Ratio	0.20	0.20	0.39	0.23	0.67
v/c Ratio	0.72	0.50	0.83	0.33	0.38
Control Delay	45.9	7.1	29.8	35.6	7.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	45.9	7.1	29.8	35.6	7.5
LOS	D	A	C	D	A
Approach Delay	25.5		29.8		11.1
Approach LOS	C		C		B

Intersection Summary














Cycle Length: 120	
Actuated Cycle Length: 87.8	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 21.9	Intersection LOS: C
Intersection Capacity Utilization 62.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 9: Heacock Street & Krameria Avenue-North



HCM 6th Signalized Intersection Summary  
 9: Heacock Street & Krameria Avenue-North

Gateway Aviation TA (JN:13445)  
 11/09/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			 			 
Traffic Volume (veh/h)	248	274	906	124	123	821
Future Volume (veh/h)	248	274	906	124	123	821
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1885	1841	1870	1900	1811	1841
Adj Flow Rate, veh/h	270	298	985	135	134	892
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	4	2	0	6	4
Cap, veh/h	392	341	1145	157	395	2267
Arrive On Green	0.22	0.22	0.36	0.36	0.23	0.65
Sat Flow, veh/h	1795	1560	3233	430	1725	3589
Grp Volume(v), veh/h	270	298	557	563	134	892
Grp Sat Flow(s),veh/h/ln	1795	1560	1777	1792	1725	1749
Q Serve(g_s), s	11.7	15.6	24.6	24.6	5.5	10.2
Cycle Q Clear(g_c), s	11.7	15.6	24.6	24.6	5.5	10.2
Prop In Lane	1.00	1.00		0.24	1.00	
Lane Grp Cap(c), veh/h	392	341	648	654	395	2267
V/C Ratio(X)	0.69	0.87	0.86	0.86	0.34	0.39
Avail Cap(c_a), veh/h	634	551	1150	1160	395	3255
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.4	32.0	24.9	24.9	27.3	7.0
Incr Delay (d2), s/veh	0.8	5.2	1.3	1.3	2.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	6.3	9.3	9.4	2.3	2.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	31.2	37.2	26.2	26.2	29.6	7.1
LnGrp LOS	C	D	C	C	C	A
Approach Vol, veh/h	568		1120			1026
Approach Delay, s/veh	34.4		26.2			10.0
Approach LOS	C		C			B
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	24.0	37.1			61.1	23.6
Change Period (Y+Rc), s	4.6	6.2			6.2	5.1
Max Green Setting (Gmax), s	19.4	54.8			78.8	29.9
Max Q Clear Time (g_c+I1), s	7.5	26.6			12.2	17.6
Green Ext Time (p_c), s	0.1	4.3			3.9	0.9
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			21.8			
HCM 6th LOS			C			



Timings  
10: Heacock Street & Driveway 1



Lane Group	EBL	EBT	NBL	NBT	SBT	SBR	Ø1	Ø8
Lane Configurations								
Traffic Volume (vph)	46	0	27	913	1134	2		
Future Volume (vph)	46	0	27	913	1134	2		
Turn Type	Perm	NA	Prot	NA	NA	Perm		
Protected Phases		4	5	2	6		1	8
Permitted Phases	4					6		
Detector Phase	4	4	5	2	6	6		
Switch Phase								
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	26.7	26.7	9.6	23.2	23.2	23.2	9.6	26.7
Total Split (s)	28.0	28.0	18.0	82.4	74.0	74.0	9.6	28.0
Total Split (%)	23.3%	23.3%	15.0%	68.7%	61.7%	61.7%	8%	23%
Yellow Time (s)	3.7	3.7	3.6	5.2	5.2	5.2	3.6	3.7
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.7	4.7	4.6	6.2	6.2	6.2		
Lead/Lag			Lead	Lag	Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	Min	Min	Min	None	None
Act Effct Green (s)	12.9	12.9	7.5	43.7	39.4	39.4		
Actuated g/C Ratio	0.21	0.21	0.12	0.71	0.64	0.64		
v/c Ratio	0.17	0.16	0.25	0.39	0.55	0.00		
Control Delay	27.8	0.7	38.1	5.9	11.7	0.0		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay	27.8	0.7	38.1	5.9	11.7	0.0		
LOS	C	A	D	A	B	A		
Approach Delay		11.5		6.8	11.7			
Approach LOS		B		A	B			

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 61.3	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.55	
Intersection Signal Delay: 9.6	Intersection LOS: A
Intersection Capacity Utilization 48.8%	ICU Level of Service A
Analysis Period (min) 15	





















Splits and Phases: 10: Heacock Street & Driveway 1



HCM 6th Signalized Intersection Summary  
 10: Heacock Street & Driveway 1

Gateway Aviation TA (JN:13445)

11/17/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	0	69	0	0	0	27	913	0	0	1134	2
Future Volume (veh/h)	46	0	69	0	0	0	27	913	0	0	1134	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1278	1278	1900	1900	1900	522	1870	1870	1900	1856	1900
Adj Flow Rate, veh/h	50	0	75	0	0	0	29	992	0	0	1233	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	42	42	0	0	0	93	2	2	0	3	0
Cap, veh/h	429	0	174	0	305	0	16	2238	0	3	1793	819
Arrive On Green	0.16	0.00	0.16	0.00	0.00	0.00	0.03	0.63	0.00	0.00	0.51	0.51
Sat Flow, veh/h	1810	0	1083	0	1900	0	497	3647	0	1810	3526	1610
Grp Volume(v), veh/h	50	0	75	0	0	0	29	992	0	0	1233	2
Grp Sat Flow(s),veh/h/ln	1810	0	1083	0	1900	0	497	1777	0	1810	1763	1610
Q Serve(g_s), s	1.2	0.0	3.3	0.0	0.0	0.0	1.7	7.5	0.0	0.0	13.8	0.0
Cycle Q Clear(g_c), s	1.2	0.0	3.3	0.0	0.0	0.0	1.7	7.5	0.0	0.0	13.8	0.0
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	429	0	174	0	305	0	16	2238	0	3	1793	819
V/C Ratio(X)	0.12	0.00	0.43	0.00	0.00	0.00	1.77	0.44	0.00	0.00	0.69	0.00
Avail Cap(c_a), veh/h	949	0	485	0	851	0	128	5205	0	174	4594	2098
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	18.8	0.0	19.7	0.0	0.0	0.0	25.2	4.9	0.0	0.0	9.7	6.3
Incr Delay (d2), s/veh	0.1	0.0	1.7	0.0	0.0	0.0	367.4	0.1	0.0	0.0	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.8	0.0	0.0	0.0	1.8	1.1	0.0	0.0	3.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.0	0.0	21.4	0.0	0.0	0.0	392.6	5.1	0.0	0.0	10.1	6.3
LnGrp LOS	B	A	C	A	A	A	F	A	A	A	B	A
Approach Vol, veh/h		125			0			1021			1235	
Approach Delay, s/veh		20.4			0.0			16.1			10.1	
Approach LOS		C						B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	39.0		13.1	6.3	32.7		13.1				
Change Period (Y+Rc), s	4.6	6.2		* 4.7	4.6	6.2		* 4.7				
Max Green Setting (Gmax), s	5.0	76.2		* 23	13.4	67.8		* 23				
Max Q Clear Time (g_c+I1), s	0.0	9.5		5.3	3.7	15.8		0.0				
Green Ext Time (p_c), s	0.0	7.7		0.5	0.0	10.7		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			13.2									
HCM 6th LOS			B									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Intersection						
Int Delay, s/veh	1.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↕	↗	↘	↕
Traffic Vol, veh/h	61	57	1086	20	18	1611
Future Vol, veh/h	61	57	1086	20	18	1611
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	0	140	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	10	8	14	8	10
Mvmt Flow	66	62	1180	22	20	1751

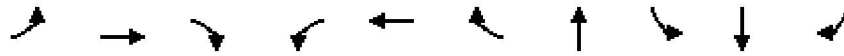
Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	2096	590	0	0	1202
Stage 1	1180	-	-	-	-
Stage 2	916	-	-	-	-
Critical Hdwy	6.84	7.1	-	-	4.26
Critical Hdwy Stg 1	5.84	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-
Follow-up Hdwy	3.52	3.4	-	-	2.28
Pot Cap-1 Maneuver	~ 45	431	-	-	544
Stage 1	254	-	-	-	-
Stage 2	350	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	~ 43	431	-	-	544
Mov Cap-2 Maneuver	151	-	-	-	-
Stage 1	254	-	-	-	-
Stage 2	337	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	31.1	0	0.1
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	151	431	544	-
HCM Lane V/C Ratio	-	-	0.439	0.144	0.036	-
HCM Control Delay (s)	-	-	46.3	14.8	11.9	-
HCM Lane LOS	-	-	E	B	B	-
HCM 95th %tile Q(veh)	-	-	2	0.5	0.1	-

Notes  
 ~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Timings  
12: Heacock Street & San Michele Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBL	SBT	SBR	Ø5
Lane Configurations	↖	↗	↘	↖	↗	↘	↕	↖	↗	↘	
Traffic Volume (vph)	59	348	8	23	102	700	141	939	353	36	
Future Volume (vph)	59	348	8	23	102	700	141	939	353	36	
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	NA	Prot	NA	Perm	
Protected Phases	7	4		3	8	1	2	1	6		5
Permitted Phases			4			8				6	
Detector Phase	7	4	4	3	8	1	2	1	6	6	
Switch Phase											
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0
Minimum Split (s)	9.5	30.5	30.5	8.5	30.5	8.5	34.5	8.5	34.5	34.5	8.5
Total Split (s)	12.0	37.4	37.4	9.6	35.0	36.0	37.0	36.0	64.5	64.5	8.5
Total Split (%)	10.0%	31.2%	31.2%	8.0%	29.2%	30.0%	30.8%	30.0%	53.8%	53.8%	7%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5	5.5	
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	None	Max	Max	None
Act Effct Green (s)	13.4	25.3	25.3	5.0	14.9	52.2	31.8	31.8	68.2	68.2	
Actuated g/C Ratio	0.12	0.23	0.23	0.05	0.14	0.47	0.29	0.29	0.62	0.62	
v/c Ratio	0.28	0.86	0.02	0.29	0.43	0.67	0.20	1.88	0.34	0.03	
Control Delay	48.0	61.2	0.0	63.4	50.8	11.3	27.5	427.4	12.9	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	48.0	61.2	0.0	63.4	50.8	11.3	27.5	427.4	12.9	0.1	
LOS	D	E	A	E	D	B	C	F	B	A	
Approach Delay		58.1			17.7		27.5		305.6		
Approach LOS		E			B		C		F		

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 109.9	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.88	
Intersection Signal Delay: 163.6	Intersection LOS: F
Intersection Capacity Utilization 89.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 12: Heacock Street & San Michele Road



HCM 6th Signalized Intersection Summary  
 12: Heacock Street & San Michele Road

Gateway Aviation TA (JN:13445)

04/19/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	348	8	23	102	700	0	141	40	939	353	36
Future Volume (veh/h)	59	348	8	23	102	700	0	141	40	939	353	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1870	1900	1826	1900	1885	1826	1900
Adj Flow Rate, veh/h	64	378	9	25	111	761	0	153	43	1021	384	39
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	2	0	5	0	1	5	0
Cap, veh/h	83	418	345	80	416	784	2	743	203	495	1095	966
Arrive On Green	0.05	0.22	0.22	0.04	0.22	0.22	0.00	0.28	0.28	0.28	0.60	0.60
Sat Flow, veh/h	1810	1900	1569	1810	1900	1585	1810	2694	735	1795	1826	1610
Grp Volume(v), veh/h	64	378	9	25	111	761	0	97	99	1021	384	39
Grp Sat Flow(s),veh/h/ln	1810	1900	1569	1810	1900	1585	1810	1735	1694	1795	1826	1610
Q Serve(g_s), s	4.0	22.1	0.5	1.5	5.5	21.8	0.0	4.9	5.1	31.5	12.2	0.8
Cycle Q Clear(g_c), s	4.0	22.1	0.5	1.5	5.5	21.8	0.0	4.9	5.1	31.5	12.2	0.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.43	1.00		1.00
Lane Grp Cap(c), veh/h	83	418	345	80	416	784	2	478	467	495	1095	966
V/C Ratio(X)	0.77	0.90	0.03	0.31	0.27	0.97	0.00	0.20	0.21	2.06	0.35	0.04
Avail Cap(c_a), veh/h	119	531	438	81	491	847	63	478	467	495	1095	966
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.9	43.4	30.8	52.9	37.0	28.1	0.0	31.7	31.8	41.4	11.6	4.2
Incr Delay (d2), s/veh	10.3	14.3	0.0	0.8	0.1	22.7	0.0	1.0	1.0	484.8	0.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	12.1	0.2	0.7	2.5	9.3	0.0	2.1	2.2	79.8	4.6	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.2	57.7	30.8	53.7	37.1	50.8	0.0	32.7	32.8	526.1	12.5	4.2
LnGrp LOS	E	E	C	D	D	D	A	C	C	F	B	A
Approach Vol, veh/h		451			897			196			1444	
Approach Delay, s/veh		58.1			49.2			32.8			375.4	
Approach LOS		E			D			C			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	37.0	37.0	9.6	30.6	0.0	74.0	9.7	30.5				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	31.5	* 32	5.1	31.9	4.0	59.0	7.5	29.5				
Max Q Clear Time (g_c+I1), s	33.5	7.1	3.5	24.1	0.0	14.2	6.0	23.8				
Green Ext Time (p_c), s	0.0	0.6	0.0	1.0	0.0	1.3	0.0	1.2				

Intersection Summary

HCM 6th Ctrl Delay	207.1
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection					
Intersection Delay, s/veh22.4					
Intersection LOS C					
Approach	EB	WB	NB		
Entry Lanes	3	2	2		
Conflicting Circle Lanes	2	2	2		
Adj Approach Flow, veh/h	0	1982	130		
Demand Flow Rate, veh/h	0	2140	137		
Vehicles Circulating, veh/h	10	122	1203		
Vehicles Exiting, veh/h	2252	1218	129		
Ped Vol Crossing Leg, #/h	0	0	0		
Ped Cap Adj	1.000	1.000	1.000		
Approach Delay, s/veh	0.0	23.2	10.1		
Approach LOS	-	C	B		
Lane	Left	Right	Left	Right	
Designated Moves	LT	TR	L	LTR	
Assumed Moves	LT	TR	L	LTR	
RT Channelized					
Lane Util	0.470	0.530	0.533	0.467	
Follow-Up Headway, s	2.667	2.535	2.667	2.535	
Critical Headway, s	4.645	4.328	4.645	4.328	
Entry Flow, veh/h	1006	1134	73	64	
Cap Entry Lane, veh/h	1207	1280	446	511	
Entry HV Adj Factor	0.926	0.926	0.944	0.955	
Flow Entry, veh/h	932	1051	69	61	
Cap Entry, veh/h	1117	1186	421	488	
V/C Ratio	0.834	0.886	0.164	0.125	
Control Delay, s/veh	21.1	25.0	11.0	9.1	
LOS	C	D	B	A	
95th %tile Queue, veh	10	13	1	0	

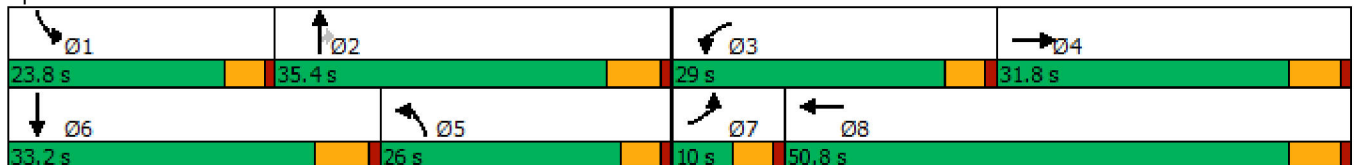
Timings  
14: Indian Street & San Michele Road

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	23	884	248	505	763	196	223	155	380
Future Volume (vph)	23	884	248	505	763	196	223	155	380
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8	5	2		1	6
Permitted Phases							2		
Detector Phase	7	4	3	8	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	31.8	9.6	31.8	9.6	32.8	32.8	9.6	32.8
Total Split (s)	10.0	31.8	29.0	50.8	26.0	35.4	35.4	23.8	33.2
Total Split (%)	8.3%	26.5%	24.2%	42.3%	21.7%	29.5%	29.5%	19.8%	27.7%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	5.3	26.2	19.1	44.2	21.6	26.0	26.0	13.6	18.1
Actuated g/C Ratio	0.05	0.25	0.18	0.42	0.20	0.25	0.25	0.13	0.17
v/c Ratio	0.28	2.74dr	0.81	0.42	1.15	0.49	0.38	0.70	0.73
Control Delay	60.3	770.5	62.0	23.6	120.9	40.4	6.5	61.0	48.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.3	770.5	62.0	23.6	120.9	40.4	6.5	61.0	48.8
LOS	E	F	E	C	F	D	A	E	D
Approach Delay		763.9		35.2		86.0			52.1
Approach LOS		F		D		F			D

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 105.9  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 2.67  
 Intersection Signal Delay: 405.5  
 Intersection LOS: F  
 Intersection Capacity Utilization 151.1%  
 ICU Level of Service H  
 Analysis Period (min) 15  
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.























Splits and Phases: 14: Indian Street & San Michele Road



HCM 6th Signalized Intersection Summary  
 14: Indian Street & San Michele Road

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	884	1555	248	505	69	763	196	223	155	380	32
Future Volume (veh/h)	23	884	1555	248	505	69	763	196	223	155	380	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		1.00	1.00		0.67
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1796	1856	1826	1900	1796	1796	1856	1870	1841	1752
Adj Flow Rate, veh/h	25	961	1690	270	549	75	829	213	242	168	413	35
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	5	7	3	5	0	7	7	3	2	4	10
Cap, veh/h	41	389	338	298	1157	158	632	570	498	197	747	62
Arrive On Green	0.02	0.22	0.22	0.17	0.37	0.37	0.18	0.32	0.32	0.11	0.23	0.23
Sat Flow, veh/h	1739	1735	1506	1767	3135	427	3421	1796	1571	1781	3211	267
Grp Volume(v), veh/h	25	961	1690	270	319	305	829	213	242	168	233	215
Grp Sat Flow(s),veh/h/ln	1739	1735	1506	1767	1826	1735	1711	1796	1571	1781	1841	1637
Q Serve(g_s), s	1.7	26.0	26.0	17.4	15.5	15.6	21.4	10.6	14.4	10.7	12.9	13.4
Cycle Q Clear(g_c), s	1.7	26.0	26.0	17.4	15.5	15.6	21.4	10.6	14.4	10.7	12.9	13.4
Prop In Lane	1.00		1.00	1.00		0.25	1.00		1.00	1.00		0.16
Lane Grp Cap(c), veh/h	41	389	338	298	674	641	632	570	498	197	428	381
V/C Ratio(X)	0.60	2.47	5.00	0.91	0.47	0.48	1.31	0.37	0.49	0.85	0.55	0.56
Avail Cap(c_a), veh/h	81	389	338	372	709	674	632	570	498	295	435	387
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.0	45.0	45.0	47.3	27.9	28.0	47.3	30.7	31.9	50.6	39.1	39.3
Incr Delay (d2), s/veh	5.1	669.0	1807.8	19.6	0.2	0.2	151.6	0.2	0.3	9.8	0.7	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	83.1	179.0	9.0	6.5	6.2	22.0	4.4	5.3	5.1	5.7	5.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.2	714.0	1852.7	66.9	28.1	28.2	198.9	30.8	32.2	60.4	39.8	40.4
LnGrp LOS	E	F	F	E	C	C	F	C	C	E	D	D
Approach Vol, veh/h		2676			894			1284			616	
Approach Delay, s/veh		1427.0			39.9			139.6			45.6	
Approach LOS		F			D			F			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.4	42.6	24.2	31.8	27.2	32.7	7.4	48.6				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	5.8	* 5.8	4.6	5.8				
Max Green Setting (Gmax), s	19.2	29.6	24.4	26.0	21.4	* 27	5.4	45.0				
Max Q Clear Time (g_c+I1), s	12.7	16.4	19.4	28.0	23.4	15.4	3.7	17.6				
Green Ext Time (p_c), s	0.1	0.9	0.2	0.0	0.0	1.2	0.0	2.2				

Intersection Summary

HCM 6th Ctrl Delay	742.5
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Timings  
15: Indian Street & Nandina Avenue

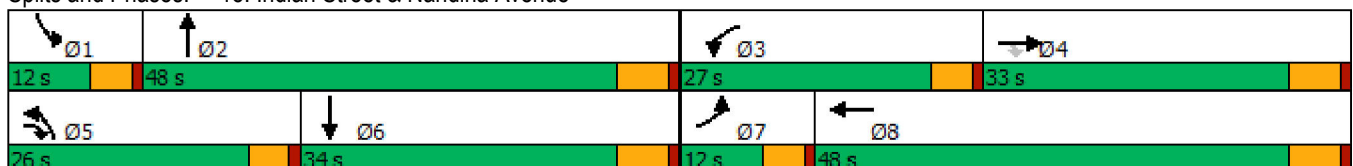


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↑	↗	↖	↗	↖	↑↔	↖	↑↔
Traffic Volume (vph)	48	116	569	186	46	172	737	24	1604
Future Volume (vph)	48	116	569	186	46	172	737	24	1604
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	5	3	8	5	2	1	6
Permitted Phases	4								
Detector Phase	7	4	5	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	29.8	9.6	9.6	29.8	9.6	26.8	9.6	26.8
Total Split (s)	12.0	33.0	26.0	27.0	48.0	26.0	48.0	12.0	34.0
Total Split (%)	10.0%	27.5%	21.7%	22.5%	40.0%	21.7%	40.0%	10.0%	28.3%
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	6.6	14.2	39.2	16.2	26.1	19.2	46.2	6.0	28.6
Actuated g/C Ratio	0.07	0.14	0.39	0.16	0.26	0.19	0.47	0.06	0.29
v/c Ratio	0.42	0.52	0.89	0.77	0.27	0.75	0.51	0.24	1.66
Control Delay	58.7	48.8	40.3	60.9	16.4	58.6	22.4	54.4	327.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.7	48.8	40.3	60.9	16.4	58.6	22.4	54.4	327.2
LOS	E	D	D	E	B	E	C	D	F
Approach Delay	42.8		44.1			28.8		323.2	
Approach LOS	D		D			C		F	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 99.3  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.66  
 Intersection Signal Delay: 166.0  
 Intersection LOS: F  
 Intersection Capacity Utilization 103.5%  
 ICU Level of Service G  
 Analysis Period (min) 15























Splits and Phases: 15: Indian Street & Nandina Avenue



HCM 6th Signalized Intersection Summary  
 15: Indian Street & Nandina Avenue

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	116	569	186	46	66	172	737	75	24	1604	36
Future Volume (veh/h)	48	116	569	186	46	66	172	737	75	24	1604	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1722	1604	1633	1500	1870	1218	1870	1841	1796	1870	1841
Adj Flow Rate, veh/h	52	126	618	202	50	72	187	801	82	26	1743	39
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	12	20	18	27	2	46	2	4	7	2	4
Cap, veh/h	67	417	568	227	195	281	204	1342	137	42	914	20
Arrive On Green	0.04	0.24	0.24	0.15	0.35	0.35	0.18	0.40	0.40	0.02	0.25	0.25
Sat Flow, veh/h	1810	1722	1359	1555	556	800	1160	3338	342	1711	3645	81
Grp Volume(v), veh/h	52	126	618	202	0	122	187	449	434	26	892	890
Grp Sat Flow(s),veh/h/ln	1810	1722	1359	1555	0	1356	1160	1870	1809	1711	1870	1856
Q Serve(g_s), s	3.2	6.7	27.2	14.3	0.0	7.2	17.8	21.2	21.2	1.7	28.2	28.2
Cycle Q Clear(g_c), s	3.2	6.7	27.2	14.3	0.0	7.2	17.8	21.2	21.2	1.7	28.2	28.2
Prop In Lane	1.00		1.00	1.00		0.59	1.00		0.19	1.00		0.04
Lane Grp Cap(c), veh/h	67	417	568	227	0	476	204	752	727	42	469	465
V/C Ratio(X)	0.77	0.30	1.09	0.89	0.00	0.26	0.92	0.60	0.60	0.61	1.90	1.91
Avail Cap(c_a), veh/h	119	417	568	310	0	509	221	752	727	113	469	465
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.6	34.9	32.7	47.1	0.0	26.0	45.5	26.4	26.4	54.3	42.1	42.1
Incr Delay (d2), s/veh	6.8	0.4	63.9	16.9	0.0	0.3	35.5	1.3	1.3	5.3	413.6	418.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	2.8	24.3	6.4	0.0	2.3	6.9	9.1	8.8	0.8	66.2	66.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.5	35.3	96.6	64.0	0.0	26.3	81.0	27.7	27.8	59.6	455.7	460.4
LnGrp LOS	E	D	F	E	A	C	F	C	C	E	F	F
Approach Vol, veh/h		796			324			1070			1808	
Approach Delay, s/veh		84.6			49.8			37.1			452.3	
Approach LOS		F			D			D			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.4	51.0	21.0	33.0	24.4	34.0	8.8	45.3				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	7.4	42.2	22.4	27.2	21.4	28.2	7.4	42.2				
Max Q Clear Time (g_c+I1), s	3.7	23.2	16.3	29.2	19.8	30.2	5.2	9.2				
Green Ext Time (p_c), s	0.0	4.8	0.1	0.0	0.0	0.0	0.0	0.7				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay	235.4											
HCM 6th LOS	F											

Timings  
16: Indian Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/10/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	102	568	108	242	421	81	295	246	326	563
Future Volume (vph)	102	568	108	242	421	81	295	246	326	563
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	5	2		1	6	3	8		7	4
Permitted Phases			2					8		
Detector Phase	5	2	2	1	6	3	8	8	7	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	35.8	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2
Total Split (s)	37.0	59.2	59.2	9.6	31.8	10.8	40.2	40.2	11.0	40.4
Total Split (%)	30.8%	49.3%	49.3%	8.0%	26.5%	9.0%	33.5%	33.5%	9.2%	33.7%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.4	4.4	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	5.4	5.4	4.6	6.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	11.2	22.9	22.9	5.3	20.2	6.1	23.9	23.9	6.7	26.6
Actuated g/C Ratio	0.14	0.29	0.29	0.07	0.25	0.08	0.30	0.30	0.08	0.33
v/c Ratio	0.54	0.43	0.24	2.25	0.51	0.37	0.34	0.42	2.34	0.70
Control Delay	46.4	24.5	5.9	612.3	27.0	45.9	23.6	7.2	647.8	28.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.4	24.5	5.9	612.3	27.0	45.9	23.6	7.2	647.8	28.2
LOS	D	C	A	F	C	D	C	A	F	C
Approach Delay		24.8			197.1		20.0			219.9
Approach LOS		C			F		C			F

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 80.3  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 2.34  
 Intersection Signal Delay: 130.1  
 Intersection Capacity Utilization 67.8%  
 Analysis Period (min) 15  
 Intersection LOS: F  
 ICU Level of Service C































Splits and Phases: 16: Indian Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 16: Indian Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 			 	
Traffic Volume (veh/h)	102	568	108	242	421	169	81	295	246	326	563	164
Future Volume (veh/h)	102	568	108	242	421	169	81	295	246	326	563	164
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1559	1841	1707	1885	1811	1811	1707	1678	1870	1900	1856	1856
Adj Flow Rate, veh/h	111	617	117	263	458	184	88	321	267	354	612	178
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	23	4	13	1	6	6	13	15	2	0	3	3
Cap, veh/h	136	1122	323	140	736	284	195	850	417	181	822	239
Arrive On Green	0.09	0.22	0.22	0.08	0.21	0.21	0.06	0.27	0.27	0.10	0.31	0.31
Sat Flow, veh/h	1485	5025	1447	1795	3509	1354	3155	3188	1565	1810	2695	782
Grp Volume(v), veh/h	111	617	117	263	429	213	88	321	267	354	400	390
Grp Sat Flow(s),veh/h/ln	1485	1675	1447	1795	1648	1567	1577	1594	1565	1810	1763	1715
Q Serve(g_s), s	4.7	7.0	4.4	5.0	7.6	7.9	1.7	5.2	9.6	6.4	13.0	13.1
Cycle Q Clear(g_c), s	4.7	7.0	4.4	5.0	7.6	7.9	1.7	5.2	9.6	6.4	13.0	13.1
Prop In Lane	1.00		1.00	1.00		0.86	1.00		1.00	1.00		0.46
Lane Grp Cap(c), veh/h	136	1122	323	140	691	329	195	850	417	181	538	523
V/C Ratio(X)	0.81	0.55	0.36	1.87	0.62	0.65	0.45	0.38	0.64	1.95	0.74	0.75
Avail Cap(c_a), veh/h	753	4197	1209	140	1341	637	306	1735	852	181	943	917
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.5	22.0	21.0	29.5	23.0	23.1	28.9	19.1	20.7	28.8	20.0	20.0
Incr Delay (d2), s/veh	4.4	0.4	0.7	418.7	0.9	2.1	0.6	0.3	1.6	448.9	2.1	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	2.4	1.4	18.3	2.7	2.8	0.6	1.7	3.2	25.1	4.9	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.9	22.4	21.7	448.1	23.9	25.3	29.6	19.4	22.4	477.6	22.0	22.1
LnGrp LOS	C	C	C	F	C	C	C	B	C	F	C	C
Approach Vol, veh/h		845			905			676			1144	
Approach Delay, s/veh		23.7			147.5			21.9			163.0	
Approach LOS		C			F			C			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.6	20.1	8.6	25.7	10.5	19.2	11.0	23.3				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	5.0	53.4	6.2	34.2	32.4	26.0	6.4	* 35				
Max Q Clear Time (g_c+I1), s	7.0	9.0	3.7	15.1	6.7	9.9	8.4	11.6				
Green Ext Time (p_c), s	0.0	4.6	0.0	4.4	0.1	3.5	0.0	2.8				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				99.4								
HCM 6th LOS				F								
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

**APPENDIX 7.4:**

**HORIZON YEAR (2045) WITHOUT PROJECT WITH HEACOCK STREET EXTENSION  
CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**

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Timings

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

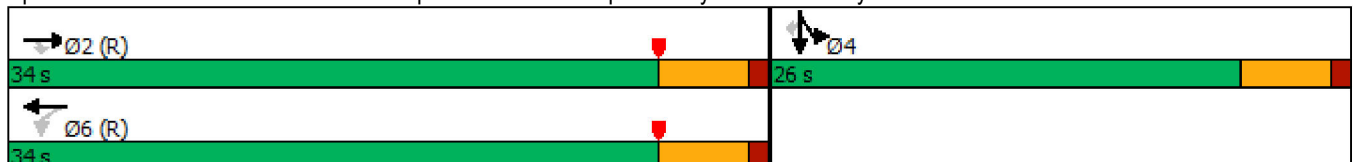


Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↑
Traffic Volume (vph)	1157	28	202	666	1	315
Future Volume (vph)	1157	28	202	666	1	315
Turn Type	NA	Perm	Perm	NA	NA	Perm
Protected Phases	2			6	4	
Permitted Phases		2	6			4
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	25.0	25.0	10.0	10.0
Total Split (s)	34.0	34.0	34.0	34.0	26.0	26.0
Total Split (%)	56.7%	56.7%	56.7%	56.7%	43.3%	43.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	29.0	29.0	29.0	29.0	21.0	21.0
Actuated g/C Ratio	0.48	0.48	0.48	0.48	0.35	0.35
v/c Ratio	0.76	0.04	2.12	0.42	1.90	0.55
Control Delay	16.3	3.1	548.0	18.5	430.5	12.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.3	3.1	548.0	18.5	430.5	12.4
LOS	B	A	F	B	F	B
Approach Delay	16.0			141.9	328.6	
Approach LOS	B			F	F	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 2.12  
 Intersection Signal Delay: 169.4  
 Intersection LOS: F  
 Intersection Capacity Utilization 181.0%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.















HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↖	↑↑						↖	↗
Traffic Volume (veh/h)	0	1157	28	202	666	0	0	0	0	976	1	315
Future Volume (veh/h)	0	1157	28	202	666	0	0	0	0	976	1	315
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1826	1826	1589	1870	0				1707	1900	1781
Adj Flow Rate, veh/h	0	1258	30	220	724	0				1061	1	282
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	5	5	21	2	0				13	0	8
Cap, veh/h	0	1677	748	189	1718	0				633	1	528
Arrive On Green	0.00	0.48	0.48	0.97	0.97	0.00				0.35	0.35	0.35
Sat Flow, veh/h	0	3561	1547	364	3647	0				1808	2	1510
Grp Volume(v), veh/h	0	1258	30	220	724	0				1062	0	282
Grp Sat Flow(s),veh/h/ln	0	1735	1547	364	1777	0				1810	0	1510
Q Serve(g_s), s	0.0	17.6	0.6	11.4	0.7	0.0				21.0	0.0	9.0
Cycle Q Clear(g_c), s	0.0	17.6	0.6	29.0	0.7	0.0				21.0	0.0	9.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1677	748	189	1718	0				633	0	528
V/C Ratio(X)	0.00	0.75	0.04	1.16	0.42	0.00				1.68	0.00	0.53
Avail Cap(c_a), veh/h	0	1677	748	189	1718	0				633	0	528
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.75	0.75	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	12.6	8.2	13.4	0.5	0.0				19.5	0.0	15.6
Incr Delay (d2), s/veh	0.0	3.1	0.1	108.4	0.6	0.0				311.4	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.7	0.2	7.5	0.3	0.0				61.9	0.0	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	15.7	8.3	121.8	1.1	0.0				330.9	0.0	16.6
LnGrp LOS	A	B	A	F	A	A				F	A	B
Approach Vol, veh/h		1288			944						1344	
Approach Delay, s/veh		15.5			29.2						265.0	
Approach LOS		B			C						F	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		34.0		26.0		34.0						
Change Period (Y+Rc), s		5.0		5.0		5.0						
Max Green Setting (Gmax), s		29.0		21.0		29.0						
Max Q Clear Time (g_c+I1), s		19.6		23.0		31.0						
Green Ext Time (p_c), s		4.1		0.0		0.0						
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				112.9								
HCM 6th LOS				F								



Timings

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

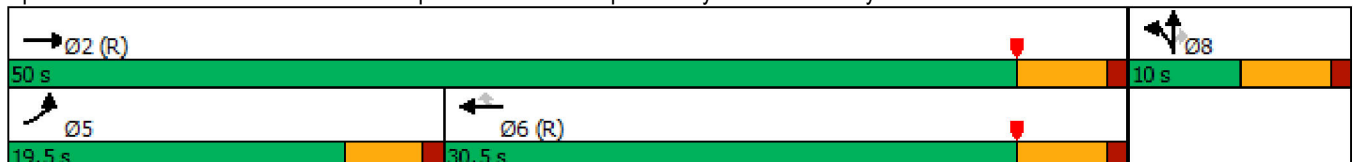


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	808	1325	810	1126	7	284
Future Volume (vph)	808	1325	810	1126	7	284
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	26.0	24.0	24.0	10.0	10.0
Total Split (s)	19.5	50.0	30.5	30.5	10.0	10.0
Total Split (%)	32.5%	83.3%	50.8%	50.8%	16.7%	16.7%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max
Act Effct Green (s)	15.0	45.0	25.5	25.5	5.0	5.0
Actuated g/C Ratio	0.25	0.75	0.42	0.42	0.08	0.08
v/c Ratio	2.02	0.59	0.61	1.61	0.48	1.31
Control Delay	483.1	3.3	15.7	301.3	37.9	186.7
Queue Delay	0.0	0.8	0.0	0.0	0.0	0.0
Total Delay	483.1	4.1	15.7	301.3	37.9	186.7
LOS	F	A	B	F	D	F
Approach Delay		185.5	181.9		158.9	
Approach LOS		F	F		F	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 29 (48%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 2.02  
 Intersection Signal Delay: 181.8  
 Intersection LOS: F  
 Intersection Capacity Utilization 181.0%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

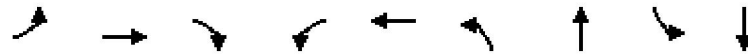
2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

11/09/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑			↑↑	↗		↙	↗			
Traffic Volume (veh/h)	808	1325	0	0	810	1126	58	7	284	0	0	0
Future Volume (veh/h)	808	1325	0	0	810	1126	58	7	284	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1841	1737	0	0	1796	1752	1870	1900	1826			
Adj Flow Rate, veh/h	878	1440	0	0	880	892	63	8	244			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	4	11	0	0	7	10	2	0	5			
Cap, veh/h	438	2475	0	0	1450	630	135	17	129			
Arrive On Green	0.50	1.00	0.00	0.00	0.43	0.43	0.08	0.08	0.08			
Sat Flow, veh/h	1753	3387	0	0	3503	1484	1614	205	1547			
Grp Volume(v), veh/h	878	1440	0	0	880	892	71	0	244			
Grp Sat Flow(s),veh/h/ln	1753	1650	0	0	1706	1484	1819	0	1547			
Q Serve(g_s), s	15.0	0.0	0.0	0.0	12.0	25.5	2.2	0.0	5.0			
Cycle Q Clear(g_c), s	15.0	0.0	0.0	0.0	12.0	25.5	2.2	0.0	5.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.89		1.00			
Lane Grp Cap(c), veh/h	438	2475	0	0	1450	630	152	0	129			
V/C Ratio(X)	2.00	0.58	0.00	0.00	0.61	1.41	0.47	0.00	1.89			
Avail Cap(c_a), veh/h	438	2475	0	0	1450	630	152	0	129			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.57	0.57	0.00	0.00	0.80	0.80	1.00	0.00	1.00			
Uniform Delay (d), s/veh	15.0	0.0	0.0	0.0	13.4	17.3	26.2	0.0	27.5			
Incr Delay (d2), s/veh	456.1	0.6	0.0	0.0	1.5	194.1	10.0	0.0	429.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	58.7	0.2	0.0	0.0	3.9	40.6	1.3	0.0	17.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	471.1	0.6	0.0	0.0	14.9	211.4	36.3	0.0	456.7			
LnGrp LOS	F	A	A	A	B	F	D	A	F			
Approach Vol, veh/h		2318			1772			315				
Approach Delay, s/veh		178.8			113.8			361.9				
Approach LOS		F			F			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		50.0			19.5	30.5		10.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		45.0			15.0	25.5		5.0				
Max Q Clear Time (g_c+I1), s		2.0			17.0	27.5		7.0				
Green Ext Time (p_c), s		8.3			0.0	0.0		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					165.8							
HCM 6th LOS					F							

Timings  
3: Western Way & Harley Knox Bl.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↵	↑↑↑	↵	↵	↑↑↑	↵	↵	↵	↵
Traffic Volume (vph)	105	1409	10	13	1536	1	0	7	0
Future Volume (vph)	105	1409	10	13	1536	1	0	7	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	NA
Protected Phases	5	2		1	6		8		4
Permitted Phases			2			8		4	
Detector Phase	5	2	2	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	21.8	21.8	9.6	21.8	32.6	32.6	32.6	32.6
Total Split (s)	22.0	75.4	75.4	9.6	63.0	35.0	35.0	35.0	35.0
Total Split (%)	18.3%	62.8%	62.8%	8.0%	52.5%	29.2%	29.2%	29.2%	29.2%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	11.5	57.0	57.0	6.4	44.6	14.9	14.9	14.9	14.9
Actuated g/C Ratio	0.16	0.81	0.81	0.09	0.64	0.21	0.21	0.21	0.21
v/c Ratio	0.43	0.40	0.01	0.09	0.56	0.00	0.00	0.04	0.13
Control Delay	40.5	5.9	0.0	46.0	14.1	33.0	0.0	33.1	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.5	5.9	0.0	46.0	14.1	33.0	0.0	33.1	0.7
LOS	D	A	A	D	B	C	A	C	A
Approach Delay		8.3			14.3		11.0		4.9
Approach LOS		A			B		B		A

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 70.2	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.56	
Intersection Signal Delay: 11.3	Intersection LOS: B
Intersection Capacity Utilization 57.8%	ICU Level of Service B
Analysis Period (min) 15	


























Splits and Phases: 3: Western Way & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 3: Western Way & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  							
Traffic Volume (veh/h)	105	1409	10	13	1536	42	1	0	2	7	0	49
Future Volume (veh/h)	105	1409	10	13	1536	42	1	0	2	7	0	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1722	1737	1900	1900	1767	1663	1900	1900	1900	1322	1900	1233
Adj Flow Rate, veh/h	113	1515	11	14	1652	43	1	0	2	8	0	41
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	12	11	0	0	9	16	0	0	0	39	0	45
Cap, veh/h	142	2926	994	32	2648	69	235	0	163	227	0	164
Arrive On Green	0.09	0.62	0.62	0.02	0.55	0.55	0.10	0.00	0.10	0.10	0.00	0.10
Sat Flow, veh/h	1640	4742	1610	1810	4833	126	1388	0	1607	997	0	1610
Grp Volume(v), veh/h	113	1515	11	14	1099	596	1	0	2	8	0	41
Grp Sat Flow(s),veh/h/ln	1640	1581	1610	1810	1608	1744	1388	0	1607	997	0	1610
Q Serve(g_s), s	3.8	10.2	0.1	0.4	13.4	13.4	0.0	0.0	0.1	0.4	0.0	1.3
Cycle Q Clear(g_c), s	3.8	10.2	0.1	0.4	13.4	13.4	1.4	0.0	0.1	0.5	0.0	1.3
Prop In Lane	1.00		1.00	1.00		0.07	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	142	2926	994	32	1761	955	235	0	163	227	0	164
V/C Ratio(X)	0.79	0.52	0.01	0.44	0.62	0.62	0.00	0.00	0.01	0.04	0.00	0.25
Avail Cap(c_a), veh/h	502	5803	1970	159	3234	1754	836	0	859	659	0	861
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.5	6.1	4.2	27.7	8.8	8.8	24.2	0.0	23.0	23.2	0.0	23.5
Incr Delay (d2), s/veh	3.7	0.1	0.0	3.6	0.4	0.7	0.0	0.0	0.0	0.1	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	1.9	0.0	0.2	3.1	3.4	0.0	0.0	0.0	0.1	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.2	6.3	4.2	31.3	9.2	9.5	24.2	0.0	23.0	23.3	0.0	24.3
LnGrp LOS	C	A	A	C	A	A	C	A	C	C	A	C
Approach Vol, veh/h		1639			1709			3				49
Approach Delay, s/veh		7.8			9.5			23.4				24.2
Approach LOS		A			A			C				C
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.6	40.9		10.4	9.5	37.0		10.4				
Change Period (Y+Rc), s	4.6	5.8		4.6	4.6	5.8		4.6				
Max Green Setting (Gmax), s	5.0	69.6		30.4	17.4	57.2		30.4				
Max Q Clear Time (g_c+I1), s	2.4	12.2		3.3	5.8	15.4		3.4				
Green Ext Time (p_c), s	0.0	15.4		0.2	0.1	15.8		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				8.9								
HCM 6th LOS				A								

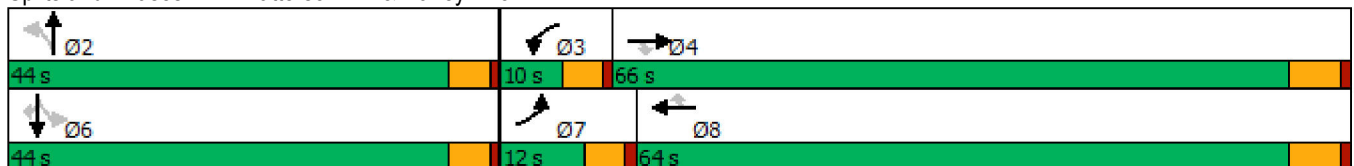
Timings  
4: Patterson Av. & Harley Knox Bl.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	24	1272	83	46	1520	18	81	8	16	4	19
Future Volume (vph)	24	1272	83	46	1520	18	81	8	16	4	19
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	7	4		3	8			2		6	
Permitted Phases			4			8	2		6		6
Detector Phase	7	4	4	3	8	8	2	2	6	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	9.6	31.8	31.8	33.7	33.7	40.7	40.7	40.7
Total Split (s)	12.0	66.0	66.0	10.0	64.0	64.0	44.0	44.0	44.0	44.0	44.0
Total Split (%)	10.0%	55.0%	55.0%	8.3%	53.3%	53.3%	36.7%	36.7%	36.7%	36.7%	36.7%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8		4.7		4.7	4.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	6.2	55.7	55.7	5.5	59.8	59.8		17.0		17.0	17.0
Actuated g/C Ratio	0.07	0.61	0.61	0.06	0.65	0.65		0.19		0.19	0.19
v/c Ratio	0.29	0.47	0.09	0.56	0.76	0.03		0.59		0.12	0.08
Control Delay	53.8	12.2	2.9	70.2	17.5	0.1		38.0		32.4	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	53.8	12.2	2.9	70.2	17.5	0.1		38.0		32.4	0.6
LOS	D	B	A	E	B	A		D		C	A
Approach Delay		12.3			18.8			38.0		16.5	
Approach LOS		B			B			D		B	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 91.7  
 Natural Cycle: 105  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.76  
 Intersection Signal Delay: 16.8  
 Intersection LOS: B  
 Intersection Capacity Utilization 71.4%  
 ICU Level of Service C  
 Analysis Period (min) 15


























Splits and Phases: 4: Patterson Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 4: Patterson Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			 			 				
Traffic Volume (veh/h)	24	1272	83	46	1520	18	81	8	48	16	4	19
Future Volume (veh/h)	24	1272	83	46	1520	18	81	8	48	16	4	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1396	1781	1870	1589	1781	981	1589	1381	1811	877	774	1159
Adj Flow Rate, veh/h	26	1383	83	50	1652	12	88	9	50	17	4	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	34	8	2	21	8	62	21	35	6	69	76	50
Cap, veh/h	37	2843	927	65	2030	499	169	25	61	160	22	169
Arrive On Green	0.03	0.58	0.58	0.04	0.60	0.60	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	1330	4863	1585	1513	3385	831	540	143	352	428	129	982
Grp Volume(v), veh/h	26	1383	83	50	1652	12	147	0	0	21	0	5
Grp Sat Flow(s),veh/h/ln	1330	1621	1585	1513	1692	831	1035	0	0	556	0	982
Q Serve(g_s), s	1.5	12.5	1.7	2.5	28.8	0.4	8.2	0.0	0.0	0.0	0.0	0.3
Cycle Q Clear(g_c), s	1.5	12.5	1.7	2.5	28.8	0.4	10.5	0.0	0.0	2.3	0.0	0.3
Prop In Lane	1.00		1.00	1.00		1.00	0.60		0.34	0.81		1.00
Lane Grp Cap(c), veh/h	37	2843	927	65	2030	499	255	0	0	182	0	169
V/C Ratio(X)	0.70	0.49	0.09	0.77	0.81	0.02	0.58	0.00	0.00	0.12	0.00	0.03
Avail Cap(c_a), veh/h	130	3877	1264	108	2609	641	637	0	0	387	0	511
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.4	9.1	6.9	35.8	11.8	6.1	30.4	0.0	0.0	26.8	0.0	26.0
Incr Delay (d2), s/veh	8.7	0.1	0.0	6.9	1.6	0.0	2.1	0.0	0.0	0.3	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	3.3	0.5	1.0	8.3	0.1	2.6	0.0	0.0	0.3	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.1	9.2	6.9	42.7	13.4	6.2	32.5	0.0	0.0	27.0	0.0	26.1
LnGrp LOS	D	A	A	D	B	A	C	A	A	C	A	C
Approach Vol, veh/h		1492			1714			147				26
Approach Delay, s/veh		9.7			14.2			32.5				26.8
Approach LOS		A			B			C				C
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		17.7	7.8	49.9		17.7	6.7	51.1				
Change Period (Y+Rc), s		* 4.7	4.6	5.8		* 4.7	4.6	5.8				
Max Green Setting (Gmax), s		* 39	5.4	60.2		* 39	7.4	58.2				
Max Q Clear Time (g_c+I1), s		12.5	4.5	14.5		4.3	3.5	30.8				
Green Ext Time (p_c), s		0.9	0.0	13.2		0.1	0.0	14.5				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			13.1									
HCM 6th LOS			B									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings  
5: Heacock Street & Cactus Avenue

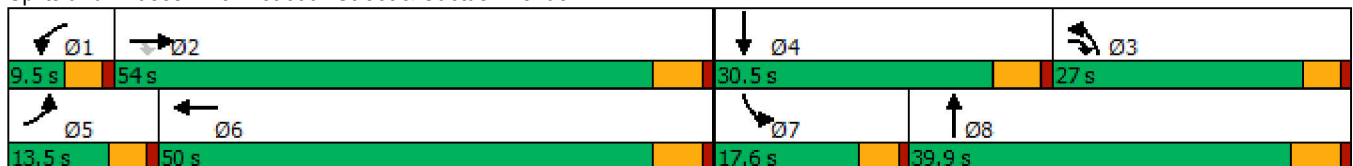


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	176	1067	762	67	2068	854	719	139	372
Future Volume (vph)	176	1067	762	67	2068	854	719	139	372
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	3	1	6	3	8	7	4
Permitted Phases			2						
Detector Phase	5	2	3	1	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.5	30.5	9.5	9.5	30.5	9.5	30.5	9.5	30.5
Total Split (s)	13.5	54.0	27.0	9.5	50.0	27.0	39.9	17.6	30.5
Total Split (%)	11.2%	44.6%	22.3%	7.9%	41.3%	22.3%	33.0%	14.5%	25.2%
Yellow Time (s)	3.5	4.5	3.5	3.5	4.5	3.5	4.5	3.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	4.5	4.5	5.5	4.5	5.5	4.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None
Act Effct Green (s)	9.0	48.6	72.6	5.0	44.6	23.0	30.3	11.8	19.1
Actuated g/C Ratio	0.08	0.42	0.63	0.04	0.39	0.20	0.26	0.10	0.17
v/c Ratio	1.27	0.71	0.71	0.85	1.60	1.25	0.81	0.77	0.79
Control Delay	207.3	31.4	12.7	122.3	300.4	163.5	47.4	76.6	53.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	207.3	31.4	12.7	122.3	300.4	163.5	47.4	76.6	53.1
LOS	F	C	B	F	F	F	D	E	D
Approach Delay		39.7			295.2		109.5		58.4
Approach LOS		D			F		F		E

Intersection Summary

Cycle Length: 121  
 Actuated Cycle Length: 115.7  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.60  
 Intersection Signal Delay: 148.6  
 Intersection LOS: F  
 Intersection Capacity Utilization 126.6%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 5: Heacock Street & Cactus Avenue



























HCM 6th Signalized Intersection Summary  
5: Heacock Street & Cactus Avenue

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	176	1067	762	67	2068	159	854	719	23	139	372	105
Future Volume (veh/h)	176	1067	762	67	2068	159	854	719	23	139	372	105
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1752	1900	1885	1856	1811	1841	1811	1870	1841	1885
Adj Flow Rate, veh/h	183	1111	794	70	2154	166	890	749	24	145	388	109
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	10	0	1	3	6	4	6	2	4	1
Cap, veh/h	138	1563	908	78	1327	101	669	958	31	172	455	126
Arrive On Green	0.08	0.42	0.42	0.04	0.38	0.38	0.19	0.27	0.27	0.10	0.16	0.16
Sat Flow, veh/h	1781	3741	1485	1810	3460	263	3450	3547	114	1781	2773	770
Grp Volume(v), veh/h	183	1111	794	70	1160	1160	890	389	384	145	256	241
Grp Sat Flow(s),veh/h/ln	1781	1870	1485	1810	1885	1838	1725	1841	1820	1781	1841	1702
Q Serve(g_s), s	9.0	28.5	16.6	4.5	44.5	44.5	22.5	22.7	22.7	9.3	15.7	16.0
Cycle Q Clear(g_c), s	9.0	28.5	16.6	4.5	44.5	44.5	22.5	22.7	22.7	9.3	15.7	16.0
Prop In Lane	1.00		1.00	1.00		0.14	1.00		0.06	1.00		0.45
Lane Grp Cap(c), veh/h	138	1563	908	78	723	705	669	497	491	172	302	279
V/C Ratio(X)	1.32	0.71	0.87	0.90	1.60	1.65	1.33	0.78	0.78	0.84	0.85	0.86
Avail Cap(c_a), veh/h	138	1563	908	78	723	705	669	546	540	201	397	367
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.5	28.0	7.3	55.3	35.8	35.8	46.8	39.2	39.2	51.5	47.1	47.2
Incr Delay (d2), s/veh	187.5	1.3	9.1	67.0	278.5	297.0	158.9	5.8	5.8	21.0	10.0	12.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.1	12.1	7.9	3.4	75.0	76.8	24.1	10.6	10.5	5.0	7.8	7.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	241.0	29.3	16.4	122.3	314.3	332.8	205.7	45.0	45.0	72.5	57.1	59.7
LnGrp LOS	F	C	B	F	F	F	F	D	D	E	E	E
Approach Vol, veh/h		2088			2390			1663			642	
Approach Delay, s/veh		42.9			317.7			131.0			61.6	
Approach LOS		D			F			F			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.5	54.0	28.0	24.5	13.5	50.0	15.7	36.8				
Change Period (Y+Rc), s	4.5	5.5	5.5	* 5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	5.0	48.5	22.5	* 25	9.0	44.5	13.1	34.4				
Max Q Clear Time (g_c+I1), s	6.5	30.5	24.5	18.0	11.0	46.5	11.3	24.7				
Green Ext Time (p_c), s	0.0	6.4	0.0	1.0	0.0	0.0	0.0	2.0				

Intersection Summary

HCM 6th Ctrl Delay	163.1
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Timings  
6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

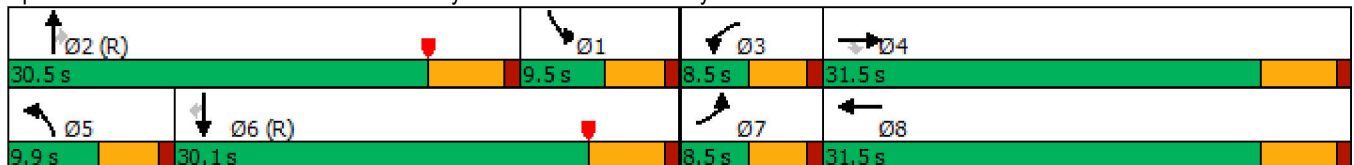
11/09/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	41	45	155	33	238	37	1033	62	127	804	22
Future Volume (vph)	41	45	155	33	238	37	1033	62	127	804	22
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4					2			6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Minimum Split (s)	8.5	23.5	23.5	8.5	31.5	8.5	30.5	30.5	8.5	23.5	23.5
Total Split (s)	8.5	31.5	31.5	8.5	31.5	9.9	30.5	30.5	9.5	30.1	30.1
Total Split (%)	10.6%	39.4%	39.4%	10.6%	39.4%	12.4%	38.1%	38.1%	11.9%	37.6%	37.6%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	5.5	4.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	4.0	13.0	13.0	4.0	13.0	5.7	41.4	41.4	5.0	44.4	44.4
Actuated g/C Ratio	0.05	0.16	0.16	0.05	0.16	0.07	0.52	0.52	0.06	0.56	0.56
v/c Ratio	0.54	0.17	0.33	0.39	0.63	0.31	0.59	0.07	1.15	0.43	0.02
Control Delay	63.9	26.9	2.7	50.1	20.3	41.9	18.5	0.1	167.3	15.3	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.9	26.9	2.7	50.1	20.3	41.9	18.5	0.1	167.3	15.3	0.0
LOS	E	C	A	D	C	D	B	A	F	B	A
Approach Delay		17.7			22.2		18.2			35.2	
Approach LOS		B			C		B			D	

Intersection Summary

Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.15  
 Intersection Signal Delay: 24.6  
 Intersection LOS: C  
 Intersection Capacity Utilization 71.0%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 6: Heacock Street & Meyer Drive/John F. Kennedy Drive



HCM 6th Signalized Intersection Summary  
6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

11/09/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↕		↖	↕	↗	↖	↕	↗
Traffic Volume (veh/h)	41	45	155	33	238	230	37	1033	62	127	804	22
Future Volume (veh/h)	41	45	155	33	238	230	37	1033	62	127	804	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.95	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1604	1767	1841	1781	1841	1885	1781	1796	1767	1856	1767	1618
Adj Flow Rate, veh/h	43	47	125	34	248	204	39	1076	55	132	838	13
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	20	9	4	8	4	1	8	7	9	3	9	19
Cap, veh/h	50	328	290	45	342	269	49	1123	443	376	1797	689
Arrive On Green	0.03	0.19	0.19	0.03	0.18	0.18	0.03	0.31	0.31	0.21	0.51	0.51
Sat Flow, veh/h	1527	1767	1560	1697	1901	1496	1697	3593	1417	1767	3533	1354
Grp Volume(v), veh/h	43	47	125	34	240	212	39	1076	55	132	838	13
Grp Sat Flow(s),veh/h/ln	1527	1767	1560	1697	1841	1556	1697	1796	1417	1767	1767	1354
Q Serve(g_s), s	2.2	1.8	5.7	1.6	9.8	10.4	1.8	23.5	1.7	5.1	12.2	0.4
Cycle Q Clear(g_c), s	2.2	1.8	5.7	1.6	9.8	10.4	1.8	23.5	1.7	5.1	12.2	0.4
Prop In Lane	1.00		1.00	1.00		0.96	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	50	328	290	45	331	280	49	1123	443	376	1797	689
V/C Ratio(X)	0.86	0.14	0.43	0.76	0.72	0.76	0.79	0.96	0.12	0.35	0.47	0.02
Avail Cap(c_a), veh/h	76	574	507	85	598	506	115	1123	443	376	1797	689
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.74	0.74	0.74	0.59	0.59	0.59
Uniform Delay (d), s/veh	38.5	27.2	28.8	38.7	30.9	31.2	38.6	27.0	12.0	26.8	12.7	9.8
Incr Delay (d2), s/veh	30.0	0.1	0.4	9.2	1.1	1.6	7.7	15.1	0.4	0.1	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.7	2.0	0.7	4.1	3.7	0.8	11.2	0.7	2.0	4.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.5	27.3	29.2	47.9	32.1	32.7	46.3	42.1	12.4	26.9	13.2	9.8
LnGrp LOS	E	C	C	D	C	C	D	D	B	C	B	A
Approach Vol, veh/h		215			486			1170			983	
Approach Delay, s/veh		36.6			33.5			40.9			15.0	
Approach LOS		D			C			D			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	22.5	30.5	6.6	20.4	6.8	46.2	7.1	19.9				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	5.0	* 25	4.0	26.0	5.4	24.6	4.0	26.0				
Max Q Clear Time (g_c+I1), s	7.1	25.5	3.6	7.7	3.8	14.2	4.2	12.4				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.3	0.0	2.6	0.0	1.4				













Intersection Summary

HCM 6th Ctrl Delay	30.4
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
7: Heacock Street & Gentian Avenue

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	33	83	946	10	172	882
Future Volume (vph)	33	83	946	10	172	882
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	27.6	27.6	27.2	27.2	9.6	16.2
Total Split (s)	28.0	28.0	65.0	65.0	27.0	92.0
Total Split (%)	23.3%	23.3%	54.2%	54.2%	22.5%	76.7%
Yellow Time (s)	3.6	3.6	5.2	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	6.2	6.2	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	12.8	12.8	30.0	30.0	12.0	49.3
Actuated g/C Ratio	0.19	0.19	0.45	0.45	0.18	0.74
v/c Ratio	0.10	0.20	0.66	0.01	0.54	0.38
Control Delay	29.0	8.9	18.9	11.6	35.7	5.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.0	8.9	18.9	11.6	35.7	5.5
LOS	C	A	B	B	D	A
Approach Delay	14.7		18.8			10.4
Approach LOS	B		B			B

Intersection Summary















Cycle Length: 120	
Actuated Cycle Length: 66.8	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay: 14.4	Intersection LOS: B
Intersection Capacity Utilization 56.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 7: Heacock Street & Gentian Avenue



















HCM 6th Signalized Intersection Summary  
7: Heacock Street & Gentian Avenue

Gateway Aviation TA (JN:13445)  
11/09/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			 			 
Traffic Volume (veh/h)	33	83	946	10	172	882
Future Volume (veh/h)	33	83	946	10	172	882
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1870	1781	1900	1870	1767
Adj Flow Rate, veh/h	35	87	996	11	181	928
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	2	8	0	2	9
Cap, veh/h	284	249	1432	681	231	2147
Arrive On Green	0.16	0.16	0.42	0.42	0.13	0.64
Sat Flow, veh/h	1810	1585	3474	1610	1781	3445
Grp Volume(v), veh/h	35	87	996	11	181	928
Grp Sat Flow(s),veh/h/ln	1810	1585	1692	1610	1781	1678
Q Serve(g_s), s	0.9	2.6	12.8	0.2	5.2	7.3
Cycle Q Clear(g_c), s	0.9	2.6	12.8	0.2	5.2	7.3
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	284	249	1432	681	231	2147
V/C Ratio(X)	0.12	0.35	0.70	0.02	0.78	0.43
Avail Cap(c_a), veh/h	797	698	3747	1782	751	5421
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.2	20.0	12.5	8.9	22.4	4.8
Incr Delay (d2), s/veh	0.1	0.3	0.6	0.0	2.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.9	3.5	0.1	2.0	1.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	19.3	20.3	13.1	8.9	24.6	4.9
LnGrp LOS	B	C	B	A	C	A
Approach Vol, veh/h	122		1007			1109
Approach Delay, s/veh	20.0		13.1			8.1
Approach LOS	B		B			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	11.5	28.7			40.2	12.9
Change Period (Y+Rc), s	4.6	6.2			6.2	4.6
Max Green Setting (Gmax), s	22.4	58.8			85.8	23.4
Max Q Clear Time (g_c+1), s	7.2	14.8			9.3	4.6
Green Ext Time (p_c), s	0.2	7.7			7.1	0.1
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			11.0			
HCM 6th LOS			B			

Timings  
8: Heacock Street & Iris Avenue

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 		 		 	 
Traffic Volume (vph)	381	484	522	244	328	632
Future Volume (vph)	381	484	522	244	328	632
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	15.8	15.8	33.2	33.2	9.6	16.2
Total Split (s)	48.0	48.0	46.0	46.0	26.0	72.0
Total Split (%)	40.0%	40.0%	38.3%	38.3%	21.7%	60.0%
Yellow Time (s)	4.8	4.8	5.2	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	6.2	6.2	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	14.9	14.9	18.6	18.6	11.4	34.8
Actuated g/C Ratio	0.24	0.24	0.30	0.30	0.18	0.56
v/c Ratio	0.48	0.66	0.59	0.40	0.54	0.38
Control Delay	23.5	9.0	21.9	4.8	27.9	8.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.5	9.0	21.9	4.8	27.9	8.4
LOS	C	A	C	A	C	A
Approach Delay	15.4		16.4			15.1
Approach LOS	B		B			B

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 62.2	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay: 15.6	Intersection LOS: B
Intersection Capacity Utilization 54.4%	ICU Level of Service A
Analysis Period (min) 15	

















Splits and Phases: 8: Heacock Street & Iris Avenue



HCM 6th Signalized Intersection Summary  
8: Heacock Street & Iris Avenue

Gateway Aviation TA (JN:13445)

11/09/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 		 		 	 
Traffic Volume (veh/h)	381	484	522	244	328	632
Future Volume (veh/h)	381	484	522	244	328	632
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1885	1885	1722	1885	1870	1737
Adj Flow Rate, veh/h	414	526	567	265	357	687
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	12	1	2	11
Cap, veh/h	1323	607	816	398	467	1484
Arrive On Green	0.38	0.38	0.25	0.25	0.14	0.45
Sat Flow, veh/h	3483	1598	3358	1598	3456	3387
Grp Volume(v), veh/h	414	526	567	265	357	687
Grp Sat Flow(s),veh/h/ln	1742	1598	1636	1598	1728	1650
Q Serve(g_s), s	5.9	21.4	11.1	10.5	7.0	10.2
Cycle Q Clear(g_c), s	5.9	21.4	11.1	10.5	7.0	10.2
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	1323	607	816	398	467	1484
V/C Ratio(X)	0.31	0.87	0.70	0.67	0.76	0.46
Avail Cap(c_a), veh/h	2086	957	1848	902	1050	3082
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.4	20.2	24.0	23.8	29.4	13.5
Incr Delay (d2), s/veh	0.1	5.2	1.1	1.9	1.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	7.6	3.9	3.7	2.7	3.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	15.5	25.4	25.1	25.7	30.4	13.7
LnGrp LOS	B	C	C	C	C	B
Approach Vol, veh/h	940		832			1044
Approach Delay, s/veh	21.1		25.3			19.4
Approach LOS	C		C			B
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	14.1	23.8			37.9	32.6
Change Period (Y+Rc), s	4.6	6.2			6.2	5.8
Max Green Setting (Gmax), s	21.4	39.8			65.8	42.2
Max Q Clear Time (g_c+1), s	9.0	13.1			12.2	23.4
Green Ext Time (p_c), s	0.5	4.5			4.7	3.3
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			21.7			
HCM 6th LOS			C			

Timings  
9: Heacock Street & Krameria Avenue-North

	↙	↖	↑	↘	↓
Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations	↙	↖	↑↔	↘	↑↑
Traffic Volume (vph)	114	136	549	237	730
Future Volume (vph)	114	136	549	237	730
Turn Type	Prot	Perm	NA	Prot	NA
Protected Phases	8		2	1	6
Permitted Phases		8			
Detector Phase	8	8	2	1	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	29.1	29.1	29.2	9.6	16.2
Total Split (s)	39.0	39.0	55.0	26.0	81.0
Total Split (%)	32.5%	32.5%	45.8%	21.7%	67.5%
Yellow Time (s)	4.1	4.1	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	6.2	4.6	6.2
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	Min	Max	Min
Act Effct Green (s)	12.6	12.6	22.1	21.9	48.7
Actuated g/C Ratio	0.17	0.17	0.30	0.30	0.67
v/c Ratio	0.39	0.33	0.79	0.48	0.34
Control Delay	31.5	7.4	27.7	27.1	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	31.5	7.4	27.7	27.1	6.1
LOS	C	A	C	C	A
Approach Delay	18.4		27.7		11.2
Approach LOS	B		C		B

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 72.8	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 18.5	Intersection LOS: B
Intersection Capacity Utilization 57.0%	ICU Level of Service B
Analysis Period (min) 15	













Splits and Phases: 9: Heacock Street & Krameria Avenue-North



HCM 6th Signalized Intersection Summary  
 9: Heacock Street & Krameria Avenue-North

Gateway Aviation TA (JN:13445)

11/10/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	114	136	549	222	237	730
Future Volume (veh/h)	114	136	549	222	237	730
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1856	1870	1841	1841	1826	1841
Adj Flow Rate, veh/h	124	148	597	241	258	793
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	2	4	4	5	4
Cap, veh/h	260	233	734	296	550	2400
Arrive On Green	0.15	0.15	0.30	0.30	0.32	0.69
Sat Flow, veh/h	1767	1585	2524	981	1739	3589
Grp Volume(v), veh/h	124	148	429	409	258	793
Grp Sat Flow(s),veh/h/ln	1767	1585	1749	1664	1739	1749
Q Serve(g_s), s	4.4	5.9	15.4	15.4	8.1	6.2
Cycle Q Clear(g_c), s	4.4	5.9	15.4	15.4	8.1	6.2
Prop In Lane	1.00	1.00		0.59	1.00	
Lane Grp Cap(c), veh/h	260	233	528	502	550	2400
V/C Ratio(X)	0.48	0.64	0.81	0.81	0.47	0.33
Avail Cap(c_a), veh/h	885	794	1261	1200	550	3866
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.5	27.2	21.9	21.9	18.6	4.3
Incr Delay (d2), s/veh	0.5	1.1	1.2	1.2	2.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	2.3	5.5	5.2	3.2	1.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	27.0	28.2	23.0	23.1	21.4	4.3
LnGrp LOS	C	C	C	C	C	A
Approach Vol, veh/h	272		838			1051
Approach Delay, s/veh	27.7		23.1			8.5
Approach LOS	C		C			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	26.0	26.6			52.6	15.0
Change Period (Y+Rc), s	4.6	6.2			6.2	5.1
Max Green Setting (Gmax), s	21.4	48.8			74.8	33.9
Max Q Clear Time (g_c+I1), s	10.1	17.4			8.2	7.9
Green Ext Time (p_c), s	0.3	3.0			3.3	0.4
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			16.6			
HCM 6th LOS			B			



Intersection												
Int Delay, s/veh	0											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕			↑↑		↙	↑↑	
Traffic Vol, veh/h	0	0	0	0	0	0	0	821	0	0	734	0
Future Vol, veh/h	0	0	0	0	0	0	0	821	0	0	734	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	3	0	0	5	0
Mvmt Flow	0	0	0	0	0	0	0	892	0	0	798	0

Major/Minor	Minor1		Major1			Major2			
Conflicting Flow All	1291	1690	446	-	0	0	892	0	0
Stage 1	892	892	-	-	-	-	-	-	-
Stage 2	399	798	-	-	-	-	-	-	-
Critical Hdwy	6.8	6.5	6.9	-	-	-	4.1	-	-
Critical Hdwy Stg 1	5.8	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.8	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	-	-	-	2.2	-	-
Pot Cap-1 Maneuver	158	94	565	0	-	-	769	-	0
Stage 1	366	363	-	0	-	-	-	-	0
Stage 2	652	401	-	0	-	-	-	-	0
Platoon blocked, %									
Mov Cap-1 Maneuver	158	0	565	-	-	-	769	-	-
Mov Cap-2 Maneuver	278	0	-	-	-	-	-	-	-
Stage 1	366	0	-	-	-	-	-	-	-
Stage 2	652	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	769
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	0	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↕	↗	↘	↕
Traffic Vol, veh/h	12	13	1069	61	52	924
Future Vol, veh/h	12	13	1069	61	52	924
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	0	140	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	23	31	8	2	8	13
Mvmt Flow	13	14	1162	66	57	1004

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1778	581	0	0	1228
Stage 1	1162	-	-	-	-
Stage 2	616	-	-	-	-
Critical Hdwy	7.26	7.52	-	-	4.26
Critical Hdwy Stg 1	6.26	-	-	-	-
Critical Hdwy Stg 2	6.26	-	-	-	-
Follow-up Hdwy	3.73	3.61	-	-	2.28
Pot Cap-1 Maneuver	59	391	-	-	531
Stage 1	220	-	-	-	-
Stage 2	447	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	53	391	-	-	531
Mov Cap-2 Maneuver	151	-	-	-	-
Stage 1	220	-	-	-	-
Stage 2	399	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	22.5	0	0.7
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	151	391	531	-
HCM Lane V/C Ratio	-	-	0.086	0.036	0.106	-
HCM Control Delay (s)	-	-	31.1	14.6	12.6	-
HCM Lane LOS	-	-	D	B	B	-
HCM 95th %tile Q(veh)	-	-	0.3	0.1	0.4	-

Timings  
12: Heacock Street & San Michele Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	31	82	4	54	341	320	1	1664	99	1101	52	
Future Volume (vph)	31	82	4	54	341	320	1	1664	99	1101	52	
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Prot	NA	Perm	
Protected Phases	7	4		3	8	1	5	2	1	6		
Permitted Phases			4			8					6	
Detector Phase	7	4	4	3	8	1	5	2	1	6	6	
Switch Phase												
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	4.0	5.0	4.0	5.0	5.0	
Minimum Split (s)	9.5	30.5	30.5	8.5	30.5	8.5	8.5	34.5	8.5	34.5	34.5	
Total Split (s)	13.0	41.0	41.0	13.0	41.0	28.0	12.0	38.0	28.0	54.0	54.0	
Total Split (%)	10.8%	34.2%	34.2%	10.8%	34.2%	23.3%	10.0%	31.7%	23.3%	45.0%	45.0%	
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	3.5	4.5	3.5	4.5	4.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	4.5	5.5	4.5	5.5	5.5	
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	Max	None	Max	Max	
Act Effct Green (s)	6.2	12.8	12.8	13.6	22.4	42.1	4.7	33.5	14.0	50.7	50.7	
Actuated g/C Ratio	0.07	0.14	0.14	0.15	0.24	0.46	0.05	0.36	0.15	0.55	0.55	
v/c Ratio	0.27	0.35	0.01	0.23	0.80	0.38	0.01	1.41	0.40	1.18	0.05	
Control Delay	51.5	43.3	0.0	38.4	47.5	10.8	51.0	215.4	43.3	115.9	0.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	51.5	43.3	0.0	38.4	47.5	10.8	51.0	215.4	43.3	115.9	0.5	
LOS	D	D	A	D	D	B	D	F	D	F	A	
Approach Delay		44.1			30.4			215.3		105.3		
Approach LOS		D			C			F		F		

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 92.2	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.41	
Intersection Signal Delay: 138.3	Intersection LOS: F
Intersection Capacity Utilization 99.2%	ICU Level of Service F
Analysis Period (min) 15	

























Splits and Phases: 12: Heacock Street & San Michele Road

Ø2	Ø1	Ø4	Ø3
38 s	28 s	41 s	13 s
Ø5	Ø6	Ø8	Ø7
12 s	54 s	41 s	13 s

HCM 6th Signalized Intersection Summary  
 12: Heacock Street & San Michele Road

Gateway Aviation TA (JN:13445)

04/19/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	82	4	54	341	320	1	1664	17	99	1101	52
Future Volume (veh/h)	31	82	4	54	341	320	1	1664	17	99	1101	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1856	1366	1796	1900	1856	1900	1885	1707	1811	1856	1856
Adj Flow Rate, veh/h	34	89	4	59	371	348	1	1809	18	108	1197	57
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	3	36	7	0	3	0	1	13	6	3	3
Cap, veh/h	46	133	83	310	433	617	2	1286	13	284	980	831
Arrive On Green	0.03	0.07	0.07	0.18	0.23	0.23	0.00	0.35	0.35	0.16	0.53	0.53
Sat Flow, veh/h	1810	1856	1158	1711	1900	1572	1810	3633	36	1725	1856	1572
Grp Volume(v), veh/h	34	89	4	59	371	348	1	890	937	108	1197	57
Grp Sat Flow(s),veh/h/ln	1810	1856	1158	1711	1900	1572	1810	1791	1879	1725	1856	1572
Q Serve(g_s), s	1.7	4.3	0.3	2.7	17.2	0.8	0.1	32.5	32.5	5.1	48.5	1.2
Cycle Q Clear(g_c), s	1.7	4.3	0.3	2.7	17.2	0.8	0.1	32.5	32.5	5.1	48.5	1.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.02	1.00		1.00
Lane Grp Cap(c), veh/h	46	133	83	310	433	617	2	634	665	284	980	831
V/C Ratio(X)	0.74	0.67	0.05	0.19	0.86	0.56	0.50	1.40	1.41	0.38	1.22	0.07
Avail Cap(c_a), veh/h	168	717	448	310	735	867	148	634	665	441	980	831
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.5	41.5	30.8	31.9	34.0	21.8	45.8	29.7	29.7	34.2	21.7	5.4
Incr Delay (d2), s/veh	8.5	2.1	0.1	0.1	2.2	0.3	58.5	191.5	192.7	0.3	108.9	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	2.0	0.1	1.1	7.7	5.4	0.1	46.2	48.7	2.0	46.8	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.0	43.7	30.9	32.0	36.2	22.1	104.4	221.2	222.4	34.5	130.6	5.6
LnGrp LOS	D	D	C	C	D	C	F	F	F	C	F	A
Approach Vol, veh/h		127			778			1828			1362	
Approach Delay, s/veh		45.8			29.6			221.8			117.7	
Approach LOS		D			C			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.6	38.0	21.1	12.1	4.6	54.0	6.8	26.4				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	23.5	* 33	8.5	35.5	7.5	48.5	8.5	35.5				
Max Q Clear Time (g_c+I1), s	7.1	34.5	4.7	6.3	2.1	50.5	3.7	19.2				
Green Ext Time (p_c), s	0.1	0.0	0.0	0.3	0.0	0.0	0.0	1.7				

Intersection Summary

HCM 6th Ctrl Delay	145.2
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection							
Intersection Delay, s/veh	80.8						
Intersection LOS	F						
Approach	EB	WB	NB		SB		
Entry Lanes	3	2	2		2		
Conflicting Circle Lanes	2	2	2		2		
Adj Approach Flow, veh/h	0	1397	761		837		
Demand Flow Rate, veh/h	0	1509	770		837		
Vehicles Circulating, veh/h	511	766	1119		1514		
Vehicles Exiting, veh/h	1840	1123	948		761		
Ped Vol Crossing Leg, #/h	0	0	0		0		
Ped Cap Adj	1.000	1.000	1.000		1.000		
Approach Delay, s/veh	0.0	80.9	28.8		128.0		
Approach LOS	-	F	D		F		
Lane	Left		Right		Left		Right
Designated Moves	LT		TR		LT		TR
Assumed Moves	LT		TR		LT		R
RT Channelized							
Lane Util	0.470	0.530	0.470	0.530	0.465	0.535	
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535	
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328	
Entry Flow, veh/h	709	800	362	408	389	448	
Cap Entry Lane, veh/h	667	740	482	549	335	392	
Entry HV Adj Factor	0.926	0.926	0.988	0.989	1.000	1.000	
Flow Entry, veh/h	657	740	358	403	389	448	
Cap Entry, veh/h	618	685	476	542	335	392	
V/C Ratio	1.063	1.080	0.751	0.744	1.160	1.143	
Control Delay, s/veh	79.5	82.0	30.7	27.2	134.8	122.1	
LOS	F	F	D	D	F	F	
95th %tile Queue, veh	18	20	6	6	16	17	

Timings  
14: Indian Street & San Michele Road

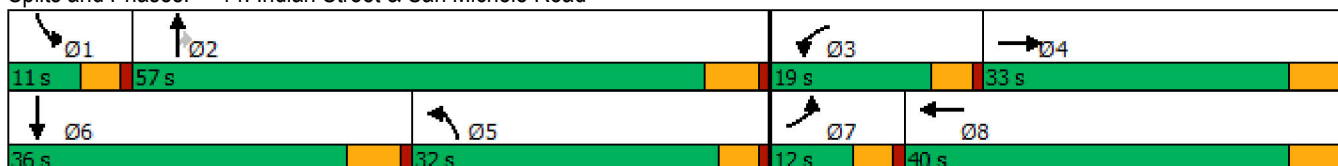


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↖	↕	↖	↕	↖	↕	↗	↖	↕
Traffic Volume (vph)	6	29	120	109	576	28	106	5	21
Future Volume (vph)	6	29	120	109	576	28	106	5	21
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8	5	2		1	6
Permitted Phases							2		
Detector Phase	7	4	3	8	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	31.8	9.6	31.8	9.6	32.8	32.8	9.6	32.8
Total Split (s)	12.0	33.0	19.0	40.0	32.0	57.0	57.0	11.0	36.0
Total Split (%)	10.0%	27.5%	15.8%	33.3%	26.7%	47.5%	47.5%	9.2%	30.0%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	6.3	13.9	10.3	24.4	17.7	21.5	21.5	6.1	14.0
Actuated g/C Ratio	0.10	0.22	0.17	0.39	0.28	0.35	0.35	0.10	0.22
v/c Ratio	0.05	0.25	0.44	0.09	0.60	0.05	0.17	0.03	0.04
Control Delay	41.2	9.3	36.5	17.2	26.1	15.5	2.1	41.4	25.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.2	9.3	36.5	17.2	26.1	15.5	2.1	41.4	25.0
LOS	D	A	D	B	C	B	A	D	C
Approach Delay		10.4		27.0		22.1			27.5
Approach LOS		B		C		C			C

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 62.3  
 Natural Cycle: 95  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.60  
 Intersection Signal Delay: 21.4  
 Intersection LOS: C  
 Intersection Capacity Utilization 52.6%  
 ICU Level of Service A  
 Analysis Period (min) 15























Splits and Phases: 14: Indian Street & San Michele Road



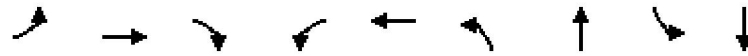
HCM 6th Signalized Intersection Summary  
 14: Indian Street & San Michele Road

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	29	150	120	109	6	576	28	106	5	21	5
Future Volume (veh/h)	6	29	150	120	109	6	576	28	106	5	21	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.99	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1218	1470	1870	1826	1826	1900	1856	1752	1767	1900	1707	1900
Adj Flow Rate, veh/h	7	32	163	130	118	7	626	30	115	5	23	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	46	29	2	5	5	0	3	10	9	0	13	0
Cap, veh/h	11	249	222	165	901	53	751	744	627	12	547	114
Arrive On Green	0.01	0.18	0.18	0.09	0.26	0.26	0.21	0.42	0.42	0.01	0.20	0.20
Sat Flow, veh/h	1160	1397	1246	1739	3411	201	3534	1752	1478	1810	2718	564
Grp Volume(v), veh/h	7	32	163	130	63	62	626	30	115	5	14	14
Grp Sat Flow(s),veh/h/ln	1160	1397	1246	1739	1826	1786	1767	1752	1478	1810	1707	1575
Q Serve(g_s), s	0.4	1.4	8.7	5.1	1.8	1.9	11.9	0.7	3.4	0.2	0.5	0.5
Cycle Q Clear(g_c), s	0.4	1.4	8.7	5.1	1.8	1.9	11.9	0.7	3.4	0.2	0.5	0.5
Prop In Lane	1.00		1.00	1.00		0.11	1.00		1.00	1.00		0.36
Lane Grp Cap(c), veh/h	11	249	222	165	482	472	751	744	627	12	344	317
V/C Ratio(X)	0.66	0.13	0.73	0.79	0.13	0.13	0.83	0.04	0.18	0.42	0.04	0.04
Avail Cap(c_a), veh/h	122	540	482	356	888	868	1377	1276	1076	165	733	676
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.7	24.3	27.3	31.1	19.7	19.7	26.5	11.9	12.6	34.8	22.6	22.6
Incr Delay (d2), s/veh	23.4	0.1	1.8	3.2	0.0	0.0	0.9	0.0	0.1	8.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.4	2.4	2.1	0.7	0.7	4.5	0.2	1.0	0.1	0.2	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.2	24.4	29.1	34.3	19.8	19.8	27.4	11.9	12.7	43.2	22.6	22.6
LnGrp LOS	E	C	C	C	B	B	C	B	B	D	C	C
Approach Vol, veh/h		202			255			771				33
Approach Delay, s/veh		29.3			27.2			24.6				25.7
Approach LOS		C			C			C				C
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.1	35.6	11.3	18.4	20.7	20.0	5.2	24.4				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	5.8	* 5.8	4.6	5.8				
Max Green Setting (Gmax), s	6.4	51.2	14.4	27.2	27.4	* 30	7.4	34.2				
Max Q Clear Time (g_c+I1), s	2.2	5.4	7.1	10.7	13.9	2.5	2.4	3.9				
Green Ext Time (p_c), s	0.0	0.3	0.1	0.6	1.0	0.0	0.0	0.4				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				25.9								
HCM 6th LOS				C								
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings  
15: Indian Street & Nandina Avenue



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	
Lane Configurations	↖	↑	↗	↖	↗	↖	↕	↖	↕	
Traffic Volume (vph)	8	35	78	36	44	178	679	13	252	
Future Volume (vph)	8	35	78	36	44	178	679	13	252	
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA	
Protected Phases	7	4	5	3	8	5	2	1	6	
Permitted Phases	4									
Detector Phase	7	4	5	3	8	5	2	1	6	
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0	
Minimum Split (s)	9.6	29.8	9.6	9.6	29.8	9.6	26.8	9.6	26.8	
Total Split (s)	13.0	35.0	36.0	15.0	37.0	36.0	56.0	14.0	34.0	
Total Split (%)	10.8%	29.2%	30.0%	12.5%	30.8%	30.0%	46.7%	11.7%	28.3%	
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	3.6	4.8	3.6	4.8	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	4.6	5.8	4.6	5.8	
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	Min	None	Min	
Act Effct Green (s)	6.3	13.8	22.3	7.3	16.2	12.8	36.7	6.5	15.3	
Actuated g/C Ratio	0.12	0.26	0.41	0.14	0.30	0.24	0.68	0.12	0.28	
v/c Ratio	0.04	0.11	0.14	0.19	0.17	0.50	0.33	0.08	0.29	
Control Delay	35.0	24.9	3.4	33.1	16.3	27.8	11.5	34.8	21.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	35.0	24.9	3.4	33.1	16.3	27.8	11.5	34.8	21.6	
LOS	C	C	A	C	B	C	B	C	C	
Approach Delay	11.7					22.2		14.6		22.2
Approach LOS	B					C		B		C

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 53.9	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.50	
Intersection Signal Delay: 16.4	Intersection LOS: B
Intersection Capacity Utilization 47.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 15: Indian Street & Nandina Avenue




























HCM 6th Signalized Intersection Summary  
15: Indian Street & Nandina Avenue

Gateway Aviation TA (JN:13445)

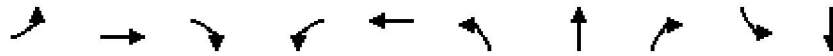
11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	35	78	36	44	23	178	679	76	13	252	27
Future Volume (veh/h)	8	35	78	36	44	23	178	679	76	13	252	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1248	1218	1559	1441	1455	1648	1841	1707	1411	1811	1900
Adj Flow Rate, veh/h	9	38	85	39	48	25	193	738	83	14	274	29
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	44	46	23	31	30	17	4	13	33	6	0
Cap, veh/h	21	235	352	62	195	101	239	1093	123	24	653	68
Arrive On Green	0.01	0.19	0.19	0.04	0.22	0.22	0.15	0.34	0.34	0.02	0.20	0.20
Sat Flow, veh/h	1810	1248	1032	1485	892	465	1570	3242	364	1344	3223	338
Grp Volume(v), veh/h	9	38	85	39	0	73	193	419	402	14	153	150
Grp Sat Flow(s),veh/h/ln	1810	1248	1032	1485	0	1357	1570	1841	1765	1344	1811	1750
Q Serve(g_s), s	0.2	1.3	3.0	1.3	0.0	2.2	6.0	9.8	9.8	0.5	3.7	3.7
Cycle Q Clear(g_c), s	0.2	1.3	3.0	1.3	0.0	2.2	6.0	9.8	9.8	0.5	3.7	3.7
Prop In Lane	1.00		1.00	1.00		0.34	1.00		0.21	1.00		0.19
Lane Grp Cap(c), veh/h	21	235	352	62	0	296	239	621	595	24	367	354
V/C Ratio(X)	0.42	0.16	0.24	0.63	0.00	0.25	0.81	0.68	0.68	0.59	0.42	0.42
Avail Cap(c_a), veh/h	303	728	759	308	0	845	984	1845	1769	252	1020	985
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.6	17.0	11.9	23.6	0.0	16.2	20.5	14.2	14.3	24.4	17.4	17.4
Incr Delay (d2), s/veh	4.9	0.3	0.4	3.8	0.0	0.4	2.5	1.3	1.3	8.4	0.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.3	0.6	0.5	0.0	0.6	1.9	3.2	3.1	0.2	1.3	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.5	17.3	12.2	27.5	0.0	16.6	23.0	15.5	15.6	32.8	18.2	18.2
LnGrp LOS	C	B	B	C	A	B	C	B	B	C	B	B
Approach Vol, veh/h		132			112			1014			317	
Approach Delay, s/veh		14.9			20.4			17.0			18.8	
Approach LOS		B			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.5	22.7	6.7	15.2	12.2	15.9	5.2	16.7				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	9.4	50.2	10.4	29.2	31.4	28.2	8.4	31.2				
Max Q Clear Time (g_c+I1), s	2.5	11.8	3.3	5.0	8.0	5.7	2.2	4.2				
Green Ext Time (p_c), s	0.0	5.1	0.0	0.4	0.2	1.4	0.0	0.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				17.4								
HCM 6th LOS				B								

Timings  
16: Indian Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/09/2020

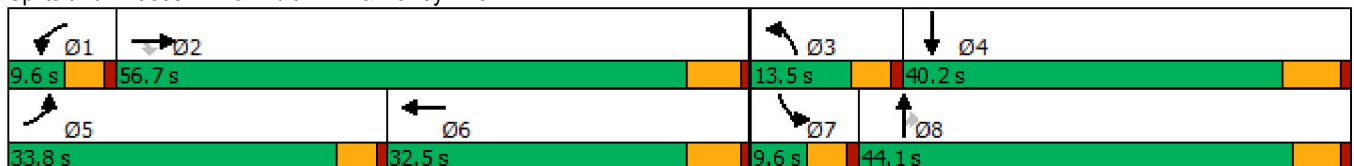


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↘	↑↑↑	↗	↘	↑↑↑	↘↗	↑↑	↗	↘	↑↗
Traffic Volume (vph)	108	633	108	157	1051	148	290	82	102	187
Future Volume (vph)	108	633	108	157	1051	148	290	82	102	187
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	5	2		1	6	3	8		7	4
Permitted Phases			2					8		
Detector Phase	5	2	2	1	6	3	8	8	7	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	35.8	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2
Total Split (s)	33.8	56.7	56.7	9.6	32.5	13.5	44.1	44.1	9.6	40.2
Total Split (%)	28.2%	47.3%	47.3%	8.0%	27.1%	11.3%	36.8%	36.8%	8.0%	33.5%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.4	4.4	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	5.4	5.4	4.6	6.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	13.1	35.4	35.4	5.1	27.4	8.2	18.9	18.9	5.1	15.0
Actuated g/C Ratio	0.15	0.41	0.41	0.06	0.32	0.10	0.22	0.22	0.06	0.18
v/c Ratio	0.66	0.34	0.18	1.61	0.91	0.53	0.43	0.20	1.04	0.61
Control Delay	53.6	18.5	4.6	346.6	38.6	46.8	30.2	1.3	142.8	20.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.6	18.5	4.6	346.6	38.6	46.8	30.2	1.3	142.8	20.1
LOS	D	B	A	F	D	D	C	A	F	C
Approach Delay		21.2			70.7		30.4			46.6
Approach LOS		C			E		C			D

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 85.5  
 Natural Cycle: 100  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.61  
 Intersection Signal Delay: 48.5  
 Intersection LOS: D  
 Intersection Capacity Utilization 66.0%  
 ICU Level of Service C  
 Analysis Period (min) 15































Splits and Phases: 16: Indian Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 16: Indian Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 			 	
Traffic Volume (veh/h)	108	633	108	157	1051	302	148	290	82	102	187	184
Future Volume (veh/h)	108	633	108	157	1051	302	148	290	82	102	187	184
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1085	1811	1707	1870	1856	1900	1737	1767	1796	1885	1811	1426
Adj Flow Rate, veh/h	117	688	108	171	1142	308	161	315	82	111	203	151
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	55	6	13	2	3	0	11	9	7	1	6	32
Cap, veh/h	132	1996	584	123	1371	370	239	552	250	124	306	217
Arrive On Green	0.13	0.40	0.40	0.07	0.35	0.35	0.07	0.16	0.16	0.07	0.16	0.16
Sat Flow, veh/h	1033	4944	1447	1781	3969	1071	3209	3357	1522	1795	1925	1362
Grp Volume(v), veh/h	117	688	108	171	972	478	161	315	82	111	180	174
Grp Sat Flow(s),veh/h/ln	1033	1648	1447	1781	1689	1663	1605	1678	1522	1795	1721	1566
Q Serve(g_s), s	8.0	7.0	3.5	5.0	19.1	19.1	3.5	6.3	3.4	4.4	7.1	7.6
Cycle Q Clear(g_c), s	8.0	7.0	3.5	5.0	19.1	19.1	3.5	6.3	3.4	4.4	7.1	7.6
Prop In Lane	1.00		1.00	1.00		0.64	1.00		1.00	1.00		0.87
Lane Grp Cap(c), veh/h	132	1996	584	123	1166	574	239	552	250	124	274	249
V/C Ratio(X)	0.89	0.34	0.18	1.39	0.83	0.83	0.67	0.57	0.33	0.89	0.66	0.70
Avail Cap(c_a), veh/h	418	3484	1020	123	1248	615	395	1798	816	124	810	737
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.0	14.9	13.9	33.6	21.7	21.7	32.6	27.8	26.6	33.4	28.5	28.7
Incr Delay (d2), s/veh	7.6	0.1	0.2	216.2	4.7	9.1	1.2	0.9	0.8	48.4	2.7	3.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	2.2	1.0	9.4	7.3	7.9	1.3	2.4	1.2	3.5	2.9	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.6	15.0	14.0	249.8	26.5	30.8	33.8	28.8	27.4	81.8	31.2	32.2
LnGrp LOS	D	B	B	F	C	C	C	C	C	F	C	C
Approach Vol, veh/h		913			1621			558			465	
Approach Delay, s/veh		17.9			51.3			30.0			43.7	
Approach LOS		B			D			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.6	35.0	10.0	17.7	13.8	30.7	9.6	18.1				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	5.0	50.9	8.9	34.0	29.2	26.7	5.0	* 39				
Max Q Clear Time (g_c+I1), s	7.0	9.0	5.5	9.6	10.0	21.1	6.4	8.3				
Green Ext Time (p_c), s	0.0	5.1	0.1	1.9	0.1	3.8	0.0	2.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				38.4								
HCM 6th LOS				D								
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

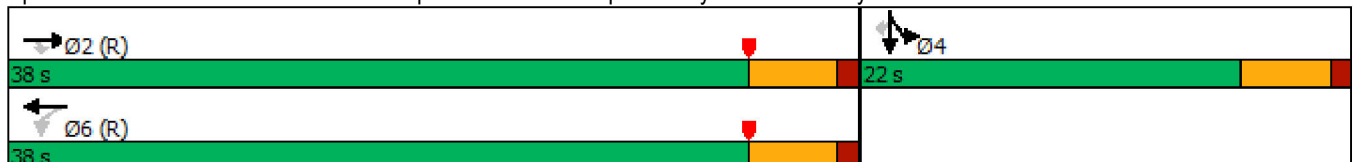


Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↑
Traffic Volume (vph)	875	153	627	400	0	255
Future Volume (vph)	875	153	627	400	0	255
Turn Type	NA	Perm	Perm	NA	NA	Perm
Protected Phases	2			6	4	
Permitted Phases		2	6			4
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	25.0	25.0	10.0	10.0
Total Split (s)	38.0	38.0	38.0	38.0	22.0	22.0
Total Split (%)	63.3%	63.3%	63.3%	63.3%	36.7%	36.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	33.0	33.0	33.0	33.0	17.0	17.0
Actuated g/C Ratio	0.55	0.55	0.55	0.55	0.28	0.28
v/c Ratio	0.50	0.18	2.70	0.23	1.25	0.45
Control Delay	9.6	1.8	786.5	8.5	156.0	5.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.6	1.8	786.5	8.5	156.0	5.3
LOS	A	A	F	A	F	A
Approach Delay	8.4			483.5	106.6	
Approach LOS	A			F	F	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 2.70  
 Intersection Signal Delay: 207.7  
 Intersection LOS: F  
 Intersection Capacity Utilization 111.5%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.















HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑						↑	↑
Traffic Volume (veh/h)	0	875	153	627	400	0	0	0	0	522	0	255
Future Volume (veh/h)	0	875	153	627	400	0	0	0	0	522	0	255
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1826	1885	1841	1826	0				1707	1900	1767
Adj Flow Rate, veh/h	0	951	166	682	435	0				567	0	217
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	5	1	4	5	0				13	0	9
Cap, veh/h	0	1908	878	309	1908	0				513	0	424
Arrive On Green	0.00	0.55	0.55	0.92	0.92	0.00				0.28	0.00	0.28
Sat Flow, veh/h	0	3561	1597	496	3561	0				1810	0	1497
Grp Volume(v), veh/h	0	951	166	682	435	0				567	0	217
Grp Sat Flow(s),veh/h/ln	0	1735	1597	496	1735	0				1810	0	1497
Q Serve(g_s), s	0.0	10.2	3.1	22.8	0.8	0.0				17.0	0.0	7.3
Cycle Q Clear(g_c), s	0.0	10.2	3.1	33.0	0.8	0.0				17.0	0.0	7.3
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1908	878	309	1908	0				513	0	424
V/C Ratio(X)	0.00	0.50	0.19	2.21	0.23	0.00				1.11	0.00	0.51
Avail Cap(c_a), veh/h	0	1908	878	309	1908	0				513	0	424
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.45	0.45	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	8.4	6.8	12.0	1.1	0.0				21.5	0.0	18.0
Incr Delay (d2), s/veh	0.0	0.9	0.5	549.1	0.1	0.0				71.9	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.8	0.8	50.4	0.2	0.0				16.2	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	9.3	7.3	561.1	1.3	0.0				93.4	0.0	19.1
LnGrp LOS	A	A	A	F	A	A				F	A	B
Approach Vol, veh/h		1117			1117						784	
Approach Delay, s/veh		9.0			343.1						72.9	
Approach LOS		A			F						E	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		38.0		22.0		38.0						
Change Period (Y+Rc), s		5.0		5.0		5.0						
Max Green Setting (Gmax), s		33.0		17.0		33.0						
Max Q Clear Time (g_c+I1), s		12.2		19.0		35.0						
Green Ext Time (p_c), s		4.3		0.0		0.0						
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				149.2								
HCM 6th LOS				F								

Timings

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.



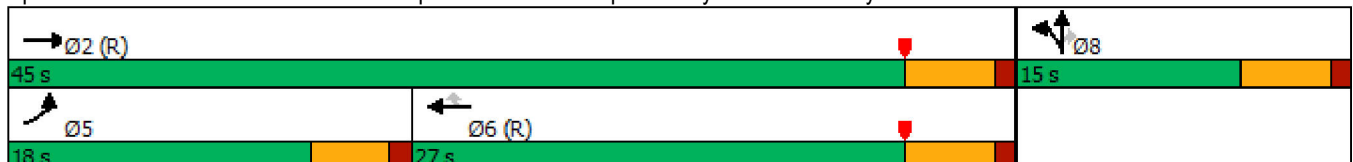
Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	479	918	967	1110	8	340
Future Volume (vph)	479	918	967	1110	8	340
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	26.0	24.0	24.0	10.0	10.0
Total Split (s)	18.0	45.0	27.0	27.0	15.0	15.0
Total Split (%)	30.0%	75.0%	45.0%	45.0%	25.0%	25.0%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max
Act Effct Green (s)	13.5	40.0	22.0	22.0	10.0	10.0
Actuated g/C Ratio	0.22	0.67	0.37	0.37	0.17	0.17
v/c Ratio	1.34	0.46	0.83	1.44	0.26	1.03
Control Delay	186.5	4.4	24.5	220.3	24.5	74.4
Queue Delay	0.0	0.3	0.0	0.0	0.0	0.0
Total Delay	186.5	4.7	24.5	220.3	24.5	74.4
LOS	F	A	C	F	C	E
Approach Delay		67.0	129.1		66.2	
Approach LOS		E	F		E	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 29 (48%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.44  
 Intersection Signal Delay: 100.2  
 Intersection Capacity Utilization 111.5%  
 Analysis Period (min) 15

Intersection LOS: F  
 ICU Level of Service H

Splits and Phases: 2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

11/09/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	479	918	0	0	967	1110	59	8	340	0	0	0
Future Volume (veh/h)	479	918	0	0	967	1110	59	8	340	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1841	1752	0	0	1841	1781	1796	1900	1678			
Adj Flow Rate, veh/h	521	998	0	0	1051	1143	64	9	305			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	4	10	0	0	4	8	7	0	15			
Cap, veh/h	394	2219	0	0	1282	554	266	37	237			
Arrive On Green	0.07	0.22	0.00	0.00	0.37	0.37	0.17	0.17	0.17			
Sat Flow, veh/h	1753	3416	0	0	3589	1510	1596	224	1422			
Grp Volume(v), veh/h	521	998	0	0	1051	1143	73	0	305			
Grp Sat Flow(s),veh/h/ln	1753	1664	0	0	1749	1510	1820	0	1422			
Q Serve(g_s), s	13.5	15.6	0.0	0.0	16.3	22.0	2.1	0.0	10.0			
Cycle Q Clear(g_c), s	13.5	15.6	0.0	0.0	16.3	22.0	2.1	0.0	10.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.88		1.00			
Lane Grp Cap(c), veh/h	394	2219	0	0	1282	554	303	0	237			
V/C Ratio(X)	1.32	0.45	0.00	0.00	0.82	2.06	0.24	0.00	1.29			
Avail Cap(c_a), veh/h	394	2219	0	0	1282	554	303	0	237			
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.86	0.86	0.00	0.00	0.63	0.63	1.00	0.00	1.00			
Uniform Delay (d), s/veh	27.8	13.9	0.0	0.0	17.2	19.0	21.7	0.0	25.0			
Incr Delay (d2), s/veh	159.1	0.6	0.0	0.0	3.8	483.1	1.9	0.0	157.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	23.4	6.7	0.0	0.0	5.9	80.4	0.9	0.0	13.3			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	186.8	14.4	0.0	0.0	21.0	502.1	23.6	0.0	182.2			
LnGrp LOS	F	B	A	A	C	F	C	A	F			
Approach Vol, veh/h		1519			2194			378				
Approach Delay, s/veh		73.6			271.7			151.6				
Approach LOS		E			F			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		45.0			18.0	27.0		15.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		40.0			13.5	22.0		10.0				
Max Q Clear Time (g_c+1), s		17.6			15.5	24.0		12.0				
Green Ext Time (p_c), s		4.4			0.0	0.0		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					187.0							
HCM 6th LOS					F							



Timings  
3: Western Way & Harley Knox Bl.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↑↑↑	↗	↖	↑↑↑	↖	↗	↖	↗
Traffic Volume (vph)	35	1223	1	2	1935	3	0	15	0
Future Volume (vph)	35	1223	1	2	1935	3	0	15	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	NA
Protected Phases	5	2		1	6		8		4
Permitted Phases			2			8		4	
Detector Phase	5	2	2	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	21.8	21.8	9.6	21.8	32.6	32.6	32.6	32.6
Total Split (s)	18.0	71.4	71.4	9.6	63.0	39.0	39.0	39.0	39.0
Total Split (%)	15.0%	59.5%	59.5%	8.0%	52.5%	32.5%	32.5%	32.5%	32.5%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	7.3	53.3	53.3	5.4	48.1	13.4	13.4	13.4	13.4
Actuated g/C Ratio	0.09	0.67	0.67	0.07	0.61	0.17	0.17	0.17	0.17
v/c Ratio	0.30	0.42	0.00	0.02	0.71	0.02	0.01	0.07	0.40
Control Delay	47.6	7.3	0.0	46.5	14.3	33.3	0.0	34.3	10.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.6	7.3	0.0	46.5	14.3	33.3	0.0	34.3	10.2
LOS	D	A	A	D	B	C	A	C	B
Approach Delay		8.4			14.4		14.3		12.5
Approach LOS		A			B		B		B

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 79.3	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 12.1	Intersection LOS: B
Intersection Capacity Utilization 55.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 3: Western Way & Harley Knox Bl.






























HCM 6th Signalized Intersection Summary  
 3: Western Way & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  							
Traffic Volume (veh/h)	35	1223	1	2	1935	11	3	0	4	15	0	140
Future Volume (veh/h)	35	1223	1	2	1935	11	3	0	4	15	0	140
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1426	1737	1900	1900	1811	1515	1900	1900	1900	1767	1900	1811
Adj Flow Rate, veh/h	38	1329	1	2	2103	10	3	0	4	16	0	140
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	32	11	0	0	6	26	0	0	0	9	0	6
Cap, veh/h	51	3039	1032	5	3079	15	176	0	223	287	0	223
Arrive On Green	0.04	0.64	0.64	0.00	0.61	0.61	0.14	0.00	0.14	0.14	0.00	0.14
Sat Flow, veh/h	1358	4742	1610	1810	5079	24	1269	0	1610	1334	0	1610
Grp Volume(v), veh/h	38	1329	1	2	1365	748	3	0	4	16	0	140
Grp Sat Flow(s),veh/h/ln	1358	1581	1610	1810	1648	1807	1269	0	1610	1334	0	1610
Q Serve(g_s), s	1.9	9.6	0.0	0.1	19.2	19.2	0.2	0.0	0.1	0.7	0.0	5.7
Cycle Q Clear(g_c), s	1.9	9.6	0.0	0.1	19.2	19.2	5.8	0.0	0.1	0.9	0.0	5.7
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	51	3039	1032	5	1998	1095	176	0	223	287	0	223
V/C Ratio(X)	0.75	0.44	0.00	0.41	0.68	0.68	0.02	0.00	0.02	0.06	0.00	0.63
Avail Cap(c_a), veh/h	264	4514	1533	131	2736	1500	634	0	804	767	0	804
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.8	6.2	4.4	34.3	9.1	9.1	30.7	0.0	25.6	26.0	0.0	28.0
Incr Delay (d2), s/veh	7.8	0.1	0.0	18.7	0.4	0.8	0.0	0.0	0.0	0.1	0.0	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	2.1	0.0	0.1	4.7	5.3	0.0	0.0	0.1	0.2	0.0	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.7	6.3	4.4	53.0	9.5	9.9	30.8	0.0	25.7	26.1	0.0	30.9
LnGrp LOS	D	A	A	D	A	A	C	A	C	C	A	C
Approach Vol, veh/h		1368			2115			7				156
Approach Delay, s/veh		7.2			9.7			27.9				30.4
Approach LOS		A			A			C				C
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.8	50.0		14.2	7.2	47.6		14.2				
Change Period (Y+Rc), s	4.6	5.8		4.6	4.6	5.8		4.6				
Max Green Setting (Gmax), s	5.0	65.6		34.4	13.4	57.2		34.4				
Max Q Clear Time (g_c+I1), s	2.1	11.6		7.7	3.9	21.2		7.8				
Green Ext Time (p_c), s	0.0	12.3		0.9	0.0	20.6		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				9.7								
HCM 6th LOS				A								

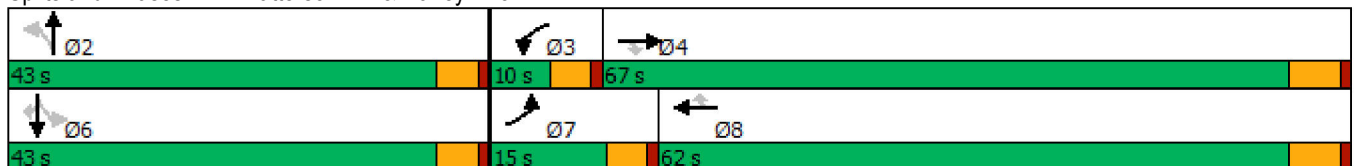
Timings  
4: Patterson Av. & Harley Knox Bl.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	23	1000	46	46	1800	19	118	4	52	4	29
Future Volume (vph)	23	1000	46	46	1800	19	118	4	52	4	29
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	7	4		3	8			2		6	
Permitted Phases			4			8	2		6		6
Detector Phase	7	4	4	3	8	8	2	2	6	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	9.6	31.8	31.8	33.7	33.7	40.7	40.7	40.7
Total Split (s)	15.0	67.0	67.0	10.0	62.0	62.0	43.0	43.0	43.0	43.0	43.0
Total Split (%)	12.5%	55.8%	55.8%	8.3%	51.7%	51.7%	35.8%	35.8%	35.8%	35.8%	35.8%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8		4.7		4.7	4.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	6.9	56.2	56.2	5.4	59.5	59.5		18.7		18.7	18.7
Actuated g/C Ratio	0.07	0.60	0.60	0.06	0.64	0.64		0.20		0.20	0.20
v/c Ratio	0.31	0.38	0.05	0.48	0.90	0.02		0.66		0.26	0.09
Control Delay	55.5	11.8	3.1	62.8	25.7	0.1		42.9		33.7	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	55.5	11.8	3.1	62.8	25.7	0.1		42.9		33.7	0.5
LOS	E	B	A	E	C	A		D		C	A
Approach Delay		12.4			26.3			42.9		22.3	
Approach LOS		B			C			D		C	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 93.6  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.90  
 Intersection Signal Delay: 22.4  
 Intersection LOS: C  
 Intersection Capacity Utilization 80.3%  
 ICU Level of Service D  
 Analysis Period (min) 15


























Splits and Phases: 4: Patterson Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
4: Patterson Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			 			 				
Traffic Volume (veh/h)	23	1000	46	46	1800	19	118	4	46	52	4	29
Future Volume (veh/h)	23	1000	46	46	1800	19	118	4	46	52	4	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	922	1752	1856	1900	1811	1574	1826	1900	1811	1781	1337	1544
Adj Flow Rate, veh/h	25	1087	50	50	1957	21	128	4	50	57	4	32
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	66	10	3	0	6	22	5	0	6	8	38	24
Cap, veh/h	23	2853	938	72	2100	797	214	17	62	253	14	256
Arrive On Green	0.03	0.60	0.60	0.04	0.61	0.61	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	878	4782	1572	1810	3441	1306	744	86	314	898	74	1309
Grp Volume(v), veh/h	25	1087	50	50	1957	21	182	0	0	61	0	32
Grp Sat Flow(s),veh/h/ln	878	1594	1572	1810	1721	1306	1145	0	0	972	0	1309
Q Serve(g_s), s	2.3	10.7	1.2	2.5	46.2	0.6	9.8	0.0	0.0	0.0	0.0	1.8
Cycle Q Clear(g_c), s	2.3	10.7	1.2	2.5	46.2	0.6	14.6	0.0	0.0	4.8	0.0	1.8
Prop In Lane	1.00		1.00	1.00		1.00	0.70		0.27	0.93		1.00
Lane Grp Cap(c), veh/h	23	2853	938	72	2100	797	292	0	0	268	0	256
V/C Ratio(X)	1.10	0.38	0.05	0.70	0.93	0.03	0.62	0.00	0.00	0.23	0.00	0.12
Avail Cap(c_a), veh/h	102	3255	1070	109	2151	817	627	0	0	494	0	558
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	43.8	9.5	7.6	42.6	15.8	6.9	36.4	0.0	0.0	31.0	0.0	29.8
Incr Delay (d2), s/veh	83.8	0.1	0.0	4.5	8.0	0.0	2.2	0.0	0.0	0.4	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	3.1	0.3	1.1	16.4	0.1	4.0	0.0	0.0	1.1	0.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	127.6	9.6	7.6	47.1	23.8	6.9	38.6	0.0	0.0	31.4	0.0	30.0
LnGrp LOS	F	A	A	D	C	A	D	A	A	C	A	C
Approach Vol, veh/h		1162			2028			182				93
Approach Delay, s/veh		12.0			24.2			38.6				30.9
Approach LOS		B			C			D				C
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		22.3	8.2	59.4		22.3	6.9	60.7				
Change Period (Y+Rc), s		* 4.7	4.6	5.8		* 4.7	4.6	5.8				
Max Green Setting (Gmax), s		* 38	5.4	61.2		* 38	10.4	56.2				
Max Q Clear Time (g_c+I1), s		16.6	4.5	12.7		6.8	4.3	48.2				
Green Ext Time (p_c), s		1.0	0.0	9.2		0.4	0.0	6.7				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				21.0								
HCM 6th LOS				C								
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings  
5: Heacock Street & Cactus Avenue

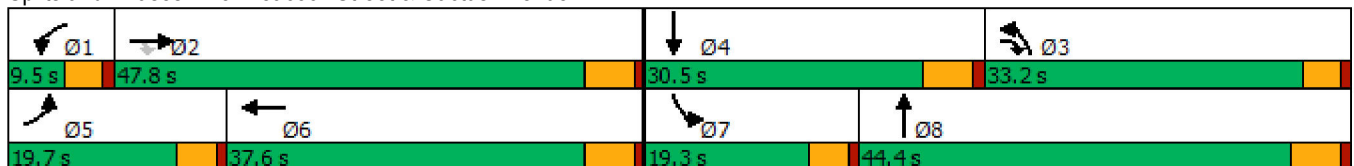


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↶	↶↶	↶	↶	↶↶	↶↶	↶↶	↶	↶↶
Traffic Volume (vph)	244	2146	1378	27	956	818	672	184	746
Future Volume (vph)	244	2146	1378	27	956	818	672	184	746
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	3	1	6	3	8	7	4
Permitted Phases			2						
Detector Phase	5	2	3	1	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.5	30.5	9.5	9.5	30.5	9.5	30.5	9.5	30.5
Total Split (s)	19.7	47.8	33.2	9.5	37.6	33.2	44.4	19.3	30.5
Total Split (%)	16.3%	39.5%	27.4%	7.9%	31.1%	27.4%	36.7%	16.0%	25.2%
Yellow Time (s)	3.5	4.5	3.5	3.5	4.5	3.5	4.5	3.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	4.5	4.5	5.5	4.5	5.5	4.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None
Act Effct Green (s)	15.2	46.1	75.8	5.0	32.1	28.7	39.5	14.2	25.0
Actuated g/C Ratio	0.13	0.38	0.63	0.04	0.27	0.24	0.33	0.12	0.21
v/c Ratio	1.07	1.56	1.25	0.38	1.13	1.00	0.63	0.86	1.10
Control Delay	127.4	284.4	139.2	71.2	110.7	77.7	36.9	86.2	106.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	127.4	284.4	139.2	71.2	110.7	77.7	36.9	86.2	106.0
LOS	F	F	F	E	F	E	D	F	F
Approach Delay		221.2			109.8		58.4		102.3
Approach LOS		F			F		E		F

Intersection Summary

Cycle Length: 121  
 Actuated Cycle Length: 121  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.56  
 Intersection Signal Delay: 154.6  
 Intersection LOS: F  
 Intersection Capacity Utilization 126.1%  
 ICU Level of Service H  
 Analysis Period (min) 15























Splits and Phases: 5: Heacock Street & Cactus Avenue



HCM 6th Signalized Intersection Summary  
5: Heacock Street & Cactus Avenue

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	244	2146	1378	27	956	132	818	672	61	184	746	61
Future Volume (veh/h)	244	2146	1378	27	956	132	818	672	61	184	746	61
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1811	1826	1885	1870	1811	1870	1870	1900	1856	1900
Adj Flow Rate, veh/h	254	2235	1435	28	996	138	852	700	64	192	777	64
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	1	6	5	1	2	6	2	2	0	3	0
Cap, veh/h	225	1367	916	44	853	118	812	1105	101	218	693	57
Arrive On Green	0.12	0.36	0.36	0.03	0.26	0.26	0.24	0.33	0.33	0.12	0.20	0.20
Sat Flow, veh/h	1810	3770	1531	1739	3241	449	3450	3371	308	1810	3382	278
Grp Volume(v), veh/h	254	2235	1435	28	579	555	852	388	376	192	426	415
Grp Sat Flow(s),veh/h/ln	1810	1885	1531	1739	1885	1804	1725	1870	1808	1810	1856	1804
Q Serve(g_s), s	15.2	44.2	27.8	1.9	32.1	32.1	28.7	21.5	21.5	12.7	25.0	25.0
Cycle Q Clear(g_c), s	15.2	44.2	27.8	1.9	32.1	32.1	28.7	21.5	21.5	12.7	25.0	25.0
Prop In Lane	1.00		1.00	1.00		0.25	1.00		0.17	1.00		0.15
Lane Grp Cap(c), veh/h	225	1367	916	44	496	475	812	613	593	218	380	370
V/C Ratio(X)	1.13	1.63	1.57	0.64	1.17	1.17	1.05	0.63	0.63	0.88	1.12	1.12
Avail Cap(c_a), veh/h	225	1367	916	71	496	475	812	613	593	220	380	370
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.4	38.9	11.8	58.9	44.9	45.0	46.7	34.8	34.8	52.8	48.5	48.5
Incr Delay (d2), s/veh	98.2	289.0	260.1	5.7	95.3	96.6	45.5	1.6	1.7	29.9	83.2	84.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.8	74.0	77.4	0.9	27.5	26.5	17.0	9.7	9.4	7.4	20.0	19.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	151.6	327.9	271.9	64.6	140.3	141.6	92.1	36.4	36.5	82.7	131.7	132.5
LnGrp LOS	F	F	F	E	F	F	F	D	D	F	F	F
Approach Vol, veh/h		3924			1162			1616			1033	
Approach Delay, s/veh		296.0			139.1			65.8			122.9	
Approach LOS		F			F			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.6	49.7	34.2	30.5	19.7	37.6	19.2	45.5				
Change Period (Y+Rc), s	4.5	5.5	5.5	* 5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	5.0	42.3	28.7	* 25	15.2	32.1	14.8	38.9				
Max Q Clear Time (g_c+I1), s	3.9	46.2	30.7	27.0	17.2	34.1	14.7	23.5				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4				

Intersection Summary

HCM 6th Ctrl Delay	201.2
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

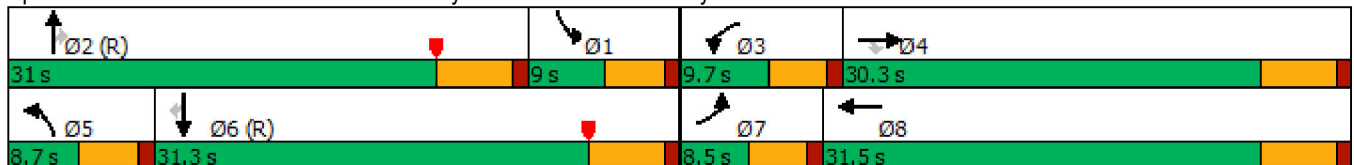
11/09/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	35	218	386	47	99	135	1045	134	362	1208	24	
Future Volume (vph)	35	218	386	47	99	135	1045	134	362	1208	24	
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	7	4		3	8	5	2		1	6		
Permitted Phases			4					2			6	
Detector Phase	7	4	4	3	8	5	2	2	1	6	6	
Switch Phase												
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	
Minimum Split (s)	8.5	23.5	23.5	8.5	31.5	8.5	30.5	30.5	8.5	23.5	23.5	
Total Split (s)	8.5	30.3	30.3	9.7	31.5	8.7	31.0	31.0	9.0	31.3	31.3	
Total Split (%)	10.6%	37.9%	37.9%	12.1%	39.4%	10.9%	38.8%	38.8%	11.3%	39.1%	39.1%	
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5	4.5	4.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	5.5	4.5	5.5	5.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max	
Act Effct Green (s)	4.0	15.8	15.8	5.1	16.5	12.5	38.4	38.4	4.5	30.4	30.4	
Actuated g/C Ratio	0.05	0.20	0.20	0.06	0.21	0.16	0.48	0.48	0.06	0.38	0.38	
v/c Ratio	0.40	0.64	0.75	0.42	0.34	0.49	0.67	0.15	3.85	0.97	0.03	
Control Delay	49.5	36.4	21.1	47.3	10.3	43.1	21.8	2.8	1321.3	47.5	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	49.5	36.4	21.1	47.3	10.3	43.1	21.8	2.8	1321.3	47.5	0.1	
LOS	D	D	C	D	B	D	C	A	F	D	A	
Approach Delay		27.9			15.4		22.1			335.8		
Approach LOS		C			B		C			F		

Intersection Summary

Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 110  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 3.85  
 Intersection Signal Delay: 151.0  
 Intersection LOS: F  
 Intersection Capacity Utilization 80.4%  
 ICU Level of Service D  
 Analysis Period (min) 15
























Splits and Phases: 6: Heacock Street & Meyer Drive/John F. Kennedy Drive



HCM 6th Signalized Intersection Summary  
 6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	218	386	47	99	194	135	1045	134	362	1208	24
Future Volume (veh/h)	35	218	386	47	99	194	135	1045	134	362	1208	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1900	1900	1885	1885	1900	1796	1900	1841	1796	1900
Adj Flow Rate, veh/h	38	237	420	51	108	211	147	1136	146	393	1313	26
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	1	0	0	1	1	0	7	0	4	7	0
Cap, veh/h	52	536	458	65	550	466	95	1145	513	173	1355	607
Arrive On Green	0.03	0.28	0.28	0.04	0.29	0.29	0.05	0.32	0.32	0.10	0.38	0.38
Sat Flow, veh/h	1810	1885	1610	1810	1885	1598	1810	3593	1610	1753	3593	1610
Grp Volume(v), veh/h	38	237	420	51	108	211	147	1136	146	393	1313	26
Grp Sat Flow(s),veh/h/ln	1810	1885	1610	1810	1885	1598	1810	1796	1610	1753	1796	1610
Q Serve(g_s), s	1.7	8.2	20.2	2.2	3.4	8.6	4.2	25.2	4.2	7.9	28.7	0.8
Cycle Q Clear(g_c), s	1.7	8.2	20.2	2.2	3.4	8.6	4.2	25.2	4.2	7.9	28.7	0.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	52	536	458	65	550	466	95	1145	513	173	1355	607
V/C Ratio(X)	0.74	0.44	0.92	0.78	0.20	0.45	1.55	0.99	0.28	2.28	0.97	0.04
Avail Cap(c_a), veh/h	90	584	499	118	613	519	95	1145	513	173	1355	607
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.59	0.59	0.59	0.09	0.09	0.09
Uniform Delay (d), s/veh	38.6	23.4	27.7	38.3	21.3	23.1	37.9	27.1	11.9	36.1	24.5	15.8
Incr Delay (d2), s/veh	7.4	0.2	20.0	7.5	0.1	0.3	274.7	18.6	0.8	576.7	3.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	3.5	9.6	1.1	1.4	3.0	9.0	12.4	1.9	30.7	11.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.9	23.6	47.8	45.8	21.3	23.4	312.6	45.8	12.7	612.8	27.5	15.8
LnGrp LOS	D	C	D	D	C	C	F	D	B	F	C	B
Approach Vol, veh/h		695			370			1429			1732	
Approach Delay, s/veh		39.4			25.9			69.8			160.1	
Approach LOS		D			C			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.4	31.0	7.4	28.3	8.7	35.7	6.8	28.8				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	4.5	* 26	5.2	24.8	4.2	25.8	4.0	26.0				
Max Q Clear Time (g_c+I1), s	9.9	27.2	4.2	22.2	6.2	30.7	3.7	10.6				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.5	0.0	0.0	0.0	1.0				

Intersection Summary













HCM 6th Ctrl Delay	98.0
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Timings  
7: Heacock Street & Gentian Avenue

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	19	156	1122	54	250	1418
Future Volume (vph)	19	156	1122	54	250	1418
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	27.6	27.6	27.2	27.2	9.6	16.2
Total Split (s)	31.0	31.0	62.0	62.0	27.0	89.0
Total Split (%)	25.8%	25.8%	51.7%	51.7%	22.5%	74.2%
Yellow Time (s)	3.6	3.6	5.2	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	6.2	6.2	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	12.4	12.4	38.7	38.7	17.8	61.3
Actuated g/C Ratio	0.15	0.15	0.46	0.46	0.21	0.72
v/c Ratio	0.08	0.40	0.79	0.07	0.70	0.62
Control Delay	37.0	9.4	24.3	10.7	44.6	7.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.0	9.4	24.3	10.7	44.6	7.4
LOS	D	A	C	B	D	A
Approach Delay	12.4		23.7			13.0
Approach LOS	B		C			B

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 85	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 17.1	Intersection LOS: B
Intersection Capacity Utilization 66.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 7: Heacock Street & Gentian Avenue

































HCM 6th Signalized Intersection Summary  
7: Heacock Street & Gentian Avenue

Gateway Aviation TA (JN:13445)

11/09/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	19	156	1122	54	250	1418
Future Volume (veh/h)	19	156	1122	54	250	1418
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1811	1900	1856	1826
Adj Flow Rate, veh/h	21	170	1220	59	272	1541
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	6	0	3	5
Cap, veh/h	250	222	1597	747	319	2461
Arrive On Green	0.14	0.14	0.46	0.46	0.18	0.71
Sat Flow, veh/h	1810	1610	3532	1610	1767	3561
Grp Volume(v), veh/h	21	170	1220	59	272	1541
Grp Sat Flow(s),veh/h/ln	1810	1610	1721	1610	1767	1735
Q Serve(g_s), s	0.7	7.2	20.8	1.4	10.5	16.4
Cycle Q Clear(g_c), s	0.7	7.2	20.8	1.4	10.5	16.4
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	250	222	1597	747	319	2461
V/C Ratio(X)	0.08	0.76	0.76	0.08	0.85	0.63
Avail Cap(c_a), veh/h	675	601	2715	1270	560	4061
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.6	29.4	15.7	10.5	28.1	5.4
Incr Delay (d2), s/veh	0.1	2.1	0.8	0.0	2.6	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.7	6.6	0.4	4.2	2.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	26.6	31.4	16.5	10.6	30.6	5.6
LnGrp LOS	C	C	B	B	C	A
Approach Vol, veh/h	191		1279			1813
Approach Delay, s/veh	30.9		16.3			9.4
Approach LOS	C		B			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	17.3	39.0			56.4	14.4
Change Period (Y+Rc), s	4.6	6.2			6.2	4.6
Max Green Setting (Gmax), s	22.4	55.8			82.8	26.4
Max Q Clear Time (g_c+1), s	12.5	22.8			18.4	9.2
Green Ext Time (p_c), s	0.3	10.0			16.4	0.3
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			13.3			
HCM 6th LOS			B			

Timings  
8: Heacock Street & Iris Avenue

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 		 		 	 
Traffic Volume (vph)	271	344	849	410	541	1076
Future Volume (vph)	271	344	849	410	541	1076
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	15.8	15.8	33.2	33.2	9.6	16.2
Total Split (s)	35.0	35.0	47.0	47.0	38.0	85.0
Total Split (%)	29.2%	29.2%	39.2%	39.2%	31.7%	70.8%
Yellow Time (s)	4.8	4.8	5.2	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	6.2	6.2	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	13.1	13.1	31.3	31.3	18.3	54.3
Actuated g/C Ratio	0.16	0.16	0.39	0.39	0.23	0.68
v/c Ratio	0.49	0.60	0.71	0.55	0.70	0.51
Control Delay	35.3	8.5	24.3	9.2	34.5	7.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.3	8.5	24.3	9.2	34.5	7.0
LOS	D	A	C	A	C	A
Approach Delay	20.3		19.4			16.2
Approach LOS	C		B			B

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 79.9	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 18.1	Intersection LOS: B
Intersection Capacity Utilization 61.1%	ICU Level of Service B
Analysis Period (min) 15	

















Splits and Phases: 8: Heacock Street & Iris Avenue



HCM 6th Signalized Intersection Summary  
8: Heacock Street & Iris Avenue

Gateway Aviation TA (JN:13445)

11/09/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 		 		 	 
Traffic Volume (veh/h)	271	344	849	410	541	1076
Future Volume (veh/h)	271	344	849	410	541	1076
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1781	1900	1885	1811
Adj Flow Rate, veh/h	295	374	923	446	588	1170
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	8	0	1	6
Cap, veh/h	924	424	1188	565	687	2066
Arrive On Green	0.26	0.26	0.35	0.35	0.20	0.60
Sat Flow, veh/h	3510	1610	3474	1610	3483	3532
Grp Volume(v), veh/h	295	374	923	446	588	1170
Grp Sat Flow(s),veh/h/ln	1755	1610	1692	1610	1742	1721
Q Serve(g_s), s	5.9	19.6	21.4	21.9	14.3	18.1
Cycle Q Clear(g_c), s	5.9	19.6	21.4	21.9	14.3	18.1
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	924	424	1188	565	687	2066
V/C Ratio(X)	0.32	0.88	0.78	0.79	0.86	0.57
Avail Cap(c_a), veh/h	1166	535	1571	747	1323	3084
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.1	31.1	25.5	25.6	34.1	10.6
Incr Delay (d2), s/veh	0.2	13.4	1.8	4.2	1.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	8.6	8.0	8.1	5.7	5.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	26.3	44.5	27.3	29.8	35.3	10.9
LnGrp LOS	C	D	C	C	D	B
Approach Vol, veh/h	669		1369			1758
Approach Delay, s/veh	36.5		28.1			19.1
Approach LOS	D		C			B
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	21.9	37.0			59.0	28.9
Change Period (Y+Rc), s	4.6	6.2			6.2	5.8
Max Green Setting (Gmax), s	33.4	40.8			78.8	29.2
Max Q Clear Time (g_c+I1), s	16.3	23.9			20.1	21.6
Green Ext Time (p_c), s	1.0	7.0			10.0	1.5
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			25.4			
HCM 6th LOS			C			

Timings  
9: Heacock Street & Krameria Avenue-North

	↙	↖	↑	↘	↓
Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations	↙	↖	↑↔	↘	↑↑
Traffic Volume (vph)	248	274	864	123	819
Future Volume (vph)	248	274	864	123	819
Turn Type	Prot	Perm	NA	Prot	NA
Protected Phases	8		2	1	6
Permitted Phases		8			
Detector Phase	8	8	2	1	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	29.1	29.1	29.2	9.6	16.2
Total Split (s)	35.0	35.0	61.0	24.0	85.0
Total Split (%)	29.2%	29.2%	50.8%	20.0%	70.8%
Yellow Time (s)	4.1	4.1	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	6.2	4.6	6.2
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	Min	Max	Min
Act Effct Green (s)	17.1	17.1	32.0	19.9	56.6
Actuated g/C Ratio	0.20	0.20	0.38	0.23	0.66
v/c Ratio	0.72	0.49	0.82	0.32	0.39
Control Delay	44.5	7.0	29.4	34.1	7.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	44.5	7.0	29.4	34.1	7.5
LOS	D	A	C	C	A
Approach Delay	24.8		29.4		10.9
Approach LOS	C		C		B

Intersection Summary














Cycle Length: 120	
Actuated Cycle Length: 85.3	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay: 21.3	Intersection LOS: C
Intersection Capacity Utilization 61.5%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 9: Heacock Street & Krameria Avenue-North



HCM 6th Signalized Intersection Summary  
 9: Heacock Street & Krameria Avenue-North

Gateway Aviation TA (JN:13445)  
 11/09/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			 			 
Traffic Volume (veh/h)	248	274	864	120	123	819
Future Volume (veh/h)	248	274	864	120	123	819
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1885	1841	1870	1900	1811	1841
Adj Flow Rate, veh/h	270	298	939	130	134	890
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	4	2	0	6	4
Cap, veh/h	394	342	1100	152	407	2249
Arrive On Green	0.22	0.22	0.35	0.35	0.24	0.64
Sat Flow, veh/h	1795	1560	3228	434	1725	3589
Grp Volume(v), veh/h	270	298	532	537	134	890
Grp Sat Flow(s),veh/h/ln	1795	1560	1777	1792	1725	1749
Q Serve(g_s), s	11.3	15.1	22.8	22.8	5.3	10.0
Cycle Q Clear(g_c), s	11.3	15.1	22.8	22.8	5.3	10.0
Prop In Lane	1.00	1.00		0.24	1.00	
Lane Grp Cap(c), veh/h	394	342	623	629	407	2249
V/C Ratio(X)	0.69	0.87	0.85	0.85	0.33	0.40
Avail Cap(c_a), veh/h	654	568	1186	1195	407	3355
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.5	30.9	24.7	24.7	26.0	7.0
Incr Delay (d2), s/veh	0.8	4.2	1.3	1.3	2.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	6.0	8.6	8.7	2.2	2.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	30.3	35.1	26.0	26.0	28.1	7.1
LnGrp LOS	C	D	C	C	C	A
Approach Vol, veh/h	568		1069			1024
Approach Delay, s/veh	32.8		26.0			9.8
Approach LOS	C		C			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	24.0	35.0			59.0	23.1
Change Period (Y+Rc), s	4.6	6.2			6.2	5.1
Max Green Setting (Gmax), s	19.4	54.8			78.8	29.9
Max Q Clear Time (g_c+11), s	7.3	24.8			12.0	17.1
Green Ext Time (p_c), s	0.1	4.0			3.9	0.9
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			21.2			
HCM 6th LOS			C			

Intersection												
Int Delay, s/veh	0											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕			↕		↕	↕	
Traffic Vol, veh/h	0	0	0	0	0	0	0	913	0	0	1134	0
Future Vol, veh/h	0	0	0	0	0	0	0	913	0	0	1134	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	2	0	0	3	0
Mvmt Flow	0	0	0	0	0	0	0	992	0	0	1233	0

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1609	2225	496
Stage 1	992	992	-
Stage 2	617	1233	-
Critical Hdwy	6.8	6.5	6.9
Critical Hdwy Stg 1	5.8	5.5	-
Critical Hdwy Stg 2	5.8	5.5	-
Follow-up Hdwy	3.5	4	3.3
Pot Cap-1 Maneuver	97	44	525
Stage 1	324	326	-
Stage 2	506	251	-
Platoon blocked, %			
Mov Cap-1 Maneuver	97	0	525
Mov Cap-2 Maneuver	222	0	-
Stage 1	324	0	-
Stage 2	506	0	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	705
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	0	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0

Intersection						
Int Delay, s/veh	1.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↑↑	↗	↘	↑↑
Traffic Vol, veh/h	61	57	1059	20	18	1542
Future Vol, veh/h	61	57	1059	20	18	1542
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	0	140	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	10	6	14	8	9
Mvmt Flow	66	62	1151	22	20	1676

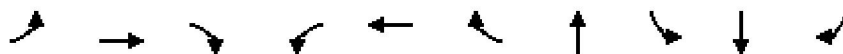
Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	2029	576	0	0	1173
Stage 1	1151	-	-	-	-
Stage 2	878	-	-	-	-
Critical Hdwy	6.84	7.1	-	-	4.26
Critical Hdwy Stg 1	5.84	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-
Follow-up Hdwy	3.52	3.4	-	-	2.28
Pot Cap-1 Maneuver	~ 50	441	-	-	558
Stage 1	263	-	-	-	-
Stage 2	367	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	~ 48	441	-	-	558
Mov Cap-2 Maneuver	159	-	-	-	-
Stage 1	263	-	-	-	-
Stage 2	354	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	29.2	0	0.1
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	159	441	558
HCM Lane V/C Ratio	-	-	0.417	0.14	0.035
HCM Control Delay (s)	-	-	42.9	14.5	11.7
HCM Lane LOS	-	-	E	B	B
HCM 95th %tile Q(veh)	-	-	1.9	0.5	0.1

Notes  
 ~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Timings  
12: Heacock Street & San Michele Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBL	SBT	SBR	Ø5
Lane Configurations	↖	↑	↗	↖	↑	↗	↕	↖	↑	↗	
Traffic Volume (vph)	59	348	7	31	102	590	1147	334	1696	36	
Future Volume (vph)	59	348	7	31	102	590	1147	334	1696	36	
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	NA	Prot	NA	Perm	
Protected Phases	7	4		3	8	1	2	1	6		5
Permitted Phases			4			8				6	
Detector Phase	7	4	4	3	8	1	2	1	6	6	
Switch Phase											
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0
Minimum Split (s)	9.5	30.5	30.5	8.5	30.5	8.5	34.5	8.5	34.5	34.5	8.5
Total Split (s)	12.0	37.4	37.4	9.6	35.0	36.0	37.0	36.0	64.5	64.5	8.5
Total Split (%)	10.0%	31.2%	31.2%	8.0%	29.2%	30.0%	30.8%	30.0%	53.8%	53.8%	7%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5	5.5	
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	None	Max	Max	None
Act Effct Green (s)	12.8	24.5	24.5	5.1	14.5	48.6	32.2	28.4	65.2	65.2	
Actuated g/C Ratio	0.12	0.23	0.23	0.05	0.14	0.46	0.30	0.27	0.61	0.61	
v/c Ratio	0.28	0.86	0.01	0.38	0.43	0.70	1.19	0.72	1.61	0.03	
Control Delay	47.7	60.0	0.0	66.4	49.9	24.7	128.8	46.2	300.4	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	47.7	60.0	0.0	66.4	49.9	24.7	128.8	46.2	300.4	0.1	
LOS	D	E	A	E	D	C	F	D	F	A	
Approach Delay		57.2			30.1		128.8		254.1		
Approach LOS		E			C		F		F		

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 106.1  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.61  
 Intersection Signal Delay: 164.7  
 Intersection LOS: F  
 Intersection Capacity Utilization 131.0%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 12: Heacock Street & San Michele Road





























HCM 6th Signalized Intersection Summary  
 12: Heacock Street & San Michele Road

Gateway Aviation TA (JN:13445)

04/19/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	348	7	31	102	590	0	1147	45	334	1696	36
Future Volume (veh/h)	59	348	7	31	102	590	0	1147	45	334	1696	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1870	1900	1900	1900	1885	1870	1900
Adj Flow Rate, veh/h	64	378	8	34	111	641	0	1247	49	363	1843	39
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	2	0	0	0	1	2	0
Cap, veh/h	84	428	353	44	386	673	2	1123	44	398	1111	957
Arrive On Green	0.05	0.23	0.23	0.02	0.20	0.20	0.00	0.32	0.32	0.22	0.59	0.59
Sat Flow, veh/h	1810	1900	1569	1810	1900	1585	1810	3541	139	1795	1870	1610
Grp Volume(v), veh/h	64	378	8	34	111	641	0	635	661	363	1843	39
Grp Sat Flow(s),veh/h/ln	1810	1900	1569	1810	1900	1585	1810	1805	1875	1795	1870	1610
Q Serve(g_s), s	3.5	19.1	0.4	1.9	4.9	16.8	0.0	31.5	31.5	19.6	59.0	0.6
Cycle Q Clear(g_c), s	3.5	19.1	0.4	1.9	4.9	16.8	0.0	31.5	31.5	19.6	59.0	0.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.07	1.00		1.00
Lane Grp Cap(c), veh/h	84	428	353	44	386	673	2	573	595	398	1111	957
V/C Ratio(X)	0.76	0.88	0.02	0.77	0.29	0.95	0.00	1.11	1.11	0.91	1.66	0.04
Avail Cap(c_a), veh/h	137	610	504	93	564	822	73	573	595	570	1111	957
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.8	37.2	25.8	48.1	33.5	27.6	0.0	33.9	33.9	37.7	20.1	3.4
Incr Delay (d2), s/veh	5.2	8.3	0.0	9.8	0.2	17.5	0.0	71.2	71.2	12.0	300.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	9.8	0.1	0.9	2.2	6.8	0.0	23.9	24.9	9.4	113.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.0	45.5	25.8	57.9	33.6	45.1	0.0	105.1	105.1	49.7	320.4	3.5
LnGrp LOS	D	D	C	E	C	D	A	F	F	D	F	A
Approach Vol, veh/h		450			786			1296			2245	
Approach Delay, s/veh		46.0			44.0			105.1			271.1	
Approach LOS		D			D			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	27.5	37.0	6.9	27.9	0.0	64.5	9.1	25.7				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	31.5	* 32	5.1	31.9	4.0	59.0	7.5	29.5				
Max Q Clear Time (g_c+I1), s	21.6	33.5	3.9	21.1	0.0	61.0	5.5	18.8				
Green Ext Time (p_c), s	0.4	0.0	0.0	1.2	0.0	0.0	0.0	1.3				

Intersection Summary

HCM 6th Ctrl Delay	167.5
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection								
Intersection Delay, s/veh	286.2							
Intersection LOS	F							
Approach	EB	WB	NB		SB			
Entry Lanes	3	2	2		2			
Conflicting Circle Lanes	2	2	2		2			
Adj Approach Flow, veh/h	0	1404	924		1374			
Demand Flow Rate, veh/h	0	1483	945		1374			
Vehicles Circulating, veh/h	1023	945	877		1721			
Vehicles Exiting, veh/h	2072	877	1412		707			
Ped Vol Crossing Leg, #/h	0	0	0		0			
Ped Cap Adj	1.000	1.000	1.000		1.000			
Approach Delay, s/veh	0.0	143.2	24.1		608.5			
Approach LOS	-	F	C		F			
Lane	Left		Right		Left		Right	
Designated Moves	LT		TR		LT		TR	
Assumed Moves	LT		TR		LT		TR	
RT Channelized								
Lane Util	0.470	0.530	0.470	0.530	0.470	0.530		
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535		
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328		
Entry Flow, veh/h	697	786	444	501	646	728		
Cap Entry Lane, veh/h	566	636	602	674	277	329		
Entry HV Adj Factor	0.946	0.946	0.978	0.977	1.000	1.000		
Flow Entry, veh/h	660	744	434	490	646	728		
Cap Entry, veh/h	536	602	589	659	277	329		
V/C Ratio	1.232	1.236	0.737	0.744	2.331	2.214		
Control Delay, s/veh	144.1	142.5	25.0	23.3	638.7	581.6		
LOS	F	F	C	C	F	F		
95th %tile Queue, veh	25	28	6	7	51	55		

Timings  
14: Indian Street & San Michele Road

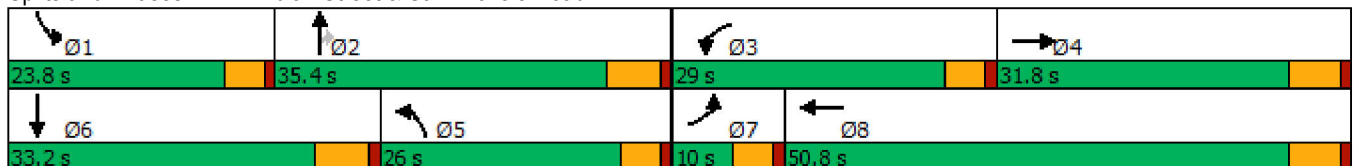


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↘	↗	↗	↗	↗	↘	↗
Traffic Volume (vph)	28	171	165	225	447	122	121	88	194
Future Volume (vph)	28	171	165	225	447	122	121	88	194
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8	5	2		1	6
Permitted Phases							2		
Detector Phase	7	4	3	8	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	31.8	9.6	31.8	9.6	32.8	32.8	9.6	32.8
Total Split (s)	10.0	31.8	29.0	50.8	26.0	35.4	35.4	23.8	33.2
Total Split (%)	8.3%	26.5%	24.2%	42.3%	21.7%	29.5%	29.5%	19.8%	27.7%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	5.5	15.3	12.8	29.8	15.5	22.3	22.3	9.1	13.2
Actuated g/C Ratio	0.07	0.19	0.16	0.38	0.20	0.28	0.28	0.12	0.17
v/c Ratio	0.24	0.79	0.60	0.24	0.70	0.26	0.21	0.45	0.40
Control Delay	48.0	18.7	42.4	16.8	37.7	28.3	4.7	44.3	32.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.0	18.7	42.4	16.8	37.7	28.3	4.7	44.3	32.0
LOS	D	B	D	B	D	C	A	D	C
Approach Delay		19.8		26.0		30.3			35.5
Approach LOS		B		C		C			D

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 78.9  
 Natural Cycle: 95  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.79  
 Intersection Signal Delay: 26.7  
 Intersection LOS: C  
 Intersection Capacity Utilization 84.4%  
 ICU Level of Service E  
 Analysis Period (min) 15























Splits and Phases: 14: Indian Street & San Michele Road



HCM 6th Signalized Intersection Summary  
 14: Indian Street & San Michele Road

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	171	511	165	225	70	447	122	121	88	194	27
Future Volume (veh/h)	28	171	511	165	225	70	447	122	121	88	194	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		1.00	1.00		0.68
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1796	1856	1826	1900	1796	1796	1856	1870	1841	1752
Adj Flow Rate, veh/h	30	186	555	179	245	76	486	133	132	96	211	29
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	5	7	3	5	0	7	7	3	2	4	10
Cap, veh/h	48	433	377	211	912	275	556	653	571	122	774	101
Arrive On Green	0.03	0.25	0.25	0.12	0.34	0.34	0.16	0.36	0.36	0.07	0.26	0.26
Sat Flow, veh/h	1739	1735	1510	1767	2675	806	3421	1796	1571	1781	3002	390
Grp Volume(v), veh/h	30	186	555	179	165	156	486	133	132	96	125	115
Grp Sat Flow(s),veh/h/ln	1739	1735	1510	1767	1826	1655	1711	1796	1571	1781	1841	1552
Q Serve(g_s), s	1.8	9.4	26.0	10.3	6.8	7.2	14.5	5.3	6.1	5.5	5.6	6.2
Cycle Q Clear(g_c), s	1.8	9.4	26.0	10.3	6.8	7.2	14.5	5.3	6.1	5.5	5.6	6.2
Prop In Lane	1.00		1.00	1.00		0.49	1.00		1.00	1.00		0.25
Lane Grp Cap(c), veh/h	48	433	377	211	623	564	556	653	571	122	474	400
V/C Ratio(X)	0.62	0.43	1.47	0.85	0.26	0.28	0.87	0.20	0.23	0.79	0.26	0.29
Avail Cap(c_a), veh/h	90	433	377	414	788	714	702	653	571	328	484	408
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.1	32.9	39.1	45.0	24.9	25.0	42.6	22.8	23.1	47.8	30.8	31.0
Incr Delay (d2), s/veh	4.7	0.3	227.1	3.6	0.1	0.1	8.5	0.1	0.1	4.2	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	3.8	32.9	4.6	2.8	2.7	6.5	2.1	2.2	2.5	2.4	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.9	33.1	266.2	48.6	25.0	25.1	51.1	22.9	23.1	52.0	30.9	31.2
LnGrp LOS	D	C	F	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		771			500			751			336	
Approach Delay, s/veh		201.8			33.5			41.2			37.0	
Approach LOS		F			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.7	43.7	17.0	31.8	22.7	32.7	7.5	41.3				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	5.8	* 5.8	4.6	5.8				
Max Green Setting (Gmax), s	19.2	29.6	24.4	26.0	21.4	* 27	5.4	45.0				
Max Q Clear Time (g_c+I1), s	7.5	8.1	12.3	28.0	16.5	8.2	3.8	9.2				
Green Ext Time (p_c), s	0.1	0.5	0.2	0.0	0.5	0.7	0.0	1.1				

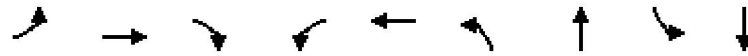
Intersection Summary

HCM 6th Ctrl Delay	91.5
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
15: Indian Street & Nandina Avenue

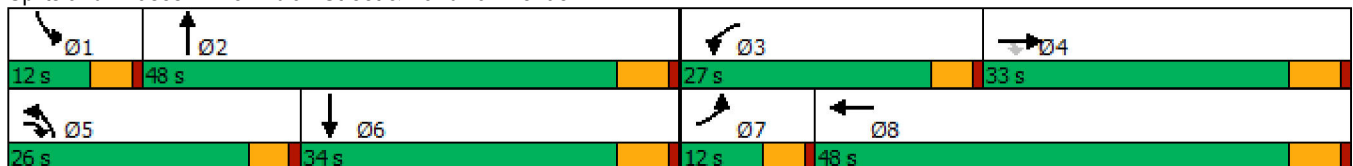


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↑	↗	↖	↗	↖	↕	↖	↕
Traffic Volume (vph)	48	112	269	186	46	74	585	20	814
Future Volume (vph)	48	112	269	186	46	74	585	20	814
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	5	3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	5	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	29.8	9.6	9.6	29.8	9.6	26.8	9.6	26.8
Total Split (s)	12.0	33.0	26.0	27.0	48.0	26.0	48.0	12.0	34.0
Total Split (%)	10.0%	27.5%	21.7%	22.5%	40.0%	21.7%	40.0%	10.0%	28.3%
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	6.5	13.5	28.8	15.1	26.8	9.4	38.8	5.8	28.8
Actuated g/C Ratio	0.07	0.15	0.33	0.17	0.30	0.11	0.44	0.07	0.33
v/c Ratio	0.37	0.47	0.46	0.73	0.22	0.51	0.44	0.19	0.76
Control Delay	50.8	41.6	16.8	51.8	14.8	51.4	20.6	47.6	33.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.8	41.6	16.8	51.8	14.8	51.4	20.6	47.6	33.6
LOS	D	D	B	D	B	D	C	D	C
Approach Delay		27.1			38.6		23.7		34.0
Approach LOS		C			D		C		C

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 88	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 30.0	Intersection LOS: C
Intersection Capacity Utilization 63.1%	ICU Level of Service B
Analysis Period (min) 15	























Splits and Phases: 15: Indian Street & Nandina Avenue



HCM 6th Signalized Intersection Summary  
 15: Indian Street & Nandina Avenue

Gateway Aviation TA (JN:13445)

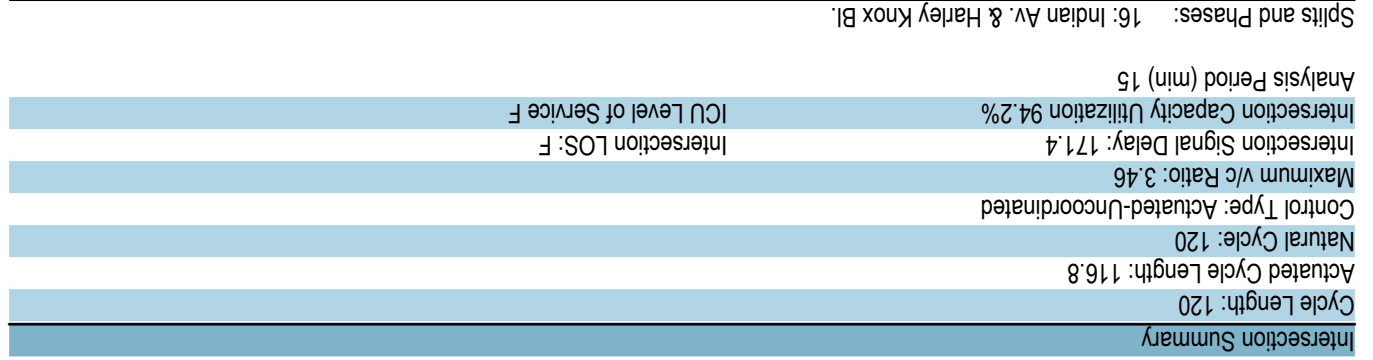
11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	112	269	186	46	57	74	585	75	20	814	36
Future Volume (veh/h)	48	112	269	186	46	57	74	585	75	20	814	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1722	1737	1633	1500	1870	1485	1870	1841	1796	1870	1841
Adj Flow Rate, veh/h	52	122	292	202	50	62	80	636	82	22	885	39
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	12	11	18	27	2	28	2	4	7	2	4
Cap, veh/h	78	375	421	237	199	247	96	1110	143	41	1060	47
Arrive On Green	0.04	0.22	0.22	0.15	0.33	0.33	0.07	0.34	0.34	0.02	0.30	0.30
Sat Flow, veh/h	1810	1722	1472	1555	609	755	1414	3247	418	1711	3556	157
Grp Volume(v), veh/h	52	122	292	202	0	112	80	366	352	22	466	458
Grp Sat Flow(s),veh/h/ln	1810	1722	1472	1555	0	1364	1414	1870	1795	1711	1870	1842
Q Serve(g_s), s	2.2	4.7	13.9	10.0	0.0	4.7	4.4	12.6	12.7	1.0	18.3	18.3
Cycle Q Clear(g_c), s	2.2	4.7	13.9	10.0	0.0	4.7	4.4	12.6	12.7	1.0	18.3	18.3
Prop In Lane	1.00		1.00	1.00		0.55	1.00		0.23	1.00		0.09
Lane Grp Cap(c), veh/h	78	375	421	237	0	446	96	639	613	41	557	549
V/C Ratio(X)	0.67	0.33	0.69	0.85	0.00	0.25	0.83	0.57	0.57	0.53	0.84	0.84
Avail Cap(c_a), veh/h	170	594	608	442	0	730	384	1001	961	161	669	659
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.2	26.0	25.1	32.5	0.0	19.4	36.3	21.2	21.3	38.0	25.9	25.9
Incr Delay (d2), s/veh	3.6	0.5	2.1	3.3	0.0	0.3	6.9	0.8	0.9	3.9	7.7	7.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	1.8	4.6	3.7	0.0	1.4	1.6	5.0	4.8	0.4	8.4	8.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.8	26.5	27.2	35.9	0.0	19.7	43.2	22.1	22.1	41.9	33.6	33.7
LnGrp LOS	D	C	C	D	A	B	D	C	C	D	C	C
Approach Vol, veh/h		466			314			798			946	
Approach Delay, s/veh		28.5			30.1			24.2			33.9	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.5	32.7	16.6	23.0	10.0	29.3	8.0	31.6				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	7.4	42.2	22.4	27.2	21.4	28.2	7.4	42.2				
Max Q Clear Time (g_c+I1), s	3.0	14.7	12.0	15.9	6.4	20.3	4.2	6.7				
Green Ext Time (p_c), s	0.0	4.1	0.2	1.2	0.1	3.2	0.0	0.6				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				29.4								
HCM 6th LOS				C								



Lane Group	EBL	EBT	EBR	WBL	WBT	WBL	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	326	768	108	242	730	118	295	246	326	559	559
Future Volume (vph)	326	768	108	242	730	118	295	246	326	559	559
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	NA
Protected Phases	5	2	2	1	6	3	8	8	7	4	4
Permitted Phases	2	2	2	1	6	3	8	8	7	4	4
Detector Phase	5	2	2	1	6	3	8	8	7	4	4
Switch Phase	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	35.8	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2	40.2
Total Split (s)	36.3	59.2	59.2	9.6	32.5	10.8	37.4	37.4	13.8	40.4	40.4
Total Split (%)	30.3%	49.3%	49.3%	8.0%	27.1%	9.0%	31.2%	31.2%	11.5%	33.7%	33.7%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.4	4.4	3.6	5.2	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	5.4	5.4	4.6	6.2	6.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effort Green (s)	29.1	50.1	50.1	5.0	26.0	6.2	32.1	32.1	9.2	34.3	34.3
Actuated g/C Ratio	0.25	0.43	0.43	0.04	0.22	0.05	0.27	0.27	0.08	0.29	0.29
v/c Ratio	0.92	0.39	0.17	3.46	0.89	0.78	0.37	0.49	2.49	1.19	1.19
Control Delay	73.6	23.3	4.1	1152.5	53.3	85.6	36.5	17.5	715.4	124.4	124.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	73.6	23.3	4.1	1152.5	53.3	85.6	36.5	17.5	715.4	124.4	124.4
LOS	E	C	A	F	D	F	D	B	F	F	F
Approach Delay	35.2	286.4	38.2	249.7	35.2	286.4	38.2	249.7	35.2	286.4	38.2
Approach LOS	D	F	D	F	D	F	D	B	F	F	F

Intersection Summary											
Cycle Length:	120										
Actuated Cycle Length:	116.8										
Natural Cycle:	120										
Control Type:	Actuated-Uncoordinated										
Maximum v/c Ratio:	3.46										
Intersection Signal Delay:	171.4										
Intersection LOS:	F										
ICU Level of Service:	F										
Intersection Capacity Utilization:	94.2%										
Analysis Period (min):	15										



































HCM 6th Signalized Intersection Summary  
 16: Indian Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/09/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 			 	
Traffic Volume (veh/h)	326	768	108	242	730	169	118	295	246	326	559	651
Future Volume (veh/h)	326	768	108	242	730	169	118	295	246	326	559	651
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1648	1841	1707	1885	1811	1885	1707	1678	1870	1900	1856	1826
Adj Flow Rate, veh/h	354	835	108	263	793	164	128	321	260	354	608	659
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	17	4	13	1	6	1	13	15	2	0	3	5
Cap, veh/h	378	2098	604	79	907	186	171	870	427	146	527	470
Arrive On Green	0.24	0.42	0.42	0.04	0.22	0.22	0.05	0.27	0.27	0.08	0.30	0.30
Sat Flow, veh/h	1570	5025	1447	1795	4112	844	3155	3188	1565	1810	1763	1572
Grp Volume(v), veh/h	354	835	108	263	634	323	128	321	260	354	608	659
Grp Sat Flow(s),veh/h/ln	1570	1675	1447	1795	1648	1659	1577	1594	1565	1810	1763	1572
Q Serve(g_s), s	25.3	13.3	5.4	5.0	21.2	21.5	4.6	9.3	16.6	9.2	34.2	34.2
Cycle Q Clear(g_c), s	25.3	13.3	5.4	5.0	21.2	21.5	4.6	9.3	16.6	9.2	34.2	34.2
Prop In Lane	1.00		1.00	1.00		0.51	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	378	2098	604	79	727	366	171	870	427	146	527	470
V/C Ratio(X)	0.94	0.40	0.18	3.35	0.87	0.88	0.75	0.37	0.61	2.43	1.15	1.40
Avail Cap(c_a), veh/h	435	2347	676	79	770	387	171	892	438	146	527	470
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.6	23.3	21.0	54.7	43.0	43.1	53.3	33.6	36.3	52.6	40.1	40.1
Incr Delay (d2), s/veh	24.8	0.1	0.1	1089.2	10.4	19.7	14.9	0.3	2.4	664.5	88.9	193.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.9	4.9	1.8	26.0	9.4	10.5	2.1	3.5	6.4	30.9	27.1	37.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.4	23.4	21.1	1143.9	53.4	62.8	68.2	33.9	38.6	717.1	128.9	233.1
LnGrp LOS	E	C	C	F	D	E	E	C	D	F	F	F
Approach Vol, veh/h		1297			1220			709			1621	
Approach Delay, s/veh		35.2			291.0			41.8			299.7	
Approach LOS		D			F			D			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.6	53.5	10.8	40.4	32.1	31.0	13.8	37.4				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	5.0	53.4	6.2	34.2	31.7	26.7	9.2	* 32				
Max Q Clear Time (g_c+I1), s	7.0	15.3	6.6	36.2	27.3	23.5	11.2	18.6				
Green Ext Time (p_c), s	0.0	6.3	0.0	0.0	0.2	1.7	0.0	2.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			189.0									
HCM 6th LOS			F									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												



**APPENDIX 7.5:**

**HORIZON YEAR (2045) WITH PROJECT (NON-PEAK) WITH HEACOCK STREET  
EXTENSION CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**

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Timings

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

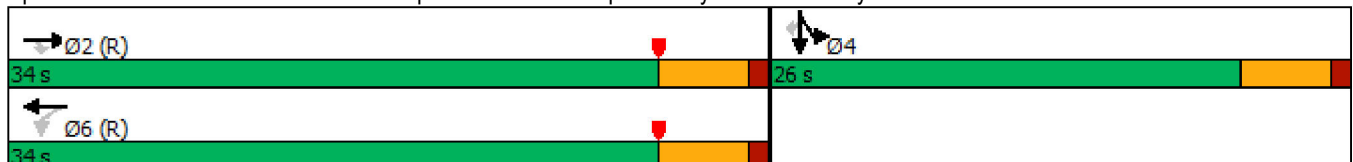


Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↑
Traffic Volume (vph)	1157	28	212	666	1	315
Future Volume (vph)	1157	28	212	666	1	315
Turn Type	NA	Perm	Perm	NA	NA	Perm
Protected Phases	2			6	4	
Permitted Phases		2	6			4
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	25.0	25.0	10.0	10.0
Total Split (s)	34.0	34.0	34.0	34.0	26.0	26.0
Total Split (%)	56.7%	56.7%	56.7%	56.7%	43.3%	43.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	29.0	29.0	29.0	29.0	21.0	21.0
Actuated g/C Ratio	0.48	0.48	0.48	0.48	0.35	0.35
v/c Ratio	0.76	0.04	2.21	0.42	1.94	0.55
Control Delay	16.3	3.1	589.5	18.4	450.2	12.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.3	3.1	589.5	18.4	450.2	12.4
LOS	B	A	F	B	F	B
Approach Delay	16.0			156.1	345.4	
Approach LOS	B			F	F	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 2.21  
 Intersection Signal Delay: 180.6  
 Intersection LOS: F  
 Intersection Capacity Utilization 184.3%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.















HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

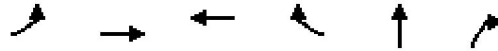
1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↖	↑↑						↖	↗
Traffic Volume (veh/h)	0	1157	28	212	666	0	0	0	0	999	1	315
Future Volume (veh/h)	0	1157	28	212	666	0	0	0	0	999	1	315
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1826	1826	1589	1870	0				1781	1900	1781
Adj Flow Rate, veh/h	0	1258	30	230	724	0				1086	1	282
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	5	5	21	2	0				8	0	8
Cap, veh/h	0	1677	748	189	1718	0				633	1	528
Arrive On Green	0.00	0.48	0.48	0.97	0.97	0.00				0.35	0.35	0.35
Sat Flow, veh/h	0	3561	1547	364	3647	0				1808	2	1510
Grp Volume(v), veh/h	0	1258	30	230	724	0				1087	0	282
Grp Sat Flow(s),veh/h/ln	0	1735	1547	364	1777	0				1810	0	1510
Q Serve(g_s), s	0.0	17.6	0.6	11.4	0.7	0.0				21.0	0.0	9.0
Cycle Q Clear(g_c), s	0.0	17.6	0.6	29.0	0.7	0.0				21.0	0.0	9.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1677	748	189	1718	0				633	0	528
V/C Ratio(X)	0.00	0.75	0.04	1.22	0.42	0.00				1.72	0.00	0.53
Avail Cap(c_a), veh/h	0	1677	748	189	1718	0				633	0	528
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.75	0.75	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	12.6	8.2	13.4	0.5	0.0				19.5	0.0	15.6
Incr Delay (d2), s/veh	0.0	3.1	0.1	128.2	0.6	0.0				329.0	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.7	0.2	8.5	0.3	0.0				65.0	0.0	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	15.7	8.3	141.6	1.1	0.0				348.5	0.0	16.6
LnGrp LOS	A	B	A	F	A	A				F	A	B
Approach Vol, veh/h		1288			954						1369	
Approach Delay, s/veh		15.5			35.0						280.1	
Approach LOS		B			C						F	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		34.0		26.0		34.0						
Change Period (Y+Rc), s		5.0		5.0		5.0						
Max Green Setting (Gmax), s		29.0		21.0		29.0						
Max Q Clear Time (g_c+I1), s		19.6		23.0		31.0						
Green Ext Time (p_c), s		4.1		0.0		0.0						
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				121.0								
HCM 6th LOS				F								

Timings

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

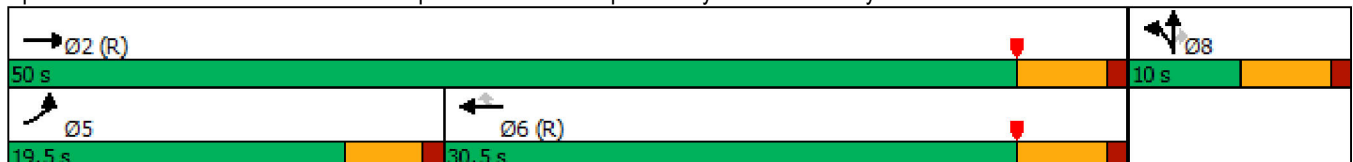


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	808	1348	820	1142	7	301
Future Volume (vph)	808	1348	820	1142	7	301
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	26.0	24.0	24.0	10.0	10.0
Total Split (s)	19.5	50.0	30.5	30.5	10.0	10.0
Total Split (%)	32.5%	83.3%	50.8%	50.8%	16.7%	16.7%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max
Act Effct Green (s)	15.0	45.0	25.5	25.5	5.0	5.0
Actuated g/C Ratio	0.25	0.75	0.42	0.42	0.08	0.08
v/c Ratio	2.02	0.60	0.62	1.64	0.48	1.39
Control Delay	483.1	3.5	15.8	311.3	37.9	218.0
Queue Delay	0.0	0.9	0.0	0.0	0.0	0.0
Total Delay	483.1	4.4	15.8	311.3	37.9	218.0
LOS	F	A	B	F	D	F
Approach Delay		183.8	187.8		185.9	
Approach LOS		F	F		F	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 29 (48%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 2.02  
 Intersection Signal Delay: 185.7  
 Intersection LOS: F  
 Intersection Capacity Utilization 184.3%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

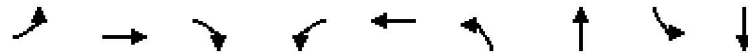
2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

11/10/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗			↗	↘		↗	↘			
Traffic Volume (veh/h)	808	1348	0	0	820	1142	58	7	301	0	0	0
Future Volume (veh/h)	808	1348	0	0	820	1142	58	7	301	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1841	1737	0	0	1796	1752	1826	1900	1826			
Adj Flow Rate, veh/h	878	1465	0	0	891	909	63	8	262			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	4	11	0	0	7	10	5	0	5			
Cap, veh/h	438	2475	0	0	1450	630	135	17	129			
Arrive On Green	0.50	1.00	0.00	0.00	0.43	0.43	0.08	0.08	0.08			
Sat Flow, veh/h	1753	3387	0	0	3503	1484	1614	205	1547			
Grp Volume(v), veh/h	878	1465	0	0	891	909	71	0	262			
Grp Sat Flow(s),veh/h/ln	1753	1650	0	0	1706	1484	1819	0	1547			
Q Serve(g_s), s	15.0	0.0	0.0	0.0	12.2	25.5	2.2	0.0	5.0			
Cycle Q Clear(g_c), s	15.0	0.0	0.0	0.0	12.2	25.5	2.2	0.0	5.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.89		1.00			
Lane Grp Cap(c), veh/h	438	2475	0	0	1450	630	152	0	129			
V/C Ratio(X)	2.00	0.59	0.00	0.00	0.61	1.44	0.47	0.00	2.03			
Avail Cap(c_a), veh/h	438	2475	0	0	1450	630	152	0	129			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.57	0.57	0.00	0.00	0.80	0.80	1.00	0.00	1.00			
Uniform Delay (d), s/veh	15.0	0.0	0.0	0.0	13.4	17.3	26.2	0.0	27.5			
Incr Delay (d2), s/veh	456.1	0.6	0.0	0.0	1.6	206.0	10.0	0.0	490.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	58.7	0.2	0.0	0.0	3.9	42.7	1.3	0.0	19.2			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	471.1	0.6	0.0	0.0	15.0	223.2	36.3	0.0	517.9			
LnGrp LOS	F	A	A	A	B	F	D	A	F			
Approach Vol, veh/h		2343			1800			333				
Approach Delay, s/veh		176.9			120.1			415.2				
Approach LOS		F			F			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		50.0			19.5	30.5		10.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		45.0			15.0	25.5		5.0				
Max Q Clear Time (g_c+I1), s		2.0			17.0	27.5		7.0				
Green Ext Time (p_c), s		8.6			0.0	0.0		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					171.8							
HCM 6th LOS					F							

Timings  
3: Western Way & Harley Knox Bl.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↑↑↑	↗	↖	↑↑↑	↖	↗	↖	↗
Traffic Volume (vph)	105	1449	10	13	1562	1	0	7	0
Future Volume (vph)	105	1449	10	13	1562	1	0	7	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	NA
Protected Phases	5	2		1	6		8		4
Permitted Phases			2			8		4	
Detector Phase	5	2	2	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	21.8	21.8	9.6	21.8	32.6	32.6	32.6	32.6
Total Split (s)	22.0	75.4	75.4	9.6	63.0	35.0	35.0	35.0	35.0
Total Split (%)	18.3%	62.8%	62.8%	8.0%	52.5%	29.2%	29.2%	29.2%	29.2%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	11.6	57.9	57.9	6.4	45.4	15.0	15.0	15.0	15.0
Actuated g/C Ratio	0.16	0.82	0.82	0.09	0.64	0.21	0.21	0.21	0.21
v/c Ratio	0.43	0.41	0.01	0.09	0.57	0.00	0.00	0.04	0.13
Control Delay	41.1	6.0	0.0	46.5	14.1	33.0	0.0	33.6	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.1	6.0	0.0	46.5	14.1	33.0	0.0	33.6	0.7
LOS	D	A	A	D	B	C	A	C	A
Approach Delay		8.3			14.4		11.0		5.0
Approach LOS		A			B		B		A

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 71	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.57	
Intersection Signal Delay: 11.3	Intersection LOS: B
Intersection Capacity Utilization 58.3%	ICU Level of Service B
Analysis Period (min) 15	


























Splits and Phases: 3: Western Way & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 3: Western Way & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  							
Traffic Volume (veh/h)	105	1449	10	13	1562	42	1	0	2	7	0	49
Future Volume (veh/h)	105	1449	10	13	1562	42	1	0	2	7	0	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1722	1737	1900	1900	1767	1767	1900	1900	1900	1322	1900	1900
Adj Flow Rate, veh/h	113	1558	11	14	1680	43	1	0	2	8	0	41
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	12	11	0	0	9	9	0	0	0	39	0	0
Cap, veh/h	142	2949	1001	32	2672	68	232	0	162	224	0	163
Arrive On Green	0.09	0.62	0.62	0.02	0.55	0.55	0.10	0.00	0.10	0.10	0.00	0.10
Sat Flow, veh/h	1640	4742	1610	1810	4836	124	1388	0	1607	997	0	1610
Grp Volume(v), veh/h	113	1558	11	14	1117	606	1	0	2	8	0	41
Grp Sat Flow(s),veh/h/ln	1640	1581	1610	1810	1608	1744	1388	0	1607	997	0	1610
Q Serve(g_s), s	3.9	10.7	0.2	0.4	13.8	13.8	0.0	0.0	0.1	0.4	0.0	1.4
Cycle Q Clear(g_c), s	3.9	10.7	0.2	0.4	13.8	13.8	1.4	0.0	0.1	0.5	0.0	1.4
Prop In Lane	1.00		1.00	1.00		0.07	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	142	2949	1001	32	1776	964	232	0	162	224	0	163
V/C Ratio(X)	0.79	0.53	0.01	0.44	0.63	0.63	0.00	0.00	0.01	0.04	0.00	0.25
Avail Cap(c_a), veh/h	494	5711	1939	157	3182	1726	822	0	845	648	0	847
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.9	6.2	4.2	28.1	8.9	8.9	24.6	0.0	23.4	23.6	0.0	24.0
Incr Delay (d2), s/veh	3.7	0.1	0.0	3.6	0.4	0.7	0.0	0.0	0.0	0.1	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	2.0	0.0	0.2	3.2	3.5	0.0	0.0	0.0	0.1	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.6	6.3	4.2	31.7	9.2	9.5	24.6	0.0	23.4	23.7	0.0	24.8
LnGrp LOS	C	A	A	C	A	A	C	A	C	C	A	C
Approach Vol, veh/h		1682			1737			3				49
Approach Delay, s/veh		7.9			9.5			23.8				24.6
Approach LOS		A			A			C				C
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.6	41.7		10.4	9.6	37.7		10.4				
Change Period (Y+Rc), s	4.6	5.8		4.6	4.6	5.8		4.6				
Max Green Setting (Gmax), s	5.0	69.6		30.4	17.4	57.2		30.4				
Max Q Clear Time (g_c+I1), s	2.4	12.7		3.4	5.9	15.8		3.4				
Green Ext Time (p_c), s	0.0	16.2		0.2	0.1	16.2		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			8.9									
HCM 6th LOS			A									



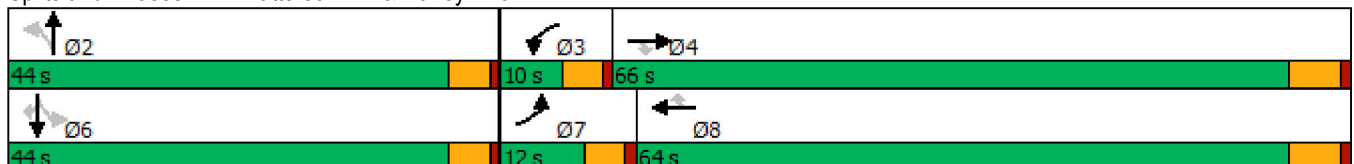
Timings  
4: Patterson Av. & Harley Knox Bl.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	24	1312	83	49	1546	18	81	8	16	4	19
Future Volume (vph)	24	1312	83	49	1546	18	81	8	16	4	19
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	7	4		3	8			2		6	
Permitted Phases			4			8	2		6		6
Detector Phase	7	4	4	3	8	8	2	2	6	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	9.6	31.8	31.8	33.7	33.7	40.7	40.7	40.7
Total Split (s)	12.0	66.0	66.0	10.0	64.0	64.0	44.0	44.0	44.0	44.0	44.0
Total Split (%)	10.0%	55.0%	55.0%	8.3%	53.3%	53.3%	36.7%	36.7%	36.7%	36.7%	36.7%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8		4.7		4.7	4.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	6.2	57.8	57.8	5.5	61.8	61.8		17.3		17.3	17.3
Actuated g/C Ratio	0.07	0.61	0.61	0.06	0.66	0.66		0.18		0.18	0.18
v/c Ratio	0.29	0.48	0.09	0.61	0.76	0.03		0.61		0.13	0.08
Control Delay	54.4	12.2	2.9	75.8	17.7	0.1		38.8		32.5	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	54.4	12.2	2.9	75.8	17.7	0.1		38.8		32.5	0.6
LOS	D	B	A	E	B	A		D		C	A
Approach Delay		12.4			19.3			38.8		16.6	
Approach LOS		B			B			D		B	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 94  
 Natural Cycle: 105  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.76  
 Intersection Signal Delay: 17.1  
 Intersection LOS: B  
 Intersection Capacity Utilization 72.1%  
 ICU Level of Service C  
 Analysis Period (min) 15


























Splits and Phases: 4: Patterson Av. & Harley Knox Bl.



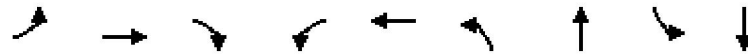
HCM 6th Signalized Intersection Summary  
 4: Patterson Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			 			 				
Traffic Volume (veh/h)	24	1312	83	49	1546	18	81	8	53	16	4	19
Future Volume (veh/h)	24	1312	83	49	1546	18	81	8	53	16	4	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1396	1781	1870	1589	1781	981	1381	1381	1381	774	774	1159
Adj Flow Rate, veh/h	26	1426	83	53	1680	12	88	9	56	17	4	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	34	8	2	21	8	62	35	35	35	76	76	50
Cap, veh/h	37	2846	928	66	2035	500	165	25	68	157	22	174
Arrive On Green	0.03	0.59	0.59	0.04	0.60	0.60	0.18	0.18	0.18	0.18	0.18	0.18
Sat Flow, veh/h	1330	4863	1585	1513	3385	831	520	141	382	416	124	982
Grp Volume(v), veh/h	26	1426	83	53	1680	12	153	0	0	21	0	5
Grp Sat Flow(s),veh/h/ln	1330	1621	1585	1513	1692	831	1042	0	0	541	0	982
Q Serve(g_s), s	1.5	13.4	1.8	2.7	30.6	0.5	8.7	0.0	0.0	0.0	0.0	0.3
Cycle Q Clear(g_c), s	1.5	13.4	1.8	2.7	30.6	0.5	11.2	0.0	0.0	2.5	0.0	0.3
Prop In Lane	1.00		1.00	1.00		1.00	0.58		0.37	0.81		1.00
Lane Grp Cap(c), veh/h	37	2846	928	66	2035	500	257	0	0	179	0	174
V/C Ratio(X)	0.71	0.50	0.09	0.80	0.83	0.02	0.59	0.00	0.00	0.12	0.00	0.03
Avail Cap(c_a), veh/h	126	3758	1225	105	2529	621	618	0	0	371	0	496
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.6	9.5	7.1	36.9	12.3	6.3	31.2	0.0	0.0	27.3	0.0	26.5
Incr Delay (d2), s/veh	8.9	0.1	0.0	8.9	1.9	0.0	2.2	0.0	0.0	0.3	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	3.7	0.5	1.1	9.0	0.1	2.8	0.0	0.0	0.3	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.5	9.6	7.1	45.8	14.2	6.3	33.4	0.0	0.0	27.6	0.0	26.6
LnGrp LOS	D	A	A	D	B	A	C	A	A	C	A	C
Approach Vol, veh/h		1535			1745			153				26
Approach Delay, s/veh		10.1			15.1			33.4				27.4
Approach LOS		B			B			C				C
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		18.5	8.0	51.4		18.5	6.8	52.6				
Change Period (Y+Rc), s		* 4.7	4.6	5.8		* 4.7	4.6	5.8				
Max Green Setting (Gmax), s		* 39	5.4	60.2		* 39	7.4	58.2				
Max Q Clear Time (g_c+I1), s		13.2	4.7	15.4		4.5	3.5	32.6				
Green Ext Time (p_c), s		0.9	0.0	13.7		0.1	0.0	14.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				13.8								
HCM 6th LOS				B								
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings  
5: Heacock Street & Cactus Avenue

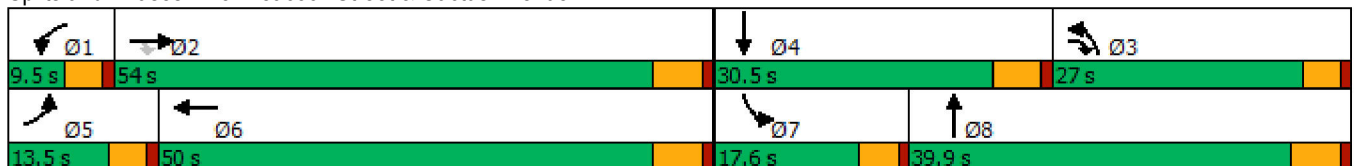


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↙	↑↑	↗	↙	↑↑	↗	↑↑	↙	↑↑
Traffic Volume (vph)	176	1067	778	81	2068	862	721	139	376
Future Volume (vph)	176	1067	778	81	2068	862	721	139	376
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	3	1	6	3	8	7	4
Permitted Phases			2						
Detector Phase	5	2	3	1	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.5	30.5	9.5	9.5	30.5	9.5	30.5	9.5	30.5
Total Split (s)	13.5	54.0	27.0	9.5	50.0	27.0	39.9	17.6	30.5
Total Split (%)	11.2%	44.6%	22.3%	7.9%	41.3%	22.3%	33.0%	14.5%	25.2%
Yellow Time (s)	3.5	4.5	3.5	3.5	4.5	3.5	4.5	3.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	4.5	4.5	5.5	4.5	5.5	4.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None
Act Effct Green (s)	9.0	48.6	72.6	5.0	44.6	23.0	30.5	11.8	19.3
Actuated g/C Ratio	0.08	0.42	0.63	0.04	0.38	0.20	0.26	0.10	0.17
v/c Ratio	1.27	0.71	0.72	1.02	1.60	1.26	0.81	0.77	0.79
Control Delay	207.3	31.5	13.3	163.2	301.6	167.6	47.6	76.8	53.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	207.3	31.5	13.3	163.2	301.6	167.6	47.6	76.8	53.2
LOS	F	C	B	F	F	F	D	E	D
Approach Delay		39.8			296.8		111.7		58.5
Approach LOS		D			F		F		E

Intersection Summary

Cycle Length: 121  
 Actuated Cycle Length: 115.9  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.60  
 Intersection Signal Delay: 149.6  
 Intersection LOS: F  
 Intersection Capacity Utilization 127.0%  
 ICU Level of Service H  
 Analysis Period (min) 15























Splits and Phases: 5: Heacock Street & Cactus Avenue



HCM 6th Signalized Intersection Summary  
5: Heacock Street & Cactus Avenue

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	176	1067	778	81	2068	159	862	721	30	139	376	105
Future Volume (veh/h)	176	1067	778	81	2068	159	862	721	30	139	376	105
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1752	1900	1885	1885	1811	1841	1841	1870	1841	1841
Adj Flow Rate, veh/h	183	1111	810	84	2154	166	898	751	31	145	392	109
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	10	0	1	1	6	4	4	2	4	4
Cap, veh/h	138	1562	907	78	1325	101	668	950	39	172	459	126
Arrive On Green	0.08	0.42	0.42	0.04	0.38	0.38	0.19	0.27	0.27	0.10	0.17	0.17
Sat Flow, veh/h	1781	3741	1485	1810	3460	263	3450	3510	145	1781	2780	764
Grp Volume(v), veh/h	183	1111	810	84	1160	1160	898	394	388	145	258	243
Grp Sat Flow(s),veh/h/ln	1781	1870	1485	1810	1885	1838	1725	1841	1815	1781	1841	1703
Q Serve(g_s), s	9.0	28.6	18.5	5.0	44.5	44.5	22.5	23.1	23.1	9.3	15.8	16.1
Cycle Q Clear(g_c), s	9.0	28.6	18.5	5.0	44.5	44.5	22.5	23.1	23.1	9.3	15.8	16.1
Prop In Lane	1.00		1.00	1.00		0.14	1.00		0.08	1.00		0.45
Lane Grp Cap(c), veh/h	138	1562	907	78	722	704	668	498	491	172	304	281
V/C Ratio(X)	1.33	0.71	0.89	1.08	1.61	1.65	1.34	0.79	0.79	0.84	0.85	0.86
Avail Cap(c_a), veh/h	138	1562	907	78	722	704	668	545	537	201	396	366
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.6	28.0	7.7	55.6	35.8	35.8	46.8	39.3	39.3	51.6	47.1	47.2
Incr Delay (d2), s/veh	188.2	1.3	10.8	125.1	279.4	297.9	164.8	6.2	6.3	21.1	10.4	12.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.1	12.1	8.6	4.9	75.2	76.9	24.6	10.9	10.7	5.0	7.9	7.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	241.8	29.4	18.5	180.7	315.2	333.8	211.6	45.5	45.6	72.7	57.5	60.0
LnGrp LOS	F	C	B	F	F	F	F	D	D	E	E	E
Approach Vol, veh/h		2104			2404			1680			646	
Approach Delay, s/veh		43.7			319.5			134.3			61.8	
Approach LOS		D			F			F			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.5	54.0	28.0	24.7	13.5	50.0	15.7	37.0				
Change Period (Y+Rc), s	4.5	5.5	5.5	* 5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	5.0	48.5	22.5	* 25	9.0	44.5	13.1	34.4				
Max Q Clear Time (g_c+I1), s	7.0	30.6	24.5	18.1	11.0	46.5	11.3	25.1				
Green Ext Time (p_c), s	0.0	6.5	0.0	1.0	0.0	0.0	0.0	2.0				

Intersection Summary

HCM 6th Ctrl Delay	164.7
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

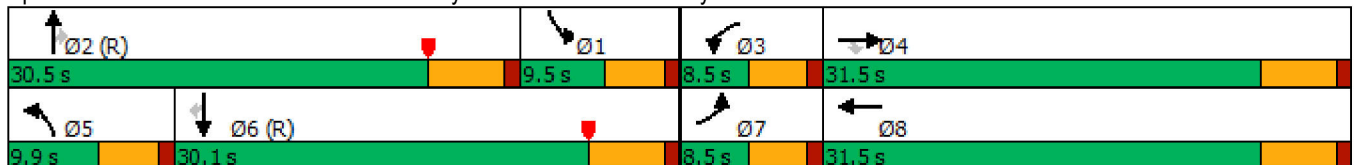
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Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	41	45	155	36	238	37	1051	64	127	837	22	
Future Volume (vph)	41	45	155	36	238	37	1051	64	127	837	22	
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	7	4		3	8	5	2		1	6		
Permitted Phases			4					2			6	
Detector Phase	7	4	4	3	8	5	2	2	1	6	6	
Switch Phase												
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	
Minimum Split (s)	8.5	23.5	23.5	8.5	31.5	8.5	30.5	30.5	8.5	23.5	23.5	
Total Split (s)	8.5	31.5	31.5	8.5	31.5	9.9	30.5	30.5	9.5	30.1	30.1	
Total Split (%)	10.6%	39.4%	39.4%	10.6%	39.4%	12.4%	38.1%	38.1%	11.9%	37.6%	37.6%	
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5	4.5	4.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	5.5	4.5	5.5	5.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max	
Act Effct Green (s)	4.0	13.0	13.0	4.0	13.0	5.7	41.4	41.4	5.0	44.4	44.4	
Actuated g/C Ratio	0.05	0.16	0.16	0.05	0.16	0.07	0.52	0.52	0.06	0.56	0.56	
v/c Ratio	0.54	0.17	0.33	0.44	0.63	0.31	0.60	0.07	1.15	0.45	0.02	
Control Delay	63.9	26.8	2.7	53.0	20.3	41.9	18.7	0.2	167.3	15.8	0.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	63.9	26.8	2.7	53.0	20.3	41.9	18.7	0.2	167.3	15.8	0.0	
LOS	E	C	A	D	C	D	B	A	F	B	A	
Approach Delay		17.7			22.7		18.4			34.9		
Approach LOS		B			C		B			C		

Intersection Summary

Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.15  
 Intersection Signal Delay: 24.7  
 Intersection LOS: C  
 Intersection Capacity Utilization 71.5%  
 ICU Level of Service C  
 Analysis Period (min) 15
























Splits and Phases: 6: Heacock Street & Meyer Drive/John F. Kennedy Drive



HCM 6th Signalized Intersection Summary  
 6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	45	155	36	238	230	37	1051	64	127	837	22
Future Volume (veh/h)	41	45	155	36	238	230	37	1051	64	127	837	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.95	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1604	1767	1841	1781	1841	1841	1781	1796	1767	1856	1767	1618
Adj Flow Rate, veh/h	43	47	125	38	248	204	39	1095	57	132	872	13
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	20	9	4	8	4	4	8	7	9	3	9	19
Cap, veh/h	50	325	287	48	342	269	49	1123	443	376	1797	689
Arrive On Green	0.03	0.18	0.18	0.03	0.18	0.18	0.03	0.31	0.31	0.21	0.51	0.51
Sat Flow, veh/h	1527	1767	1560	1697	1901	1496	1697	3593	1417	1767	3533	1354
Grp Volume(v), veh/h	43	47	125	38	240	212	39	1095	57	132	872	13
Grp Sat Flow(s),veh/h/ln	1527	1767	1560	1697	1841	1556	1697	1796	1417	1767	1767	1354
Q Serve(g_s), s	2.2	1.8	5.7	1.8	9.8	10.4	1.8	24.1	1.8	5.1	12.9	0.4
Cycle Q Clear(g_c), s	2.2	1.8	5.7	1.8	9.8	10.4	1.8	24.1	1.8	5.1	12.9	0.4
Prop In Lane	1.00		1.00	1.00		0.96	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	50	325	287	48	331	280	49	1123	443	376	1797	689
V/C Ratio(X)	0.86	0.14	0.44	0.79	0.72	0.76	0.79	0.98	0.13	0.35	0.49	0.02
Avail Cap(c_a), veh/h	76	574	507	85	598	506	115	1123	443	376	1797	689
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.73	0.73	0.73	0.56	0.56	0.56
Uniform Delay (d), s/veh	38.5	27.4	29.0	38.6	30.9	31.2	38.6	27.2	11.9	26.8	12.8	9.8
Incr Delay (d2), s/veh	30.0	0.1	0.4	9.9	1.1	1.6	7.6	17.8	0.4	0.1	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.7	2.0	0.8	4.1	3.7	0.8	11.8	0.7	2.0	4.3	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.5	27.4	29.3	48.5	32.1	32.7	46.2	45.0	12.3	26.9	13.4	9.8
LnGrp LOS	E	C	C	D	C	C	D	D	B	C	B	A
Approach Vol, veh/h		215			490			1191			1017	
Approach Delay, s/veh		36.8			33.6			43.5			15.1	
Approach LOS		D			C			D			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	22.5	30.5	6.8	20.2	6.8	46.2	7.1	19.9				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	5.0	* 25	4.0	26.0	5.4	24.6	4.0	26.0				
Max Q Clear Time (g_c+I1), s	7.1	26.1	3.8	7.7	3.8	14.9	4.2	12.4				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.3	0.0	2.7	0.0	1.4				

Intersection Summary

HCM 6th Ctrl Delay	31.4
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
7: Heacock Street & Gentian Avenue

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	33	83	966	10	172	918
Future Volume (vph)	33	83	966	10	172	918
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	27.6	27.6	27.2	27.2	9.6	16.2
Total Split (s)	28.0	28.0	65.0	65.0	27.0	92.0
Total Split (%)	23.3%	23.3%	54.2%	54.2%	22.5%	76.7%
Yellow Time (s)	3.6	3.6	5.2	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	6.2	6.2	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	12.8	12.8	30.6	30.6	12.1	50.0
Actuated g/C Ratio	0.19	0.19	0.45	0.45	0.18	0.74
v/c Ratio	0.10	0.21	0.67	0.01	0.54	0.39
Control Delay	29.4	9.1	19.0	11.5	36.2	5.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.4	9.1	19.0	11.5	36.2	5.6
LOS	C	A	B	B	D	A
Approach Delay	14.9		18.9			10.4
Approach LOS	B		B			B

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 67.5	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 14.4	Intersection LOS: B
Intersection Capacity Utilization 57.4%	ICU Level of Service B
Analysis Period (min) 15	













Splits and Phases: 7: Heacock Street & Gentian Avenue





HCM 6th Signalized Intersection Summary  
7: Heacock Street & Gentian Avenue

Gateway Aviation TA (JN:13445)  
11/10/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	33	83	966	10	172	918
Future Volume (veh/h)	33	83	966	10	172	918
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1870	1781	1900	1870	1767
Adj Flow Rate, veh/h	35	87	1017	11	181	966
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	2	8	0	2	9
Cap, veh/h	282	247	1452	691	231	2162
Arrive On Green	0.16	0.16	0.43	0.43	0.13	0.64
Sat Flow, veh/h	1810	1585	3474	1610	1781	3445
Grp Volume(v), veh/h	35	87	1017	11	181	966
Grp Sat Flow(s),veh/h/ln	1810	1585	1692	1610	1781	1678
Q Serve(g_s), s	0.9	2.6	13.2	0.2	5.3	7.8
Cycle Q Clear(g_c), s	0.9	2.6	13.2	0.2	5.3	7.8
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	282	247	1452	691	231	2162
V/C Ratio(X)	0.12	0.35	0.70	0.02	0.78	0.45
Avail Cap(c_a), veh/h	785	688	3690	1756	740	5340
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.6	20.3	12.6	8.8	22.7	4.8
Incr Delay (d2), s/veh	0.1	0.3	0.6	0.0	2.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.9	3.6	0.1	2.0	1.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	19.7	20.7	13.2	8.9	24.9	4.9
LnGrp LOS	B	C	B	A	C	A
Approach Vol, veh/h	122		1028			1147
Approach Delay, s/veh	20.4		13.1			8.1
Approach LOS	C		B			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	11.6	29.3			40.9	13.0
Change Period (Y+Rc), s	4.6	6.2			6.2	4.6
Max Green Setting (Gmax), s	22.4	58.8			85.8	23.4
Max Q Clear Time (g_c+1), s	7.3	15.2			9.8	4.6
Green Ext Time (p_c), s	0.2	7.9			7.5	0.1
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			11.0			
HCM 6th LOS			B			



Timings  
8: Heacock Street & Iris Avenue

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	391	484	542	250	328	668
Future Volume (vph)	391	484	542	250	328	668
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	15.8	15.8	33.2	33.2	9.6	16.2
Total Split (s)	48.0	48.0	46.0	46.0	26.0	72.0
Total Split (%)	40.0%	40.0%	38.3%	38.3%	21.7%	60.0%
Yellow Time (s)	4.8	4.8	5.2	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	6.2	6.2	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	15.2	15.2	19.5	19.5	11.5	35.9
Actuated g/C Ratio	0.24	0.24	0.31	0.31	0.18	0.57
v/c Ratio	0.49	0.67	0.59	0.40	0.54	0.40
Control Delay	24.0	9.4	22.1	4.7	28.6	8.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.0	9.4	22.1	4.7	28.6	8.6
LOS	C	A	C	A	C	A
Approach Delay	15.9		16.6			15.2
Approach LOS	B		B			B

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 63.5	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 15.8	Intersection LOS: B
Intersection Capacity Utilization 55.0%	ICU Level of Service A
Analysis Period (min) 15	

















Splits and Phases: 8: Heacock Street & Iris Avenue



HCM 6th Signalized Intersection Summary  
8: Heacock Street & Iris Avenue

Gateway Aviation TA (JN:13445)

11/10/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 		 		 	 
Traffic Volume (veh/h)	391	484	542	250	328	668
Future Volume (veh/h)	391	484	542	250	328	668
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1885	1885	1722	1885	1870	1737
Adj Flow Rate, veh/h	425	526	589	272	357	726
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	12	1	2	11
Cap, veh/h	1320	606	837	409	465	1499
Arrive On Green	0.38	0.38	0.26	0.26	0.13	0.45
Sat Flow, veh/h	3483	1598	3358	1598	3456	3387
Grp Volume(v), veh/h	425	526	589	272	357	726
Grp Sat Flow(s),veh/h/ln	1742	1598	1636	1598	1728	1650
Q Serve(g_s), s	6.2	21.9	11.8	11.0	7.2	11.1
Cycle Q Clear(g_c), s	6.2	21.9	11.8	11.0	7.2	11.1
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	1320	606	837	409	465	1499
V/C Ratio(X)	0.32	0.87	0.70	0.67	0.77	0.48
Avail Cap(c_a), veh/h	2042	937	1809	883	1027	3017
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.8	20.7	24.3	24.0	30.1	13.7
Incr Delay (d2), s/veh	0.1	5.6	1.1	1.9	1.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	7.9	4.1	3.9	2.8	3.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	15.9	26.3	25.4	25.9	31.1	14.0
LnGrp LOS	B	C	C	C	C	B
Approach Vol, veh/h	951		861			1083
Approach Delay, s/veh	21.7		25.6			19.6
Approach LOS	C		C			B
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	14.3	24.6			38.9	33.1
Change Period (Y+Rc), s	4.6	6.2			6.2	5.8
Max Green Setting (Gmax), s	21.4	39.8			65.8	42.2
Max Q Clear Time (g_c+1), s	9.2	13.8			13.1	23.9
Green Ext Time (p_c), s	0.5	4.7			5.1	3.3
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			22.1			
HCM 6th LOS			C			

Timings  
9: Heacock Street & Krameria Avenue-North

	↙	↖	↑	↘	↓
Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations	↙	↖	↑↓	↘	↑↑
Traffic Volume (vph)	114	136	549	237	730
Future Volume (vph)	114	136	549	237	730
Turn Type	Prot	Perm	NA	Prot	NA
Protected Phases	8		2	1	6
Permitted Phases		8			
Detector Phase	8	8	2	1	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	29.1	29.1	29.2	9.6	16.2
Total Split (s)	39.0	39.0	56.0	25.0	81.0
Total Split (%)	32.5%	32.5%	46.7%	20.8%	67.5%
Yellow Time (s)	4.1	4.1	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	6.2	4.6	6.2
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	Min	Max	Min
Act Effct Green (s)	12.5	12.5	21.8	20.8	47.3
Actuated g/C Ratio	0.18	0.18	0.31	0.29	0.66
v/c Ratio	0.38	0.33	0.79	0.49	0.34
Control Delay	30.7	7.3	27.0	27.5	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	30.7	7.3	27.0	27.5	6.2
LOS	C	A	C	C	A
Approach Delay	18.0		27.0		11.4
Approach LOS	B		C		B

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 71.4	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 18.3	Intersection LOS: B
Intersection Capacity Utilization 57.0%	ICU Level of Service B
Analysis Period (min) 15	













Splits and Phases: 9: Heacock Street & Krameria Avenue-North



HCM 6th Signalized Intersection Summary  
 9: Heacock Street & Krameria Avenue-North

Gateway Aviation TA (JN:13445)

11/10/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	114	136	549	222	237	730
Future Volume (veh/h)	114	136	549	222	237	730
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1856	1870	1841	1841	1826	1841
Adj Flow Rate, veh/h	124	148	597	241	258	793
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	2	4	4	5	4
Cap, veh/h	265	237	737	297	535	2378
Arrive On Green	0.15	0.15	0.30	0.30	0.31	0.68
Sat Flow, veh/h	1767	1585	2524	981	1739	3589
Grp Volume(v), veh/h	124	148	429	409	258	793
Grp Sat Flow(s),veh/h/ln	1767	1585	1749	1664	1739	1749
Q Serve(g_s), s	4.3	5.8	15.0	15.1	8.0	6.2
Cycle Q Clear(g_c), s	4.3	5.8	15.0	15.1	8.0	6.2
Prop In Lane	1.00	1.00		0.59	1.00	
Lane Grp Cap(c), veh/h	265	237	530	504	535	2378
V/C Ratio(X)	0.47	0.62	0.81	0.81	0.48	0.33
Avail Cap(c_a), veh/h	903	810	1313	1249	535	3943
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.8	26.4	21.3	21.4	18.7	4.4
Incr Delay (d2), s/veh	0.5	1.0	1.1	1.2	3.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.1	5.3	5.1	3.2	1.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	26.3	27.5	22.5	22.6	21.8	4.4
LnGrp LOS	C	C	C	C	C	A
Approach Vol, veh/h	272		838			1051
Approach Delay, s/veh	26.9		22.5			8.7
Approach LOS	C		C			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	25.0	26.3			51.3	15.0
Change Period (Y+Rc), s	4.6	6.2			6.2	5.1
Max Green Setting (Gmax), s	20.4	49.8			74.8	33.9
Max Q Clear Time (g_c+I1), s	10.0	17.1			8.2	7.8
Green Ext Time (p_c), s	0.3	3.0			3.3	0.4
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			16.3			
HCM 6th LOS			B			

Timings  
10: Heacock Street & Driveway 1



Lane Group	EBL	EBT	NBL	NBT	SBT	SBR	Ø1	Ø8
Lane Configurations								
Traffic Volume (vph)	28	0	61	821	734	52		
Future Volume (vph)	28	0	61	821	734	52		
Turn Type	Perm	NA	Prot	NA	NA	Perm		
Protected Phases		4	5	2	6		1	8
Permitted Phases	4					6		
Detector Phase	4	4	5	2	6	6		
Switch Phase								
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	26.7	26.7	9.6	23.2	23.2	23.2	9.6	26.7
Total Split (s)	30.0	30.0	21.0	80.4	69.0	69.0	9.6	30.0
Total Split (%)	25.0%	25.0%	17.5%	67.0%	57.5%	57.5%	8%	25%
Yellow Time (s)	3.7	3.7	3.6	5.2	5.2	5.2	3.6	3.7
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.7	4.7	4.6	6.2	6.2	6.2		
Lead/Lag			Lead	Lag	Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	Min	Min	Min	None	None
Act Effct Green (s)	12.5	12.5	7.1	39.2	28.9	28.9		
Actuated g/C Ratio	0.24	0.24	0.14	0.76	0.56	0.56		
v/c Ratio	0.09	0.07	0.27	0.34	0.42	0.06		
Control Delay	19.9	0.2	28.0	5.6	12.8	1.3		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay	19.9	0.2	28.0	5.6	12.8	1.3		
LOS	B	A	C	A	B	A		
Approach Delay		8.7		7.1	12.0			
Approach LOS		A		A	B			

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 51.9	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.42	
Intersection Signal Delay: 9.4	Intersection LOS: A
Intersection Capacity Utilization 48.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 10: Heacock Street & Driveway 1



HCM 6th Signalized Intersection Summary  
 10: Heacock Street & Driveway 1

Gateway Aviation TA (JN:13445)

11/17/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	0	37	0	0	0	61	821	0	0	734	52
Future Volume (veh/h)	28	0	37	0	0	0	61	821	0	0	734	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1856	1856	1900	1826	1900
Adj Flow Rate, veh/h	30	0	40	0	0	0	66	892	0	0	798	57
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	3	3	0	5	0
Cap, veh/h	438	0	221	0	261	0	119	2032	0	5	1352	628
Arrive On Green	0.14	0.00	0.14	0.00	0.00	0.00	0.07	0.58	0.00	0.00	0.39	0.39
Sat Flow, veh/h	1810	0	1610	0	1900	0	1810	3618	0	1810	3469	1610
Grp Volume(v), veh/h	30	0	40	0	0	0	66	892	0	0	798	57
Grp Sat Flow(s),veh/h/ln	1810	0	1610	0	1900	0	1810	1763	0	1810	1735	1610
Q Serve(g_s), s	0.6	0.0	0.8	0.0	0.0	0.0	1.3	5.5	0.0	0.0	6.9	0.9
Cycle Q Clear(g_c), s	0.6	0.0	0.8	0.0	0.0	0.0	1.3	5.5	0.0	0.0	6.9	0.9
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	438	0	221	0	261	0	119	2032	0	5	1352	628
V/C Ratio(X)	0.07	0.00	0.18	0.00	0.00	0.00	0.55	0.44	0.00	0.00	0.59	0.09
Avail Cap(c_a), veh/h	1391	0	1069	0	1262	0	779	6868	0	238	5720	2655
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	14.4	0.0	14.5	0.0	0.0	0.0	17.2	4.6	0.0	0.0	9.2	7.4
Incr Delay (d2), s/veh	0.1	0.0	0.4	0.0	0.0	0.0	1.5	0.1	0.0	0.0	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.3	0.0	0.0	0.0	0.5	0.5	0.0	0.0	1.5	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.5	0.0	14.9	0.0	0.0	0.0	18.7	4.7	0.0	0.0	9.6	7.4
LnGrp LOS	B	A	B	A	A	A	B	A	A	A	A	A
Approach Vol, veh/h		70			0			958			855	
Approach Delay, s/veh		14.7			0.0			5.7			9.5	
Approach LOS		B						A			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	28.2		9.9	7.1	21.0		9.9				
Change Period (Y+Rc), s	4.6	6.2		* 4.7	4.6	6.2		* 4.7				
Max Green Setting (Gmax), s	5.0	74.2		* 25	16.4	62.8		* 25				
Max Q Clear Time (g_c+I1), s	0.0	7.5		2.8	3.3	8.9		0.0				
Green Ext Time (p_c), s	0.0	6.6		0.2	0.0	5.9		0.0				

Intersection Summary

HCM 6th Ctrl Delay	7.7
HCM 6th LOS	A

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↕	↗	↘	↕
Traffic Vol, veh/h	12	13	1130	61	52	961
Future Vol, veh/h	12	13	1130	61	52	961
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	0	140	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	23	31	8	2	8	13
Mvmt Flow	13	14	1228	66	57	1045

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1865	614	0	0	1294
Stage 1	1228	-	-	-	-
Stage 2	637	-	-	-	-
Critical Hdwy	7.26	7.52	-	-	4.26
Critical Hdwy Stg 1	6.26	-	-	-	-
Critical Hdwy Stg 2	6.26	-	-	-	-
Follow-up Hdwy	3.73	3.61	-	-	2.28
Pot Cap-1 Maneuver	51	370	-	-	500
Stage 1	202	-	-	-	-
Stage 2	436	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	45	370	-	-	500
Mov Cap-2 Maneuver	139	-	-	-	-
Stage 1	202	-	-	-	-
Stage 2	386	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	24	0	0.7
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	139	370	500	-
HCM Lane V/C Ratio	-	-	0.094	0.038	0.113	-
HCM Control Delay (s)	-	-	33.6	15.1	13.1	-
HCM Lane LOS	-	-	D	C	B	-
HCM 95th %tile Q(veh)	-	-	0.3	0.1	0.4	-

Timings  
12: Heacock Street & San Michele Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	31	82	4	54	341	325	1	1720	102	1135	52
Future Volume (vph)	31	82	4	54	341	325	1	1720	102	1135	52
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	1	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	4.0	5.0	4.0	5.0	5.0
Minimum Split (s)	9.5	30.5	30.5	8.5	30.5	8.5	8.5	34.5	8.5	34.5	34.5
Total Split (s)	13.0	41.0	41.0	13.0	41.0	28.0	12.0	38.0	28.0	54.0	54.0
Total Split (%)	10.8%	34.2%	34.2%	10.8%	34.2%	23.3%	10.0%	31.7%	23.3%	45.0%	45.0%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	3.5	4.5	3.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	4.5	5.5	4.5	5.5	5.5
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	None	Max	Max
Act Effct Green (s)	6.2	12.8	12.8	13.6	22.4	42.1	4.7	33.5	14.1	50.7	50.7
Actuated g/C Ratio	0.07	0.14	0.14	0.15	0.24	0.46	0.05	0.36	0.15	0.55	0.55
v/c Ratio	0.27	0.35	0.01	0.23	0.80	0.38	0.01	1.46	0.41	1.22	0.05
Control Delay	51.5	43.3	0.0	38.5	47.6	11.0	51.0	236.2	43.5	130.6	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.5	43.3	0.0	38.5	47.6	11.0	51.0	236.2	43.5	130.6	0.5
LOS	D	D	A	D	D	B	D	F	D	F	A
Approach Delay		44.1			30.4			236.1		118.4	
Approach LOS		D			C			F		F	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 92.2  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.46  
 Intersection Signal Delay: 152.7  
 Intersection LOS: F  
 Intersection Capacity Utilization 101.0%  
 ICU Level of Service G  
 Analysis Period (min) 15

Splits and Phases: 12: Heacock Street & San Michele Road

























Ø2	Ø1	Ø4	Ø3
38 s	28 s	41 s	13 s
Ø5	Ø6	Ø8	Ø7
12 s	54 s	41 s	13 s



HCM 6th Signalized Intersection Summary  
 12: Heacock Street & San Michele Road

Gateway Aviation TA (JN:13445)

04/19/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	82	4	54	341	325	1	1720	17	102	1135	52
Future Volume (veh/h)	31	82	4	54	341	325	1	1720	17	102	1135	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1856	1366	1796	1900	1856	1900	1885	1707	1811	1856	1856
Adj Flow Rate, veh/h	34	89	4	59	371	353	1	1870	18	111	1234	57
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	3	36	7	0	3	0	1	13	6	3	3
Cap, veh/h	46	133	83	310	433	617	2	1286	12	284	980	830
Arrive On Green	0.03	0.07	0.07	0.18	0.23	0.23	0.00	0.35	0.35	0.16	0.53	0.53
Sat Flow, veh/h	1810	1856	1158	1711	1900	1572	1810	3635	35	1725	1856	1572
Grp Volume(v), veh/h	34	89	4	59	371	353	1	920	968	111	1234	57
Grp Sat Flow(s),veh/h/ln	1810	1856	1158	1711	1900	1572	1810	1791	1879	1725	1856	1572
Q Serve(g_s), s	1.7	4.3	0.3	2.7	17.2	1.1	0.1	32.5	32.5	5.3	48.5	1.2
Cycle Q Clear(g_c), s	1.7	4.3	0.3	2.7	17.2	1.1	0.1	32.5	32.5	5.3	48.5	1.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.02	1.00		1.00
Lane Grp Cap(c), veh/h	46	133	83	310	433	617	2	634	665	284	980	830
V/C Ratio(X)	0.74	0.67	0.05	0.19	0.86	0.57	0.50	1.45	1.46	0.39	1.26	0.07
Avail Cap(c_a), veh/h	167	717	448	310	734	866	148	634	665	441	980	830
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.5	41.5	30.8	31.9	34.0	21.9	45.8	29.7	29.7	34.3	21.7	5.4
Incr Delay (d2), s/veh	8.5	2.1	0.1	0.1	2.2	0.3	58.5	212.0	213.4	0.3	125.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	2.0	0.1	1.1	7.7	5.5	0.1	49.8	52.5	2.1	51.2	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.0	43.7	30.9	32.0	36.2	22.2	104.4	241.6	243.1	34.6	146.7	5.6
LnGrp LOS	D	D	C	C	D	C	F	F	F	C	F	A
Approach Vol, veh/h		127			783			1889			1402	
Approach Delay, s/veh		45.8			29.6			242.3			132.1	
Approach LOS		D			C			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.6	38.0	21.1	12.1	4.6	54.0	6.8	26.4				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	23.5	* 33	8.5	35.5	7.5	48.5	8.5	35.5				
Max Q Clear Time (g_c+I1), s	7.3	34.5	4.7	6.3	2.1	50.5	3.7	19.2				
Green Ext Time (p_c), s	0.1	0.0	0.0	0.3	0.0	0.0	0.0	1.7				

Intersection Summary

HCM 6th Ctrl Delay	159.9
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection							
Intersection Delay, s/veh	96.4						
Intersection LOS	F						
Approach	EB	WB	NB		SB		
Entry Lanes	3	2	2		2		
Conflicting Circle Lanes	2	2	2		2		
Adj Approach Flow, veh/h	0	1417	761		866		
Demand Flow Rate, veh/h	0	1530	770		866		
Vehicles Circulating, veh/h	518	805	1176		1524		
Vehicles Exiting, veh/h	1872	1141	948		811		
Ped Vol Crossing Leg, #/h	0	0	0		0		
Ped Cap Adj	1.000	1.000	1.000		1.000		
Approach Delay, s/veh	0.0	99.6	33.5		146.5		
Approach LOS	-	F	D		F		
Lane	Left		Right		Left		Right
Designated Moves	LT		TR		LT		TR
Assumed Moves	LT		TR		LT		R
RT Channelized							
Lane Util	0.470	0.530	0.470	0.530	0.457	0.543	
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535	
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328	
Entry Flow, veh/h	719	811	362	408	396	470	
Cap Entry Lane, veh/h	644	716	458	523	332	389	
Entry HV Adj Factor	0.926	0.926	0.988	0.989	1.000	1.000	
Flow Entry, veh/h	666	751	358	403	396	470	
Cap Entry, veh/h	596	663	452	517	332	389	
V/C Ratio	1.117	1.132	0.791	0.781	1.192	1.209	
Control Delay, s/veh	98.4	100.6	35.9	31.4	146.6	146.5	
LOS	F	F	E	D	F	F	
95th %tile Queue, veh	21	23	7	7	17	19	

Timings  
14: Indian Street & San Michele Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↖	↕	↖	↕	↖↗	↕	↖	↖	↕
Traffic Volume (vph)	6	29	120	109	581	28	106	5	21
Future Volume (vph)	6	29	120	109	581	28	106	5	21
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8	5	2		1	6
Permitted Phases							2		
Detector Phase	7	4	3	8	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	31.8	9.6	31.8	9.6	32.8	32.8	9.6	32.8
Total Split (s)	12.0	33.0	19.0	40.0	32.0	57.0	57.0	11.0	36.0
Total Split (%)	10.0%	27.5%	15.8%	33.3%	26.7%	47.5%	47.5%	9.2%	30.0%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	6.3	13.8	10.3	24.4	17.7	21.5	21.5	6.1	13.9
Actuated g/C Ratio	0.10	0.22	0.17	0.39	0.28	0.35	0.35	0.10	0.22
v/c Ratio	0.05	0.25	0.44	0.09	0.60	0.05	0.17	0.03	0.04
Control Delay	41.2	9.2	36.5	17.2	26.1	15.5	2.1	41.6	25.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.2	9.2	36.5	17.2	26.1	15.5	2.1	41.6	25.0
LOS	D	A	D	B	C	B	A	D	C
Approach Delay		10.3		27.1		22.2			27.5
Approach LOS		B		C		C			C

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 62.3  
 Natural Cycle: 95  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.60  
 Intersection Signal Delay: 21.4  
 Intersection LOS: C  
 Intersection Capacity Utilization 52.7%  
 ICU Level of Service A  
 Analysis Period (min) 15























Splits and Phases: 14: Indian Street & San Michele Road





















HCM 6th Signalized Intersection Summary  
 14: Indian Street & San Michele Road

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	29	153	120	109	6	581	28	106	5	21	5
Future Volume (veh/h)	6	29	153	120	109	6	581	28	106	5	21	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.99	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1218	1470	1470	1826	1826	1826	1856	1752	1767	1900	1707	1707
Adj Flow Rate, veh/h	7	32	166	130	118	7	632	30	115	5	23	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	46	29	29	5	5	5	3	10	9	0	13	13
Cap, veh/h	11	252	225	164	907	53	757	744	628	12	545	113
Arrive On Green	0.01	0.18	0.18	0.09	0.27	0.27	0.21	0.42	0.42	0.01	0.20	0.20
Sat Flow, veh/h	1160	1397	1246	1739	3411	201	3534	1752	1478	1810	2718	564
Grp Volume(v), veh/h	7	32	166	130	63	62	632	30	115	5	14	14
Grp Sat Flow(s),veh/h/ln	1160	1397	1246	1739	1826	1786	1767	1752	1478	1810	1707	1575
Q Serve(g_s), s	0.4	1.4	8.9	5.2	1.8	1.9	12.1	0.7	3.4	0.2	0.5	0.5
Cycle Q Clear(g_c), s	0.4	1.4	8.9	5.2	1.8	1.9	12.1	0.7	3.4	0.2	0.5	0.5
Prop In Lane	1.00		1.00	1.00		0.11	1.00		1.00	1.00		0.36
Lane Grp Cap(c), veh/h	11	252	225	164	486	475	757	744	628	12	342	316
V/C Ratio(X)	0.66	0.13	0.74	0.79	0.13	0.13	0.84	0.04	0.18	0.42	0.04	0.04
Avail Cap(c_a), veh/h	121	536	478	353	882	862	1367	1266	1068	163	728	671
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.0	24.4	27.5	31.4	19.8	19.8	26.6	11.9	12.7	35.0	22.8	22.8
Incr Delay (d2), s/veh	23.5	0.1	1.8	3.2	0.0	0.0	1.0	0.0	0.1	8.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.4	2.5	2.1	0.7	0.7	4.6	0.2	1.0	0.1	0.2	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.5	24.4	29.2	34.6	19.8	19.8	27.6	11.9	12.8	43.4	22.9	22.9
LnGrp LOS	E	C	C	C	B	B	C	B	B	D	C	C
Approach Vol, veh/h		205			255			777				33
Approach Delay, s/veh		29.5			27.3			24.8				26.0
Approach LOS		C			C			C				C
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.1	35.9	11.3	18.6	21.0	20.0	5.2	24.6				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	5.8	* 5.8	4.6	5.8				
Max Green Setting (Gmax), s	6.4	51.2	14.4	27.2	27.4	* 30	7.4	34.2				
Max Q Clear Time (g_c+I1), s	2.2	5.4	7.2	10.9	14.1	2.5	2.4	3.9				
Green Ext Time (p_c), s	0.0	0.3	0.1	0.6	1.0	0.0	0.0	0.4				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			26.1									
HCM 6th LOS			C									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

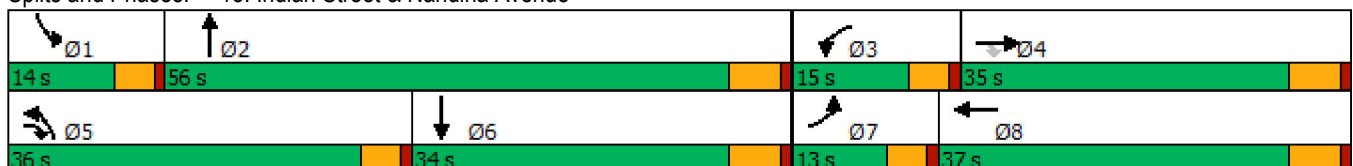
Timings  
15: Indian Street & Nandina Avenue

										
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	
Lane Configurations										
Traffic Volume (vph)	8	35	87	36	44	187	684	13	255	
Future Volume (vph)	8	35	87	36	44	187	684	13	255	
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA	
Protected Phases	7	4	5	3	8	5	2	1	6	
Permitted Phases	4									
Detector Phase	7	4	5	3	8	5	2	1	6	
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0	
Minimum Split (s)	9.6	29.8	9.6	9.6	29.8	9.6	26.8	9.6	26.8	
Total Split (s)	13.0	35.0	36.0	15.0	37.0	36.0	56.0	14.0	34.0	
Total Split (%)	10.8%	29.2%	30.0%	12.5%	30.8%	30.0%	46.7%	11.7%	28.3%	
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	3.6	4.8	3.6	4.8	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	4.6	5.8	4.6	5.8	
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	Min	None	Min	
Act Effct Green (s)	6.4	14.0	22.7	7.4	16.4	13.3	36.9	6.6	14.8	
Actuated g/C Ratio	0.12	0.26	0.42	0.14	0.30	0.25	0.68	0.12	0.27	
v/c Ratio	0.04	0.11	0.16	0.18	0.17	0.51	0.33	0.08	0.31	
Control Delay	35.2	25.2	3.3	33.3	16.5	27.8	11.4	35.2	22.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	35.2	25.2	3.3	33.3	16.5	27.8	11.4	35.2	22.0	
LOS	D	C	A	C	B	C	B	D	C	
Approach Delay	11.2		22.4				14.6		22.5	
Approach LOS	B		C				B		C	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 54  
 Natural Cycle: 80  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.51  
 Intersection Signal Delay: 16.5  
 Intersection LOS: B  
 Intersection Capacity Utilization 47.7%  
 ICU Level of Service A  
 Analysis Period (min) 15























Splits and Phases: 15: Indian Street & Nandina Avenue



HCM 6th Signalized Intersection Summary  
15: Indian Street & Nandina Avenue

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	35	87	36	44	23	187	684	76	13	255	27
Future Volume (veh/h)	8	35	87	36	44	23	187	684	76	13	255	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1248	1218	1559	1441	1441	1648	1841	1841	1411	1811	1811
Adj Flow Rate, veh/h	9	38	95	39	48	25	203	743	83	14	277	29
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	44	46	23	31	31	17	4	4	33	6	6
Cap, veh/h	21	235	359	62	195	101	250	1107	124	24	643	67
Arrive On Green	0.01	0.19	0.19	0.04	0.22	0.22	0.16	0.34	0.34	0.02	0.20	0.20
Sat Flow, veh/h	1810	1248	1032	1485	892	465	1570	3244	362	1344	3227	335
Grp Volume(v), veh/h	9	38	95	39	0	73	203	421	405	14	154	152
Grp Sat Flow(s),veh/h/ln	1810	1248	1032	1485	0	1357	1570	1841	1766	1344	1811	1751
Q Serve(g_s), s	0.2	1.3	3.3	1.3	0.0	2.2	6.3	9.9	9.9	0.5	3.8	3.8
Cycle Q Clear(g_c), s	0.2	1.3	3.3	1.3	0.0	2.2	6.3	9.9	9.9	0.5	3.8	3.8
Prop In Lane	1.00		1.00	1.00		0.34	1.00		0.21	1.00		0.19
Lane Grp Cap(c), veh/h	21	235	359	62	0	296	250	628	602	24	361	349
V/C Ratio(X)	0.42	0.16	0.26	0.63	0.00	0.25	0.81	0.67	0.67	0.59	0.43	0.43
Avail Cap(c_a), veh/h	301	721	761	305	0	837	975	1827	1753	250	1010	976
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.8	17.2	11.9	23.8	0.0	16.3	20.5	14.2	14.2	24.7	17.7	17.7
Incr Delay (d2), s/veh	4.9	0.3	0.4	3.9	0.0	0.4	2.4	1.3	1.3	8.4	0.8	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.3	0.6	0.5	0.0	0.6	2.0	3.2	3.1	0.2	1.3	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.7	17.5	12.2	27.7	0.0	16.8	22.9	15.5	15.5	33.0	18.5	18.6
LnGrp LOS	C	B	B	C	A	B	C	B	B	C	B	B
Approach Vol, veh/h		142			112			1029			320	
Approach Delay, s/veh		14.8			20.6			17.0			19.2	
Approach LOS		B			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.5	23.1	6.7	15.3	12.7	15.9	5.2	16.8				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	9.4	50.2	10.4	29.2	31.4	28.2	8.4	31.2				
Max Q Clear Time (g_c+I1), s	2.5	11.9	3.3	5.3	8.3	5.8	2.2	4.2				
Green Ext Time (p_c), s	0.0	5.1	0.0	0.4	0.2	1.5	0.0	0.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				17.5								
HCM 6th LOS				B								

Timings  
16: Indian Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

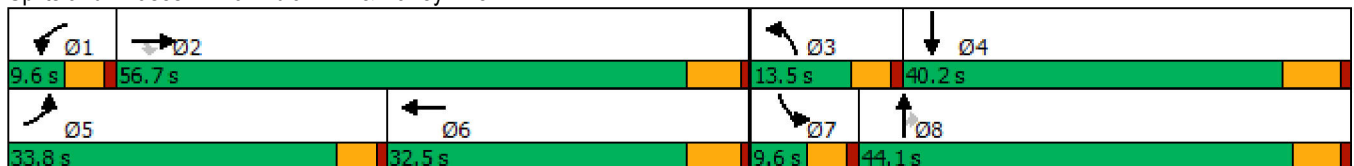
11/10/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	117	639	108	157	1061	148	295	82	102	190
Future Volume (vph)	117	639	108	157	1061	148	295	82	102	190
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	5	2		1	6	3	8		7	4
Permitted Phases			2					8		
Detector Phase	5	2	2	1	6	3	8	8	7	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	35.8	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2
Total Split (s)	33.8	56.7	56.7	9.6	32.5	13.5	44.1	44.1	9.6	40.2
Total Split (%)	28.2%	47.3%	47.3%	8.0%	27.1%	11.3%	36.8%	36.8%	8.0%	33.5%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.4	4.4	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	5.4	5.4	4.6	6.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	13.9	36.2	36.2	5.1	27.4	8.2	19.1	19.1	5.1	15.2
Actuated g/C Ratio	0.16	0.42	0.42	0.06	0.32	0.09	0.22	0.22	0.06	0.18
v/c Ratio	0.68	0.34	0.18	1.64	0.93	0.54	0.44	0.20	1.05	0.63
Control Delay	54.2	18.4	4.5	356.2	41.2	47.6	30.8	1.3	146.8	20.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.2	18.4	4.5	356.2	41.2	47.6	30.8	1.3	146.8	20.4
LOS	D	B	A	F	D	D	C	A	F	C
Approach Delay		21.5			73.8		31.0			46.9
Approach LOS		C			E		C			D

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 86.5	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.64	
Intersection Signal Delay: 50.0	Intersection LOS: D
Intersection Capacity Utilization 67.1%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 16: Indian Av. & Harley Knox Bl.



































HCM 6th Signalized Intersection Summary  
 16: Indian Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 			 	
Traffic Volume (veh/h)	117	639	108	157	1061	302	148	295	82	102	190	193
Future Volume (veh/h)	117	639	108	157	1061	302	148	295	82	102	190	193
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1085	1811	1707	1870	1856	1856	1737	1767	1796	1885	1811	1811
Adj Flow Rate, veh/h	127	695	108	171	1153	308	161	321	82	111	207	161
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	55	6	13	2	3	3	11	9	7	1	6	6
Cap, veh/h	143	2036	596	119	1353	361	238	570	258	120	307	227
Arrive On Green	0.14	0.41	0.41	0.07	0.34	0.34	0.07	0.17	0.17	0.07	0.16	0.16
Sat Flow, veh/h	1033	4944	1447	1781	3979	1063	3209	3357	1522	1795	1886	1395
Grp Volume(v), veh/h	127	695	108	171	979	482	161	321	82	111	188	180
Grp Sat Flow(s),veh/h/ln	1033	1648	1447	1781	1689	1664	1605	1678	1522	1795	1721	1560
Q Serve(g_s), s	9.0	7.2	3.5	5.0	20.1	20.1	3.6	6.5	3.5	4.6	7.7	8.1
Cycle Q Clear(g_c), s	9.0	7.2	3.5	5.0	20.1	20.1	3.6	6.5	3.5	4.6	7.7	8.1
Prop In Lane	1.00		1.00	1.00		0.64	1.00		1.00	1.00		0.89
Lane Grp Cap(c), veh/h	143	2036	596	119	1149	566	238	570	258	120	280	254
V/C Ratio(X)	0.89	0.34	0.18	1.43	0.85	0.85	0.68	0.56	0.32	0.92	0.67	0.71
Avail Cap(c_a), veh/h	405	3376	988	119	1209	596	383	1742	790	120	785	711
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.5	15.0	13.9	34.8	22.9	22.9	33.6	28.4	27.2	34.6	29.3	29.5
Incr Delay (d2), s/veh	6.9	0.1	0.1	235.3	5.8	11.0	1.3	0.9	0.7	57.4	2.8	3.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	2.3	1.0	9.8	7.9	8.6	1.4	2.5	1.2	3.8	3.1	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.4	15.1	14.1	270.1	28.7	33.9	34.9	29.3	27.9	91.9	32.1	33.2
LnGrp LOS	D	B	B	F	C	C	C	C	C	F	C	C
Approach Vol, veh/h		930			1632			564			479	
Approach Delay, s/veh		18.2			55.5			30.7			46.4	
Approach LOS		B			E			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.6	36.5	10.1	18.3	14.9	31.2	9.6	18.9				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	5.0	50.9	8.9	34.0	29.2	26.7	5.0	* 39				
Max Q Clear Time (g_c+I1), s	7.0	9.2	5.6	10.1	11.0	22.1	6.6	8.5				
Green Ext Time (p_c), s	0.0	5.2	0.1	2.0	0.1	3.3	0.0	2.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			40.8									
HCM 6th LOS			D									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												



Timings

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

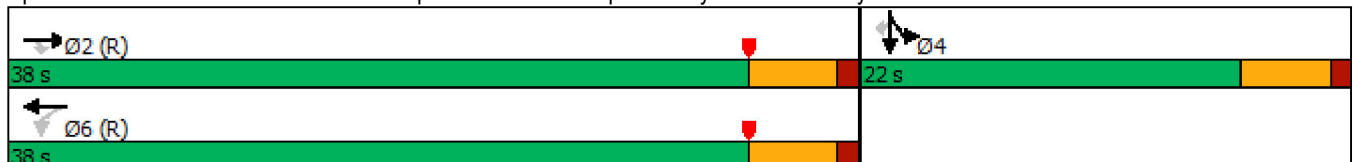


Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↑
Traffic Volume (vph)	875	153	639	400	0	255
Future Volume (vph)	875	153	639	400	0	255
Turn Type	NA	Perm	Perm	NA	NA	Perm
Protected Phases	2			6	4	
Permitted Phases		2	6			4
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	25.0	25.0	10.0	10.0
Total Split (s)	38.0	38.0	38.0	38.0	22.0	22.0
Total Split (%)	63.3%	63.3%	63.3%	63.3%	36.7%	36.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	33.0	33.0	33.0	33.0	17.0	17.0
Actuated g/C Ratio	0.55	0.55	0.55	0.55	0.28	0.28
v/c Ratio	0.50	0.18	2.75	0.23	1.29	0.45
Control Delay	9.6	1.8	809.1	8.5	171.4	5.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.6	1.8	809.1	8.5	171.4	5.3
LOS	A	A	F	A	F	A
Approach Delay	8.4			500.9	118.0	
Approach LOS	A			F	F	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 2.75  
 Intersection Signal Delay: 217.8  
 Intersection LOS: F  
 Intersection Capacity Utilization 153.0%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.















HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑						↑	↑
Traffic Volume (veh/h)	0	875	153	639	400	0	0	0	0	537	0	255
Future Volume (veh/h)	0	875	153	639	400	0	0	0	0	537	0	255
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1826	1885	1841	1826	0				1767	1900	1767
Adj Flow Rate, veh/h	0	951	166	695	435	0				584	0	217
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	5	1	4	5	0				9	0	9
Cap, veh/h	0	1908	878	309	1908	0				513	0	424
Arrive On Green	0.00	0.55	0.55	0.92	0.92	0.00				0.28	0.00	0.28
Sat Flow, veh/h	0	3561	1597	496	3561	0				1810	0	1497
Grp Volume(v), veh/h	0	951	166	695	435	0				584	0	217
Grp Sat Flow(s),veh/h/ln	0	1735	1597	496	1735	0				1810	0	1497
Q Serve(g_s), s	0.0	10.2	3.1	22.8	0.8	0.0				17.0	0.0	7.3
Cycle Q Clear(g_c), s	0.0	10.2	3.1	33.0	0.8	0.0				17.0	0.0	7.3
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1908	878	309	1908	0				513	0	424
V/C Ratio(X)	0.00	0.50	0.19	2.25	0.23	0.00				1.14	0.00	0.51
Avail Cap(c_a), veh/h	0	1908	878	309	1908	0				513	0	424
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.44	0.44	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	8.4	6.8	12.0	1.1	0.0				21.5	0.0	18.0
Incr Delay (d2), s/veh	0.0	0.9	0.5	567.9	0.1	0.0				84.0	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.8	0.8	52.0	0.2	0.0				18.0	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	9.3	7.3	579.9	1.3	0.0				105.5	0.0	19.1
LnGrp LOS	A	A	A	F	A	A				F	A	B
Approach Vol, veh/h		1117			1130						801	
Approach Delay, s/veh		9.0			357.1						82.1	
Approach LOS		A			F						F	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		38.0		22.0		38.0						
Change Period (Y+Rc), s		5.0		5.0		5.0						
Max Green Setting (Gmax), s		33.0		17.0		33.0						
Max Q Clear Time (g_c+I1), s		12.2		19.0		35.0						
Green Ext Time (p_c), s		4.3		0.0		0.0						
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				157.3								
HCM 6th LOS				F								

Timings

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

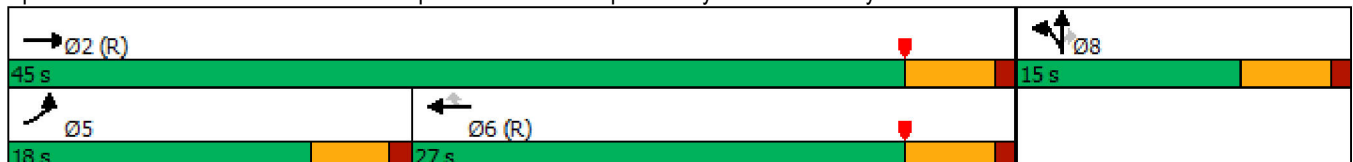


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	479	933	979	1136	8	343
Future Volume (vph)	479	933	979	1136	8	343
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	26.0	24.0	24.0	10.0	10.0
Total Split (s)	18.0	45.0	27.0	27.0	15.0	15.0
Total Split (%)	30.0%	75.0%	45.0%	45.0%	25.0%	25.0%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max
Act Effct Green (s)	13.5	40.0	22.0	22.0	10.0	10.0
Actuated g/C Ratio	0.22	0.67	0.37	0.37	0.17	0.17
v/c Ratio	1.34	0.46	0.84	1.47	0.26	1.05
Control Delay	186.5	4.3	25.1	235.1	24.5	80.8
Queue Delay	0.0	0.3	0.0	0.0	0.0	0.0
Total Delay	186.5	4.6	25.1	235.1	24.5	80.8
LOS	F	A	C	F	C	F
Approach Delay		66.3	137.9		71.6	
Approach LOS		E	F		E	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 29 (48%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.47  
 Intersection Signal Delay: 105.3  
 Intersection LOS: F  
 Intersection Capacity Utilization 153.0%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

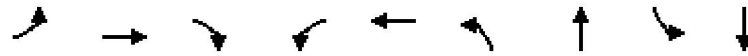
2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

11/10/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗↗			↗↗	↘		↘	↘			
Traffic Volume (veh/h)	479	933	0	0	979	1136	59	8	343	0	0	0
Future Volume (veh/h)	479	933	0	0	979	1136	59	8	343	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1841	1752	0	0	1841	1781	1678	1900	1678			
Adj Flow Rate, veh/h	521	1014	0	0	1064	1171	64	9	308			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	4	10	0	0	4	8	15	0	15			
Cap, veh/h	394	2219	0	0	1282	554	266	37	237			
Arrive On Green	0.07	0.22	0.00	0.00	0.37	0.37	0.17	0.17	0.17			
Sat Flow, veh/h	1753	3416	0	0	3589	1510	1596	224	1422			
Grp Volume(v), veh/h	521	1014	0	0	1064	1171	73	0	308			
Grp Sat Flow(s),veh/h/ln	1753	1664	0	0	1749	1510	1820	0	1422			
Q Serve(g_s), s	13.5	15.9	0.0	0.0	16.6	22.0	2.1	0.0	10.0			
Cycle Q Clear(g_c), s	13.5	15.9	0.0	0.0	16.6	22.0	2.1	0.0	10.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.88		1.00			
Lane Grp Cap(c), veh/h	394	2219	0	0	1282	554	303	0	237			
V/C Ratio(X)	1.32	0.46	0.00	0.00	0.83	2.12	0.24	0.00	1.30			
Avail Cap(c_a), veh/h	394	2219	0	0	1282	554	303	0	237			
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.86	0.86	0.00	0.00	0.62	0.62	1.00	0.00	1.00			
Uniform Delay (d), s/veh	27.8	14.0	0.0	0.0	17.3	19.0	21.7	0.0	25.0			
Incr Delay (d2), s/veh	159.1	0.6	0.0	0.0	4.0	505.7	1.9	0.0	162.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	23.4	6.8	0.0	0.0	6.1	83.9	0.9	0.0	13.6			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	186.8	14.6	0.0	0.0	21.3	524.7	23.6	0.0	187.3			
LnGrp LOS	F	B	A	A	C	F	C	A	F			
Approach Vol, veh/h		1535			2235			381				
Approach Delay, s/veh		73.0			285.1			155.9				
Approach LOS		E			F			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		45.0			18.0	27.0		15.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		40.0			13.5	22.0		10.0				
Max Q Clear Time (g_c+1), s		17.9			15.5	24.0		12.0				
Green Ext Time (p_c), s		4.5			0.0	0.0		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					194.8							
HCM 6th LOS					F							

Timings  
3: Western Way & Harley Knox Bl.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↗↗↗	↖	↖	↗↗↗	↖	↗	↖	↗
Traffic Volume (vph)	35	1241	1	2	1973	3	0	15	0
Future Volume (vph)	35	1241	1	2	1973	3	0	15	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	NA
Protected Phases	5	2		1	6		8		4
Permitted Phases			2			8		4	
Detector Phase	5	2	2	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	21.8	21.8	9.6	21.8	32.6	32.6	32.6	32.6
Total Split (s)	18.0	71.4	71.4	9.6	63.0	39.0	39.0	39.0	39.0
Total Split (%)	15.0%	59.5%	59.5%	8.0%	52.5%	32.5%	32.5%	32.5%	32.5%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	7.3	54.7	54.7	5.4	49.5	13.3	13.3	13.3	13.3
Actuated g/C Ratio	0.09	0.68	0.68	0.07	0.61	0.17	0.17	0.17	0.17
v/c Ratio	0.31	0.43	0.00	0.02	0.72	0.02	0.01	0.07	0.41
Control Delay	48.2	7.3	0.0	46.5	14.4	33.3	0.0	34.6	10.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.2	7.3	0.0	46.5	14.4	33.3	0.0	34.6	10.3
LOS	D	A	A	D	B	C	A	C	B
Approach Delay		8.4			14.5		14.3		12.6
Approach LOS		A			B		B		B

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 80.6	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 12.1	Intersection LOS: B
Intersection Capacity Utilization 55.7%	ICU Level of Service B
Analysis Period (min) 15	


























Splits and Phases: 3: Western Way & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 3: Western Way & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  							
Traffic Volume (veh/h)	35	1241	1	2	1973	11	3	0	4	15	0	140
Future Volume (veh/h)	35	1241	1	2	1973	11	3	0	4	15	0	140
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1426	1737	1900	1900	1811	1811	1900	1900	1900	1767	1900	1900
Adj Flow Rate, veh/h	38	1349	1	2	2145	10	3	0	4	16	0	140
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	32	11	0	0	6	6	0	0	0	9	0	0
Cap, veh/h	51	3064	1040	5	3106	14	172	0	220	283	0	220
Arrive On Green	0.04	0.65	0.65	0.00	0.61	0.61	0.14	0.00	0.14	0.14	0.00	0.14
Sat Flow, veh/h	1358	4742	1610	1810	5079	24	1269	0	1610	1334	0	1610
Grp Volume(v), veh/h	38	1349	1	2	1392	763	3	0	4	16	0	140
Grp Sat Flow(s),veh/h/ln	1358	1581	1610	1810	1648	1807	1269	0	1610	1334	0	1610
Q Serve(g_s), s	1.9	9.8	0.0	0.1	19.9	19.9	0.2	0.0	0.2	0.7	0.0	5.8
Cycle Q Clear(g_c), s	1.9	9.8	0.0	0.1	19.9	19.9	5.9	0.0	0.2	0.9	0.0	5.8
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	51	3064	1040	5	2016	1105	172	0	220	283	0	220
V/C Ratio(X)	0.75	0.44	0.00	0.41	0.69	0.69	0.02	0.00	0.02	0.06	0.00	0.64
Avail Cap(c_a), veh/h	260	4444	1509	129	2693	1476	622	0	791	756	0	791
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.4	6.1	4.4	34.8	9.1	9.1	31.4	0.0	26.1	26.5	0.0	28.6
Incr Delay (d2), s/veh	8.0	0.1	0.0	18.7	0.5	0.9	0.0	0.0	0.0	0.1	0.0	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	2.1	0.0	0.1	4.9	5.5	0.0	0.0	0.1	0.2	0.0	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.4	6.2	4.4	53.5	9.6	10.0	31.4	0.0	26.2	26.6	0.0	31.6
LnGrp LOS	D	A	A	D	A	B	C	A	C	C	A	C
Approach Vol, veh/h		1388			2157			7				156
Approach Delay, s/veh		7.2			9.8			28.4				31.1
Approach LOS		A			A			C				C
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.8	51.0		14.2	7.2	48.6		14.2				
Change Period (Y+Rc), s	4.6	5.8		4.6	4.6	5.8		4.6				
Max Green Setting (Gmax), s	5.0	65.6		34.4	13.4	57.2		34.4				
Max Q Clear Time (g_c+I1), s	2.1	11.8		7.8	3.9	21.9		7.9				
Green Ext Time (p_c), s	0.0	12.6		0.9	0.0	20.9		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			9.8									
HCM 6th LOS			A									

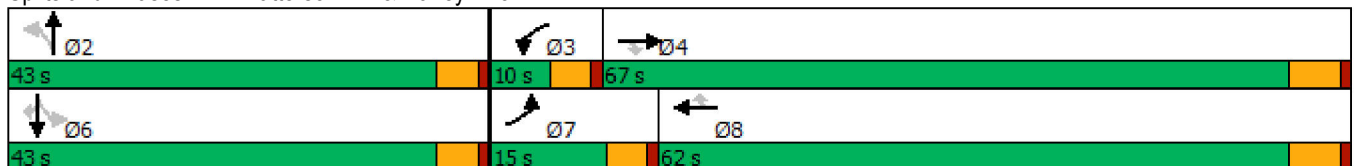
Timings  
4: Patterson Av. & Harley Knox Bl.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	23	1018	46	49	1838	19	118	4	52	4	29
Future Volume (vph)	23	1018	46	49	1838	19	118	4	52	4	29
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	7	4		3	8			2		6	
Permitted Phases			4			8	2		6		6
Detector Phase	7	4	4	3	8	8	2	2	6	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	9.6	31.8	31.8	33.7	33.7	40.7	40.7	40.7
Total Split (s)	15.0	67.0	67.0	10.0	62.0	62.0	43.0	43.0	43.0	43.0	43.0
Total Split (%)	12.5%	55.8%	55.8%	8.3%	51.7%	51.7%	35.8%	35.8%	35.8%	35.8%	35.8%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8		4.7		4.7	4.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	6.9	56.1	56.1	5.4	59.4	59.4		18.7		18.7	18.7
Actuated g/C Ratio	0.07	0.60	0.60	0.06	0.64	0.64		0.20		0.20	0.20
v/c Ratio	0.31	0.39	0.05	0.51	0.92	0.02		0.66		0.26	0.09
Control Delay	55.5	11.9	3.1	64.4	27.4	0.1		42.9		33.7	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	55.5	11.9	3.1	64.4	27.4	0.1		42.9		33.7	0.5
LOS	E	B	A	E	C	A		D		C	A
Approach Delay		12.4			28.1			42.9		22.3	
Approach LOS		B			C			D		C	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 93.5  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.92  
 Intersection Signal Delay: 23.4  
 Intersection LOS: C  
 Intersection Capacity Utilization 81.4%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 4: Patterson Av. & Harley Knox Bl.






























HCM 6th Signalized Intersection Summary  
 4: Patterson Av. & Harley Knox Bl.

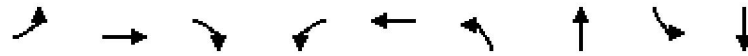
Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			 			 				
Traffic Volume (veh/h)	23	1018	46	49	1838	19	118	4	46	52	4	29
Future Volume (veh/h)	23	1018	46	49	1838	19	118	4	46	52	4	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	922	1752	1856	1900	1811	1574	1900	1900	1900	1337	1337	1544
Adj Flow Rate, veh/h	25	1107	50	53	1998	21	128	4	50	57	4	32
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	66	10	3	0	6	22	0	0	0	38	38	24
Cap, veh/h	23	2856	939	74	2106	799	213	17	61	253	14	256
Arrive On Green	0.03	0.60	0.60	0.04	0.61	0.61	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	878	4782	1572	1810	3441	1306	744	86	314	898	74	1309
Grp Volume(v), veh/h	25	1107	50	53	1998	21	182	0	0	61	0	32
Grp Sat Flow(s),veh/h/ln	878	1594	1572	1810	1721	1306	1143	0	0	971	0	1309
Q Serve(g_s), s	2.3	11.0	1.2	2.6	48.7	0.6	9.9	0.0	0.0	0.0	0.0	1.8
Cycle Q Clear(g_c), s	2.3	11.0	1.2	2.6	48.7	0.6	14.8	0.0	0.0	4.9	0.0	1.8
Prop In Lane	1.00		1.00	1.00		1.00	0.70		0.27	0.93		1.00
Lane Grp Cap(c), veh/h	23	2856	939	74	2106	799	291	0	0	267	0	256
V/C Ratio(X)	1.11	0.39	0.05	0.72	0.95	0.03	0.62	0.00	0.00	0.23	0.00	0.12
Avail Cap(c_a), veh/h	101	3228	1061	108	2133	810	621	0	0	490	0	553
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	44.2	9.6	7.6	43.0	16.3	6.9	36.8	0.0	0.0	31.3	0.0	30.1
Incr Delay (d2), s/veh	84.8	0.1	0.0	4.9	10.0	0.0	2.2	0.0	0.0	0.4	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	3.2	0.3	1.2	17.7	0.1	4.0	0.0	0.0	1.2	0.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	129.0	9.7	7.6	47.9	26.2	7.0	38.9	0.0	0.0	31.7	0.0	30.3
LnGrp LOS	F	A	A	D	C	A	D	A	A	C	A	C
Approach Vol, veh/h		1182			2072			182				93
Approach Delay, s/veh		12.1			26.6			38.9				31.2
Approach LOS		B			C			D				C
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		22.4	8.3	59.9		22.4	6.9	61.3				
Change Period (Y+Rc), s		* 4.7	4.6	5.8		* 4.7	4.6	5.8				
Max Green Setting (Gmax), s		* 38	5.4	61.2		* 38	10.4	56.2				
Max Q Clear Time (g_c+I1), s		16.8	4.6	13.0		6.9	4.3	50.7				
Green Ext Time (p_c), s		1.0	0.0	9.4		0.4	0.0	4.8				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				22.5								
HCM 6th LOS				C								
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												



Timings  
5: Heacock Street & Cactus Avenue

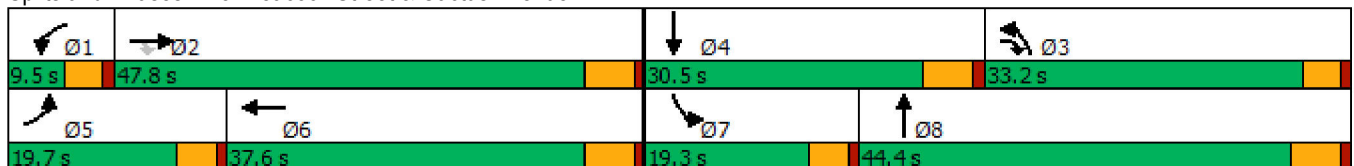


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	244	2146	1378	27	956	827	674	184	746
Future Volume (vph)	244	2146	1378	27	956	827	674	184	746
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	3	1	6	3	8	7	4
Permitted Phases			2						
Detector Phase	5	2	3	1	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.5	30.5	9.5	9.5	30.5	9.5	30.5	9.5	30.5
Total Split (s)	19.7	47.8	33.2	9.5	37.6	33.2	44.4	19.3	30.5
Total Split (%)	16.3%	39.5%	27.4%	7.9%	31.1%	27.4%	36.7%	16.0%	25.2%
Yellow Time (s)	3.5	4.5	3.5	3.5	4.5	3.5	4.5	3.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	4.5	4.5	5.5	4.5	5.5	4.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None
Act Effct Green (s)	15.2	46.1	75.8	5.0	32.1	28.7	39.5	14.2	25.0
Actuated g/C Ratio	0.13	0.38	0.63	0.04	0.27	0.24	0.33	0.12	0.21
v/c Ratio	1.07	1.56	1.25	0.38	1.13	1.01	0.63	0.86	1.10
Control Delay	127.4	284.4	139.2	71.2	110.7	80.0	37.1	86.2	106.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	127.4	284.4	139.2	71.2	110.7	80.0	37.1	86.2	106.0
LOS	F	F	F	E	F	E	D	F	F
Approach Delay		221.2			109.8		59.7		102.3
Approach LOS		F			F		E		F

Intersection Summary

Cycle Length: 121  
 Actuated Cycle Length: 121  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.56  
 Intersection Signal Delay: 154.6  
 Intersection LOS: F  
 Intersection Capacity Utilization 126.3%  
 ICU Level of Service H  
 Analysis Period (min) 15























Splits and Phases: 5: Heacock Street & Cactus Avenue



HCM 6th Signalized Intersection Summary  
5: Heacock Street & Cactus Avenue

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	244	2146	1378	27	956	132	827	674	68	184	746	61
Future Volume (veh/h)	244	2146	1378	27	956	132	827	674	68	184	746	61
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1811	1826	1885	1885	1811	1870	1870	1900	1856	1856
Adj Flow Rate, veh/h	254	2235	1435	28	996	138	861	702	71	192	777	64
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	1	6	5	1	1	6	2	2	0	3	3
Cap, veh/h	225	1367	916	44	853	118	812	1093	110	218	693	57
Arrive On Green	0.12	0.36	0.36	0.03	0.26	0.26	0.24	0.33	0.33	0.12	0.20	0.20
Sat Flow, veh/h	1810	3770	1531	1739	3241	449	3450	3335	337	1810	3382	278
Grp Volume(v), veh/h	254	2235	1435	28	579	555	861	393	380	192	426	415
Grp Sat Flow(s),veh/h/ln	1810	1885	1531	1739	1885	1804	1725	1870	1802	1810	1856	1804
Q Serve(g_s), s	15.2	44.2	27.8	1.9	32.1	32.1	28.7	21.8	21.9	12.7	25.0	25.0
Cycle Q Clear(g_c), s	15.2	44.2	27.8	1.9	32.1	32.1	28.7	21.8	21.9	12.7	25.0	25.0
Prop In Lane	1.00		1.00	1.00		0.25	1.00		0.19	1.00		0.15
Lane Grp Cap(c), veh/h	225	1367	916	44	496	475	812	613	591	218	380	370
V/C Ratio(X)	1.13	1.63	1.57	0.64	1.17	1.17	1.06	0.64	0.64	0.88	1.12	1.12
Avail Cap(c_a), veh/h	225	1367	916	71	496	475	812	613	591	220	380	370
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.4	38.9	11.8	58.9	44.9	45.0	46.7	34.9	34.9	52.8	48.5	48.5
Incr Delay (d2), s/veh	98.2	289.0	260.1	5.7	95.3	96.6	49.0	1.8	1.9	29.9	83.2	84.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.8	74.0	77.4	0.9	27.5	26.5	17.4	9.9	9.5	7.4	20.0	19.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	151.6	327.9	271.9	64.6	140.3	141.6	95.7	36.7	36.8	82.7	131.7	132.5
LnGrp LOS	F	F	F	E	F	F	F	D	D	F	F	F
Approach Vol, veh/h		3924			1162			1634			1033	
Approach Delay, s/veh		296.0			139.1			67.8			122.9	
Approach LOS		F			F			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.6	49.7	34.2	30.5	19.7	37.6	19.2	45.5				
Change Period (Y+Rc), s	4.5	5.5	5.5	* 5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	5.0	42.3	28.7	* 25	15.2	32.1	14.8	38.9				
Max Q Clear Time (g_c+I1), s	3.9	46.2	30.7	27.0	17.2	34.1	14.7	23.9				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			201.3									
HCM 6th LOS			F									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings  
6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

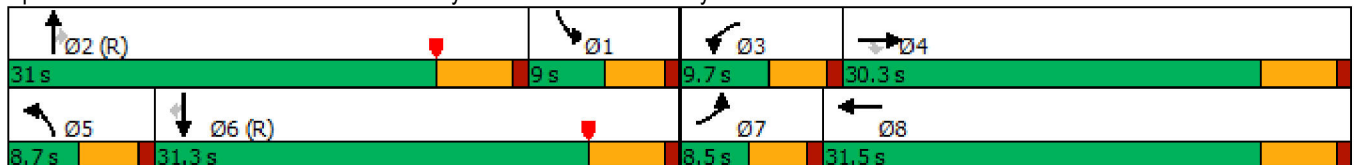
11/10/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	35	218	386	47	99	135	1063	136	362	1209	24	
Future Volume (vph)	35	218	386	47	99	135	1063	136	362	1209	24	
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	7	4		3	8	5	2		1	6		
Permitted Phases			4					2			6	
Detector Phase	7	4	4	3	8	5	2	2	1	6	6	
Switch Phase												
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	
Minimum Split (s)	8.5	23.5	23.5	8.5	31.5	8.5	30.5	30.5	8.5	23.5	23.5	
Total Split (s)	8.5	30.3	30.3	9.7	31.5	8.7	31.0	31.0	9.0	31.3	31.3	
Total Split (%)	10.6%	37.9%	37.9%	12.1%	39.4%	10.9%	38.8%	38.8%	11.3%	39.1%	39.1%	
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5	4.5	4.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	5.5	4.5	5.5	5.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max	
Act Effct Green (s)	4.0	15.8	15.8	5.1	16.5	12.5	38.4	38.4	4.5	30.4	30.4	
Actuated g/C Ratio	0.05	0.20	0.20	0.06	0.21	0.16	0.48	0.48	0.06	0.38	0.38	
v/c Ratio	0.40	0.64	0.75	0.42	0.34	0.49	0.68	0.15	3.85	0.98	0.03	
Control Delay	49.5	36.4	21.1	47.3	10.3	43.1	22.1	2.9	1321.3	47.6	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	49.5	36.4	21.1	47.3	10.3	43.1	22.1	2.9	1321.3	47.6	0.1	
LOS	D	D	C	D	B	D	C	A	F	D	A	
Approach Delay		27.9			15.4		22.2			335.7		
Approach LOS		C			B		C			F		

Intersection Summary

Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 110  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 3.85  
 Intersection Signal Delay: 150.5  
 Intersection LOS: F  
 Intersection Capacity Utilization 80.9%  
 ICU Level of Service D  
 Analysis Period (min) 15
























Splits and Phases: 6: Heacock Street & Meyer Drive/John F. Kennedy Drive



HCM 6th Signalized Intersection Summary  
 6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	218	386	47	99	194	135	1063	136	362	1209	24
Future Volume (veh/h)	35	218	386	47	99	194	135	1063	136	362	1209	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1900	1900	1885	1885	1900	1796	1900	1841	1796	1900
Adj Flow Rate, veh/h	38	237	420	51	108	211	147	1155	148	393	1314	26
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	1	0	0	1	1	0	7	0	4	7	0
Cap, veh/h	52	536	458	65	550	466	95	1145	513	173	1355	607
Arrive On Green	0.03	0.28	0.28	0.04	0.29	0.29	0.05	0.32	0.32	0.10	0.38	0.38
Sat Flow, veh/h	1810	1885	1610	1810	1885	1598	1810	3593	1610	1753	3593	1610
Grp Volume(v), veh/h	38	237	420	51	108	211	147	1155	148	393	1314	26
Grp Sat Flow(s),veh/h/ln	1810	1885	1610	1810	1885	1598	1810	1796	1610	1753	1796	1610
Q Serve(g_s), s	1.7	8.2	20.2	2.2	3.4	8.6	4.2	25.5	4.2	7.9	28.7	0.8
Cycle Q Clear(g_c), s	1.7	8.2	20.2	2.2	3.4	8.6	4.2	25.5	4.2	7.9	28.7	0.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	52	536	458	65	550	466	95	1145	513	173	1355	607
V/C Ratio(X)	0.74	0.44	0.92	0.78	0.20	0.45	1.55	1.01	0.29	2.28	0.97	0.04
Avail Cap(c_a), veh/h	90	584	499	118	613	519	95	1145	513	173	1355	607
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.58	0.58	0.58	0.09	0.09	0.09
Uniform Delay (d), s/veh	38.6	23.4	27.7	38.3	21.3	23.1	37.9	27.2	11.9	36.1	24.5	15.8
Incr Delay (d2), s/veh	7.4	0.2	20.0	7.5	0.1	0.3	274.2	22.4	0.8	576.7	3.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	3.5	9.6	1.1	1.4	3.0	9.0	13.1	2.0	30.7	11.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.9	23.6	47.8	45.8	21.3	23.4	312.1	49.6	12.7	612.8	27.6	15.8
LnGrp LOS	D	C	D	D	C	C	F	F	B	F	C	B
Approach Vol, veh/h		695			370			1450			1733	
Approach Delay, s/veh		39.4			25.9			72.5			160.1	
Approach LOS		D			C			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.4	31.0	7.4	28.3	8.7	35.7	6.8	28.8				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	4.5	* 26	5.2	24.8	4.2	25.8	4.0	26.0				
Max Q Clear Time (g_c+I1), s	9.9	27.5	4.2	22.2	6.2	30.7	3.7	10.6				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.5	0.0	0.0	0.0	1.0				













Intersection Summary

HCM 6th Ctrl Delay	98.8
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
7: Heacock Street & Gentian Avenue

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	19	156	1142	54	250	1419
Future Volume (vph)	19	156	1142	54	250	1419
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	27.6	27.6	27.2	27.2	9.6	16.2
Total Split (s)	31.0	31.0	62.0	62.0	27.0	89.0
Total Split (%)	25.8%	25.8%	51.7%	51.7%	22.5%	74.2%
Yellow Time (s)	3.6	3.6	5.2	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	6.2	6.2	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	12.4	12.4	39.3	39.3	17.8	61.9
Actuated g/C Ratio	0.14	0.14	0.46	0.46	0.21	0.72
v/c Ratio	0.08	0.40	0.79	0.07	0.71	0.62
Control Delay	37.3	9.4	24.6	10.9	45.1	7.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.3	9.4	24.6	10.9	45.1	7.3
LOS	D	A	C	B	D	A
Approach Delay	12.5		23.9			13.0
Approach LOS	B		C			B













Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 85.6	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 17.3	Intersection LOS: B
Intersection Capacity Utilization 66.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 7: Heacock Street & Gentian Avenue



HCM 6th Signalized Intersection Summary  
7: Heacock Street & Gentian Avenue

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	19	156	1142	54	250	1419
Future Volume (veh/h)	19	156	1142	54	250	1419
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1811	1900	1856	1826
Adj Flow Rate, veh/h	21	170	1241	59	272	1542
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	6	0	3	5
Cap, veh/h	247	219	1614	755	318	2474
Arrive On Green	0.14	0.14	0.47	0.47	0.18	0.71
Sat Flow, veh/h	1810	1610	3532	1610	1767	3561
Grp Volume(v), veh/h	21	170	1241	59	272	1542
Grp Sat Flow(s),veh/h/ln	1810	1610	1721	1610	1767	1735
Q Serve(g_s), s	0.7	7.3	21.5	1.4	10.7	16.5
Cycle Q Clear(g_c), s	0.7	7.3	21.5	1.4	10.7	16.5
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	247	219	1614	755	318	2474
V/C Ratio(X)	0.09	0.77	0.77	0.08	0.86	0.62
Avail Cap(c_a), veh/h	666	592	2676	1252	552	4004
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.1	29.9	15.8	10.5	28.5	5.3
Incr Delay (d2), s/veh	0.1	2.2	0.8	0.0	2.6	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.8	6.8	0.4	4.3	2.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	27.1	32.1	16.6	10.5	31.1	5.6
LnGrp LOS	C	C	B	B	C	A
Approach Vol, veh/h	191		1300			1814
Approach Delay, s/veh	31.6		16.3			9.4
Approach LOS	C		B			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	17.5	39.9			57.4	14.4
Change Period (Y+Rc), s	4.6	6.2			6.2	4.6
Max Green Setting (Gmax), s	22.4	55.8			82.8	26.4
Max Q Clear Time (g_c+1), s	12.7	23.5			18.5	9.3
Green Ext Time (p_c), s	0.3	10.2			16.4	0.3
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			13.4			
HCM 6th LOS			B			

Timings  
8: Heacock Street & Iris Avenue

	↙	↖	↑	↗	↘	↓
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖↖	↖	↖↖	↖	↖↖	↖↖
Traffic Volume (vph)	271	344	869	416	541	1077
Future Volume (vph)	271	344	869	416	541	1077
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	15.8	15.8	33.2	33.2	9.6	16.2
Total Split (s)	35.0	35.0	47.0	47.0	38.0	85.0
Total Split (%)	29.2%	29.2%	39.2%	39.2%	31.7%	70.8%
Yellow Time (s)	4.8	4.8	5.2	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	6.2	6.2	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	13.2	13.2	32.4	32.4	18.4	55.6
Actuated g/C Ratio	0.16	0.16	0.40	0.40	0.23	0.68
v/c Ratio	0.49	0.60	0.71	0.55	0.71	0.50
Control Delay	36.0	8.5	24.3	9.4	35.4	6.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.0	8.5	24.3	9.4	35.4	6.9
LOS	D	A	C	A	D	A
Approach Delay	20.6		19.5			16.4
Approach LOS	C		B			B

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 81.2	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 18.3	Intersection LOS: B
Intersection Capacity Utilization 61.6%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 8: Heacock Street & Iris Avenue





















HCM 6th Signalized Intersection Summary  
 8: Heacock Street & Iris Avenue

Gateway Aviation TA (JN:13445)

11/10/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 		 		 	 
Traffic Volume (veh/h)	271	344	869	416	541	1077
Future Volume (veh/h)	271	344	869	416	541	1077
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1781	1900	1885	1811
Adj Flow Rate, veh/h	295	374	945	452	588	1171
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	8	0	1	6
Cap, veh/h	922	423	1198	570	686	2073
Arrive On Green	0.26	0.26	0.35	0.35	0.20	0.60
Sat Flow, veh/h	3510	1610	3474	1610	3483	3532
Grp Volume(v), veh/h	295	374	945	452	588	1171
Grp Sat Flow(s),veh/h/ln	1755	1610	1692	1610	1742	1721
Q Serve(g_s), s	6.0	19.8	22.3	22.4	14.5	18.2
Cycle Q Clear(g_c), s	6.0	19.8	22.3	22.4	14.5	18.2
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	922	423	1198	570	686	2073
V/C Ratio(X)	0.32	0.88	0.79	0.79	0.86	0.56
Avail Cap(c_a), veh/h	1153	529	1553	739	1309	3050
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.4	31.5	25.8	25.8	34.5	10.7
Incr Delay (d2), s/veh	0.2	13.9	2.1	4.5	1.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	8.8	8.3	8.4	5.8	5.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	26.6	45.4	27.9	30.3	35.7	10.9
LnGrp LOS	C	D	C	C	D	B
Approach Vol, veh/h	669		1397			1759
Approach Delay, s/veh	37.1		28.7			19.2
Approach LOS	D		C			B
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	22.1	37.7			59.8	29.1
Change Period (Y+Rc), s	4.6	6.2			6.2	5.8
Max Green Setting (Gmax), s	33.4	40.8			78.8	29.2
Max Q Clear Time (g_c+I1), s	16.5	24.4			20.2	21.8
Green Ext Time (p_c), s	1.0	7.0			10.0	1.5
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			25.8			
HCM 6th LOS			C			



Timings  
9: Heacock Street & Krameria Avenue-North

	↙	↖	↑	↘	↓
Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations	↙	↖	↑↓	↘	↑↑
Traffic Volume (vph)	248	274	890	123	820
Future Volume (vph)	248	274	890	123	820
Turn Type	Prot	Perm	NA	Prot	NA
Protected Phases	8		2	1	6
Permitted Phases		8			
Detector Phase	8	8	2	1	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	29.1	29.1	29.2	9.6	16.2
Total Split (s)	35.0	35.0	61.0	24.0	85.0
Total Split (%)	29.2%	29.2%	50.8%	20.0%	70.8%
Yellow Time (s)	4.1	4.1	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	6.2	4.6	6.2
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	Min	Max	Min
Act Effct Green (s)	17.3	17.3	33.1	20.0	57.8
Actuated g/C Ratio	0.20	0.20	0.38	0.23	0.67
v/c Ratio	0.72	0.50	0.82	0.33	0.39
Control Delay	45.3	7.0	29.7	35.0	7.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	45.3	7.0	29.7	35.0	7.5
LOS	D	A	C	C	A
Approach Delay	25.2		29.7		11.1
Approach LOS	C		C		B













Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 86.7	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay: 21.7	Intersection LOS: C
Intersection Capacity Utilization 62.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 9: Heacock Street & Krameria Avenue-North



HCM 6th Signalized Intersection Summary  
 9: Heacock Street & Krameria Avenue-North

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	248	274	890	123	123	820
Future Volume (veh/h)	248	274	890	123	123	820
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1885	1841	1870	1870	1811	1841
Adj Flow Rate, veh/h	270	298	967	134	134	891
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	4	2	2	6	4
Cap, veh/h	393	341	1127	156	400	2260
Arrive On Green	0.22	0.22	0.36	0.36	0.23	0.65
Sat Flow, veh/h	1795	1560	3228	434	1725	3589
Grp Volume(v), veh/h	270	298	548	553	134	891
Grp Sat Flow(s),veh/h/ln	1795	1560	1777	1792	1725	1749
Q Serve(g_s), s	11.6	15.4	23.9	23.9	5.4	10.1
Cycle Q Clear(g_c), s	11.6	15.4	23.9	23.9	5.4	10.1
Prop In Lane	1.00	1.00		0.24	1.00	
Lane Grp Cap(c), veh/h	393	341	639	644	400	2260
V/C Ratio(X)	0.69	0.87	0.86	0.86	0.34	0.39
Avail Cap(c_a), veh/h	641	557	1163	1173	400	3292
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.1	31.6	24.8	24.8	26.8	7.0
Incr Delay (d2), s/veh	0.8	4.8	1.3	1.3	2.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	6.2	9.0	9.1	2.3	2.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	30.9	36.4	26.2	26.2	29.0	7.1
LnGrp LOS	C	D	C	C	C	A
Approach Vol, veh/h	568		1101			1025
Approach Delay, s/veh	33.8		26.2			9.9
Approach LOS	C		C			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	24.0	36.3			60.3	23.4
Change Period (Y+Rc), s	4.6	6.2			6.2	5.1
Max Green Setting (Gmax), s	19.4	54.8			78.8	29.9
Max Q Clear Time (g_c+1), s	7.4	25.9			12.1	17.4
Green Ext Time (p_c), s	0.1	4.2			3.9	0.9
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			21.6			
HCM 6th LOS			C			

Timings  
10: Heacock Street & Driveway 1



Lane Group	EBL	EBT	NBL	NBT	SBT	SBR	Ø1	Ø8
Lane Configurations								
Traffic Volume (vph)	29	0	18	913	1134	2		
Future Volume (vph)	29	0	18	913	1134	2		
Turn Type	Perm	NA	Prot	NA	NA	Perm		
Protected Phases		4	5	2	6		1	8
Permitted Phases	4					6		
Detector Phase	4	4	5	2	6	6		
Switch Phase								
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	26.7	26.7	9.6	23.2	23.2	23.2	9.6	26.7
Total Split (s)	28.0	28.0	13.0	82.4	79.0	79.0	9.6	28.0
Total Split (%)	23.3%	23.3%	10.8%	68.7%	65.8%	65.8%	8%	23%
Yellow Time (s)	3.7	3.7	3.6	5.2	5.2	5.2	3.6	3.7
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.7	4.7	4.6	6.2	6.2	6.2		
Lead/Lag			Lead	Lag	Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	Min	Min	Min	None	None
Act Effct Green (s)	12.6	12.6	6.0	40.2	38.8	38.8		
Actuated g/C Ratio	0.22	0.22	0.10	0.70	0.67	0.67		
v/c Ratio	0.10	0.12	0.11	0.40	0.52	0.00		
Control Delay	23.3	0.5	32.0	6.3	9.5	0.0		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay	23.3	0.5	32.0	6.3	9.5	0.0		
LOS	C	A	C	A	A	A		
Approach Delay		9.0		6.8	9.4			
Approach LOS		A		A	A			

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 57.7	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.52	
Intersection Signal Delay: 8.3	Intersection LOS: A
Intersection Capacity Utilization 48.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 10: Heacock Street & Driveway 1

Ø1	Ø2	Ø4
9.6 s	32.4 s	28 s
Ø5	Ø6	Ø8
13 s	79 s	28 s

HCM 6th Signalized Intersection Summary  
 10: Heacock Street & Driveway 1

Gateway Aviation TA (JN:13445)

11/17/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	0	50	0	0	0	18	913	0	0	1134	2
Future Volume (veh/h)	29	0	50	0	0	0	18	913	0	0	1134	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1870	1870	1900	1856	1900
Adj Flow Rate, veh/h	32	0	54	0	0	0	20	992	0	0	1233	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	2	2	0	3	0
Cap, veh/h	401	0	226	0	267	0	44	2265	0	4	1831	836
Arrive On Green	0.14	0.00	0.14	0.00	0.00	0.00	0.02	0.64	0.00	0.00	0.52	0.52
Sat Flow, veh/h	1810	0	1610	0	1900	0	1810	3647	0	1810	3526	1610
Grp Volume(v), veh/h	32	0	54	0	0	0	20	992	0	0	1233	2
Grp Sat Flow(s),veh/h/ln	1810	0	1610	0	1900	0	1810	1777	0	1810	1763	1610
Q Serve(g_s), s	0.8	0.0	1.5	0.0	0.0	0.0	0.5	6.9	0.0	0.0	12.7	0.0
Cycle Q Clear(g_c), s	0.8	0.0	1.5	0.0	0.0	0.0	0.5	6.9	0.0	0.0	12.7	0.0
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	401	0	226	0	267	0	44	2265	0	4	1831	836
V/C Ratio(X)	0.08	0.00	0.24	0.00	0.00	0.00	0.45	0.44	0.00	0.00	0.67	0.00
Avail Cap(c_a), veh/h	1005	0	764	0	901	0	310	5514	0	184	5226	2387
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	18.5	0.0	18.8	0.0	0.0	0.0	23.6	4.5	0.0	0.0	8.7	5.7
Incr Delay (d2), s/veh	0.1	0.0	0.5	0.0	0.0	0.0	2.7	0.1	0.0	0.0	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.5	0.0	0.0	0.0	0.2	0.8	0.0	0.0	2.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.5	0.0	19.3	0.0	0.0	0.0	26.3	4.6	0.0	0.0	9.2	5.7
LnGrp LOS	B	A	B	A	A	A	C	A	A	A	A	A
Approach Vol, veh/h		86			0			1012			1235	
Approach Delay, s/veh		19.0			0.0			5.0			9.2	
Approach LOS		B						A			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	37.5		11.6	5.8	31.7		11.6				
Change Period (Y+Rc), s	4.6	6.2		* 4.7	4.6	6.2		* 4.7				
Max Green Setting (Gmax), s	5.0	76.2		* 23	8.4	72.8		* 23				
Max Q Clear Time (g_c+I1), s	0.0	8.9		3.5	2.5	14.7		0.0				
Green Ext Time (p_c), s	0.0	7.7		0.3	0.0	10.8		0.0				

Intersection Summary

HCM 6th Ctrl Delay	7.7
HCM 6th LOS	A

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection						
Int Delay, s/veh	1.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↕	↗	↘	↕
Traffic Vol, veh/h	61	57	1077	20	18	1592
Future Vol, veh/h	61	57	1077	20	18	1592
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	0	140	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	10	6	14	8	9
Mvmt Flow	66	62	1171	22	20	1730

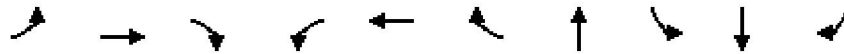
Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	2076	586	0	0	1193
Stage 1	1171	-	-	-	-
Stage 2	905	-	-	-	-
Critical Hdwy	6.84	7.1	-	-	4.26
Critical Hdwy Stg 1	5.84	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-
Follow-up Hdwy	3.52	3.4	-	-	2.28
Pot Cap-1 Maneuver	~ 46	434	-	-	548
Stage 1	257	-	-	-	-
Stage 2	355	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	~ 44	434	-	-	548
Mov Cap-2 Maneuver	154	-	-	-	-
Stage 1	257	-	-	-	-
Stage 2	342	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	30.4	0	0.1
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	154	434	548	-
HCM Lane V/C Ratio	-	-	0.431	0.143	0.036	-
HCM Control Delay (s)	-	-	45	14.7	11.8	-
HCM Lane LOS	-	-	E	B	B	-
HCM 95th %tile Q(veh)	-	-	1.9	0.5	0.1	-

Notes  
 ~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Timings  
12: Heacock Street & San Michele Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBL	SBT	SBR	Ø5
Lane Configurations	↖	↗	↘	↖	↗	↘	↕	↖	↗	↘	
Traffic Volume (vph)	59	348	7	31	102	590	1165	337	1743	36	
Future Volume (vph)	59	348	7	31	102	590	1165	337	1743	36	
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	NA	Prot	NA	Perm	
Protected Phases	7	4		3	8	1	2	1	6		5
Permitted Phases			4			8				6	
Detector Phase	7	4	4	3	8	1	2	1	6	6	
Switch Phase											
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0
Minimum Split (s)	9.5	30.5	30.5	8.5	30.5	8.5	34.5	8.5	34.5	34.5	8.5
Total Split (s)	12.0	37.4	37.4	9.6	35.0	36.0	37.0	36.0	64.5	64.5	8.5
Total Split (%)	10.0%	31.2%	31.2%	8.0%	29.2%	30.0%	30.8%	30.0%	53.8%	53.8%	7%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5	5.5	
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	None	Max	Max	None
Act Effct Green (s)	12.8	24.5	24.5	5.1	14.5	48.6	32.2	28.4	65.2	65.2	
Actuated g/C Ratio	0.12	0.23	0.23	0.05	0.14	0.46	0.30	0.27	0.61	0.61	
v/c Ratio	0.28	0.86	0.01	0.38	0.43	0.70	1.21	0.73	1.66	0.03	
Control Delay	47.7	60.0	0.0	66.4	49.9	24.7	135.7	46.5	320.5	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	47.7	60.0	0.0	66.4	49.9	24.7	135.7	46.5	320.5	0.1	
LOS	D	E	A	E	D	C	F	D	F	A	
Approach Delay		57.2			30.1		135.7		271.4		
Approach LOS		E			C		F		F		

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 106.1  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.66  
 Intersection Signal Delay: 175.7  
 Intersection LOS: F  
 Intersection Capacity Utilization 133.5%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 12: Heacock Street & San Michele Road



HCM 6th Signalized Intersection Summary  
 12: Heacock Street & San Michele Road

Gateway Aviation TA (JN:13445)

04/19/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	348	7	31	102	590	0	1165	45	337	1743	36
Future Volume (veh/h)	59	348	7	31	102	590	0	1165	45	337	1743	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1870	1900	1900	1900	1885	1870	1900
Adj Flow Rate, veh/h	64	378	8	34	111	641	0	1266	49	366	1895	39
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	2	0	0	0	1	2	0
Cap, veh/h	86	428	353	44	383	673	2	1122	43	400	1112	958
Arrive On Green	0.05	0.23	0.23	0.02	0.20	0.20	0.00	0.32	0.32	0.22	0.59	0.59
Sat Flow, veh/h	1810	1900	1569	1810	1900	1585	1810	3543	137	1795	1870	1610
Grp Volume(v), veh/h	64	378	8	34	111	641	0	644	671	366	1895	39
Grp Sat Flow(s),veh/h/ln	1810	1900	1569	1810	1900	1585	1810	1805	1875	1795	1870	1610
Q Serve(g_s), s	3.5	19.2	0.4	1.9	4.9	16.7	0.0	31.5	31.5	19.8	59.2	0.6
Cycle Q Clear(g_c), s	3.5	19.2	0.4	1.9	4.9	16.7	0.0	31.5	31.5	19.8	59.2	0.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.07	1.00		1.00
Lane Grp Cap(c), veh/h	86	428	353	44	383	673	2	571	594	400	1112	958
V/C Ratio(X)	0.74	0.88	0.02	0.77	0.29	0.95	0.00	1.13	1.13	0.91	1.70	0.04
Avail Cap(c_a), veh/h	136	609	503	93	563	823	73	571	594	568	1112	958
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.8	37.3	25.9	48.3	33.7	27.6	0.0	34.0	34.0	37.7	20.2	3.4
Incr Delay (d2), s/veh	4.6	8.3	0.0	9.8	0.2	17.4	0.0	78.1	78.1	12.5	320.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	9.8	0.1	0.9	2.2	6.8	0.0	25.0	26.0	9.5	119.4	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.4	45.6	25.9	58.1	33.8	45.1	0.0	112.1	112.1	50.3	340.7	3.5
LnGrp LOS	D	D	C	E	C	D	A	F	F	D	F	A
Approach Vol, veh/h		450			786			1315			2300	
Approach Delay, s/veh		46.1			44.1			112.1			288.8	
Approach LOS		D			D			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	27.7	37.0	6.9	27.9	0.0	64.7	9.3	25.6				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	31.5	* 32	5.1	31.9	4.0	59.0	7.5	29.5				
Max Q Clear Time (g_c+I1), s	21.8	33.5	3.9	21.2	0.0	61.2	5.5	18.7				
Green Ext Time (p_c), s	0.4	0.0	0.0	1.2	0.0	0.0	0.0	1.3				

Intersection Summary

HCM 6th Ctrl Delay	178.7
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection								
Intersection Delay, s/veh	307.9							
Intersection LOS	F							
Approach	EB	WB	NB		SB			
Entry Lanes	3	2	2		2			
Conflicting Circle Lanes	2	2	2		2			
Adj Approach Flow, veh/h	0	1426	924		1403			
Demand Flow Rate, veh/h	0	1507	945		1403			
Vehicles Circulating, veh/h	1030	946	906		1745			
Vehicles Exiting, veh/h	2118	905	1412		708			
Ped Vol Crossing Leg, #/h	0	0	0		0			
Ped Cap Adj	1.000	1.000	1.000		1.000			
Approach Delay, s/veh	0.0	151.6	26.0		652.4			
Approach LOS	-	F	D		F			
Lane	Left		Right		Left		Right	
Designated Moves	LT		TR		LT		TR	
Assumed Moves	LT		TR		LT		TR	
RT Channelized								
Lane Util	0.470	0.530	0.470	0.530	0.470	0.530		
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535		
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328		
Entry Flow, veh/h	708	799	444	501	659	744		
Cap Entry Lane, veh/h	565	635	587	657	271	322		
Entry HV Adj Factor	0.947	0.946	0.978	0.977	1.001	0.999		
Flow Entry, veh/h	670	756	434	490	659	744		
Cap Entry, veh/h	535	601	574	643	271	322		
V/C Ratio	1.252	1.257	0.757	0.762	2.431	2.310		
Control Delay, s/veh	152.2	151.0	27.0	25.1	683.9	624.6		
LOS	F	F	D	D	F	F		
95th %tile Queue, veh	26	29	7	7	53	58		



Timings  
14: Indian Street & San Michele Road

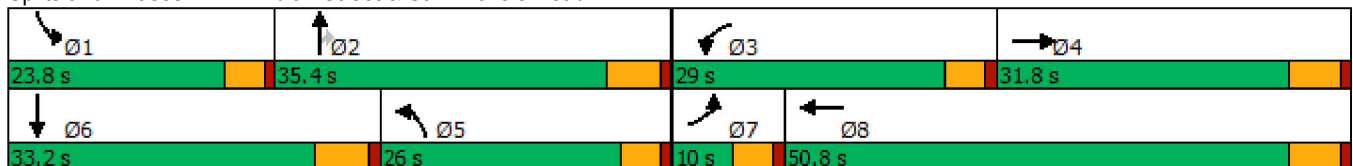


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↘	↕	↘	↕	↘	↕	↗	↘	↕
Traffic Volume (vph)	28	171	165	225	447	122	121	88	194
Future Volume (vph)	28	171	165	225	447	122	121	88	194
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8	5	2		1	6
Permitted Phases							2		
Detector Phase	7	4	3	8	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	31.8	9.6	31.8	9.6	32.8	32.8	9.6	32.8
Total Split (s)	10.0	31.8	29.0	50.8	26.0	35.4	35.4	23.8	33.2
Total Split (%)	8.3%	26.5%	24.2%	42.3%	21.7%	29.5%	29.5%	19.8%	27.7%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	5.5	15.4	12.8	29.9	15.5	22.3	22.3	9.1	13.2
Actuated g/C Ratio	0.07	0.19	0.16	0.38	0.20	0.28	0.28	0.12	0.17
v/c Ratio	0.24	0.79	0.60	0.24	0.70	0.27	0.21	0.45	0.40
Control Delay	48.1	18.9	42.5	16.8	37.8	28.3	4.7	44.4	32.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.1	18.9	42.5	16.8	37.8	28.3	4.7	44.4	32.1
LOS	D	B	D	B	D	C	A	D	C
Approach Delay		20.0		26.0		30.3			35.6
Approach LOS		C		C		C			D

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 79  
 Natural Cycle: 95  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.79  
 Intersection Signal Delay: 26.8  
 Intersection LOS: C  
 Intersection Capacity Utilization 84.5%  
 ICU Level of Service E  
 Analysis Period (min) 15























Splits and Phases: 14: Indian Street & San Michele Road



HCM 6th Signalized Intersection Summary  
 14: Indian Street & San Michele Road

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	171	514	165	225	70	447	122	121	88	194	27
Future Volume (veh/h)	28	171	514	165	225	70	447	122	121	88	194	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		1.00	1.00		0.68
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1856	1826	1826	1796	1796	1856	1870	1841	1841
Adj Flow Rate, veh/h	30	186	559	179	245	76	486	133	132	96	211	29
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	5	5	3	5	5	7	7	3	2	4	4
Cap, veh/h	48	433	377	211	912	275	556	653	571	122	774	101
Arrive On Green	0.03	0.25	0.25	0.12	0.34	0.34	0.16	0.36	0.36	0.07	0.26	0.26
Sat Flow, veh/h	1739	1735	1510	1767	2675	806	3421	1796	1571	1781	3002	390
Grp Volume(v), veh/h	30	186	559	179	165	156	486	133	132	96	125	115
Grp Sat Flow(s),veh/h/ln	1739	1735	1510	1767	1826	1655	1711	1796	1571	1781	1841	1552
Q Serve(g_s), s	1.8	9.4	26.0	10.3	6.8	7.2	14.5	5.3	6.1	5.5	5.6	6.2
Cycle Q Clear(g_c), s	1.8	9.4	26.0	10.3	6.8	7.2	14.5	5.3	6.1	5.5	5.6	6.2
Prop In Lane	1.00		1.00	1.00		0.49	1.00		1.00	1.00		0.25
Lane Grp Cap(c), veh/h	48	433	377	211	623	564	556	653	571	122	474	400
V/C Ratio(X)	0.62	0.43	1.48	0.85	0.26	0.28	0.87	0.20	0.23	0.79	0.26	0.29
Avail Cap(c_a), veh/h	90	433	377	414	788	714	702	653	571	328	484	408
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.1	32.9	39.1	45.0	24.9	25.0	42.6	22.8	23.1	47.8	30.8	31.0
Incr Delay (d2), s/veh	4.7	0.3	231.7	3.6	0.1	0.1	8.5	0.1	0.1	4.2	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	3.8	33.3	4.6	2.8	2.7	6.5	2.1	2.2	2.5	2.4	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.9	33.1	270.8	48.6	25.0	25.1	51.1	22.9	23.1	52.0	30.9	31.2
LnGrp LOS	D	C	F	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		775			500			751			336	
Approach Delay, s/veh		205.4			33.5			41.2			37.0	
Approach LOS		F			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.7	43.7	17.0	31.8	22.7	32.7	7.5	41.3				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	5.8	* 5.8	4.6	5.8				
Max Green Setting (Gmax), s	19.2	29.6	24.4	26.0	21.4	* 27	5.4	45.0				
Max Q Clear Time (g_c+I1), s	7.5	8.1	12.3	28.0	16.5	8.2	3.8	9.2				
Green Ext Time (p_c), s	0.1	0.5	0.2	0.0	0.5	0.7	0.0	1.1				

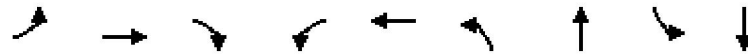
Intersection Summary

HCM 6th Ctrl Delay	92.8
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
15: Indian Street & Nandina Avenue

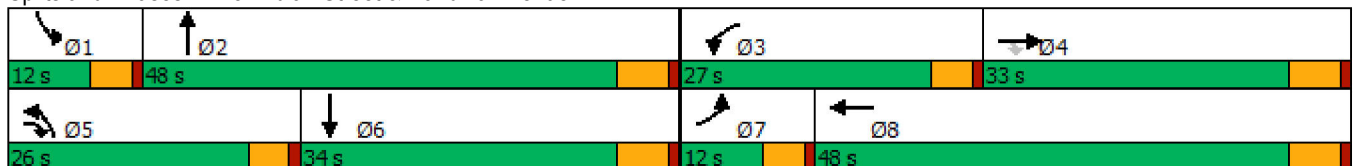


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↑	↗	↖	↗	↖	↕	↖	↕
Traffic Volume (vph)	48	112	290	186	46	91	585	20	817
Future Volume (vph)	48	112	290	186	46	91	585	20	817
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	5	3	8	5	2	1	6
Permitted Phases	4								
Detector Phase	7	4	5	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	29.8	9.6	9.6	29.8	9.6	26.8	9.6	26.8
Total Split (s)	12.0	33.0	26.0	27.0	48.0	26.0	48.0	12.0	34.0
Total Split (%)	10.0%	27.5%	21.7%	22.5%	40.0%	21.7%	40.0%	10.0%	28.3%
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	6.5	13.6	30.1	15.3	27.1	10.6	40.1	5.9	28.8
Actuated g/C Ratio	0.07	0.15	0.34	0.17	0.30	0.12	0.45	0.07	0.32
v/c Ratio	0.38	0.47	0.49	0.73	0.22	0.57	0.43	0.19	0.77
Control Delay	52.0	42.7	17.6	52.9	15.2	52.5	20.4	48.7	35.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.0	42.7	17.6	52.9	15.2	52.5	20.4	48.7	35.0
LOS	D	D	B	D	B	D	C	D	C
Approach Delay	27.5		39.5			24.3		35.3	
Approach LOS	C		D			C		D	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 89.5  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.77  
 Intersection Signal Delay: 30.8  
 Intersection LOS: C  
 Intersection Capacity Utilization 64.5%  
 ICU Level of Service C  
 Analysis Period (min) 15























Splits and Phases: 15: Indian Street & Nandina Avenue



HCM 6th Signalized Intersection Summary  
 15: Indian Street & Nandina Avenue

Gateway Aviation TA (JN:13445)

11/10/2020

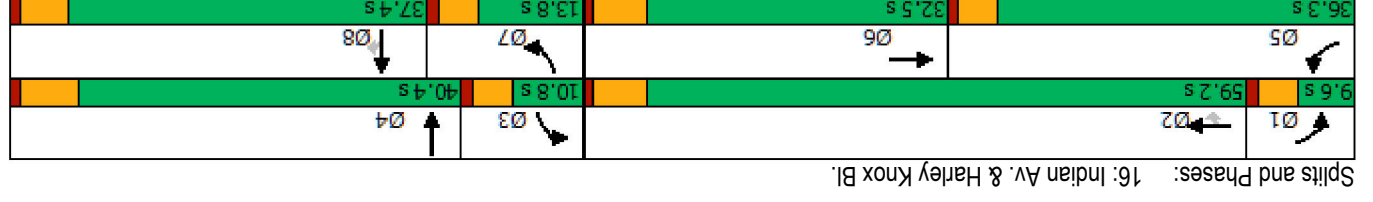
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	112	290	186	46	57	91	585	75	20	817	36
Future Volume (veh/h)	48	112	290	186	46	57	91	585	75	20	817	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1722	1737	1633	1500	1500	1485	1870	1870	1796	1870	1870
Adj Flow Rate, veh/h	52	122	315	202	50	62	99	636	82	22	888	39
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	12	11	18	27	27	28	2	2	7	2	2
Cap, veh/h	76	389	457	235	204	253	119	1144	147	41	1038	46
Arrive On Green	0.04	0.23	0.23	0.15	0.34	0.34	0.08	0.35	0.35	0.02	0.29	0.29
Sat Flow, veh/h	1810	1722	1472	1555	609	755	1414	3247	418	1711	3556	156
Grp Volume(v), veh/h	52	122	315	202	0	112	99	366	352	22	467	460
Grp Sat Flow(s),veh/h/ln	1810	1722	1472	1555	0	1364	1414	1870	1795	1711	1870	1842
Q Serve(g_s), s	2.4	5.0	15.8	10.7	0.0	5.0	5.8	13.3	13.3	1.1	19.9	19.9
Cycle Q Clear(g_c), s	2.4	5.0	15.8	10.7	0.0	5.0	5.8	13.3	13.3	1.1	19.9	19.9
Prop In Lane	1.00		1.00	1.00		0.55	1.00		0.23	1.00		0.08
Lane Grp Cap(c), veh/h	76	389	457	235	0	457	119	659	632	41	546	537
V/C Ratio(X)	0.69	0.31	0.69	0.86	0.00	0.24	0.83	0.56	0.56	0.54	0.86	0.86
Avail Cap(c_a), veh/h	159	556	599	413	0	683	359	936	899	150	626	616
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.8	27.2	25.5	34.9	0.0	20.3	38.0	22.0	22.0	40.7	28.2	28.2
Incr Delay (d2), s/veh	4.1	0.5	2.2	3.5	0.0	0.3	5.5	0.7	0.8	4.0	10.2	10.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	2.0	5.3	4.0	0.0	1.5	2.1	5.3	5.1	0.5	9.5	9.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.9	27.6	27.7	38.4	0.0	20.6	43.5	22.7	22.8	44.7	38.4	38.5
LnGrp LOS	D	C	C	D	A	C	D	C	C	D	D	D
Approach Vol, veh/h		489			314			817			949	
Approach Delay, s/veh		29.4			32.0			25.2			38.6	
Approach LOS		C			C			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.6	35.5	17.4	24.8	11.7	30.4	8.1	34.1				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	7.4	42.2	22.4	27.2	21.4	28.2	7.4	42.2				
Max Q Clear Time (g_c+I1), s	3.1	15.3	12.7	17.8	7.8	21.9	4.4	7.0				
Green Ext Time (p_c), s	0.0	4.1	0.2	1.2	0.1	2.7	0.0	0.6				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				31.8								
HCM 6th LOS				C								



Lane Group	EBL	EBT	EBR	WBL	WBT	WBL	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↔↔↔	↔↔↔	↔	↔↔↔	↔↔↔	↔	↔↔↔	↔↔↔	↔	↔	↔↔
Traffic Volume (vph)	343	774	108	242	730	118	295	246	326	562	562
Future Volume (vph)	343	774	108	242	730	118	295	246	326	562	562
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	NA
Protected Phases	5	2	2	1	6	3	8	8	7	4	4
Permitted Phases	2	2	2	1	6	3	8	8	7	4	4
Detector Phase	5	2	2	1	6	3	8	8	7	4	4
Switch Phase	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	35.8	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2	40.2
Total Split (s)	36.3	59.2	59.2	9.6	32.5	10.8	37.4	37.4	13.8	40.4	40.4
Total Split (%)	30.3%	49.3%	49.3%	8.0%	27.1%	9.0%	31.2%	31.2%	11.5%	33.7%	33.7%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.4	4.4	3.6	5.2	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	5.4	5.4	4.6	6.2	6.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effort Green (s)	30.3	51.4	51.4	5.0	26.2	6.2	32.0	32.0	9.2	34.2	34.2
Actuated g/C Ratio	0.26	0.44	0.44	0.04	0.22	0.05	0.27	0.27	0.08	0.29	0.29
v/c Ratio	0.94	0.39	0.17	3.51	0.89	0.79	0.38	0.49	2.53	1.22	1.22
Control Delay	77.1	23.2	4.1	1173.2	54.2	87.1	37.0	17.7	728.1	137.3	137.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	77.1	23.2	4.1	1173.2	54.2	87.1	37.0	17.7	728.1	137.3	137.3
LOS	E	C	A	F	D	F	D	B	F	F	F
Approach Delay	36.6	291.6	38.8	260.7	260.7	260.7	260.7	260.7	260.7	260.7	260.7
Approach LOS	D	F	D	F	D	F	D	B	F	F	F

Intersection Summary											
Cycle Length:	120										
Actuated Cycle Length:	118.1										
Natural Cycle:	120										
Control Type:	Actuated-Uncoordinated										
Maximum v/c Ratio:	3.51										
Intersection Signal Delay:	176.6										
Intersection Capacity Utilization:	95.9%										
ICU Level of Service:	F										
Analysis Period (min):	15										

Splits and Phases: 16: Indian Av. & Harley Knox Bl.											
Phase	Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8	Ø9	Ø10	Ø11
Duration (s)	9.6	59.2	10.8	40.4	36.3	32.5	13.8	37.4	37.4	37.4	37.4
Phase Diagram	↔↔↔	↔↔↔	↔↔↔	↔↔↔	↔↔↔	↔↔↔	↔↔↔	↔↔↔	↔↔↔	↔↔↔	↔↔↔



HCM 6th Signalized Intersection Summary  
 16: Indian Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/10/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	343	774	108	242	730	169	118	295	246	326	562	672
Future Volume (veh/h)	343	774	108	242	730	169	118	295	246	326	562	672
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1648	1841	1707	1885	1811	1811	1707	1678	1870	1900	1856	1856
Adj Flow Rate, veh/h	373	841	108	263	793	164	128	321	260	354	611	681
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	17	4	13	1	6	6	13	15	2	0	3	3
Cap, veh/h	395	2149	619	77	899	184	168	855	420	143	518	462
Arrive On Green	0.25	0.43	0.43	0.04	0.22	0.22	0.05	0.27	0.27	0.08	0.29	0.29
Sat Flow, veh/h	1570	5025	1447	1795	4112	844	3155	3188	1565	1810	1763	1572
Grp Volume(v), veh/h	373	841	108	263	634	323	128	321	260	354	611	681
Grp Sat Flow(s),veh/h/ln	1570	1675	1447	1795	1648	1659	1577	1594	1565	1810	1763	1572
Q Serve(g_s), s	27.1	13.4	5.4	5.0	21.7	21.9	4.7	9.5	17.0	9.2	34.2	34.2
Cycle Q Clear(g_c), s	27.1	13.4	5.4	5.0	21.7	21.9	4.7	9.5	17.0	9.2	34.2	34.2
Prop In Lane	1.00		1.00	1.00		0.51	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	395	2149	619	77	721	363	168	855	420	143	518	462
V/C Ratio(X)	0.94	0.39	0.17	3.41	0.88	0.89	0.76	0.38	0.62	2.47	1.18	1.47
Avail Cap(c_a), veh/h	428	2306	664	77	756	381	168	877	430	143	518	462
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.7	22.9	20.6	55.7	44.0	44.1	54.3	34.6	37.4	53.6	41.1	41.1
Incr Delay (d2), s/veh	27.8	0.1	0.1	1116.0	11.3	21.2	16.6	0.3	2.6	683.8	99.2	224.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.0	5.0	1.8	26.1	9.7	10.8	2.2	3.6	6.6	31.2	28.4	41.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	70.5	23.0	20.7	1171.7	55.3	65.3	71.0	34.9	40.0	737.4	140.3	265.6
LnGrp LOS	E	C	C	F	E	E	E	C	D	F	F	F
Approach Vol, veh/h		1322			1220			709			1646	
Approach Delay, s/veh		36.2			298.6			43.3			320.6	
Approach LOS		D			F			D			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.6	55.6	10.8	40.4	33.9	31.2	13.8	37.4				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	5.0	53.4	6.2	34.2	31.7	26.7	9.2	* 32				
Max Q Clear Time (g_c+1), s	7.0	15.4	6.7	36.2	29.1	23.9	11.2	19.0				
Green Ext Time (p_c), s	0.0	6.4	0.0	0.0	0.2	1.5	0.0	2.3				

Intersection Summary

HCM 6th Ctrl Delay	198.2
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

**APPENDIX 7.6:**

**HORIZON YEAR (2045) WITH PROJECT (PEAK) WITH HEACOCK STREET EXTENSION  
CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**

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Timings

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

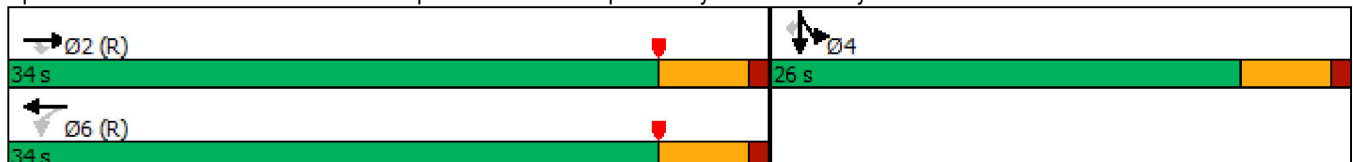


Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↑
Traffic Volume (vph)	1157	28	216	666	1	315
Future Volume (vph)	1157	28	216	666	1	315
Turn Type	NA	Perm	Perm	NA	NA	Perm
Protected Phases	2			6	4	
Permitted Phases		2	6			4
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	25.0	25.0	10.0	10.0
Total Split (s)	34.0	34.0	34.0	34.0	26.0	26.0
Total Split (%)	56.7%	56.7%	56.7%	56.7%	43.3%	43.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	29.0	29.0	29.0	29.0	21.0	21.0
Actuated g/C Ratio	0.48	0.48	0.48	0.48	0.35	0.35
v/c Ratio	0.76	0.04	2.26	0.42	1.96	0.55
Control Delay	16.3	3.1	610.4	18.4	459.6	12.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.3	3.1	610.4	18.4	459.6	12.4
LOS	B	A	F	B	F	B
Approach Delay	16.0			163.5	353.5	
Approach LOS	B			F	F	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 2.26  
 Intersection Signal Delay: 186.2  
 Intersection LOS: F  
 Intersection Capacity Utilization 185.9%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

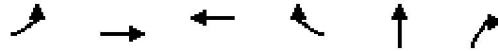
11/10/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑						↑	↑
Traffic Volume (veh/h)	0	1157	28	216	666	0	0	0	0	1010	1	315
Future Volume (veh/h)	0	1157	28	216	666	0	0	0	0	1010	1	315
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1826	1826	1589	1870	0				1781	1900	1781
Adj Flow Rate, veh/h	0	1258	30	235	724	0				1098	1	282
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	5	5	21	2	0				8	0	8
Cap, veh/h	0	1677	748	189	1718	0				633	1	528
Arrive On Green	0.00	0.48	0.48	0.97	0.97	0.00				0.35	0.35	0.35
Sat Flow, veh/h	0	3561	1547	364	3647	0				1808	2	1510
Grp Volume(v), veh/h	0	1258	30	235	724	0				1099	0	282
Grp Sat Flow(s),veh/h/ln	0	1735	1547	364	1777	0				1810	0	1510
Q Serve(g_s), s	0.0	17.6	0.6	11.4	0.7	0.0				21.0	0.0	9.0
Cycle Q Clear(g_c), s	0.0	17.6	0.6	29.0	0.7	0.0				21.0	0.0	9.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1677	748	189	1718	0				633	0	528
V/C Ratio(X)	0.00	0.75	0.04	1.24	0.42	0.00				1.74	0.00	0.53
Avail Cap(c_a), veh/h	0	1677	748	189	1718	0				633	0	528
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.74	0.74	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	12.6	8.2	13.4	0.5	0.0				19.5	0.0	15.6
Incr Delay (d2), s/veh	0.0	3.1	0.1	138.2	0.6	0.0				337.4	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.7	0.2	9.0	0.3	0.0				66.5	0.0	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	15.7	8.3	151.6	1.1	0.0				356.9	0.0	16.6
LnGrp LOS	A	B	A	F	A	A				F	A	B
Approach Vol, veh/h		1288			959						1381	
Approach Delay, s/veh		15.5			38.0						287.4	
Approach LOS		B			D						F	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		34.0		26.0		34.0						
Change Period (Y+Rc), s		5.0		5.0		5.0						
Max Green Setting (Gmax), s		29.0		21.0		29.0						
Max Q Clear Time (g_c+I1), s		19.6		23.0		31.0						
Green Ext Time (p_c), s		4.1		0.0		0.0						
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				125.0								
HCM 6th LOS				F								

Timings

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

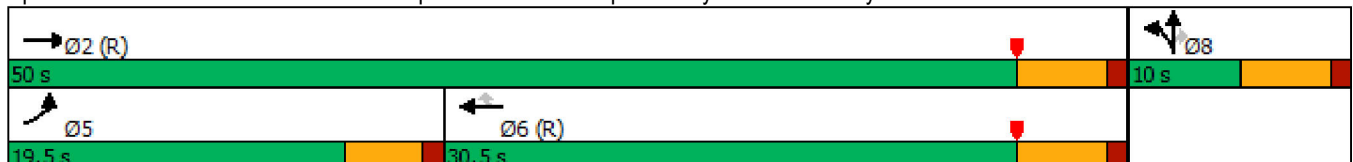


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	808	1359	824	1149	7	309
Future Volume (vph)	808	1359	824	1149	7	309
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	26.0	24.0	24.0	10.0	10.0
Total Split (s)	19.5	50.0	30.5	30.5	10.0	10.0
Total Split (%)	32.5%	83.3%	50.8%	50.8%	16.7%	16.7%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max
Act Effect Green (s)	15.0	45.0	25.5	25.5	5.0	5.0
Actuated g/C Ratio	0.25	0.75	0.42	0.42	0.08	0.08
v/c Ratio	2.02	0.61	0.63	1.65	0.48	1.42
Control Delay	483.1	3.6	15.9	316.0	37.9	234.0
Queue Delay	0.0	1.0	0.0	0.0	0.0	0.0
Total Delay	483.1	4.6	15.9	316.0	37.9	234.0
LOS	F	A	B	F	D	F
Approach Delay		183.0	190.6		199.8	
Approach LOS		F	F		F	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 29 (48%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 2.02  
 Intersection Signal Delay: 187.7  
 Intersection LOS: F  
 Intersection Capacity Utilization 185.9%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

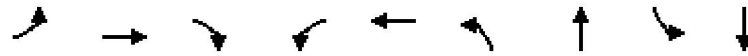
2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

11/10/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗			↗	↘		↗	↘			
Traffic Volume (veh/h)	808	1359	0	0	824	1149	58	7	309	0	0	0
Future Volume (veh/h)	808	1359	0	0	824	1149	58	7	309	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1841	1737	0	0	1796	1752	1826	1900	1826			
Adj Flow Rate, veh/h	878	1477	0	0	896	917	63	8	271			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	4	11	0	0	7	10	5	0	5			
Cap, veh/h	438	2475	0	0	1450	630	135	17	129			
Arrive On Green	0.50	1.00	0.00	0.00	0.43	0.43	0.08	0.08	0.08			
Sat Flow, veh/h	1753	3387	0	0	3503	1484	1614	205	1547			
Grp Volume(v), veh/h	878	1477	0	0	896	917	71	0	271			
Grp Sat Flow(s),veh/h/ln	1753	1650	0	0	1706	1484	1819	0	1547			
Q Serve(g_s), s	15.0	0.0	0.0	0.0	12.3	25.5	2.2	0.0	5.0			
Cycle Q Clear(g_c), s	15.0	0.0	0.0	0.0	12.3	25.5	2.2	0.0	5.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.89		1.00			
Lane Grp Cap(c), veh/h	438	2475	0	0	1450	630	152	0	129			
V/C Ratio(X)	2.00	0.60	0.00	0.00	0.62	1.45	0.47	0.00	2.10			
Avail Cap(c_a), veh/h	438	2475	0	0	1450	630	152	0	129			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.57	0.57	0.00	0.00	0.80	0.80	1.00	0.00	1.00			
Uniform Delay (d), s/veh	15.0	0.0	0.0	0.0	13.4	17.3	26.2	0.0	27.5			
Incr Delay (d2), s/veh	456.1	0.6	0.0	0.0	1.6	211.5	10.0	0.0	521.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	58.7	0.2	0.0	0.0	4.0	43.7	1.3	0.0	20.3			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	471.1	0.6	0.0	0.0	15.0	228.8	36.3	0.0	548.6			
LnGrp LOS	F	A	A	A	B	F	D	A	F			
Approach Vol, veh/h		2355			1813			342				
Approach Delay, s/veh		176.0			123.2			442.2				
Approach LOS		F			F			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		50.0			19.5	30.5		10.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		45.0			15.0	25.5		5.0				
Max Q Clear Time (g_c+I1), s		2.0			17.0	27.5		7.0				
Green Ext Time (p_c), s		8.7			0.0	0.0		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					175.0							
HCM 6th LOS					F							

Timings  
3: Western Way & Harley Knox Bl.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↑↑↑	↗	↖	↑↑↑	↖	↗	↖	↗
Traffic Volume (vph)	105	1468	10	13	1574	1	0	7	0
Future Volume (vph)	105	1468	10	13	1574	1	0	7	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	NA
Protected Phases	5	2		1	6		8		4
Permitted Phases			2			8		4	
Detector Phase	5	2	2	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	21.8	21.8	9.6	21.8	32.6	32.6	32.6	32.6
Total Split (s)	22.0	75.4	75.4	9.6	63.0	35.0	35.0	35.0	35.0
Total Split (%)	18.3%	62.8%	62.8%	8.0%	52.5%	29.2%	29.2%	29.2%	29.2%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	11.7	58.0	58.0	6.4	45.6	15.0	15.0	15.0	15.0
Actuated g/C Ratio	0.16	0.81	0.81	0.09	0.64	0.21	0.21	0.21	0.21
v/c Ratio	0.43	0.41	0.01	0.09	0.57	0.00	0.00	0.04	0.13
Control Delay	41.1	6.0	0.0	46.5	14.1	33.0	0.0	33.7	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.1	6.0	0.0	46.5	14.1	33.0	0.0	33.7	0.7
LOS	D	A	A	D	B	C	A	C	A
Approach Delay		8.3			14.4		11.0		5.0
Approach LOS		A			B		B		A

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 71.2	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.57	
Intersection Signal Delay: 11.3	Intersection LOS: B
Intersection Capacity Utilization 58.5%	ICU Level of Service B
Analysis Period (min) 15	


























Splits and Phases: 3: Western Way & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 3: Western Way & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  							
Traffic Volume (veh/h)	105	1468	10	13	1574	42	1	0	2	7	0	49
Future Volume (veh/h)	105	1468	10	13	1574	42	1	0	2	7	0	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1722	1737	1900	1900	1767	1767	1900	1900	1900	1322	1900	1900
Adj Flow Rate, veh/h	113	1578	11	14	1692	43	1	0	2	8	0	41
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	12	11	0	0	9	9	0	0	0	39	0	0
Cap, veh/h	142	2959	1005	31	2682	68	231	0	162	223	0	162
Arrive On Green	0.09	0.62	0.62	0.02	0.55	0.55	0.10	0.00	0.10	0.10	0.00	0.10
Sat Flow, veh/h	1640	4742	1610	1810	4837	123	1388	0	1607	997	0	1610
Grp Volume(v), veh/h	113	1578	11	14	1125	610	1	0	2	8	0	41
Grp Sat Flow(s),veh/h/ln	1640	1581	1610	1810	1608	1745	1388	0	1607	997	0	1610
Q Serve(g_s), s	3.9	10.9	0.2	0.4	13.9	14.0	0.0	0.0	0.1	0.4	0.0	1.4
Cycle Q Clear(g_c), s	3.9	10.9	0.2	0.4	13.9	14.0	1.4	0.0	0.1	0.5	0.0	1.4
Prop In Lane	1.00		1.00	1.00		0.07	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	142	2959	1005	31	1783	967	231	0	162	223	0	162
V/C Ratio(X)	0.79	0.53	0.01	0.44	0.63	0.63	0.00	0.00	0.01	0.04	0.00	0.25
Avail Cap(c_a), veh/h	490	5672	1926	155	3160	1715	816	0	840	644	0	841
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.1	6.2	4.1	28.3	8.9	8.9	24.8	0.0	23.6	23.8	0.0	24.1
Incr Delay (d2), s/veh	3.7	0.2	0.0	3.6	0.4	0.7	0.0	0.0	0.0	0.1	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	2.0	0.0	0.2	3.3	3.6	0.0	0.0	0.0	0.1	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.8	6.3	4.1	31.9	9.3	9.6	24.8	0.0	23.6	23.8	0.0	24.9
LnGrp LOS	C	A	A	C	A	A	C	A	C	C	A	C
Approach Vol, veh/h		1702			1749			3				49
Approach Delay, s/veh		7.9			9.5			24.0				24.8
Approach LOS		A			A			C				C
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.6	42.1		10.5	9.7	38.1		10.5				
Change Period (Y+Rc), s	4.6	5.8		4.6	4.6	5.8		4.6				
Max Green Setting (Gmax), s	5.0	69.6		30.4	17.4	57.2		30.4				
Max Q Clear Time (g_c+I1), s	2.4	12.9		3.4	5.9	16.0		3.4				
Green Ext Time (p_c), s	0.0	16.5		0.2	0.1	16.3		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			9.0									
HCM 6th LOS			A									

Timings  
4: Patterson Av. & Harley Knox Bl.

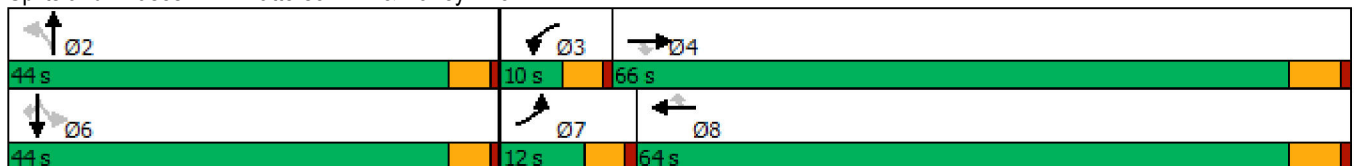


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑	↗	↖	↑↑	↗		↕		↖	↗
Traffic Volume (vph)	24	1331	83	50	1558	18	81	8	16	4	19
Future Volume (vph)	24	1331	83	50	1558	18	81	8	16	4	19
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	7	4		3	8			2		6	
Permitted Phases			4			8	2		6		6
Detector Phase	7	4	4	3	8	8	2	2	6	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	9.6	31.8	31.8	33.7	33.7	40.7	40.7	40.7
Total Split (s)	12.0	66.0	66.0	10.0	64.0	64.0	44.0	44.0	44.0	44.0	44.0
Total Split (%)	10.0%	55.0%	55.0%	8.3%	53.3%	53.3%	36.7%	36.7%	36.7%	36.7%	36.7%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8		4.7		4.7	4.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	6.2	58.3	58.3	5.5	62.2	62.2		17.4		17.4	17.4
Actuated g/C Ratio	0.07	0.62	0.62	0.06	0.66	0.66		0.18		0.18	0.18
v/c Ratio	0.30	0.49	0.09	0.63	0.77	0.03		0.62		0.13	0.08
Control Delay	54.6	12.3	2.9	77.4	17.9	0.1		39.1		32.5	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	54.6	12.3	2.9	77.4	17.9	0.1		39.1		32.5	0.6
LOS	D	B	A	E	B	A		D		C	A
Approach Delay		12.5			19.5			39.1		16.6	
Approach LOS		B			B			D		B	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 94.5  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.77  
 Intersection Signal Delay: 17.2  
 Intersection LOS: B  
 Intersection Capacity Utilization 72.4%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 4: Patterson Av. & Harley Knox Bl.





HCM 6th Signalized Intersection Summary  
 4: Patterson Av. & Harley Knox Bl.

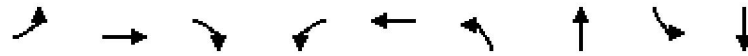
Gateway Aviation TA (JN:13445)

11/10/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	1331	83	50	1558	18	81	8	56	16	4	19
Future Volume (veh/h)	24	1331	83	50	1558	18	81	8	56	16	4	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1396	1781	1870	1589	1781	981	1381	1381	1381	774	774	1159
Adj Flow Rate, veh/h	26	1447	83	54	1693	12	88	9	59	17	4	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	34	8	2	21	8	62	35	35	35	76	76	50
Cap, veh/h	37	2847	928	66	2037	500	163	25	71	156	22	176
Arrive On Green	0.03	0.59	0.59	0.04	0.60	0.60	0.18	0.18	0.18	0.18	0.18	0.18
Sat Flow, veh/h	1330	4863	1585	1513	3385	831	511	140	395	411	122	982
Grp Volume(v), veh/h	26	1447	83	54	1693	12	156	0	0	21	0	5
Grp Sat Flow(s),veh/h/ln	1330	1621	1585	1513	1692	831	1046	0	0	533	0	982
Q Serve(g_s), s	1.5	13.9	1.8	2.8	31.5	0.5	9.0	0.0	0.0	0.0	0.0	0.3
Cycle Q Clear(g_c), s	1.5	13.9	1.8	2.8	31.5	0.5	11.5	0.0	0.0	2.5	0.0	0.3
Prop In Lane	1.00		1.00	1.00		1.00	0.56		0.38	0.81		1.00
Lane Grp Cap(c), veh/h	37	2847	928	66	2037	500	259	0	0	178	0	176
V/C Ratio(X)	0.71	0.51	0.09	0.81	0.83	0.02	0.60	0.00	0.00	0.12	0.00	0.03
Avail Cap(c_a), veh/h	124	3704	1207	103	2492	612	609	0	0	363	0	488
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.1	9.7	7.2	37.5	12.5	6.4	31.5	0.0	0.0	27.6	0.0	26.7
Incr Delay (d2), s/veh	9.1	0.1	0.0	12.4	2.1	0.0	2.2	0.0	0.0	0.3	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	3.8	0.5	1.2	9.4	0.1	2.9	0.0	0.0	0.3	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.2	9.8	7.2	49.9	14.6	6.4	33.8	0.0	0.0	27.9	0.0	26.8
LnGrp LOS	D	A	A	D	B	A	C	A	A	C	A	C
Approach Vol, veh/h		1556			1759			156				26
Approach Delay, s/veh		10.3			15.7			33.8				27.7
Approach LOS		B			B			C				C
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		18.9	8.1	52.1		18.9	6.8	53.4				
Change Period (Y+Rc), s		* 4.7	4.6	5.8		* 4.7	4.6	5.8				
Max Green Setting (Gmax), s		* 39	5.4	60.2		* 39	7.4	58.2				
Max Q Clear Time (g_c+I1), s		13.5	4.8	15.9		4.5	3.5	33.5				
Green Ext Time (p_c), s		0.9	0.0	14.0		0.1	0.0	14.1				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			14.2									
HCM 6th LOS			B									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												



Timings  
5: Heacock Street & Cactus Avenue

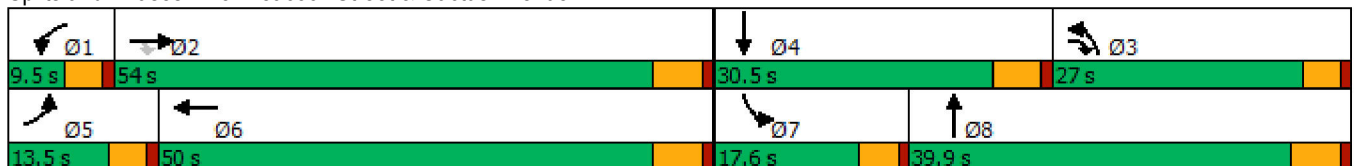


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	176	1067	785	87	2068	866	722	139	378
Future Volume (vph)	176	1067	785	87	2068	866	722	139	378
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	3	1	6	3	8	7	4
Permitted Phases			2						
Detector Phase	5	2	3	1	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.5	30.5	9.5	9.5	30.5	9.5	30.5	9.5	30.5
Total Split (s)	13.5	54.0	27.0	9.5	50.0	27.0	39.9	17.6	30.5
Total Split (%)	11.2%	44.6%	22.3%	7.9%	41.3%	22.3%	33.0%	14.5%	25.2%
Yellow Time (s)	3.5	4.5	3.5	3.5	4.5	3.5	4.5	3.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	4.5	4.5	5.5	4.5	5.5	4.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None
Act Effct Green (s)	9.0	48.6	72.7	5.0	44.6	23.1	30.6	11.8	19.3
Actuated g/C Ratio	0.08	0.42	0.63	0.04	0.38	0.20	0.26	0.10	0.17
v/c Ratio	1.27	0.71	0.73	1.11	1.60	1.27	0.82	0.77	0.79
Control Delay	207.3	31.6	13.6	185.4	302.1	169.0	47.7	77.1	53.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	207.3	31.6	13.6	185.4	302.1	169.0	47.7	77.1	53.4
LOS	F	C	B	F	F	F	D	E	D
Approach Delay		39.8			297.7		112.5		58.7
Approach LOS		D			F		F		E

Intersection Summary

Cycle Length: 121  
 Actuated Cycle Length: 116  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.60  
 Intersection Signal Delay: 150.1  
 Intersection LOS: F  
 Intersection Capacity Utilization 127.2%  
 ICU Level of Service H  
 Analysis Period (min) 15























Splits and Phases: 5: Heacock Street & Cactus Avenue



HCM 6th Signalized Intersection Summary  
5: Heacock Street & Cactus Avenue

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	176	1067	785	87	2068	159	866	722	34	139	378	105
Future Volume (veh/h)	176	1067	785	87	2068	159	866	722	34	139	378	105
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1752	1900	1885	1885	1811	1841	1841	1870	1841	1841
Adj Flow Rate, veh/h	183	1111	818	91	2154	166	902	752	35	145	394	109
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	10	0	1	1	6	4	4	2	4	4
Cap, veh/h	138	1561	907	78	1324	101	668	946	44	172	461	126
Arrive On Green	0.08	0.42	0.42	0.04	0.38	0.38	0.19	0.27	0.27	0.10	0.17	0.17
Sat Flow, veh/h	1781	3741	1485	1810	3460	263	3450	3490	162	1781	2783	761
Grp Volume(v), veh/h	183	1111	818	91	1160	1160	902	397	390	145	259	244
Grp Sat Flow(s),veh/h/ln	1781	1870	1485	1810	1885	1838	1725	1841	1811	1781	1841	1704
Q Serve(g_s), s	9.0	28.6	19.5	5.0	44.5	44.5	22.5	23.3	23.3	9.3	15.9	16.2
Cycle Q Clear(g_c), s	9.0	28.6	19.5	5.0	44.5	44.5	22.5	23.3	23.3	9.3	15.9	16.2
Prop In Lane	1.00		1.00	1.00		0.14	1.00		0.09	1.00		0.45
Lane Grp Cap(c), veh/h	138	1561	907	78	722	704	668	499	491	172	305	282
V/C Ratio(X)	1.33	0.71	0.90	1.17	1.61	1.65	1.35	0.79	0.79	0.84	0.85	0.86
Avail Cap(c_a), veh/h	138	1561	907	78	722	704	668	545	536	201	396	366
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.6	28.1	7.9	55.6	35.9	35.9	46.9	39.4	39.4	51.6	47.1	47.2
Incr Delay (d2), s/veh	188.5	1.3	11.8	154.8	279.8	298.4	167.7	6.5	6.6	21.1	10.5	13.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.1	12.2	9.0	5.6	75.2	76.9	24.9	11.0	10.8	5.0	7.9	7.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	242.1	29.4	19.7	210.4	315.7	334.2	214.6	45.9	46.0	72.7	57.6	60.2
LnGrp LOS	F	C	B	F	F	F	F	D	D	E	E	E
Approach Vol, veh/h		2112			2411			1689			648	
Approach Delay, s/veh		44.1			320.6			136.0			62.0	
Approach LOS		D			F			F			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.5	54.0	28.0	24.8	13.5	50.0	15.7	37.0				
Change Period (Y+Rc), s	4.5	5.5	5.5	* 5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	5.0	48.5	22.5	* 25	9.0	44.5	13.1	34.4				
Max Q Clear Time (g_c+I1), s	7.0	30.6	24.5	18.2	11.0	46.5	11.3	25.3				
Green Ext Time (p_c), s	0.0	6.5	0.0	1.0	0.0	0.0	0.0	2.0				

Intersection Summary

HCM 6th Ctrl Delay	165.6
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

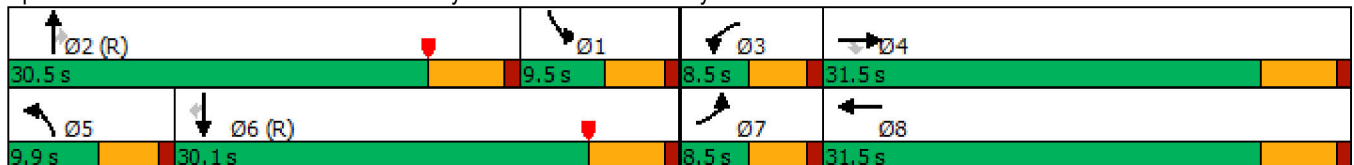
Timings  
6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	41	45	155	38	238	37	1059	64	127	853	22	
Future Volume (vph)	41	45	155	38	238	37	1059	64	127	853	22	
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	7	4		3	8	5	2		1	6		
Permitted Phases			4					2			6	
Detector Phase	7	4	4	3	8	5	2	2	1	6	6	
Switch Phase												
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	
Minimum Split (s)	8.5	23.5	23.5	8.5	31.5	8.5	30.5	30.5	8.5	23.5	23.5	
Total Split (s)	8.5	31.5	31.5	8.5	31.5	9.9	30.5	30.5	9.5	30.1	30.1	
Total Split (%)	10.6%	39.4%	39.4%	10.6%	39.4%	12.4%	38.1%	38.1%	11.9%	37.6%	37.6%	
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5	4.5	4.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	5.5	4.5	5.5	5.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max	
Act Effct Green (s)	4.0	13.0	13.0	4.0	13.0	5.7	41.4	41.4	5.0	44.4	44.4	
Actuated g/C Ratio	0.05	0.16	0.16	0.05	0.16	0.07	0.52	0.52	0.06	0.56	0.56	
v/c Ratio	0.54	0.17	0.33	0.46	0.63	0.31	0.60	0.07	1.15	0.46	0.02	
Control Delay	63.9	26.8	2.7	54.7	20.3	41.9	18.8	0.2	167.3	16.0	0.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	63.9	26.8	2.7	54.7	20.3	41.9	18.8	0.2	167.3	16.0	0.0	
LOS	E	C	A	D	C	D	B	A	F	B	A	
Approach Delay		17.7			22.9		18.5			34.7		
Approach LOS		B			C		B			C		

Intersection Summary

Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.15  
 Intersection Signal Delay: 24.8  
 Intersection LOS: C  
 Intersection Capacity Utilization 71.7%  
 ICU Level of Service C  
 Analysis Period (min) 15
























Splits and Phases: 6: Heacock Street & Meyer Drive/John F. Kennedy Drive



HCM 6th Signalized Intersection Summary  
 6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	45	155	38	238	230	37	1059	64	127	853	22
Future Volume (veh/h)	41	45	155	38	238	230	37	1059	64	127	853	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.95	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1604	1767	1841	1781	1841	1841	1781	1796	1767	1856	1767	1618
Adj Flow Rate, veh/h	43	47	125	40	248	204	39	1103	57	132	889	13
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	20	9	4	8	4	4	8	7	9	3	9	19
Cap, veh/h	50	323	285	50	342	269	49	1123	443	376	1797	689
Arrive On Green	0.03	0.18	0.18	0.03	0.18	0.18	0.03	0.31	0.31	0.21	0.51	0.51
Sat Flow, veh/h	1527	1767	1560	1697	1901	1496	1697	3593	1417	1767	3533	1354
Grp Volume(v), veh/h	43	47	125	40	240	212	39	1103	57	132	889	13
Grp Sat Flow(s),veh/h/ln	1527	1767	1560	1697	1841	1556	1697	1796	1417	1767	1767	1354
Q Serve(g_s), s	2.2	1.8	5.7	1.9	9.8	10.4	1.8	24.4	1.8	5.1	13.2	0.4
Cycle Q Clear(g_c), s	2.2	1.8	5.7	1.9	9.8	10.4	1.8	24.4	1.8	5.1	13.2	0.4
Prop In Lane	1.00		1.00	1.00		0.96	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	50	323	285	50	331	280	49	1123	443	376	1797	689
V/C Ratio(X)	0.86	0.15	0.44	0.80	0.72	0.76	0.79	0.98	0.13	0.35	0.49	0.02
Avail Cap(c_a), veh/h	76	574	507	85	598	506	115	1123	443	376	1797	689
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.73	0.73	0.73	0.54	0.54	0.54
Uniform Delay (d), s/veh	38.5	27.4	29.0	38.6	30.9	31.2	38.6	27.3	11.8	26.8	12.9	9.8
Incr Delay (d2), s/veh	30.0	0.1	0.4	10.4	1.1	1.6	7.6	19.1	0.4	0.1	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.7	2.0	0.9	4.1	3.7	0.8	12.1	0.7	2.0	4.4	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.5	27.5	29.4	49.0	32.1	32.7	46.2	46.4	12.3	26.9	13.4	9.8
LnGrp LOS	E	C	C	D	C	C	D	D	B	C	B	A
Approach Vol, veh/h		215			492			1199			1034	
Approach Delay, s/veh		36.8			33.7			44.8			15.1	
Approach LOS		D			C			D			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	22.5	30.5	6.9	20.1	6.8	46.2	7.1	19.9				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	5.0	* 25	4.0	26.0	5.4	24.6	4.0	26.0				
Max Q Clear Time (g_c+I1), s	7.1	26.4	3.9	7.7	3.8	15.2	4.2	12.4				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.3	0.0	2.7	0.0	1.4				













Intersection Summary

HCM 6th Ctrl Delay	31.9
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
7: Heacock Street & Gentian Avenue

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	33	83	975	10	172	936
Future Volume (vph)	33	83	975	10	172	936
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	27.6	27.6	27.2	27.2	9.6	16.2
Total Split (s)	28.0	28.0	65.0	65.0	27.0	92.0
Total Split (%)	23.3%	23.3%	54.2%	54.2%	22.5%	76.7%
Yellow Time (s)	3.6	3.6	5.2	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	6.2	6.2	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	12.8	12.8	30.9	30.9	12.1	50.2
Actuated g/C Ratio	0.19	0.19	0.46	0.46	0.18	0.74
v/c Ratio	0.10	0.21	0.67	0.01	0.55	0.40
Control Delay	29.5	9.1	19.0	11.4	36.3	5.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.5	9.1	19.0	11.4	36.3	5.6
LOS	C	A	B	B	D	A
Approach Delay	15.0		18.9			10.4
Approach LOS	B		B			B













Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 67.7	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 14.4	Intersection LOS: B
Intersection Capacity Utilization 57.6%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 7: Heacock Street & Gentian Avenue



HCM 6th Signalized Intersection Summary  
 7: Heacock Street & Gentian Avenue

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	33	83	975	10	172	936
Future Volume (veh/h)	33	83	975	10	172	936
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1870	1781	1900	1870	1767
Adj Flow Rate, veh/h	35	87	1026	11	181	985
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	2	8	0	2	9
Cap, veh/h	280	246	1461	695	231	2169
Arrive On Green	0.15	0.15	0.43	0.43	0.13	0.65
Sat Flow, veh/h	1810	1585	3474	1610	1781	3445
Grp Volume(v), veh/h	35	87	1026	11	181	985
Grp Sat Flow(s),veh/h/ln	1810	1585	1692	1610	1781	1678
Q Serve(g_s), s	0.9	2.7	13.4	0.2	5.3	8.0
Cycle Q Clear(g_c), s	0.9	2.7	13.4	0.2	5.3	8.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	280	246	1461	695	231	2169
V/C Ratio(X)	0.12	0.35	0.70	0.02	0.78	0.45
Avail Cap(c_a), veh/h	780	683	3666	1744	735	5305
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.8	20.5	12.6	8.8	22.9	4.8
Incr Delay (d2), s/veh	0.1	0.3	0.6	0.0	2.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.9	3.7	0.1	2.0	1.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	19.8	20.8	13.2	8.8	25.1	5.0
LnGrp LOS	B	C	B	A	C	A
Approach Vol, veh/h	122		1037			1166
Approach Delay, s/veh	20.5		13.2			8.1
Approach LOS	C		B			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	11.6	29.6			41.3	13.0
Change Period (Y+Rc), s	4.6	6.2			6.2	4.6
Max Green Setting (Gmax), s	22.4	58.8			85.8	23.4
Max Q Clear Time (g_c+1), s	7.3	15.4			10.0	4.7
Green Ext Time (p_c), s	0.2	8.0			7.7	0.1
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			11.0			
HCM 6th LOS			B			

Timings  
8: Heacock Street & Iris Avenue

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	396	484	551	252	328	686
Future Volume (vph)	396	484	551	252	328	686
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	15.8	15.8	33.2	33.2	9.6	16.2
Total Split (s)	48.0	48.0	53.0	53.0	19.0	72.0
Total Split (%)	40.0%	40.0%	44.2%	44.2%	15.8%	60.0%
Yellow Time (s)	4.8	4.8	5.2	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	6.2	6.2	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	15.7	15.7	19.8	19.8	11.7	36.2
Actuated g/C Ratio	0.24	0.24	0.31	0.31	0.18	0.56
v/c Ratio	0.48	0.71	0.61	0.40	0.55	0.41
Control Delay	23.6	13.6	22.6	4.8	29.4	9.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.6	13.6	22.6	4.8	29.4	9.2
LOS	C	B	C	A	C	A
Approach Delay	18.1		17.0			15.7
Approach LOS	B		B			B

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 64.4	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 16.9	Intersection LOS: B
Intersection Capacity Utilization 55.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 8: Heacock Street & Iris Avenue





















HCM 6th Signalized Intersection Summary  
8: Heacock Street & Iris Avenue

Gateway Aviation TA (JN:13445)

11/10/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 		 		 	 
Traffic Volume (veh/h)	396	484	551	252	328	686
Future Volume (veh/h)	396	484	551	252	328	686
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1885	1885	1722	1885	1870	1737
Adj Flow Rate, veh/h	430	526	599	274	357	746
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	12	1	2	11
Cap, veh/h	1319	605	853	417	456	1505
Arrive On Green	0.38	0.38	0.26	0.26	0.13	0.46
Sat Flow, veh/h	3483	1598	3358	1598	3456	3387
Grp Volume(v), veh/h	430	526	599	274	357	746
Grp Sat Flow(s),veh/h/ln	1742	1598	1636	1598	1728	1650
Q Serve(g_s), s	6.4	22.2	12.0	11.1	7.3	11.5
Cycle Q Clear(g_c), s	6.4	22.2	12.0	11.1	7.3	11.5
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	1319	605	853	417	456	1505
V/C Ratio(X)	0.33	0.87	0.70	0.66	0.78	0.50
Avail Cap(c_a), veh/h	2024	928	2108	1029	685	2990
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.0	20.9	24.3	24.0	30.5	13.9
Incr Delay (d2), s/veh	0.1	5.8	1.1	1.8	1.7	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	8.0	4.2	3.9	2.8	3.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	16.1	26.7	25.4	25.7	32.2	14.1
LnGrp LOS	B	C	C	C	C	B
Approach Vol, veh/h	956		873			1103
Approach Delay, s/veh	21.9		25.5			20.0
Approach LOS	C		C			B
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	14.2	25.1			39.3	33.3
Change Period (Y+Rc), s	4.6	6.2			6.2	5.8
Max Green Setting (Gmax), s	14.4	46.8			65.8	42.2
Max Q Clear Time (g_c+1), s	9.3	14.0			13.5	24.2
Green Ext Time (p_c), s	0.3	4.9			5.3	3.4
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			22.3			
HCM 6th LOS			C			



Timings  
9: Heacock Street & Krameria Avenue-North

	↙	↖	↑	↘	↓
Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations	↙	↖	↑↓	↘	↑↑
Traffic Volume (vph)	117	136	561	237	752
Future Volume (vph)	117	136	561	237	752
Turn Type	Prot	Perm	NA	Prot	NA
Protected Phases	8		2	1	6
Permitted Phases		8			
Detector Phase	8	8	2	1	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	29.1	29.1	29.2	9.6	16.2
Total Split (s)	39.0	39.0	55.0	26.0	81.0
Total Split (%)	32.5%	32.5%	45.8%	21.7%	67.5%
Yellow Time (s)	4.1	4.1	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	6.2	4.6	6.2
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	Min	Max	Min
Act Effct Green (s)	12.6	12.6	22.6	21.9	49.1
Actuated g/C Ratio	0.17	0.17	0.31	0.30	0.67
v/c Ratio	0.40	0.33	0.79	0.48	0.35
Control Delay	32.0	7.5	27.8	27.5	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	32.0	7.5	27.8	27.5	6.1
LOS	C	A	C	C	A
Approach Delay	18.8		27.8		11.2
Approach LOS	B		C		B

Intersection Summary













Cycle Length: 120	
Actuated Cycle Length: 73.3	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 18.6	Intersection LOS: B
Intersection Capacity Utilization 57.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 9: Heacock Street & Krameria Avenue-North



HCM 6th Signalized Intersection Summary  
 9: Heacock Street & Krameria Avenue-North

Gateway Aviation TA (JN:13445)  
 11/10/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	117	136	561	223	237	752
Future Volume (veh/h)	117	136	561	223	237	752
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1856	1870	1841	1841	1826	1841
Adj Flow Rate, veh/h	127	148	610	242	258	817
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	2	4	4	5	4
Cap, veh/h	258	232	748	296	547	2406
Arrive On Green	0.15	0.15	0.31	0.31	0.31	0.69
Sat Flow, veh/h	1767	1585	2538	969	1739	3589
Grp Volume(v), veh/h	127	148	436	416	258	817
Grp Sat Flow(s),veh/h/ln	1767	1585	1749	1666	1739	1749
Q Serve(g_s), s	4.5	6.0	15.7	15.7	8.1	6.5
Cycle Q Clear(g_c), s	4.5	6.0	15.7	15.7	8.1	6.5
Prop In Lane	1.00	1.00		0.58	1.00	
Lane Grp Cap(c), veh/h	258	232	535	510	547	2406
V/C Ratio(X)	0.49	0.64	0.82	0.82	0.47	0.34
Avail Cap(c_a), veh/h	880	790	1254	1195	547	3844
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.7	27.4	21.8	21.9	18.8	4.3
Incr Delay (d2), s/veh	0.5	1.1	1.2	1.2	2.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	2.3	5.6	5.4	3.2	1.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	27.3	28.5	23.0	23.1	21.7	4.4
LnGrp LOS	C	C	C	C	C	A
Approach Vol, veh/h	275		852			1075
Approach Delay, s/veh	27.9		23.1			8.5
Approach LOS	C		C			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	26.0	27.0			53.0	15.0
Change Period (Y+Rc), s	4.6	6.2			6.2	5.1
Max Green Setting (Gmax), s	21.4	48.8			74.8	33.9
Max Q Clear Time (g_c+I1), s	10.1	17.7			8.5	8.0
Green Ext Time (p_c), s	0.3	3.1			3.5	0.4
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			16.6			
HCM 6th LOS			B			

Timings  
10: Heacock Street & Driveway 1



Lane Group	EBL	EBT	NBL	NBT	SBT	SBR	Ø1	Ø8
Lane Configurations								
Traffic Volume (vph)	41	0	90	821	734	77		
Future Volume (vph)	41	0	90	821	734	77		
Turn Type	Perm	NA	Prot	NA	NA	Perm		
Protected Phases		4	5	2	6		1	8
Permitted Phases	4					6		
Detector Phase	4	4	5	2	6	6		
Switch Phase								
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	26.7	26.7	9.6	23.2	23.2	23.2	9.6	26.7
Total Split (s)	30.0	30.0	21.0	80.4	69.0	69.0	9.6	30.0
Total Split (%)	25.0%	25.0%	17.5%	67.0%	57.5%	57.5%	8%	25%
Yellow Time (s)	3.7	3.7	3.6	5.2	5.2	5.2	3.6	3.7
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.7	4.7	4.6	6.2	6.2	6.2		
Lead/Lag			Lead	Lag	Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	Min	Min	Min	None	None
Act Effct Green (s)	12.5	12.5	8.0	36.9	27.1	27.1		
Actuated g/C Ratio	0.23	0.23	0.15	0.68	0.50	0.50		
v/c Ratio	0.14	0.10	0.37	0.37	0.46	0.10		
Control Delay	21.6	0.3	29.3	6.5	15.0	3.2		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay	21.6	0.3	29.3	6.5	15.0	3.2		
LOS	C	A	C	A	B	A		
Approach Delay		9.5		8.7	13.9			
Approach LOS		A		A	B			

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 54.2	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.46	
Intersection Signal Delay: 11.1	Intersection LOS: B
Intersection Capacity Utilization 48.1%	ICU Level of Service A
Analysis Period (min) 15	





















Splits and Phases: 10: Heacock Street & Driveway 1



HCM 6th Signalized Intersection Summary  
 10: Heacock Street & Driveway 1

Gateway Aviation TA (JN:13445)

11/17/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	0	54	0	0	0	90	821	0	0	734	77
Future Volume (veh/h)	41	0	54	0	0	0	90	821	0	0	734	77
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1856	1856	1900	1826	1900
Adj Flow Rate, veh/h	45	0	59	0	0	0	98	892	0	0	798	84
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	3	3	0	5	0
Cap, veh/h	477	0	271	0	319	0	147	2010	0	4	1312	609
Arrive On Green	0.17	0.00	0.17	0.00	0.00	0.00	0.08	0.57	0.00	0.00	0.38	0.38
Sat Flow, veh/h	1810	0	1610	0	1900	0	1810	3618	0	1810	3469	1610
Grp Volume(v), veh/h	45	0	59	0	0	0	98	892	0	0	798	84
Grp Sat Flow(s),veh/h/ln	1810	0	1610	0	1900	0	1810	1763	0	1810	1735	1610
Q Serve(g_s), s	0.9	0.0	1.3	0.0	0.0	0.0	2.2	6.1	0.0	0.0	7.7	1.4
Cycle Q Clear(g_c), s	0.9	0.0	1.3	0.0	0.0	0.0	2.2	6.1	0.0	0.0	7.7	1.4
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	477	0	271	0	319	0	147	2010	0	4	1312	609
V/C Ratio(X)	0.09	0.00	0.22	0.00	0.00	0.00	0.67	0.44	0.00	0.00	0.61	0.14
Avail Cap(c_a), veh/h	1273	0	979	0	1155	0	713	6285	0	217	5234	2429
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	14.8	0.0	15.0	0.0	0.0	0.0	18.6	5.1	0.0	0.0	10.5	8.5
Incr Delay (d2), s/veh	0.1	0.0	0.4	0.0	0.0	0.0	1.9	0.2	0.0	0.0	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.4	0.0	0.0	0.0	0.8	0.7	0.0	0.0	1.8	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.9	0.0	15.4	0.0	0.0	0.0	20.5	5.3	0.0	0.0	10.9	8.6
LnGrp LOS	B	A	B	A	A	A	C	A	A	A	B	A
Approach Vol, veh/h		104			0			990			882	
Approach Delay, s/veh		15.1			0.0			6.8			10.7	
Approach LOS		B						A			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	29.9		11.7	8.0	21.9		11.7				
Change Period (Y+Rc), s	4.6	6.2		* 4.7	4.6	6.2		* 4.7				
Max Green Setting (Gmax), s	5.0	74.2		* 25	16.4	62.8		* 25				
Max Q Clear Time (g_c+I1), s	0.0	8.1		3.3	4.2	9.7		0.0				
Green Ext Time (p_c), s	0.0	6.6		0.4	0.1	6.0		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			9.0									
HCM 6th LOS			A									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↕	↗	↘	↕
Traffic Vol, veh/h	12	13	1159	61	52	978
Future Vol, veh/h	12	13	1159	61	52	978
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	0	140	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	23	31	8	2	8	13
Mvmt Flow	13	14	1260	66	57	1063

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1906	630	0	0	1326
Stage 1	1260	-	-	-	-
Stage 2	646	-	-	-	-
Critical Hdwy	7.26	7.52	-	-	4.26
Critical Hdwy Stg 1	6.26	-	-	-	-
Critical Hdwy Stg 2	6.26	-	-	-	-
Follow-up Hdwy	3.73	3.61	-	-	2.28
Pot Cap-1 Maneuver	47	361	-	-	486
Stage 1	193	-	-	-	-
Stage 2	431	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	42	361	-	-	486
Mov Cap-2 Maneuver	134	-	-	-	-
Stage 1	193	-	-	-	-
Stage 2	381	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	24.7	0	0.7
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	134	361	486	-
HCM Lane V/C Ratio	-	-	0.097	0.039	0.116	-
HCM Control Delay (s)	-	-	34.7	15.4	13.4	-
HCM Lane LOS	-	-	D	C	B	-
HCM 95th %tile Q(veh)	-	-	0.3	0.1	0.4	-

Timings  
12: Heacock Street & San Michele Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	31	82	4	54	341	328	1	1746	103	1151	52
Future Volume (vph)	31	82	4	54	341	328	1	1746	103	1151	52
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	1	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	4.0	5.0	4.0	5.0	5.0
Minimum Split (s)	9.5	30.5	30.5	8.5	30.5	8.5	8.5	34.5	8.5	34.5	34.5
Total Split (s)	13.0	41.0	41.0	13.0	41.0	28.0	12.0	38.0	28.0	54.0	54.0
Total Split (%)	10.8%	34.2%	34.2%	10.8%	34.2%	23.3%	10.0%	31.7%	23.3%	45.0%	45.0%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	3.5	4.5	3.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	4.5	5.5	4.5	5.5	5.5
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	None	Max	Max
Act Effct Green (s)	6.3	12.8	12.8	13.6	22.5	42.3	4.7	33.5	14.1	50.8	50.8
Actuated g/C Ratio	0.07	0.14	0.14	0.15	0.24	0.46	0.05	0.36	0.15	0.55	0.55
v/c Ratio	0.27	0.35	0.01	0.23	0.80	0.39	0.01	1.48	0.41	1.23	0.05
Control Delay	51.6	43.3	0.0	38.5	47.7	11.1	51.0	246.5	43.5	137.5	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.6	43.3	0.0	38.5	47.7	11.1	51.0	246.5	43.5	137.5	0.5
LOS	D	D	A	D	D	B	D	F	D	F	A
Approach Delay		44.2			30.4			246.4		124.6	
Approach LOS		D			C			F		F	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 92.4  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.48  
 Intersection Signal Delay: 159.7  
 Intersection LOS: F  
 Intersection Capacity Utilization 101.9%  
 ICU Level of Service G  
 Analysis Period (min) 15

Splits and Phases: 12: Heacock Street & San Michele Road

Ø2	Ø1	Ø4	Ø3
38 s	28 s	41 s	13 s
Ø5	Ø6	Ø8	Ø7
12 s	54 s	41 s	13 s

HCM 6th Signalized Intersection Summary  
 12: Heacock Street & San Michele Road

Gateway Aviation TA (JN:13445)

04/19/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↑	↗	↖	↑↔		↖	↑	↗
Traffic Volume (veh/h)	31	82	4	54	341	328	1	1746	17	103	1151	52
Future Volume (veh/h)	31	82	4	54	341	328	1	1746	17	103	1151	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1856	1366	1796	1900	1856	1900	1885	1707	1811	1856	1856
Adj Flow Rate, veh/h	34	89	4	59	371	357	1	1898	18	112	1251	57
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	3	36	7	0	3	0	1	13	6	3	3
Cap, veh/h	46	133	83	310	433	617	2	1286	12	284	980	830
Arrive On Green	0.03	0.07	0.07	0.18	0.23	0.23	0.00	0.35	0.35	0.16	0.53	0.53
Sat Flow, veh/h	1810	1856	1158	1711	1900	1572	1810	3635	34	1725	1856	1572
Grp Volume(v), veh/h	34	89	4	59	371	357	1	934	982	112	1251	57
Grp Sat Flow(s),veh/h/ln	1810	1856	1158	1711	1900	1572	1810	1791	1879	1725	1856	1572
Q Serve(g_s), s	1.7	4.3	0.3	2.7	17.2	1.3	0.1	32.5	32.5	5.3	48.5	1.2
Cycle Q Clear(g_c), s	1.7	4.3	0.3	2.7	17.2	1.3	0.1	32.5	32.5	5.3	48.5	1.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.02	1.00		1.00
Lane Grp Cap(c), veh/h	46	133	83	310	433	617	2	634	665	284	980	830
V/C Ratio(X)	0.74	0.67	0.05	0.19	0.86	0.58	0.50	1.47	1.48	0.39	1.28	0.07
Avail Cap(c_a), veh/h	167	717	448	310	734	866	148	634	665	441	980	830
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.5	41.6	30.8	31.9	34.0	21.9	45.8	29.7	29.7	34.3	21.7	5.4
Incr Delay (d2), s/veh	8.5	2.1	0.1	0.1	2.2	0.3	58.5	221.4	223.0	0.3	132.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	2.0	0.1	1.1	7.7	5.6	0.1	51.4	54.2	2.1	53.2	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.0	43.7	30.9	32.0	36.2	22.3	104.4	251.1	252.7	34.6	154.2	5.6
LnGrp LOS	D	D	C	C	D	C	F	F	F	C	F	A
Approach Vol, veh/h		127			787			1917			1420	
Approach Delay, s/veh		45.8			29.6			251.8			138.8	
Approach LOS		D			C			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.6	38.0	21.1	12.1	4.6	54.0	6.8	26.4				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	23.5	* 33	8.5	35.5	7.5	48.5	8.5	35.5				
Max Q Clear Time (g_c+I1), s	7.3	34.5	4.7	6.3	2.1	50.5	3.7	19.2				
Green Ext Time (p_c), s	0.1	0.0	0.0	0.3	0.0	0.0	0.0	1.7				

Intersection Summary

HCM 6th Ctrl Delay	166.8
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection								
Intersection Delay, s/veh	294.2							
Intersection LOS	F							
Approach	EB	WB	NB		SB			
Entry Lanes	3	2	2		2			
Conflicting Circle Lanes	2	2	2		2			
Adj Approach Flow, veh/h	0	1402	924		1374			
Demand Flow Rate, veh/h	0	1513	938		1374			
Vehicles Circulating, veh/h	1021	934	867		1739			
Vehicles Exiting, veh/h	2092	872	1416		707			
Ped Vol Crossing Leg, #/h	0	0	0		0			
Ped Cap Adj	1.000	1.000	1.000		1.000			
Approach Delay, s/veh	0.0	148.6	23.0		625.1			
Approach LOS	-	F	C		F			
Lane	Left		Right		Left		Right	
Designated Moves	LT		TR		LT		TR	
Assumed Moves	LT		TR		LT		TR	
RT Channelized								
Lane Util	0.470	0.530	0.470	0.530	0.470	0.530		
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535		
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328		
Entry Flow, veh/h	711	802	441	497	646	728		
Cap Entry Lane, veh/h	572	642	608	680	273	324		
Entry HV Adj Factor	0.927	0.927	0.985	0.985	1.000	1.000		
Flow Entry, veh/h	659	743	434	490	646	728		
Cap Entry, veh/h	530	595	599	670	273	324		
V/C Ratio	1.244	1.249	0.725	0.731	2.370	2.248		
Control Delay, s/veh	149.1	148.1	23.9	22.2	656.6	597.2		
LOS	F	F	C	C	F	F		
95th %tile Queue, veh	26	28	6	6	51	55		



Timings  
14: Indian Street & San Michele Road

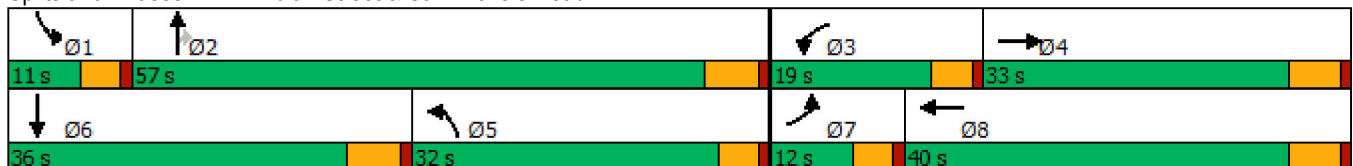


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↖	↗	↖	↗	↖	↗	↗	↖	↗
Traffic Volume (vph)	6	29	120	109	584	28	106	5	21
Future Volume (vph)	6	29	120	109	584	28	106	5	21
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8	5	2		1	6
Permitted Phases							2		
Detector Phase	7	4	3	8	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	31.8	9.6	31.8	9.6	32.8	32.8	9.6	32.8
Total Split (s)	12.0	33.0	19.0	40.0	32.0	57.0	57.0	11.0	36.0
Total Split (%)	10.0%	27.5%	15.8%	33.3%	26.7%	47.5%	47.5%	9.2%	30.0%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	6.3	13.9	10.3	24.4	17.8	21.6	21.6	6.1	14.0
Actuated g/C Ratio	0.10	0.22	0.17	0.39	0.29	0.35	0.35	0.10	0.22
v/c Ratio	0.05	0.25	0.44	0.09	0.60	0.05	0.17	0.03	0.04
Control Delay	41.2	9.2	36.5	17.2	26.2	15.5	2.1	41.6	25.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.2	9.2	36.5	17.2	26.2	15.5	2.1	41.6	25.0
LOS	D	A	D	B	C	B	A	D	C
Approach Delay		10.3		27.1		22.2			27.5
Approach LOS		B		C		C			C

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 62.4	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay: 21.4	Intersection LOS: C
Intersection Capacity Utilization 52.8%	ICU Level of Service A
Analysis Period (min) 15	























Splits and Phases: 14: Indian Street & San Michele Road



HCM 6th Signalized Intersection Summary  
 14: Indian Street & San Michele Road

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	29	154	120	109	6	584	28	106	5	21	5
Future Volume (veh/h)	6	29	154	120	109	6	584	28	106	5	21	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.99	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1218	1470	1470	1826	1826	1826	1856	1752	1767	1900	1707	1707
Adj Flow Rate, veh/h	7	32	167	130	118	7	635	30	115	5	23	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	46	29	29	5	5	5	3	10	9	0	13	13
Cap, veh/h	11	253	226	164	909	53	759	745	628	12	544	113
Arrive On Green	0.01	0.18	0.18	0.09	0.27	0.27	0.21	0.43	0.43	0.01	0.20	0.20
Sat Flow, veh/h	1160	1397	1246	1739	3411	201	3534	1752	1478	1810	2718	564
Grp Volume(v), veh/h	7	32	167	130	63	62	635	30	115	5	14	14
Grp Sat Flow(s),veh/h/ln	1160	1397	1246	1739	1826	1786	1767	1752	1478	1810	1707	1575
Q Serve(g_s), s	0.4	1.4	9.0	5.2	1.9	1.9	12.2	0.7	3.4	0.2	0.5	0.5
Cycle Q Clear(g_c), s	0.4	1.4	9.0	5.2	1.9	1.9	12.2	0.7	3.4	0.2	0.5	0.5
Prop In Lane	1.00		1.00	1.00		0.11	1.00		1.00	1.00		0.36
Lane Grp Cap(c), veh/h	11	253	226	164	487	476	759	745	628	12	341	315
V/C Ratio(X)	0.66	0.13	0.74	0.79	0.13	0.13	0.84	0.04	0.18	0.42	0.04	0.04
Avail Cap(c_a), veh/h	121	535	477	352	879	860	1363	1262	1065	163	726	669
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.1	24.4	27.5	31.5	19.8	19.8	26.7	11.9	12.7	35.2	22.9	22.9
Incr Delay (d2), s/veh	23.5	0.1	1.8	3.2	0.0	0.0	1.0	0.0	0.1	8.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.4	2.5	2.2	0.7	0.7	4.6	0.2	1.0	0.1	0.2	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.6	24.5	29.3	34.7	19.8	19.9	27.7	12.0	12.8	43.5	22.9	23.0
LnGrp LOS	E	C	C	C	B	B	C	B	B	D	C	C
Approach Vol, veh/h		206			255			780				33
Approach Delay, s/veh		29.6			27.4			24.9				26.1
Approach LOS		C			C			C				C
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.1	36.0	11.3	18.7	21.1	20.0	5.2	24.7				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	5.8	* 5.8	4.6	5.8				
Max Green Setting (Gmax), s	6.4	51.2	14.4	27.2	27.4	* 30	7.4	34.2				
Max Q Clear Time (g_c+I1), s	2.2	5.4	7.2	11.0	14.2	2.5	2.4	3.9				
Green Ext Time (p_c), s	0.0	0.3	0.1	0.6	1.0	0.0	0.0	0.4				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				26.2								
HCM 6th LOS				C								
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings  
15: Indian Street & Nandina Avenue

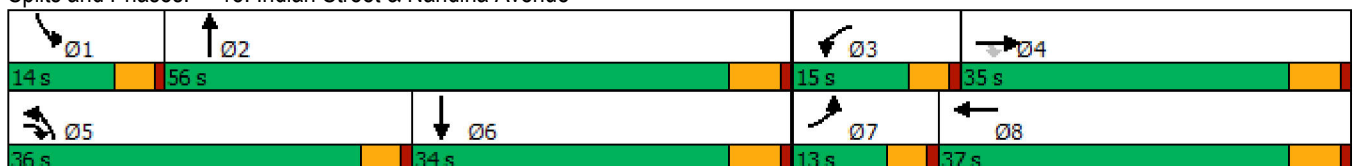


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↑	↗	↖	↗	↖	↕	↖	↕
Traffic Volume (vph)	8	35	91	36	44	191	687	13	256
Future Volume (vph)	8	35	91	36	44	191	687	13	256
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	5	3	8	5	2	1	6
Permitted Phases	4								
Detector Phase	7	4	5	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	29.8	9.6	9.6	29.8	9.6	26.8	9.6	26.8
Total Split (s)	13.0	35.0	36.0	15.0	37.0	36.0	56.0	14.0	34.0
Total Split (%)	10.8%	29.2%	30.0%	12.5%	30.8%	30.0%	46.7%	11.7%	28.3%
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	6.4	14.1	22.9	7.4	16.4	13.5	37.1	6.7	14.7
Actuated g/C Ratio	0.12	0.26	0.42	0.14	0.30	0.25	0.69	0.12	0.27
v/c Ratio	0.04	0.11	0.16	0.18	0.17	0.51	0.33	0.08	0.31
Control Delay	35.5	25.4	3.3	33.5	16.7	27.7	11.4	35.3	22.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.5	25.4	3.3	33.5	16.7	27.7	11.4	35.3	22.1
LOS	D	C	A	C	B	C	B	D	C
Approach Delay	11.0		22.5			14.7		22.7	
Approach LOS	B		C			B		C	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 54.1  
 Natural Cycle: 80  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.51  
 Intersection Signal Delay: 16.5  
 Intersection LOS: B  
 Intersection Capacity Utilization 47.8%  
 ICU Level of Service A  
 Analysis Period (min) 15























Splits and Phases: 15: Indian Street & Nandina Avenue



HCM 6th Signalized Intersection Summary  
 15: Indian Street & Nandina Avenue

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	35	91	36	44	23	191	687	76	13	256	27
Future Volume (veh/h)	8	35	91	36	44	23	191	687	76	13	256	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1248	1218	1559	1441	1441	1648	1841	1841	1411	1811	1811
Adj Flow Rate, veh/h	9	38	99	39	48	25	208	747	83	14	278	29
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	44	46	23	31	31	17	4	4	33	6	6
Cap, veh/h	21	234	362	62	194	101	256	1116	124	24	640	66
Arrive On Green	0.01	0.19	0.19	0.04	0.22	0.22	0.16	0.34	0.34	0.02	0.20	0.20
Sat Flow, veh/h	1810	1248	1032	1485	892	465	1570	3246	361	1344	3228	334
Grp Volume(v), veh/h	9	38	99	39	0	73	208	423	407	14	155	152
Grp Sat Flow(s),veh/h/ln	1810	1248	1032	1485	0	1357	1570	1841	1766	1344	1811	1751
Q Serve(g_s), s	0.3	1.3	3.5	1.3	0.0	2.3	6.5	10.0	10.0	0.5	3.8	3.9
Cycle Q Clear(g_c), s	0.3	1.3	3.5	1.3	0.0	2.3	6.5	10.0	10.0	0.5	3.8	3.9
Prop In Lane	1.00		1.00	1.00		0.34	1.00		0.20	1.00		0.19
Lane Grp Cap(c), veh/h	21	234	362	62	0	295	256	633	607	24	359	347
V/C Ratio(X)	0.42	0.16	0.27	0.63	0.00	0.25	0.81	0.67	0.67	0.59	0.43	0.44
Avail Cap(c_a), veh/h	299	717	761	304	0	833	970	1818	1744	248	1005	971
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.9	17.3	11.8	24.0	0.0	16.4	20.5	14.2	14.2	24.8	17.9	17.9
Incr Delay (d2), s/veh	4.9	0.3	0.4	3.9	0.0	0.4	2.4	1.2	1.3	8.4	0.8	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.3	0.7	0.5	0.0	0.6	2.1	3.2	3.1	0.2	1.4	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.9	17.6	12.2	27.9	0.0	16.9	22.9	15.5	15.5	33.2	18.7	18.8
LnGrp LOS	C	B	B	C	A	B	C	B	B	C	B	B
Approach Vol, veh/h		146			112			1038			321	
Approach Delay, s/veh		14.7			20.7			17.0			19.4	
Approach LOS		B			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.5	23.3	6.7	15.3	12.9	15.9	5.2	16.9				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	9.4	50.2	10.4	29.2	31.4	28.2	8.4	31.2				
Max Q Clear Time (g_c+I1), s	2.5	12.0	3.3	5.5	8.5	5.9	2.3	4.3				
Green Ext Time (p_c), s	0.0	5.1	0.0	0.5	0.3	1.5	0.0	0.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				17.5								
HCM 6th LOS				B								

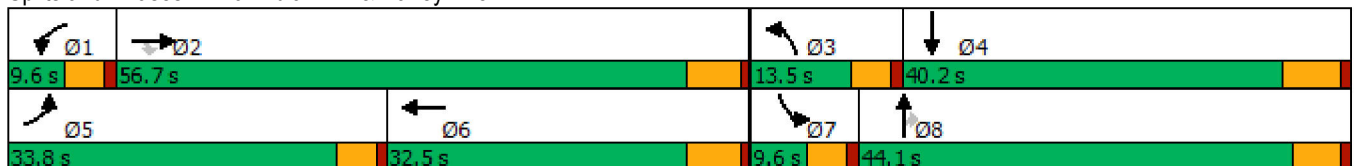
Timings  
16: Indian Av. & Harley Knox Bl.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	121	641	108	157	1066	148	298	82	102	191
Future Volume (vph)	121	641	108	157	1066	148	298	82	102	191
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	5	2		1	6	3	8		7	4
Permitted Phases			2					8		
Detector Phase	5	2	2	1	6	3	8	8	7	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	35.8	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2
Total Split (s)	33.8	56.7	56.7	9.6	32.5	13.5	44.1	44.1	9.6	40.2
Total Split (%)	28.2%	47.3%	47.3%	8.0%	27.1%	11.3%	36.8%	36.8%	8.0%	33.5%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.4	4.4	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	5.4	5.4	4.6	6.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	14.3	36.6	36.6	5.1	27.4	8.2	19.1	19.1	5.1	15.2
Actuated g/C Ratio	0.16	0.42	0.42	0.06	0.31	0.09	0.22	0.22	0.06	0.17
v/c Ratio	0.69	0.34	0.17	1.64	0.94	0.54	0.45	0.20	1.06	0.63
Control Delay	54.6	18.3	4.5	357.6	42.4	48.0	31.1	1.3	148.8	20.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.6	18.3	4.5	357.6	42.4	48.0	31.1	1.3	148.8	20.5
LOS	D	B	A	F	D	D	C	A	F	C
Approach Delay		21.7			75.0		31.2			47.2
Approach LOS		C			E		C			D

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 87  
 Natural Cycle: 100  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.64  
 Intersection Signal Delay: 50.6  
 Intersection LOS: D  
 Intersection Capacity Utilization 67.5%  
 ICU Level of Service C  
 Analysis Period (min) 15































Splits and Phases: 16: Indian Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 16: Indian Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 			 	
Traffic Volume (veh/h)	121	641	108	157	1066	302	148	298	82	102	191	197
Future Volume (veh/h)	121	641	108	157	1066	302	148	298	82	102	191	197
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1085	1811	1707	1870	1856	1856	1737	1767	1796	1885	1811	1811
Adj Flow Rate, veh/h	132	697	108	171	1159	308	161	324	82	111	208	165
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	55	6	13	2	3	3	11	9	7	1	6	6
Cap, veh/h	149	2056	602	118	1345	357	237	576	261	119	306	231
Arrive On Green	0.14	0.42	0.42	0.07	0.34	0.34	0.07	0.17	0.17	0.07	0.16	0.16
Sat Flow, veh/h	1033	4944	1447	1781	3983	1059	3209	3357	1522	1795	1868	1409
Grp Volume(v), veh/h	132	697	108	171	983	484	161	324	82	111	191	182
Grp Sat Flow(s),veh/h/ln	1033	1648	1447	1781	1689	1665	1605	1678	1522	1795	1721	1557
Q Serve(g_s), s	9.5	7.3	3.6	5.0	20.6	20.6	3.7	6.7	3.6	4.7	7.9	8.4
Cycle Q Clear(g_c), s	9.5	7.3	3.6	5.0	20.6	20.6	3.7	6.7	3.6	4.7	7.9	8.4
Prop In Lane	1.00		1.00	1.00		0.64	1.00		1.00	1.00		0.91
Lane Grp Cap(c), veh/h	149	2056	602	118	1140	562	237	576	261	119	282	255
V/C Ratio(X)	0.89	0.34	0.18	1.45	0.86	0.86	0.68	0.56	0.31	0.94	0.68	0.71
Avail Cap(c_a), veh/h	399	3328	974	118	1192	588	378	1718	779	119	774	700
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.8	15.0	13.9	35.3	23.4	23.4	34.2	28.7	27.4	35.2	29.7	29.9
Incr Delay (d2), s/veh	6.7	0.1	0.1	244.3	6.4	12.1	1.3	0.9	0.7	61.8	2.8	3.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	2.3	1.0	10.0	8.2	9.0	1.4	2.5	1.2	3.9	3.2	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.4	15.1	14.1	279.6	29.8	35.5	35.4	29.6	28.1	96.9	32.5	33.6
LnGrp LOS	D	B	B	F	C	D	D	C	C	F	C	C
Approach Vol, veh/h		937			1638			567			484	
Approach Delay, s/veh		18.3			57.6			31.0			47.7	
Approach LOS		B			E			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.6	37.2	10.2	18.6	15.5	31.3	9.6	19.2				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	5.0	50.9	8.9	34.0	29.2	26.7	5.0	* 39				
Max Q Clear Time (g_c+I1), s	7.0	9.3	5.7	10.4	11.5	22.6	6.7	8.7				
Green Ext Time (p_c), s	0.0	5.2	0.1	2.0	0.2	3.0	0.0	2.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			42.0									
HCM 6th LOS			D									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

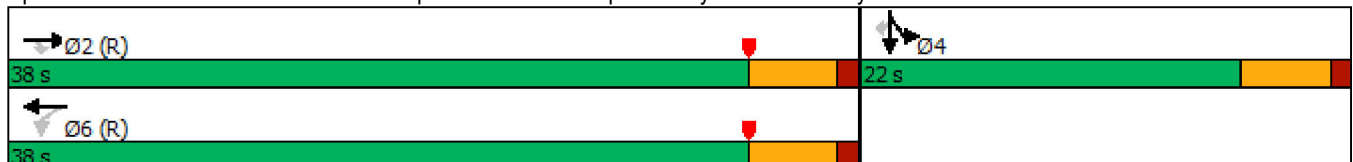


Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↑
Traffic Volume (vph)	875	153	644	400	0	255
Future Volume (vph)	875	153	644	400	0	255
Turn Type	NA	Perm	Perm	NA	NA	Perm
Protected Phases	2			6	4	
Permitted Phases		2	6			4
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	25.0	25.0	10.0	10.0
Total Split (s)	38.0	38.0	38.0	38.0	22.0	22.0
Total Split (%)	63.3%	63.3%	63.3%	63.3%	36.7%	36.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	33.0	33.0	33.0	33.0	17.0	17.0
Actuated g/C Ratio	0.55	0.55	0.55	0.55	0.28	0.28
v/c Ratio	0.50	0.18	2.77	0.23	1.31	0.45
Control Delay	9.6	1.8	817.8	8.4	177.8	5.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.6	1.8	817.8	8.4	177.8	5.3
LOS	A	A	F	A	F	A
Approach Delay	8.4			507.6	122.8	
Approach LOS	A			F	F	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 2.77  
 Intersection Signal Delay: 221.8  
 Intersection LOS: F  
 Intersection Capacity Utilization 154.3%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

















HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑						↑	↑
Traffic Volume (veh/h)	0	875	153	644	400	0	0	0	0	544	0	255
Future Volume (veh/h)	0	875	153	644	400	0	0	0	0	544	0	255
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1826	1885	1841	1826	0				1767	1900	1767
Adj Flow Rate, veh/h	0	951	166	700	435	0				591	0	217
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	5	1	4	5	0				9	0	9
Cap, veh/h	0	1908	878	309	1908	0				513	0	424
Arrive On Green	0.00	0.55	0.55	0.92	0.92	0.00				0.28	0.00	0.28
Sat Flow, veh/h	0	3561	1597	496	3561	0				1810	0	1497
Grp Volume(v), veh/h	0	951	166	700	435	0				591	0	217
Grp Sat Flow(s),veh/h/ln	0	1735	1597	496	1735	0				1810	0	1497
Q Serve(g_s), s	0.0	10.2	3.1	22.8	0.8	0.0				17.0	0.0	7.3
Cycle Q Clear(g_c), s	0.0	10.2	3.1	33.0	0.8	0.0				17.0	0.0	7.3
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1908	878	309	1908	0				513	0	424
V/C Ratio(X)	0.00	0.50	0.19	2.27	0.23	0.00				1.15	0.00	0.51
Avail Cap(c_a), veh/h	0	1908	878	309	1908	0				513	0	424
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.43	0.43	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	8.4	6.8	12.0	1.1	0.0				21.5	0.0	18.0
Incr Delay (d2), s/veh	0.0	0.9	0.5	575.0	0.1	0.0				89.2	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.8	0.8	52.6	0.2	0.0				18.7	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	9.3	7.3	587.0	1.3	0.0				110.7	0.0	19.1
LnGrp LOS	A	A	A	F	A	A				F	A	B
Approach Vol, veh/h		1117			1135						808	
Approach Delay, s/veh		9.0			362.5						86.1	
Approach LOS		A			F						F	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		38.0		22.0		38.0						
Change Period (Y+Rc), s		5.0		5.0		5.0						
Max Green Setting (Gmax), s		33.0		17.0		33.0						
Max Q Clear Time (g_c+I1), s		12.2		19.0		35.0						
Green Ext Time (p_c), s		4.3		0.0		0.0						
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				160.5								
HCM 6th LOS				F								



Timings

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.



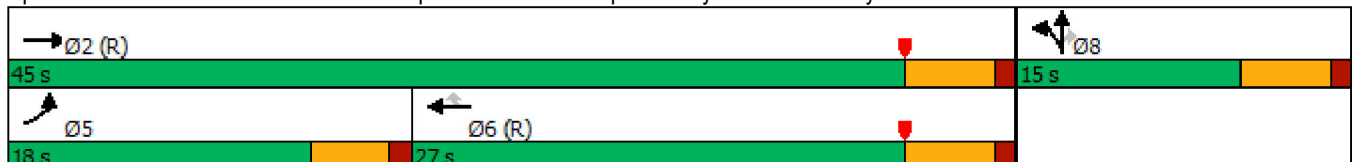
Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	479	940	984	1149	8	344
Future Volume (vph)	479	940	984	1149	8	344
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	26.0	24.0	24.0	10.0	10.0
Total Split (s)	18.0	45.0	27.0	27.0	15.0	15.0
Total Split (%)	30.0%	75.0%	45.0%	45.0%	25.0%	25.0%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max
Act Effct Green (s)	13.5	40.0	22.0	22.0	10.0	10.0
Actuated g/C Ratio	0.22	0.67	0.37	0.37	0.17	0.17
v/c Ratio	1.34	0.47	0.84	1.49	0.26	1.06
Control Delay	186.5	4.3	25.4	242.6	24.5	83.7
Queue Delay	0.0	0.3	0.0	0.0	0.0	0.0
Total Delay	186.5	4.6	25.4	242.6	24.5	83.7
LOS	F	A	C	F	C	F
Approach Delay		66.0	142.3		74.0	
Approach LOS		E	F		E	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 29 (48%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.49  
 Intersection Signal Delay: 107.9  
 Intersection Capacity Utilization 154.3%  
 Analysis Period (min) 15

Intersection LOS: F  
 ICU Level of Service H

Splits and Phases: 2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.























HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 							
Traffic Volume (veh/h)	479	940	0	0	984	1149	59	8	344	0	0	0
Future Volume (veh/h)	479	940	0	0	984	1149	59	8	344	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1841	1752	0	0	1841	1781	1678	1900	1678			
Adj Flow Rate, veh/h	521	1022	0	0	1070	1185	64	9	309			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	4	10	0	0	4	8	15	0	15			
Cap, veh/h	394	2219	0	0	1282	554	266	37	237			
Arrive On Green	0.07	0.22	0.00	0.00	0.37	0.37	0.17	0.17	0.17			
Sat Flow, veh/h	1753	3416	0	0	3589	1510	1596	224	1422			
Grp Volume(v), veh/h	521	1022	0	0	1070	1185	73	0	309			
Grp Sat Flow(s),veh/h/ln	1753	1664	0	0	1749	1510	1820	0	1422			
Q Serve(g_s), s	13.5	16.0	0.0	0.0	16.8	22.0	2.1	0.0	10.0			
Cycle Q Clear(g_c), s	13.5	16.0	0.0	0.0	16.8	22.0	2.1	0.0	10.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.88		1.00			
Lane Grp Cap(c), veh/h	394	2219	0	0	1282	554	303	0	237			
V/C Ratio(X)	1.32	0.46	0.00	0.00	0.83	2.14	0.24	0.00	1.30			
Avail Cap(c_a), veh/h	394	2219	0	0	1282	554	303	0	237			
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.86	0.86	0.00	0.00	0.62	0.62	1.00	0.00	1.00			
Uniform Delay (d), s/veh	27.8	14.0	0.0	0.0	17.3	19.0	21.7	0.0	25.0			
Incr Delay (d2), s/veh	159.1	0.6	0.0	0.0	4.2	517.1	1.9	0.0	164.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	23.4	6.9	0.0	0.0	6.1	85.6	0.9	0.0	13.7			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	186.8	14.6	0.0	0.0	21.5	536.1	23.6	0.0	189.0			
LnGrp LOS	F	B	A	A	C	F	C	A	F			
Approach Vol, veh/h		1543			2255			382				
Approach Delay, s/veh		72.8			291.9			157.4				
Approach LOS		E			F			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		45.0			18.0	27.0		15.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		40.0			13.5	22.0		10.0				
Max Q Clear Time (g_c+1), s		18.0			15.5	24.0		12.0				
Green Ext Time (p_c), s		4.5			0.0	0.0		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					198.7							
HCM 6th LOS					F							

Timings  
3: Western Way & Harley Knox Bl.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↑↑↑	↗	↖	↑↑↑	↖	↗	↖	↗
Traffic Volume (vph)	35	1249	1	2	1991	3	0	15	0
Future Volume (vph)	35	1249	1	2	1991	3	0	15	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	NA
Protected Phases	5	2		1	6		8		4
Permitted Phases			2			8		4	
Detector Phase	5	2	2	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	21.8	21.8	9.6	21.8	32.6	32.6	32.6	32.6
Total Split (s)	18.0	71.4	71.4	9.6	63.0	39.0	39.0	39.0	39.0
Total Split (%)	15.0%	59.5%	59.5%	8.0%	52.5%	32.5%	32.5%	32.5%	32.5%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	7.3	55.4	55.4	5.3	50.2	13.3	13.3	13.3	13.3
Actuated g/C Ratio	0.09	0.68	0.68	0.07	0.62	0.16	0.16	0.16	0.16
v/c Ratio	0.31	0.43	0.00	0.02	0.72	0.02	0.01	0.07	0.41
Control Delay	48.6	7.3	0.0	46.5	14.5	33.7	0.0	34.8	10.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.6	7.3	0.0	46.5	14.5	33.7	0.0	34.8	10.4
LOS	D	A	A	D	B	C	A	C	B
Approach Delay		8.4			14.5		14.4		12.7
Approach LOS		A			B		B		B

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 81.3	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 12.1	Intersection LOS: B
Intersection Capacity Utilization 56.0%	ICU Level of Service B
Analysis Period (min) 15	


























Splits and Phases: 3: Western Way & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 3: Western Way & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  							
Traffic Volume (veh/h)	35	1249	1	2	1991	11	3	0	4	15	0	140
Future Volume (veh/h)	35	1249	1	2	1991	11	3	0	4	15	0	140
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1426	1737	1900	1900	1811	1811	1900	1900	1900	1767	1900	1900
Adj Flow Rate, veh/h	38	1358	1	2	2164	10	3	0	4	16	0	140
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	32	11	0	0	6	6	0	0	0	9	0	0
Cap, veh/h	51	3075	1044	5	3118	14	170	0	219	281	0	219
Arrive On Green	0.04	0.65	0.65	0.00	0.61	0.61	0.14	0.00	0.14	0.14	0.00	0.14
Sat Flow, veh/h	1358	4742	1610	1810	5080	23	1269	0	1610	1334	0	1610
Grp Volume(v), veh/h	38	1358	1	2	1404	770	3	0	4	16	0	140
Grp Sat Flow(s),veh/h/ln	1358	1581	1610	1810	1648	1807	1269	0	1610	1334	0	1610
Q Serve(g_s), s	2.0	9.9	0.0	0.1	20.2	20.2	0.2	0.0	0.2	0.7	0.0	5.8
Cycle Q Clear(g_c), s	2.0	9.9	0.0	0.1	20.2	20.2	6.0	0.0	0.2	0.9	0.0	5.8
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	51	3075	1044	5	2023	1109	170	0	219	281	0	219
V/C Ratio(X)	0.75	0.44	0.00	0.41	0.69	0.69	0.02	0.00	0.02	0.06	0.00	0.64
Avail Cap(c_a), veh/h	258	4414	1499	128	2675	1466	617	0	786	750	0	786
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.6	6.1	4.4	35.1	9.2	9.2	31.6	0.0	26.4	26.8	0.0	28.8
Incr Delay (d2), s/veh	8.1	0.1	0.0	18.7	0.5	0.9	0.0	0.0	0.0	0.1	0.0	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	2.1	0.0	0.1	5.1	5.7	0.0	0.0	0.1	0.2	0.0	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.7	6.2	4.4	53.8	9.7	10.1	31.7	0.0	26.4	26.8	0.0	31.9
LnGrp LOS	D	A	A	D	A	B	C	A	C	C	A	C
Approach Vol, veh/h		1397			2176			7				156
Approach Delay, s/veh		7.2			9.9			28.7				31.4
Approach LOS		A			A			C				C
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.8	51.5		14.2	7.2	49.1		14.2				
Change Period (Y+Rc), s	4.6	5.8		4.6	4.6	5.8		4.6				
Max Green Setting (Gmax), s	5.0	65.6		34.4	13.4	57.2		34.4				
Max Q Clear Time (g_c+I1), s	2.1	11.9		7.8	4.0	22.2		8.0				
Green Ext Time (p_c), s	0.0	12.7		0.9	0.0	21.1		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			9.8									
HCM 6th LOS			A									

Timings  
4: Patterson Av. & Harley Knox Bl.

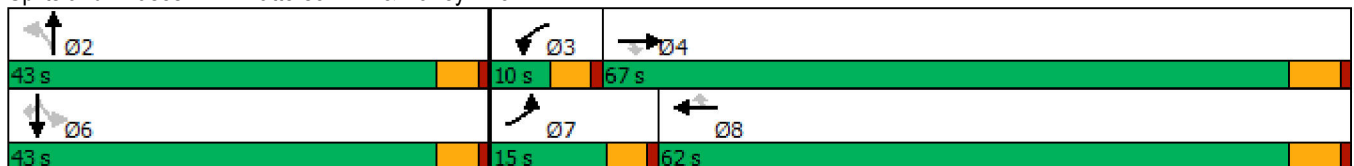
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	23	1026	46	50	1856	19	118	4	52	4	29
Future Volume (vph)	23	1026	46	50	1856	19	118	4	52	4	29
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	7	4		3	8			2		6	
Permitted Phases			4			8	2		6		6
Detector Phase	7	4	4	3	8	8	2	2	6	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	9.6	31.8	31.8	33.7	33.7	40.7	40.7	40.7
Total Split (s)	15.0	67.0	67.0	10.0	62.0	62.0	43.0	43.0	43.0	43.0	43.0
Total Split (%)	12.5%	55.8%	55.8%	8.3%	51.7%	51.7%	35.8%	35.8%	35.8%	35.8%	35.8%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8		4.7		4.7	4.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	6.9	56.1	56.1	5.4	59.4	59.4		18.7		18.7	18.7
Actuated g/C Ratio	0.07	0.60	0.60	0.06	0.64	0.64		0.20		0.20	0.20
v/c Ratio	0.31	0.39	0.05	0.52	0.93	0.02		0.66		0.26	0.09
Control Delay	55.5	11.9	3.1	65.0	28.3	0.1		42.9		33.7	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	55.5	11.9	3.1	65.0	28.3	0.1		42.9		33.7	0.5
LOS	E	B	A	E	C	A		D		C	A
Approach Delay		12.5			29.0			42.9		22.3	
Approach LOS		B			C			D		C	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 93.5  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.93  
 Intersection Signal Delay: 24.0  
 Intersection Capacity Utilization 81.9%  
 Analysis Period (min) 15

Intersection LOS: C  
 ICU Level of Service D



























Splits and Phases: 4: Patterson Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 4: Patterson Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/10/2020

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		  			 			 				 	
Traffic Volume (veh/h)	23	1026	46	50	1856	19	118	4	46	52	4	29	
Future Volume (veh/h)	23	1026	46	50	1856	19	118	4	46	52	4	29	
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No			No			No			No		
Adj Sat Flow, veh/h/ln	922	1752	1856	1900	1811	1574	1900	1900	1900	1337	1337	1544	
Adj Flow Rate, veh/h	25	1115	50	54	2017	21	128	4	50	57	4	32	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Percent Heavy Veh, %	66	10	3	0	6	22	0	0	0	38	38	24	
Cap, veh/h	23	2857	939	74	2108	800	213	17	61	252	14	256	
Arrive On Green	0.03	0.60	0.60	0.04	0.61	0.61	0.20	0.20	0.20	0.20	0.20	0.20	
Sat Flow, veh/h	878	4782	1572	1810	3441	1306	743	85	314	898	74	1309	
Grp Volume(v), veh/h	25	1115	50	54	2017	21	182	0	0	61	0	32	
Grp Sat Flow(s),veh/h/ln	878	1594	1572	1810	1721	1306	1143	0	0	971	0	1309	
Q Serve(g_s), s	2.3	11.1	1.2	2.7	49.9	0.6	9.9	0.0	0.0	0.0	0.0	1.8	
Cycle Q Clear(g_c), s	2.3	11.1	1.2	2.7	49.9	0.6	14.8	0.0	0.0	4.9	0.0	1.8	
Prop In Lane	1.00		1.00	1.00		1.00	0.70		0.27	0.93		1.00	
Lane Grp Cap(c), veh/h	23	2857	939	74	2108	800	291	0	0	267	0	256	
V/C Ratio(X)	1.11	0.39	0.05	0.73	0.96	0.03	0.63	0.00	0.00	0.23	0.00	0.12	
Avail Cap(c_a), veh/h	100	3218	1058	107	2126	807	619	0	0	488	0	551	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	
Uniform Delay (d), s/veh	44.3	9.6	7.6	43.1	16.5	6.9	36.9	0.0	0.0	31.4	0.0	30.2	
Incr Delay (d2), s/veh	85.1	0.1	0.0	5.3	11.1	0.0	2.2	0.0	0.0	0.4	0.0	0.2	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	1.0	3.2	0.3	1.3	18.4	0.1	4.0	0.0	0.0	1.2	0.0	0.6	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	129.4	9.7	7.6	48.5	27.6	7.0	39.1	0.0	0.0	31.8	0.0	30.4	
LnGrp LOS	F	A	A	D	C	A	D	A	A	C	A	C	
Approach Vol, veh/h		1190			2092			182				93	
Approach Delay, s/veh		12.1			27.9			39.1				31.3	
Approach LOS		B			C			D				C	
Timer - Assigned Phs		2	3	4		6	7	8					
Phs Duration (G+Y+Rc), s		22.5	8.3	60.1		22.5	6.9	61.5					
Change Period (Y+Rc), s		* 4.7	4.6	5.8		* 4.7	4.6	5.8					
Max Green Setting (Gmax), s		* 38	5.4	61.2		* 38	10.4	56.2					
Max Q Clear Time (g_c+I1), s		16.8	4.7	13.1		6.9	4.3	51.9					
Green Ext Time (p_c), s		1.0	0.0	9.5		0.4	0.0	3.8					
<b>Intersection Summary</b>													
HCM 6th Ctrl Delay				23.3									
HCM 6th LOS				C									
<b>Notes</b>													
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.													

Timings  
5: Heacock Street & Cactus Avenue

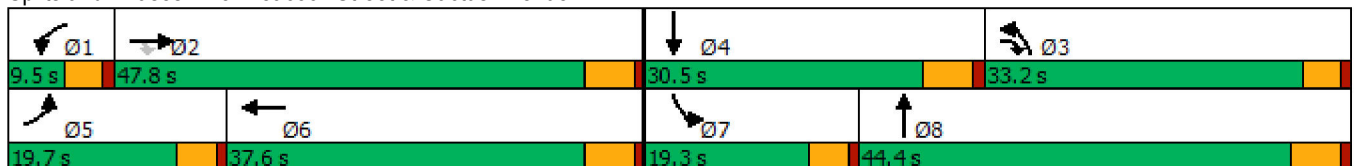


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	244	2146	1379	28	956	831	675	184	746
Future Volume (vph)	244	2146	1379	28	956	831	675	184	746
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	3	1	6	3	8	7	4
Permitted Phases			2						
Detector Phase	5	2	3	1	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.5	30.5	9.5	9.5	30.5	9.5	30.5	9.5	30.5
Total Split (s)	19.7	47.8	33.2	9.5	37.6	33.2	44.4	19.3	30.5
Total Split (%)	16.3%	39.5%	27.4%	7.9%	31.1%	27.4%	36.7%	16.0%	25.2%
Yellow Time (s)	3.5	4.5	3.5	3.5	4.5	3.5	4.5	3.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	4.5	4.5	5.5	4.5	5.5	4.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None
Act Effct Green (s)	15.2	46.1	75.8	5.0	32.1	28.7	39.5	14.2	25.0
Actuated g/C Ratio	0.13	0.38	0.63	0.04	0.27	0.24	0.33	0.12	0.21
v/c Ratio	1.07	1.56	1.25	0.39	1.13	1.02	0.64	0.86	1.10
Control Delay	127.4	284.4	139.6	72.0	110.7	81.4	37.2	86.2	106.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	127.4	284.4	139.6	72.0	110.7	81.4	37.2	86.2	106.0
LOS	F	F	F	E	F	F	D	F	F
Approach Delay		221.3			109.8		60.5		102.3
Approach LOS		F			F		E		F

Intersection Summary

Cycle Length: 121  
 Actuated Cycle Length: 121  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.56  
 Intersection Signal Delay: 154.7  
 Intersection LOS: F  
 Intersection Capacity Utilization 126.4%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 5: Heacock Street & Cactus Avenue



























HCM 6th Signalized Intersection Summary  
5: Heacock Street & Cactus Avenue

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	244	2146	1379	28	956	132	831	675	72	184	746	61
Future Volume (veh/h)	244	2146	1379	28	956	132	831	675	72	184	746	61
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1811	1826	1885	1885	1811	1870	1870	1900	1856	1856
Adj Flow Rate, veh/h	254	2235	1436	29	996	138	866	703	75	192	777	64
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	1	6	5	1	1	6	2	2	0	3	3
Cap, veh/h	225	1365	915	45	853	118	812	1087	116	218	693	57
Arrive On Green	0.12	0.36	0.36	0.03	0.26	0.26	0.24	0.33	0.33	0.12	0.20	0.20
Sat Flow, veh/h	1810	3770	1531	1739	3241	449	3450	3316	353	1810	3382	278
Grp Volume(v), veh/h	254	2235	1436	29	579	555	866	396	382	192	426	415
Grp Sat Flow(s),veh/h/ln	1810	1885	1531	1739	1885	1804	1725	1870	1799	1810	1856	1804
Q Serve(g_s), s	15.2	44.2	27.8	2.0	32.1	32.1	28.7	22.0	22.1	12.7	25.0	25.0
Cycle Q Clear(g_c), s	15.2	44.2	27.8	2.0	32.1	32.1	28.7	22.0	22.1	12.7	25.0	25.0
Prop In Lane	1.00		1.00	1.00		0.25	1.00		0.20	1.00		0.15
Lane Grp Cap(c), veh/h	225	1365	915	45	496	475	812	613	590	218	380	370
V/C Ratio(X)	1.13	1.64	1.57	0.65	1.17	1.17	1.07	0.65	0.65	0.88	1.12	1.12
Avail Cap(c_a), veh/h	225	1365	915	71	496	475	812	613	590	220	380	370
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.4	38.9	11.8	58.9	44.9	45.0	46.7	35.0	35.0	52.8	48.5	48.5
Incr Delay (d2), s/veh	98.2	290.1	261.3	5.8	95.3	96.6	51.1	1.9	1.9	29.9	83.2	84.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.8	74.1	77.6	0.9	27.5	26.5	17.6	10.0	9.6	7.4	20.0	19.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	151.6	329.0	273.0	64.7	140.3	141.6	97.7	36.8	36.9	82.7	131.7	132.5
LnGrp LOS	F	F	F	E	F	F	F	D	D	F	F	F
Approach Vol, veh/h		3925			1163			1644			1033	
Approach Delay, s/veh		297.1			139.0			68.9			122.9	
Approach LOS		F			F			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.6	49.7	34.2	30.5	19.7	37.6	19.2	45.5				
Change Period (Y+Rc), s	4.5	5.5	5.5	* 5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	5.0	42.3	28.7	* 25	15.2	32.1	14.8	38.9				
Max Q Clear Time (g_c+I1), s	4.0	46.2	30.7	27.0	17.2	34.1	14.7	24.1				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5				

Intersection Summary

HCM 6th Ctrl Delay	201.9
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



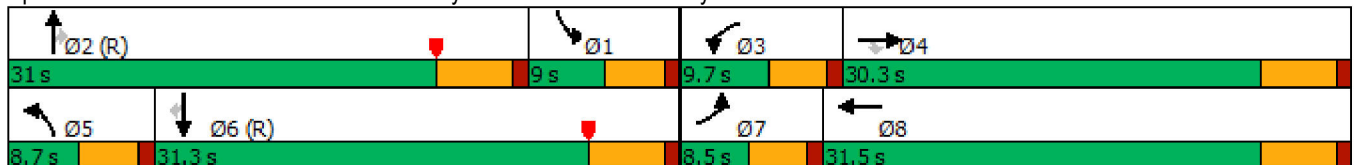
Timings  
6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	35	218	386	47	99	135	1072	137	362	1209	24	
Future Volume (vph)	35	218	386	47	99	135	1072	137	362	1209	24	
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	7	4		3	8	5	2		1	6		
Permitted Phases			4					2			6	
Detector Phase	7	4	4	3	8	5	2	2	1	6	6	
Switch Phase												
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	
Minimum Split (s)	8.5	23.5	23.5	8.5	31.5	8.5	30.5	30.5	8.5	23.5	23.5	
Total Split (s)	8.5	30.3	30.3	9.7	31.5	8.7	31.0	31.0	9.0	31.3	31.3	
Total Split (%)	10.6%	37.9%	37.9%	12.1%	39.4%	10.9%	38.8%	38.8%	11.3%	39.1%	39.1%	
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5	4.5	4.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	5.5	4.5	5.5	5.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max	
Act Effct Green (s)	4.0	15.8	15.8	5.1	16.5	12.5	38.4	38.4	4.5	30.4	30.4	
Actuated g/C Ratio	0.05	0.20	0.20	0.06	0.21	0.16	0.48	0.48	0.06	0.38	0.38	
v/c Ratio	0.40	0.64	0.75	0.42	0.34	0.49	0.68	0.15	3.85	0.98	0.03	
Control Delay	49.5	36.4	21.1	47.3	10.3	43.1	22.2	2.9	1321.3	47.6	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	49.5	36.4	21.1	47.3	10.3	43.1	22.2	2.9	1321.3	47.6	0.1	
LOS	D	D	C	D	B	D	C	A	F	D	A	
Approach Delay		27.9			15.4		22.4			335.7		
Approach LOS		C			B		C			F		

Intersection Summary

Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 110  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 3.85  
 Intersection Signal Delay: 150.2  
 Intersection LOS: F  
 Intersection Capacity Utilization 81.2%  
 ICU Level of Service D  
 Analysis Period (min) 15
























Splits and Phases: 6: Heacock Street & Meyer Drive/John F. Kennedy Drive



HCM 6th Signalized Intersection Summary  
 6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	218	386	47	99	194	135	1072	137	362	1209	24
Future Volume (veh/h)	35	218	386	47	99	194	135	1072	137	362	1209	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1900	1900	1885	1885	1900	1796	1900	1841	1796	1900
Adj Flow Rate, veh/h	38	237	420	51	108	211	147	1165	149	393	1314	26
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	1	0	0	1	1	0	7	0	4	7	0
Cap, veh/h	52	536	458	65	550	466	95	1145	513	173	1355	607
Arrive On Green	0.03	0.28	0.28	0.04	0.29	0.29	0.05	0.32	0.32	0.10	0.38	0.38
Sat Flow, veh/h	1810	1885	1610	1810	1885	1598	1810	3593	1610	1753	3593	1610
Grp Volume(v), veh/h	38	237	420	51	108	211	147	1165	149	393	1314	26
Grp Sat Flow(s),veh/h/ln	1810	1885	1610	1810	1885	1598	1810	1796	1610	1753	1796	1610
Q Serve(g_s), s	1.7	8.2	20.2	2.2	3.4	8.6	4.2	25.5	4.2	7.9	28.7	0.8
Cycle Q Clear(g_c), s	1.7	8.2	20.2	2.2	3.4	8.6	4.2	25.5	4.2	7.9	28.7	0.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	52	536	458	65	550	466	95	1145	513	173	1355	607
V/C Ratio(X)	0.74	0.44	0.92	0.78	0.20	0.45	1.55	1.02	0.29	2.28	0.97	0.04
Avail Cap(c_a), veh/h	90	584	499	118	613	519	95	1145	513	173	1355	607
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.58	0.58	0.58	0.09	0.09	0.09
Uniform Delay (d), s/veh	38.6	23.4	27.7	38.3	21.3	23.1	37.9	27.2	11.9	36.1	24.5	15.8
Incr Delay (d2), s/veh	7.4	0.2	20.0	7.5	0.1	0.3	274.2	24.7	0.8	576.7	3.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	3.5	9.6	1.1	1.4	3.0	9.0	13.5	2.0	30.7	11.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.9	23.6	47.8	45.8	21.3	23.4	312.1	52.0	12.8	612.8	27.6	15.8
LnGrp LOS	D	C	D	D	C	C	F	F	B	F	C	B
Approach Vol, veh/h		695			370			1461			1733	
Approach Delay, s/veh		39.4			25.9			74.1			160.1	
Approach LOS		D			C			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.4	31.0	7.4	28.3	8.7	35.7	6.8	28.8				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	4.5	* 26	5.2	24.8	4.2	25.8	4.0	26.0				
Max Q Clear Time (g_c+I1), s	9.9	27.5	4.2	22.2	6.2	30.7	3.7	10.6				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.5	0.0	0.0	0.0	1.0				















Intersection Summary

HCM 6th Ctrl Delay	99.3
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
7: Heacock Street & Gentian Avenue

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			 			 
Traffic Volume (vph)	19	156	1151	54	250	1419
Future Volume (vph)	19	156	1151	54	250	1419
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	27.6	27.6	27.2	27.2	9.6	16.2
Total Split (s)	31.0	31.0	62.0	62.0	27.0	89.0
Total Split (%)	25.8%	25.8%	51.7%	51.7%	22.5%	74.2%
Yellow Time (s)	3.6	3.6	5.2	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	6.2	6.2	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	12.4	12.4	39.7	39.7	17.9	62.4
Actuated g/C Ratio	0.14	0.14	0.46	0.46	0.21	0.72
v/c Ratio	0.08	0.41	0.80	0.07	0.71	0.62
Control Delay	37.5	9.5	24.6	10.8	45.5	7.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.5	9.5	24.6	10.8	45.5	7.3
LOS	D	A	C	B	D	A
Approach Delay	12.5		24.0			13.0
Approach LOS	B		C			B

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 86.1	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay: 17.3	Intersection LOS: B
Intersection Capacity Utilization 66.8%	ICU Level of Service C
Analysis Period (min) 15	













Splits and Phases: 7: Heacock Street & Gentian Avenue



















HCM 6th Signalized Intersection Summary  
7: Heacock Street & Gentian Avenue

Gateway Aviation TA (JN:13445)

11/10/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	19	156	1151	54	250	1419
Future Volume (veh/h)	19	156	1151	54	250	1419
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1811	1900	1856	1826
Adj Flow Rate, veh/h	21	170	1251	59	272	1542
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	6	0	3	5
Cap, veh/h	245	218	1623	759	318	2481
Arrive On Green	0.14	0.14	0.47	0.47	0.18	0.72
Sat Flow, veh/h	1810	1610	3532	1610	1767	3561
Grp Volume(v), veh/h	21	170	1251	59	272	1542
Grp Sat Flow(s),veh/h/ln	1810	1610	1721	1610	1767	1735
Q Serve(g_s), s	0.7	7.4	21.8	1.5	10.8	16.5
Cycle Q Clear(g_c), s	0.7	7.4	21.8	1.5	10.8	16.5
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	245	218	1623	759	318	2481
V/C Ratio(X)	0.09	0.78	0.77	0.08	0.86	0.62
Avail Cap(c_a), veh/h	661	588	2658	1244	548	3977
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.3	30.2	15.8	10.5	28.7	5.3
Incr Delay (d2), s/veh	0.1	2.3	0.8	0.0	2.6	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.8	6.9	0.4	4.3	2.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	27.4	32.5	16.6	10.5	31.3	5.5
LnGrp LOS	C	C	B	B	C	A
Approach Vol, veh/h	191		1310			1814
Approach Delay, s/veh	31.9		16.4			9.4
Approach LOS	C		B			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	17.6	40.3			57.8	14.4
Change Period (Y+Rc), s	4.6	6.2			6.2	4.6
Max Green Setting (Gmax), s	22.4	55.8			82.8	26.4
Max Q Clear Time (g_c+1), s	12.8	23.8			18.5	9.4
Green Ext Time (p_c), s	0.3	10.3			16.4	0.3
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			13.5			
HCM 6th LOS			B			

Timings  
8: Heacock Street & Iris Avenue

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 		 		 	 
Traffic Volume (vph)	271	344	878	418	541	1077
Future Volume (vph)	271	344	878	418	541	1077
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	15.8	15.8	33.2	33.2	9.6	16.2
Total Split (s)	35.0	35.0	47.0	47.0	38.0	85.0
Total Split (%)	29.2%	29.2%	39.2%	39.2%	31.7%	70.8%
Yellow Time (s)	4.8	4.8	5.2	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	6.2	6.2	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effect Green (s)	13.2	13.2	32.7	32.7	18.4	55.9
Actuated g/C Ratio	0.16	0.16	0.40	0.40	0.23	0.69
v/c Ratio	0.49	0.60	0.71	0.55	0.71	0.50
Control Delay	36.2	8.6	24.3	9.5	35.6	6.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.2	8.6	24.3	9.5	35.6	6.9
LOS	D	A	C	A	D	A
Approach Delay	20.8		19.5			16.5
Approach LOS	C		B			B

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 81.5	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 18.4	Intersection LOS: B
Intersection Capacity Utilization 61.9%	ICU Level of Service B
Analysis Period (min) 15	

















Splits and Phases: 8: Heacock Street & Iris Avenue



HCM 6th Signalized Intersection Summary  
8: Heacock Street & Iris Avenue

Gateway Aviation TA (JN:13445)

11/10/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 		 		 	 
Traffic Volume (veh/h)	271	344	878	418	541	1077
Future Volume (veh/h)	271	344	878	418	541	1077
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1781	1900	1885	1811
Adj Flow Rate, veh/h	295	374	954	454	588	1171
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	8	0	1	6
Cap, veh/h	921	423	1201	571	685	2075
Arrive On Green	0.26	0.26	0.35	0.35	0.20	0.60
Sat Flow, veh/h	3510	1610	3474	1610	3483	3532
Grp Volume(v), veh/h	295	374	954	454	588	1171
Grp Sat Flow(s),veh/h/ln	1755	1610	1692	1610	1742	1721
Q Serve(g_s), s	6.0	19.9	22.6	22.6	14.6	18.3
Cycle Q Clear(g_c), s	6.0	19.9	22.6	22.6	14.6	18.3
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	921	423	1201	571	685	2075
V/C Ratio(X)	0.32	0.89	0.79	0.79	0.86	0.56
Avail Cap(c_a), veh/h	1149	527	1547	736	1303	3038
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.5	31.6	25.9	25.9	34.6	10.7
Incr Delay (d2), s/veh	0.2	14.1	2.3	4.6	1.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	8.8	8.5	8.4	5.8	5.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	26.7	45.7	28.1	30.5	35.9	10.9
LnGrp LOS	C	D	C	C	D	B
Approach Vol, veh/h	669		1408			1759
Approach Delay, s/veh	37.3		28.9			19.3
Approach LOS	D		C			B
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	22.2	37.9			60.0	29.2
Change Period (Y+Rc), s	4.6	6.2			6.2	5.8
Max Green Setting (Gmax), s	33.4	40.8			78.8	29.2
Max Q Clear Time (g_c+1), s	16.6	24.6			20.3	21.9
Green Ext Time (p_c), s	1.0	7.1			10.0	1.5
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			25.9			
HCM 6th LOS			C			

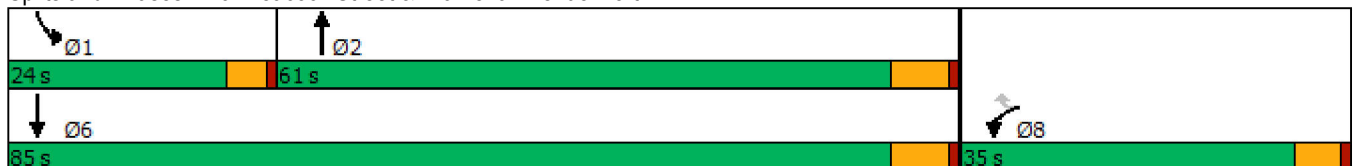
Timings  
9: Heacock Street & Krameria Avenue-North

	↙	↖	↑	↘	↓
Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations	↙	↖	↑↔	↘	↑↑
Traffic Volume (vph)	248	274	902	123	821
Future Volume (vph)	248	274	902	123	821
Turn Type	Prot	Perm	NA	Prot	NA
Protected Phases	8		2	1	6
Permitted Phases		8			
Detector Phase	8	8	2	1	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	29.1	29.1	29.2	9.6	16.2
Total Split (s)	35.0	35.0	61.0	24.0	85.0
Total Split (%)	29.2%	29.2%	50.8%	20.0%	70.8%
Yellow Time (s)	4.1	4.1	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	6.2	4.6	6.2
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	Min	Max	Min
Act Effect Green (s)	17.4	17.4	33.9	19.9	58.6
Actuated g/C Ratio	0.20	0.20	0.39	0.23	0.67
v/c Ratio	0.72	0.50	0.82	0.33	0.38
Control Delay	45.7	7.1	29.8	35.5	7.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	45.7	7.1	29.8	35.5	7.5
LOS	D	A	C	D	A
Approach Delay	25.4		29.8		11.1
Approach LOS	C		C		B

Intersection Summary














Cycle Length: 120  
 Actuated Cycle Length: 87.6  
 Natural Cycle: 75  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.82  
 Intersection Signal Delay: 21.8  
 Intersection LOS: C  
 Intersection Capacity Utilization 62.7%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 9: Heacock Street & Krameria Avenue-North



HCM 6th Signalized Intersection Summary  
 9: Heacock Street & Krameria Avenue-North

Gateway Aviation TA (JN:13445)  
 11/10/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			 			 
Traffic Volume (veh/h)	248	274	902	124	123	821
Future Volume (veh/h)	248	274	902	124	123	821
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1885	1841	1870	1870	1811	1841
Adj Flow Rate, veh/h	270	298	980	135	134	892
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	4	2	2	6	4
Cap, veh/h	392	341	1140	157	396	2265
Arrive On Green	0.22	0.22	0.36	0.36	0.23	0.65
Sat Flow, veh/h	1795	1560	3230	432	1725	3589
Grp Volume(v), veh/h	270	298	555	560	134	892
Grp Sat Flow(s),veh/h/ln	1795	1560	1777	1792	1725	1749
Q Serve(g_s), s	11.7	15.6	24.4	24.4	5.5	10.2
Cycle Q Clear(g_c), s	11.7	15.6	24.4	24.4	5.5	10.2
Prop In Lane	1.00	1.00		0.24	1.00	
Lane Grp Cap(c), veh/h	392	341	646	651	396	2265
V/C Ratio(X)	0.69	0.87	0.86	0.86	0.34	0.39
Avail Cap(c_a), veh/h	636	553	1154	1163	396	3265
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.3	31.9	24.9	24.9	27.1	7.0
Incr Delay (d2), s/veh	0.8	5.1	1.3	1.3	2.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	6.3	9.2	9.3	2.3	2.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	31.1	37.0	26.2	26.2	29.4	7.1
LnGrp LOS	C	D	C	C	C	A
Approach Vol, veh/h	568		1115			1026
Approach Delay, s/veh	34.2		26.2			10.0
Approach LOS	C		C			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	24.0	36.9			60.9	23.5
Change Period (Y+Rc), s	4.6	6.2			6.2	5.1
Max Green Setting (Gmax), s	19.4	54.8			78.8	29.9
Max Q Clear Time (g_c+1), s	7.5	26.4			12.2	17.6
Green Ext Time (p_c), s	0.1	4.2			3.9	0.9
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			21.8			
HCM 6th LOS			C			



Timings  
10: Heacock Street & Driveway 1



Lane Group	EBL	EBT	NBL	NBT	SBT	SBR	Ø1	Ø8
Lane Configurations								
Traffic Volume (vph)	42	0	27	913	1134	2		
Future Volume (vph)	42	0	27	913	1134	2		
Turn Type	Perm	NA	Prot	NA	NA	Perm		
Protected Phases		4	5	2	6		1	8
Permitted Phases	4					6		
Detector Phase	4	4	5	2	6	6		
Switch Phase								
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	26.7	26.7	9.6	23.2	23.2	23.2	9.6	26.7
Total Split (s)	28.0	28.0	13.0	82.4	79.0	79.0	9.6	28.0
Total Split (%)	23.3%	23.3%	10.8%	68.7%	65.8%	65.8%	8%	23%
Yellow Time (s)	3.7	3.7	3.6	5.2	5.2	5.2	3.6	3.7
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.7	4.7	4.6	6.2	6.2	6.2		
Lead/Lag			Lead	Lag	Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	Min	Min	Min	None	None
Act Effct Green (s)	12.7	12.7	6.3	41.5	38.0	38.0		
Actuated g/C Ratio	0.22	0.22	0.11	0.70	0.64	0.64		
v/c Ratio	0.15	0.17	0.15	0.40	0.55	0.00		
Control Delay	25.5	1.7	33.6	6.1	11.2	0.0		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay	25.5	1.7	33.6	6.1	11.2	0.0		
LOS	C	A	C	A	B	A		
Approach Delay		10.5		6.9	11.2			
Approach LOS		B		A	B			

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 59	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.55	
Intersection Signal Delay: 9.3	Intersection LOS: A
Intersection Capacity Utilization 48.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 10: Heacock Street & Driveway 1

Ø1	Ø2	Ø4
9.6 s	32.4 s	28 s
Ø5	Ø6	Ø8
13 s	79 s	28 s

HCM 6th Signalized Intersection Summary  
 10: Heacock Street & Driveway 1

Gateway Aviation TA (JN:13445)

11/17/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	0	73	0	0	0	27	913	0	0	1134	2
Future Volume (veh/h)	42	0	73	0	0	0	27	913	0	0	1134	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1870	1870	1900	1856	1900
Adj Flow Rate, veh/h	46	0	79	0	0	0	29	992	0	0	1233	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	2	2	0	3	0
Cap, veh/h	428	0	258	0	305	0	60	2241	0	3	1796	820
Arrive On Green	0.16	0.00	0.16	0.00	0.00	0.00	0.03	0.63	0.00	0.00	0.51	0.51
Sat Flow, veh/h	1810	0	1610	0	1900	0	1810	3647	0	1810	3526	1610
Grp Volume(v), veh/h	46	0	79	0	0	0	29	992	0	0	1233	2
Grp Sat Flow(s),veh/h/ln	1810	0	1610	0	1900	0	1810	1777	0	1810	1763	1610
Q Serve(g_s), s	1.1	0.0	2.3	0.0	0.0	0.0	0.8	7.5	0.0	0.0	13.8	0.0
Cycle Q Clear(g_c), s	1.1	0.0	2.3	0.0	0.0	0.0	0.8	7.5	0.0	0.0	13.8	0.0
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	428	0	258	0	305	0	60	2241	0	3	1796	820
V/C Ratio(X)	0.11	0.00	0.31	0.00	0.00	0.00	0.49	0.44	0.00	0.00	0.69	0.00
Avail Cap(c_a), veh/h	947	0	720	0	849	0	292	5194	0	174	4923	2248
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	18.9	0.0	19.3	0.0	0.0	0.0	24.8	4.9	0.0	0.0	9.6	6.3
Incr Delay (d2), s/veh	0.1	0.0	0.7	0.0	0.0	0.0	2.3	0.1	0.0	0.0	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.8	0.0	0.0	0.0	0.3	1.1	0.0	0.0	3.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.0	0.0	20.0	0.0	0.0	0.0	27.1	5.1	0.0	0.0	10.1	6.3
LnGrp LOS	B	A	B	A	A	A	C	A	A	A	B	A
Approach Vol, veh/h		125			0			1021			1235	
Approach Delay, s/veh		19.6			0.0			5.7			10.1	
Approach LOS		B						A			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	39.1		13.1	6.3	32.8		13.1				
Change Period (Y+Rc), s	4.6	6.2		* 4.7	4.6	6.2		* 4.7				
Max Green Setting (Gmax), s	5.0	76.2		* 23	8.4	72.8		* 23				
Max Q Clear Time (g_c+I1), s	0.0	9.5		4.3	2.8	15.8		0.0				
Green Ext Time (p_c), s	0.0	7.7		0.5	0.0	10.8		0.0				

Intersection Summary

HCM 6th Ctrl Delay	8.7
HCM 6th LOS	A

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection						
Int Delay, s/veh	1.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↕	↗	↘	↕
Traffic Vol, veh/h	61	57	1086	20	18	1615
Future Vol, veh/h	61	57	1086	20	18	1615
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	0	140	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	10	6	14	8	9
Mvmt Flow	66	62	1180	22	20	1755

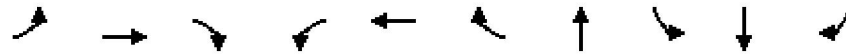
Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	2098	590	0	0	1202
Stage 1	1180	-	-	-	-
Stage 2	918	-	-	-	-
Critical Hdwy	6.84	7.1	-	-	4.26
Critical Hdwy Stg 1	5.84	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-
Follow-up Hdwy	3.52	3.4	-	-	2.28
Pot Cap-1 Maneuver	~ 45	431	-	-	544
Stage 1	254	-	-	-	-
Stage 2	349	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	~ 43	431	-	-	544
Mov Cap-2 Maneuver	151	-	-	-	-
Stage 1	254	-	-	-	-
Stage 2	336	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	31.1	0	0.1
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	151	431	544	-
HCM Lane V/C Ratio	-	-	0.439	0.144	0.036	-
HCM Control Delay (s)	-	-	46.3	14.8	11.9	-
HCM Lane LOS	-	-	E	B	B	-
HCM 95th %tile Q(veh)	-	-	2	0.5	0.1	-

Notes  
 ~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Timings  
12: Heacock Street & San Michele Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBL	SBT	SBR	Ø5
Lane Configurations	↖	↗	↘	↖	↗	↘	↕	↖	↗	↘	
Traffic Volume (vph)	59	348	7	31	102	590	1174	338	1765	36	
Future Volume (vph)	59	348	7	31	102	590	1174	338	1765	36	
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	NA	Prot	NA	Perm	
Protected Phases	7	4		3	8	1	2	1	6		5
Permitted Phases			4			8				6	
Detector Phase	7	4	4	3	8	1	2	1	6	6	
Switch Phase											
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0
Minimum Split (s)	9.5	30.5	30.5	8.5	30.5	8.5	34.5	8.5	34.5	34.5	8.5
Total Split (s)	12.0	37.4	37.4	9.6	35.0	36.0	37.0	36.0	64.5	64.5	8.5
Total Split (%)	10.0%	31.2%	31.2%	8.0%	29.2%	30.0%	30.8%	30.0%	53.8%	53.8%	7%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5	5.5	
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	None	Max	Max	None
Act Effct Green (s)	12.8	24.5	24.5	5.1	14.5	48.6	32.2	28.4	65.2	65.2	
Actuated g/C Ratio	0.12	0.23	0.23	0.05	0.14	0.46	0.30	0.27	0.61	0.61	
v/c Ratio	0.28	0.86	0.01	0.38	0.43	0.70	1.22	0.73	1.68	0.03	
Control Delay	47.7	60.0	0.0	66.4	49.9	24.7	139.4	46.6	329.3	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	47.7	60.0	0.0	66.4	49.9	24.7	139.4	46.6	329.3	0.1	
LOS	D	E	A	E	D	C	F	D	F	A	
Approach Delay		57.2			30.1		139.4		279.2		
Approach LOS		E			C		F		F		

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 106.1	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.68	
Intersection Signal Delay: 180.7	Intersection LOS: F
Intersection Capacity Utilization 134.6%	ICU Level of Service H
Analysis Period (min) 15	

























Splits and Phases: 12: Heacock Street & San Michele Road



HCM 6th Signalized Intersection Summary  
12: Heacock Street & San Michele Road

Gateway Aviation TA (JN:13445)

04/19/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	348	7	31	102	590	0	1174	45	338	1765	36
Future Volume (veh/h)	59	348	7	31	102	590	0	1174	45	338	1765	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1870	1900	1900	1900	1885	1870	1900
Adj Flow Rate, veh/h	64	378	8	34	111	641	0	1276	49	367	1918	39
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	2	0	0	0	1	2	0
Cap, veh/h	87	428	353	44	382	673	2	1121	43	401	1113	958
Arrive On Green	0.05	0.23	0.23	0.02	0.20	0.20	0.00	0.32	0.32	0.22	0.59	0.59
Sat Flow, veh/h	1810	1900	1569	1810	1900	1585	1810	3545	136	1795	1870	1610
Grp Volume(v), veh/h	64	378	8	34	111	641	0	649	676	367	1918	39
Grp Sat Flow(s),veh/h/ln	1810	1900	1569	1810	1900	1585	1810	1805	1876	1795	1870	1610
Q Serve(g_s), s	3.5	19.2	0.4	1.9	4.9	16.7	0.0	31.5	31.5	19.9	59.3	0.6
Cycle Q Clear(g_c), s	3.5	19.2	0.4	1.9	4.9	16.7	0.0	31.5	31.5	19.9	59.3	0.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.07	1.00		1.00
Lane Grp Cap(c), veh/h	87	428	353	44	382	673	2	571	593	401	1113	958
V/C Ratio(X)	0.73	0.88	0.02	0.77	0.29	0.95	0.00	1.14	1.14	0.91	1.72	0.04
Avail Cap(c_a), veh/h	136	608	503	93	563	824	73	571	593	568	1113	958
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.8	37.3	25.9	48.3	33.7	27.7	0.0	34.1	34.1	37.8	20.2	3.4
Incr Delay (d2), s/veh	4.4	8.4	0.0	9.8	0.2	17.4	0.0	81.6	81.7	12.7	329.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	9.8	0.1	0.9	2.2	6.8	0.0	25.6	26.6	9.6	122.2	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.2	45.7	25.9	58.1	33.9	45.1	0.0	115.7	115.8	50.4	349.7	3.4
LnGrp LOS	D	D	C	E	C	D	A	F	F	D	F	A
Approach Vol, veh/h		450			786			1325			2324	
Approach Delay, s/veh		46.1			44.1			115.7			296.7	
Approach LOS		D			D			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	27.8	37.0	6.9	27.9	0.0	64.8	9.3	25.6				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	31.5	* 32	5.1	31.9	4.0	59.0	7.5	29.5				
Max Q Clear Time (g_c+I1), s	21.9	33.5	3.9	21.2	0.0	61.3	5.5	18.7				
Green Ext Time (p_c), s	0.4	0.0	0.0	1.2	0.0	0.0	0.0	1.3				

Intersection Summary

HCM 6th Ctrl Delay	183.9
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection								
Intersection Delay, s/veh	318.0							
Intersection LOS	F							
Approach	EB	WB	NB		SB			
Entry Lanes	3	2	2		2			
Conflicting Circle Lanes	2	2	2		2			
Adj Approach Flow, veh/h	0	1437	924		1415			
Demand Flow Rate, veh/h	0	1519	945		1415			
Vehicles Circulating, veh/h	1032	946	918		1757			
Vehicles Exiting, veh/h	2140	917	1412		708			
Ped Vol Crossing Leg, #/h	0	0	0		0			
Ped Cap Adj	1.000	1.000	1.000		1.000			
Approach Delay, s/veh	0.0	155.6	26.8		673.1			
Approach LOS	-	F	D		F			
Lane	Left		Right		Left		Right	
Designated Moves	LT		TR		LT		TR	
Assumed Moves	LT		TR		LT		TR	
RT Channelized								
Lane Util	0.470	0.530	0.470	0.530	0.470	0.530		
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535		
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328		
Entry Flow, veh/h	714	805	444	501	665	750		
Cap Entry Lane, veh/h	565	635	580	651	268	319		
Entry HV Adj Factor	0.946	0.946	0.978	0.977	1.000	1.000		
Flow Entry, veh/h	675	762	434	490	665	750		
Cap Entry, veh/h	535	601	567	636	268	319		
V/C Ratio	1.263	1.267	0.765	0.770	2.480	2.352		
Control Delay, s/veh	156.4	154.8	27.9	25.9	706.2	643.7		
LOS	F	F	D	D	F	F		
95th %tile Queue, veh	27	30	7	7	54	59		

Timings  
14: Indian Street & San Michele Road

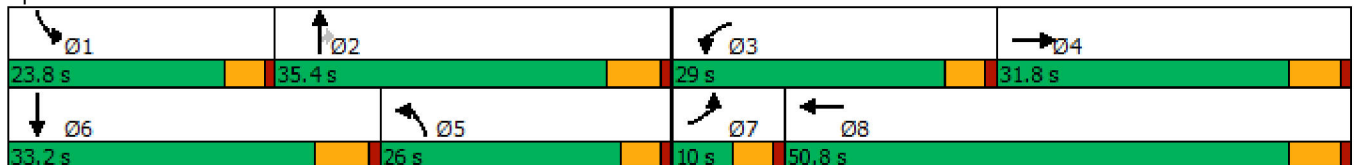


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↘	↗	↗	↗	↗	↘	↗
Traffic Volume (vph)	28	171	165	225	447	122	121	88	194
Future Volume (vph)	28	171	165	225	447	122	121	88	194
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8	5	2		1	6
Permitted Phases							2		
Detector Phase	7	4	3	8	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	31.8	9.6	31.8	9.6	32.8	32.8	9.6	32.8
Total Split (s)	10.0	31.8	29.0	50.8	26.0	35.4	35.4	23.8	33.2
Total Split (%)	8.3%	26.5%	24.2%	42.3%	21.7%	29.5%	29.5%	19.8%	27.7%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	5.5	15.4	12.8	29.9	15.4	22.3	22.3	9.1	13.2
Actuated g/C Ratio	0.07	0.19	0.16	0.38	0.19	0.28	0.28	0.12	0.17
v/c Ratio	0.24	0.85dr	0.60	0.24	0.70	0.27	0.21	0.45	0.41
Control Delay	48.1	18.9	42.6	16.8	37.8	28.4	4.7	44.5	32.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.1	18.9	42.6	16.8	37.8	28.4	4.7	44.5	32.1
LOS	D	B	D	B	D	C	A	D	C
Approach Delay		20.0		26.0		30.3			35.6
Approach LOS		C		C		C			D

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 79  
 Natural Cycle: 95  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.79  
 Intersection Signal Delay: 26.8  
 Intersection LOS: C  
 Intersection Capacity Utilization 84.5%  
 ICU Level of Service E  
 Analysis Period (min) 15  
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.























Splits and Phases: 14: Indian Street & San Michele Road



HCM 6th Signalized Intersection Summary  
 14: Indian Street & San Michele Road

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	171	515	165	225	70	447	122	121	88	194	27
Future Volume (veh/h)	28	171	515	165	225	70	447	122	121	88	194	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		1.00	1.00		0.68
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1856	1826	1826	1796	1796	1856	1870	1841	1841
Adj Flow Rate, veh/h	30	186	560	179	245	76	486	133	132	96	211	29
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	5	5	3	5	5	7	7	3	2	4	4
Cap, veh/h	48	433	377	211	912	275	556	653	571	122	774	101
Arrive On Green	0.03	0.25	0.25	0.12	0.34	0.34	0.16	0.36	0.36	0.07	0.26	0.26
Sat Flow, veh/h	1739	1735	1510	1767	2675	806	3421	1796	1571	1781	3002	390
Grp Volume(v), veh/h	30	186	560	179	165	156	486	133	132	96	125	115
Grp Sat Flow(s),veh/h/ln	1739	1735	1510	1767	1826	1655	1711	1796	1571	1781	1841	1552
Q Serve(g_s), s	1.8	9.4	26.0	10.3	6.8	7.2	14.5	5.3	6.1	5.5	5.6	6.2
Cycle Q Clear(g_c), s	1.8	9.4	26.0	10.3	6.8	7.2	14.5	5.3	6.1	5.5	5.6	6.2
Prop In Lane	1.00		1.00	1.00		0.49	1.00		1.00	1.00		0.25
Lane Grp Cap(c), veh/h	48	433	377	211	623	564	556	653	571	122	474	400
V/C Ratio(X)	0.62	0.43	1.49	0.85	0.26	0.28	0.87	0.20	0.23	0.79	0.26	0.29
Avail Cap(c_a), veh/h	90	433	377	414	788	714	702	653	571	328	484	408
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.1	32.9	39.1	45.0	24.9	25.0	42.6	22.8	23.1	47.8	30.8	31.0
Incr Delay (d2), s/veh	4.7	0.3	232.8	3.6	0.1	0.1	8.5	0.1	0.1	4.2	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	3.8	33.5	4.6	2.8	2.7	6.5	2.1	2.2	2.5	2.4	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.9	33.1	271.9	48.6	25.0	25.1	51.1	22.9	23.1	52.0	30.9	31.2
LnGrp LOS	D	C	F	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		776			500			751			336	
Approach Delay, s/veh		206.3			33.5			41.2			37.0	
Approach LOS		F			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.7	43.7	17.0	31.8	22.7	32.7	7.5	41.3				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	5.8	* 5.8	4.6	5.8				
Max Green Setting (Gmax), s	19.2	29.6	24.4	26.0	21.4	* 27	5.4	45.0				
Max Q Clear Time (g_c+I1), s	7.5	8.1	12.3	28.0	16.5	8.2	3.8	9.2				
Green Ext Time (p_c), s	0.1	0.5	0.2	0.0	0.5	0.7	0.0	1.1				

Intersection Summary

HCM 6th Ctrl Delay	93.2
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Timings  
15: Indian Street & Nandina Avenue

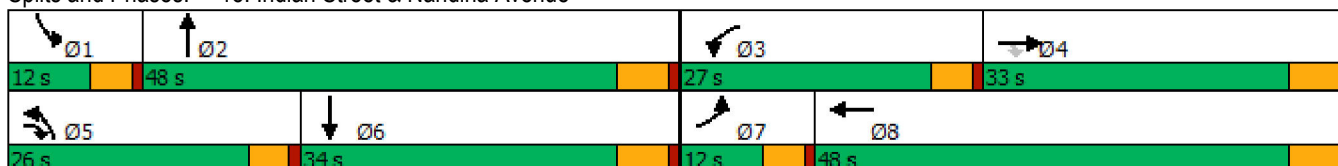


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↑	↗	↖	↗	↖	↕	↖	↕
Traffic Volume (vph)	48	112	300	186	46	99	585	20	818
Future Volume (vph)	48	112	300	186	46	99	585	20	818
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	5	3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	5	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	29.8	9.6	9.6	29.8	9.6	26.8	9.6	26.8
Total Split (s)	12.0	33.0	26.0	27.0	48.0	26.0	48.0	12.0	34.0
Total Split (%)	10.0%	27.5%	21.7%	22.5%	40.0%	21.7%	40.0%	10.0%	28.3%
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	6.5	13.6	30.7	15.3	27.1	11.2	40.7	5.9	28.8
Actuated g/C Ratio	0.07	0.15	0.34	0.17	0.30	0.12	0.45	0.07	0.32
v/c Ratio	0.38	0.48	0.50	0.74	0.22	0.59	0.43	0.19	0.78
Control Delay	52.7	43.2	18.0	53.7	15.3	52.9	20.3	49.1	35.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.7	43.2	18.0	53.7	15.3	52.9	20.3	49.1	35.6
LOS	D	D	B	D	B	D	C	D	D
Approach Delay		27.7			40.0		24.5		35.9
Approach LOS		C			D		C		D

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 90.2  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.78  
 Intersection Signal Delay: 31.2  
 Intersection LOS: C  
 Intersection Capacity Utilization 65.1%  
 ICU Level of Service C  
 Analysis Period (min) 15























Splits and Phases: 15: Indian Street & Nandina Avenue



HCM 6th Signalized Intersection Summary  
 15: Indian Street & Nandina Avenue

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	112	300	186	46	57	99	585	75	20	818	36
Future Volume (veh/h)	48	112	300	186	46	57	99	585	75	20	818	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1722	1737	1633	1500	1500	1485	1870	1870	1796	1870	1870
Adj Flow Rate, veh/h	52	122	326	202	50	62	108	636	82	22	889	39
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	12	11	18	27	27	28	2	2	7	2	2
Cap, veh/h	74	395	473	234	206	256	130	1159	149	41	1027	45
Arrive On Green	0.04	0.23	0.23	0.15	0.34	0.34	0.09	0.36	0.36	0.02	0.29	0.29
Sat Flow, veh/h	1810	1722	1472	1555	609	755	1414	3247	418	1711	3556	156
Grp Volume(v), veh/h	52	122	326	202	0	112	108	366	352	22	468	460
Grp Sat Flow(s),veh/h/ln	1810	1722	1472	1555	0	1364	1414	1870	1795	1711	1870	1842
Q Serve(g_s), s	2.5	5.1	16.8	11.0	0.0	5.1	6.5	13.6	13.6	1.1	20.6	20.6
Cycle Q Clear(g_c), s	2.5	5.1	16.8	11.0	0.0	5.1	6.5	13.6	13.6	1.1	20.6	20.6
Prop In Lane	1.00		1.00	1.00		0.55	1.00		0.23	1.00		0.08
Lane Grp Cap(c), veh/h	74	395	473	234	0	462	130	667	641	41	540	532
V/C Ratio(X)	0.70	0.31	0.69	0.86	0.00	0.24	0.83	0.55	0.55	0.54	0.87	0.87
Avail Cap(c_a), veh/h	154	539	596	401	0	662	348	908	872	146	607	598
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.1	27.8	25.7	36.0	0.0	20.7	38.8	22.4	22.4	42.0	29.3	29.3
Incr Delay (d2), s/veh	4.4	0.4	2.4	3.9	0.0	0.3	5.1	0.7	0.7	4.1	11.6	11.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	2.0	5.7	4.2	0.0	1.5	2.3	5.5	5.3	0.5	10.1	9.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.5	28.2	28.1	40.0	0.0	21.0	43.9	23.1	23.1	46.1	40.9	41.0
LnGrp LOS	D	C	C	D	A	C	D	C	C	D	D	D
Approach Vol, veh/h		500			314			826			950	
Approach Delay, s/veh		30.0			33.2			25.8			41.1	
Approach LOS		C			C			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.7	36.8	17.7	25.7	12.6	30.9	8.2	35.3				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	7.4	42.2	22.4	27.2	21.4	28.2	7.4	42.2				
Max Q Clear Time (g_c+I1), s	3.1	15.6	13.0	18.8	8.5	22.6	4.5	7.1				
Green Ext Time (p_c), s	0.0	4.1	0.2	1.2	0.1	2.5	0.0	0.6				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			33.1									
HCM 6th LOS			C									

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↘	↘↘↘	↘	↘	↘↘↘	↘	↘↘↘	↘	↘	↘↘↘
Traffic Volume (vph)	351	776	108	242	730	118	295	246	326	563
Future Volume (vph)	351	776	108	242	730	118	295	246	326	563
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	5	2	2	1	6	3	8	8	7	4
Permitted Phases	2	2	2	1	6	3	8	8	7	4
Detector Phase	5	2	2	1	6	3	8	8	7	4
Switch Phase	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	35.8	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2
Total Split (s)	36.3	59.2	59.2	9.6	32.5	10.8	37.4	37.4	13.8	40.4
Total Split (%)	30.3%	49.3%	49.3%	8.0%	27.1%	9.0%	31.2%	31.2%	11.5%	33.7%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.4	4.4	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	5.4	5.4	4.6	6.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	30.7	51.9	51.9	5.0	26.2	6.2	32.0	32.0	9.2	34.2
Actuated g/C Ratio	0.26	0.44	0.44	0.04	0.22	0.05	0.27	0.27	0.08	0.29
v/c Ratio	0.96	0.39	0.17	3.51	0.89	0.79	0.38	0.49	2.53	1.23
Control Delay	79.6	23.1	4.1	1177.5	54.5	87.8	37.1	17.7	733.0	142.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.6	23.1	4.1	1177.5	54.5	87.8	37.1	17.7	733.0	142.2
LOS	E	C	A	F	D	F	D	B	F	F
Approach Delay	37.5	292.7	38.9	264.7	37.5	292.7	38.9	264.7	37.5	292.7
Approach LOS	D	F	D	F	D	F	D	F	D	F

Intersection Summary  
 Cycle Length: 120  
 Actuated Cycle Length: 118.5  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 3.51  
 Intersection Signal Delay: 178.4  
 Intersection LOS: F  
 Intersection Capacity Utilization 96.6%  
 ICU Level of Service F  
 Analysis Period (min) 15































Splits and Phases: 16: Indian Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 16: Indian Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 			 	
Traffic Volume (veh/h)	351	776	108	242	730	169	118	295	246	326	563	682
Future Volume (veh/h)	351	776	108	242	730	169	118	295	246	326	563	682
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1648	1841	1707	1885	1811	1811	1707	1678	1870	1900	1856	1856
Adj Flow Rate, veh/h	382	843	108	263	793	164	128	321	260	354	612	692
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	17	4	13	1	6	6	13	15	2	0	3	3
Cap, veh/h	404	2172	625	77	896	184	167	848	416	142	514	458
Arrive On Green	0.26	0.43	0.43	0.04	0.22	0.22	0.05	0.27	0.27	0.08	0.29	0.29
Sat Flow, veh/h	1570	5025	1447	1795	4112	844	3155	3188	1565	1810	1763	1572
Grp Volume(v), veh/h	382	843	108	263	634	323	128	321	260	354	612	692
Grp Sat Flow(s),veh/h/ln	1570	1675	1447	1795	1648	1659	1577	1594	1565	1810	1763	1572
Q Serve(g_s), s	28.0	13.4	5.4	5.0	21.9	22.1	4.7	9.6	17.2	9.2	34.2	34.2
Cycle Q Clear(g_c), s	28.0	13.4	5.4	5.0	21.9	22.1	4.7	9.6	17.2	9.2	34.2	34.2
Prop In Lane	1.00		1.00	1.00		0.51	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	404	2172	625	77	718	361	167	848	416	142	514	458
V/C Ratio(X)	0.95	0.39	0.17	3.44	0.88	0.89	0.77	0.38	0.62	2.49	1.19	1.51
Avail Cap(c_a), veh/h	424	2288	659	77	750	378	167	870	427	142	514	458
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.8	22.7	20.4	56.2	44.4	44.5	54.8	35.1	37.9	54.1	41.6	41.6
Incr Delay (d2), s/veh	29.2	0.1	0.1	1128.8	11.8	22.0	17.5	0.3	2.7	693.0	103.9	240.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.6	5.0	1.8	26.2	9.8	11.0	2.2	3.7	6.7	31.4	29.0	43.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.0	22.8	20.6	1184.9	56.2	66.5	72.3	35.4	40.6	747.1	145.5	281.9
LnGrp LOS	E	C	C	F	E	E	E	D	D	F	F	F
Approach Vol, veh/h		1333			1220			709			1658	
Approach Delay, s/veh		36.7			302.3			44.0			330.9	
Approach LOS		D			F			D			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.6	56.5	10.8	40.4	34.8	31.3	13.8	37.4				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	5.0	53.4	6.2	34.2	31.7	26.7	9.2	* 32				
Max Q Clear Time (g_c+I1), s	7.0	15.4	6.7	36.2	30.0	24.1	11.2	19.2				
Green Ext Time (p_c), s	0.0	6.4	0.0	0.0	0.1	1.4	0.0	2.3				

Intersection Summary

HCM 6th Ctrl Delay	202.7
HCM 6th LOS	F

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

**APPENDIX 7.7:**

**HORIZON YEAR (2045) WITH PROJECT (NON-PEAK) WITHOUT HEACOCK STREET  
EXTENSION CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS**

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### Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

<u>DIST</u>	<u>CO</u>	<u>RTE</u>	<u>PM</u>	CALC <u>CP</u>	TRAFFIC CONDITIONS	WP w/o ext (non-)	
Jurisdiction: <u>March AFB</u>				CHK <u>CP</u>		DATE <u>11/10/20</u>	
Major Street: <u>Heacock St.</u>					Critical Approach Speed (Major) <u>45</u> mph	DATE <u>11/10/20</u>	
Minor Street: <u>Driveway 1</u>					Critical Approach Speed (Minor) <u>25</u> mph		
Major Street Approach Lanes = <u>2</u>	lane	Minor Street Approach Lanes: <u>1</u>	lane				
Major Street Future ADT = <u>24,547</u>	vpd	Minor Street Future ADT = <u>638</u>	vpd				
Speed limit or critical speed on major street traffic > 64 km/h (40 mph); .....						<input checked="" type="checkbox"/>	
						or	<b>RURAL (R)</b>
In built up area of isolated community of < 10,000 population .....						<input type="checkbox"/>	

**(Based on Estimated Average Daily Traffic - See Note)**

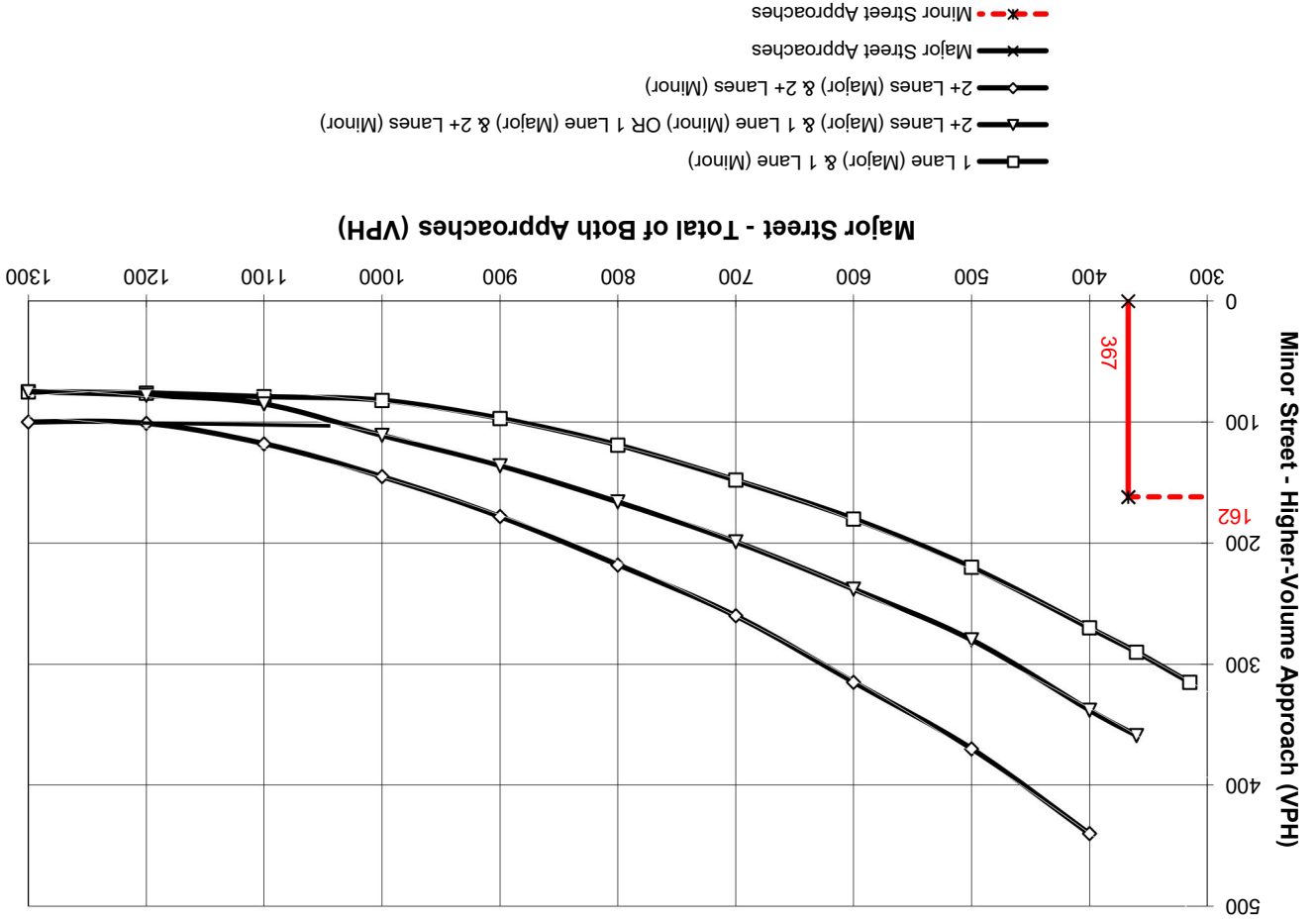
<u>URBAN</u>		<u>RURAL</u>		Minimum Requirements EADT			
<b>CONDITION A - Minimum Vehicular Volume</b>		<b>XX</b>					
<u>Satisfied</u>		<u>Not Satisfied</u>		Vehicles Per Day on Major Street		Vehicles Per Day on Higher-Volume Minor Street Approach	
		<b>XX</b>		(Total of Both Approaches)		(One Direction Only)	
Number of lanes for moving traffic on each approach		Number of lanes for moving traffic on each approach		<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
<u>Major Street</u>		<u>Minor Street</u>					
1		1		8,000	5,600	2,400	1,680
2 + <b>24,547</b>		1 <b>638</b>		9,600	6,720 *	2,400	1,680
2 +		2 +		9,600	6,720	3,200	2,240
1		2 +		8,000	5,600	3,200	2,240
<b>CONDITION B - Interruption of Continuous Traffic</b>		<b>XX</b>					
<u>Satisfied</u>		<u>Not Satisfied</u>		Vehicles Per Day on Major Street		Vehicles Per Day on Higher-Volume Minor Street Approach	
		<b>XX</b>		(Total of Both Approaches)		(One Direction Only)	
Number of lanes for moving traffic on each approach		Number of lanes for moving traffic on each approach		<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
<u>Major Street</u>		<u>Minor Street</u>					
1		1		12,000	8,400	1,200	850
2 + <b>24,547</b>		1 <b>638</b>		14,400	10,080 *	1,200	850
2 +		2 +		14,400	10,080	1,600	1,120
1		2 +		12,000	8,400	1,600	1,120
<b>Combination of CONDITIONS A + B</b>		<b>XX</b>					
<u>Satisfied</u>		<u>Not Satisfied</u>		2 CONDITIONS		2 CONDITIONS	
		<b>XX</b>		80%		80%	
No one condition satisfied, but following conditions fulfilled 80% of more .....		<u>A</u>	<u>B</u>				
		<b>38%</b>	<b>75%</b>				

**Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.**

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.



\*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane



**SIGNAL WARRANT NOT SATISFIED**

Traffic Conditions = **Heacock St.** Major Street Name = **Heacock St.** Total of Both Approaches (VPH) = **367**  
 Number of Approach Lanes Major Street = **1**  
**Nandina Av.** Minor Street Name = **Nandina Av.** High Volume Approach (VPH) = **162**  
 Number of Approach Lanes Minor Street = **1**  
 Horizon Year With Project (Non-Peak) Without Extension Conditions - PM Peak Hour

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

**Figure 4C-4. Warrant 3, Peak Hour (70% Factor)**



**APPENDIX 7.8:**

**HORIZON YEAR (2045) WITH PROJECT (PEAK) WITHOUT HEACOCK STREET  
EXTENSION CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS**

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### Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

<u>DIST</u>	<u>CO</u>	<u>RTE</u>	<u>PM</u>	TRAFFIC CONDITIONS	40 WP w/o ext (Pe
Jurisdiction: <u>March AFB</u>				CALC <u>CP</u>	DATE <u>11/10/20</u>
Major Street: <u>Heacock St.</u>				CHK <u>CP</u>	DATE <u>11/10/20</u>
Minor Street: <u>Driveway 1</u>				Critical Approach Speed (Major) <u>45</u> mph	
				Critical Approach Speed (Minor) <u>25</u> mph	
Major Street Approach Lanes =	<u>2</u>	lane	Minor Street Approach Lanes:	<u>1</u>	lane
Major Street Future ADT =	<u>24,849</u>	vpd	Minor Street Future ADT =	<u>940</u>	vpd
Speed limit or critical speed on major street traffic > 64 km/h (40 mph); .....	<input checked="" type="checkbox"/>				or
In built up area of isolated community of < 10,000 population .....	<input type="checkbox"/>				<b>RURAL (R)</b>

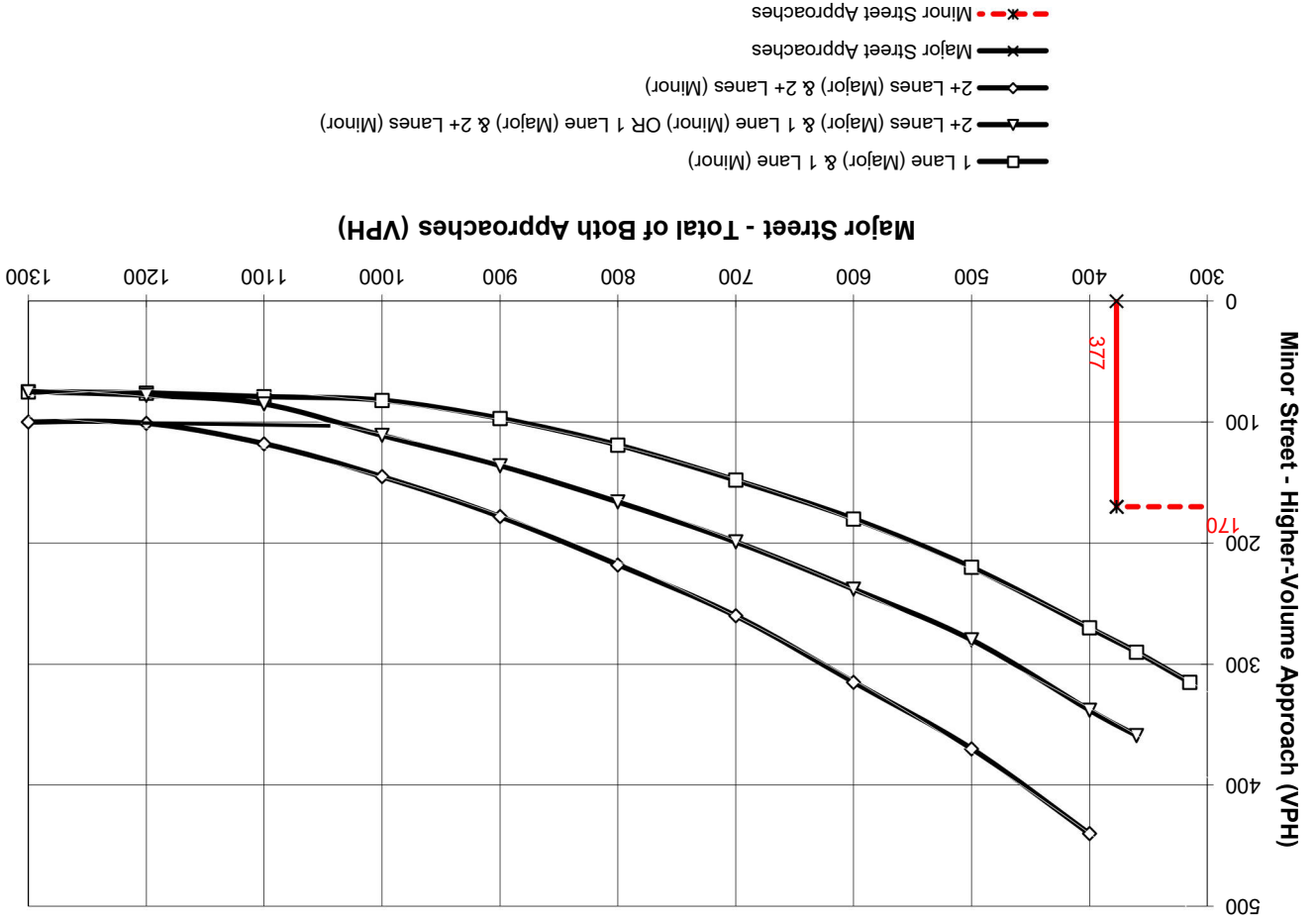
**(Based on Estimated Average Daily Traffic - See Note)**

<u>URBAN</u>	<u>RURAL</u>	Minimum Requirements EADT			
<b>CONDITION A - Minimum Vehicular Volume</b>		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Satisfied</u>	<u>Not Satisfied</u>	<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
	<b>XX</b>				
Number of lanes for moving traffic on each approach					
<u>Major Street</u>	<u>Minor Street</u>				
<u>1</u>	<u>1</u>	8,000	5,600	2,400	1,680
<u>2 + 24,849</u>	<u>1 940</u>	9,600	6,720 *	2,400	1,680
<u>2 +</u>	<u>2 +</u>	9,600	6,720	3,200	2,240
<u>1</u>	<u>2 +</u>	8,000	5,600	3,200	2,240
<b>CONDITION B - Interruption of Continuous Traffic</b>		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Satisfied</u>	<u>Not Satisfied</u>	<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
	<b>XX</b>				
Number of lanes for moving traffic on each approach					
<u>Major Street</u>	<u>Minor Street</u>				
<u>1</u>	<u>1</u>	12,000	8,400	1,200	850
<u>2 + 24,849</u>	<u>1 940</u>	14,400	10,080 *	1,200	850 *
<u>2 +</u>	<u>2 +</u>	14,400	10,080	1,600	1,120
<u>1</u>	<u>2 +</u>	12,000	8,400	1,600	1,120
<b>Combination of CONDITIONS A + B</b>		2 CONDITIONS 80%		2 CONDITIONS 80%	
<u>Satisfied</u>	<u>Not Satisfied</u>				
	<b>XX</b>				
No one condition satisfied, but following conditions fulfilled 80% of more .....					
	<b>A</b>	<b>B</b>			
	<b>56%</b>	<b>100%</b>			

**Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.**

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

\*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane



**SIGNAL WARRANT NOT SATISFIED**

Minor Street Name = **Nandina Av.** High Volume Approach (VPH) = **170** Number of Approach Lanes Minor Street = **1**

Major Street Name = **Heacock St.** Total of Both Approaches (VPH) = **377** Number of Approach Lanes Major Street = **1**

Traffic Conditions = **Horizon Year With Project (Peak) Without Extension Conditions - PM Peak Hour**

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

**Figure 4C-4. Warrant 3, Peak Hour (70% Factor)**

**APPENDIX 7.9:**

**HORIZON YEAR (2045) WITH PROJECT (NON-PEAK) WITH HEACOCK STREET  
EXTENSION CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS**

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**Figure 4C-4. Warrant 3, Peak Hour (70% Factor)**

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **Horizon Year Without Project Without Extension Conditions - PM Peak Hour**

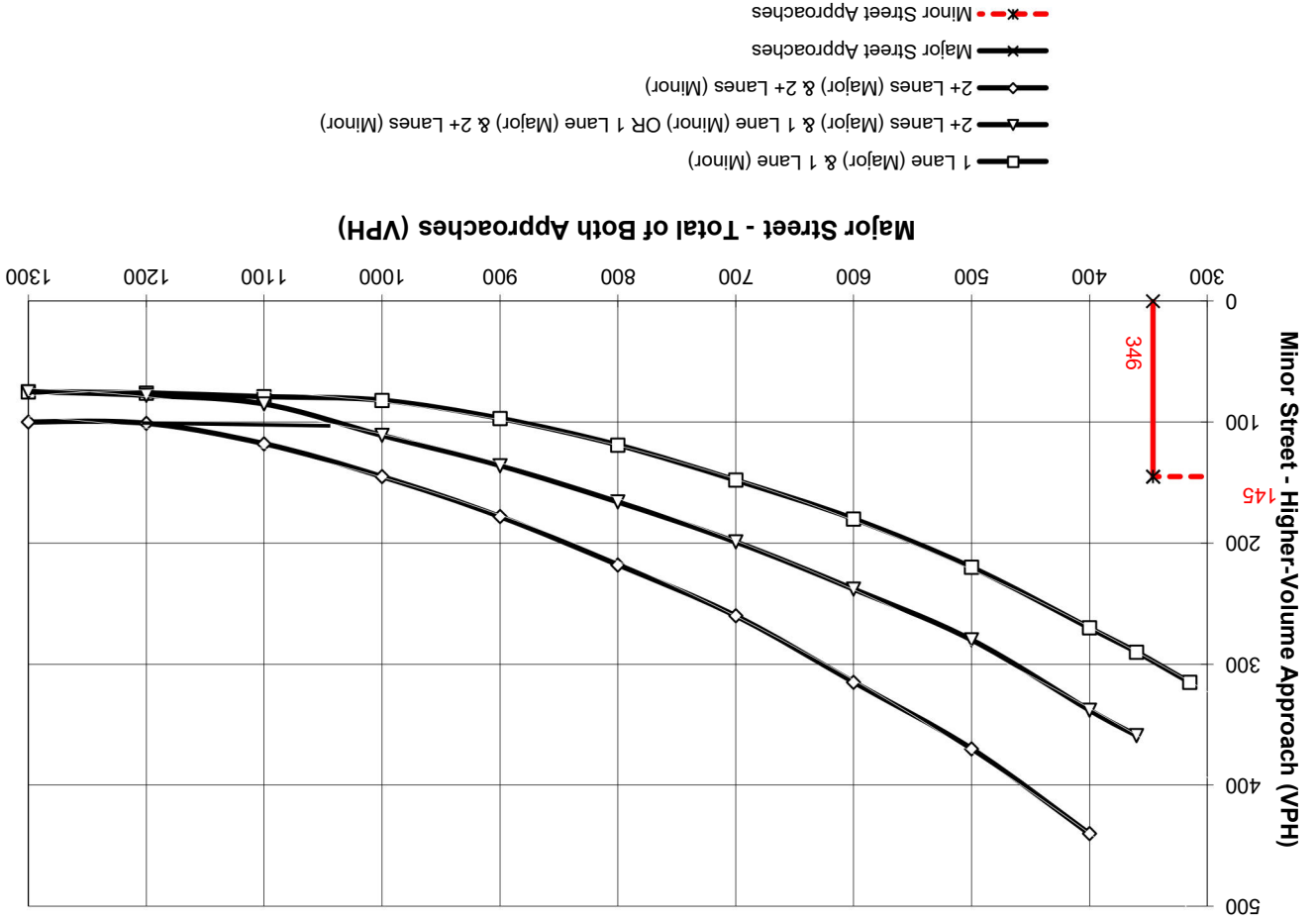
Major Street Name = **Heacock St.**

Total of Both Approaches (VPH) = **346**  
 Number of Approach Lanes Major Street = **1**

Minor Street Name = **Nandina Av.**

High Volume Approach (VPH) = **145**  
 Number of Approach Lanes Minor Street = **1**

**SIGNAL WARRANT NOT SATISFIED**



\*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

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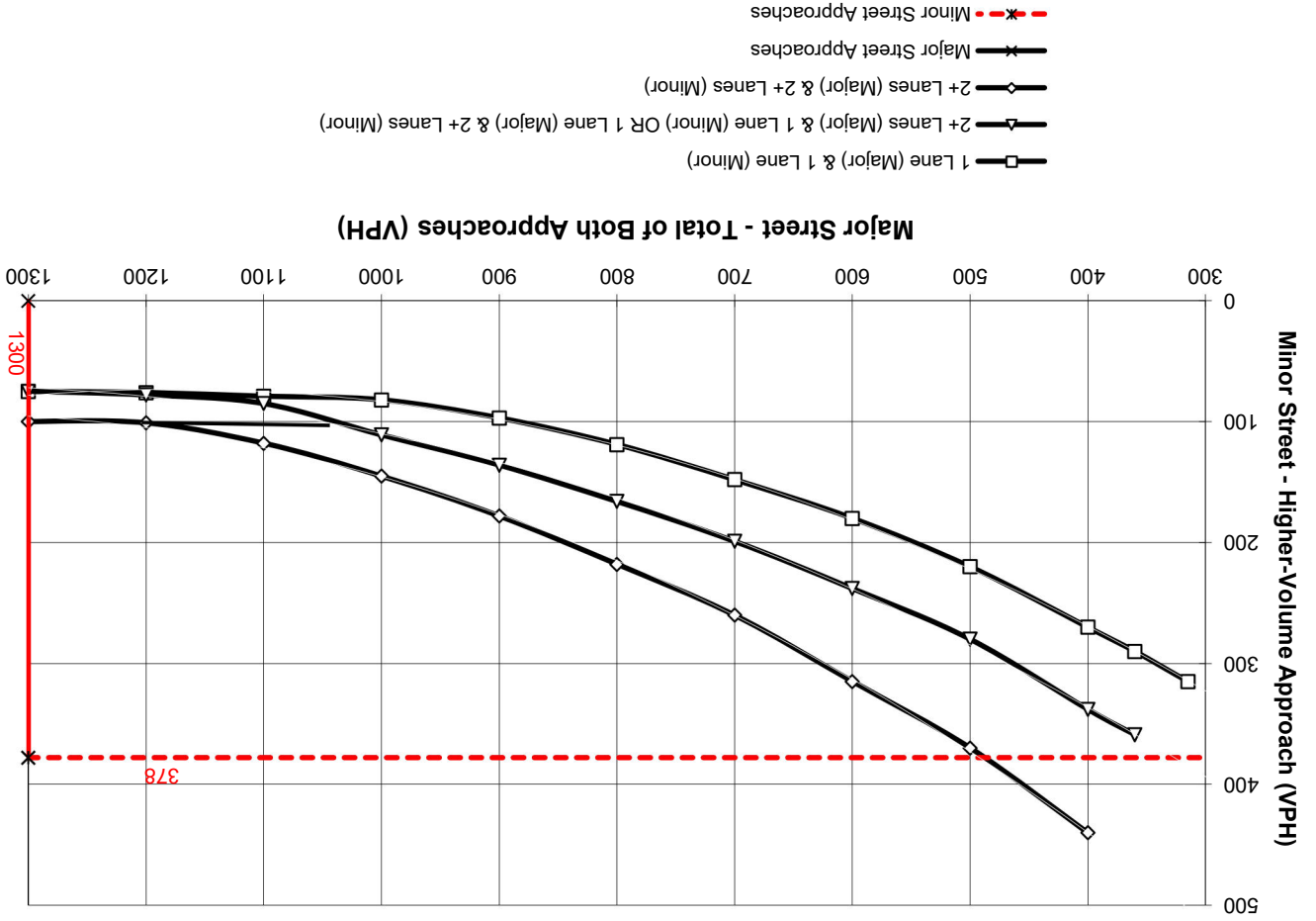


**APPENDIX 7.10:**

**HORIZON YEAR (2045) WITH PROJECT (PEAK) WITH HEACOCK STREET EXTENSION  
CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS**

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\*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane



**WARRANTED FOR A SIGNAL**

Traffic Conditions = **Horizon Year Without Project With Extension Conditions - PM Peak Hour**  
 Major Street Name = **Heacock St.** Total of Both Approaches (VPH) = **2079** Number of Approach Lanes Major Street = **1**  
 Minor Street Name = **Nandina Av.** High Volume Approach (VPH) = **378** Number of Approach Lanes Minor Street = **1**

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

**Figure 4C-4. Warrant 3, Peak Hour (70% Factor)**

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**APPENDIX 7.11:**

**HORIZON YEAR (2045) WITHOUT PROJECT WITHOUT HEACOCK STREET EXTENSION  
OFF-RAMP QUEUING ANALYSIS WORKSHEETS**

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### Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

<u>DIST</u>	<u>CO</u>	<u>RTE</u>	<u>PM</u>	CALC <u>CP</u>	TRAFFIC CONDITIONS	WP w/ ext (non-P)	
Jurisdiction: <u>March AFB</u>				CHK <u>CP</u>		DATE <u>11/10/20</u>	
Major Street: <u>Heacock St.</u>					Critical Approach Speed (Major)	<u>45</u> mph	
Minor Street: <u>Driveway 1</u>					Critical Approach Speed (Minor)	<u>25</u> mph	
Major Street Approach Lanes =		<u>2</u>	lane	Minor Street Approach Lanes:		<u>1</u> lane	
Major Street Future ADT =		<u>24,547</u>	vpd	Minor Street Future ADT =		<u>638</u> vpd	
Speed limit or critical speed on major street traffic > 64 km/h (40 mph); .....						<input checked="" type="checkbox"/>	
						or	<b>RURAL (R)</b>
In built up area of isolated community of < 10,000 population .....						<input type="checkbox"/>	

**(Based on Estimated Average Daily Traffic - See Note)**

<u>URBAN</u>	<u>RURAL</u>	Minimum Requirements EADT			
<b>CONDITION A - Minimum Vehicular Volume</b>		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Satisfied</u>	<u>Not Satisfied</u>				
	XX	<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
Number of lanes for moving traffic on each approach					
<u>Major Street</u>	<u>Minor Street</u>				
<u>1</u>	<u>1</u>	8,000	5,600	2,400	1,680
<u>2 + 24,547</u>	<u>1 638</u>	9,600	6,720 *	2,400	1,680
<u>2 +</u>	<u>2 +</u>	9,600	6,720	3,200	2,240
<u>1</u>	<u>2 +</u>	8,000	5,600	3,200	2,240
<b>CONDITION B - Interruption of Continuous Traffic</b>		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Satisfied</u>	<u>Not Satisfied</u>				
	XX	<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
Number of lanes for moving traffic on each approach					
<u>Major Street</u>	<u>Minor Street</u>				
<u>1</u>	<u>1</u>	12,000	8,400	1,200	850
<u>2 + 24,547</u>	<u>1 638</u>	14,400	10,080 *	1,200	850
<u>2 +</u>	<u>2 +</u>	14,400	10,080	1,600	1,120
<u>1</u>	<u>2 +</u>	12,000	8,400	1,600	1,120
<b>Combination of CONDITIONS A + B</b>		2 CONDITIONS		2 CONDITIONS	
<u>Satisfied</u>	<u>Not Satisfied</u>	80%		80%	
	XX	No one condition satisfied, but following conditions fulfilled 80% of more .....			
		A	B		
		38%	75%		

**Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.**

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

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**APPENDIX 7.12:**

**HORIZON YEAR (2045) WITH PROJECT (NON-PEAK) WITHOUT HEACOCK STREET  
EXTENSION OFF-RAMP QUEUING ANALYSIS WORKSHEETS**

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### Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

<u>DIST</u>	<u>CO</u>	<u>RTE</u>	<u>PM</u>	CALC <u>CP</u>	TRAFFIC CONDITIONS	<u>40 WP w/ ext (Pea</u>	
Jurisdiction: <u>March AFB</u>				CHK <u>CP</u>	DATE <u>11/10/20</u>		
Major Street: <u>Heacock St.</u>					DATE <u>11/10/20</u>		
Minor Street: <u>Driveway 1</u>					Critical Approach Speed (Major) <u>45 mph</u>		
					Critical Approach Speed (Minor) <u>25 mph</u>		
Major Street Approach Lanes =	<u>2</u>	lane		Minor Street Approach Lanes:	<u>1</u>	lane	
Major Street Future ADT =	<u>24,849</u>	vpd		Minor Street Future ADT =	<u>940</u>	vpd	
Speed limit or critical speed on major street traffic > 64 km/h (40 mph); .....						<input checked="" type="checkbox"/>	
						or	<b>RURAL (R)</b>
In built up area of isolated community of < 10,000 population .....						<input type="checkbox"/>	

**(Based on Estimated Average Daily Traffic - See Note)**

<u>URBAN</u>		<u>RURAL</u>		Minimum Requirements EADT			
<b>CONDITION A - Minimum Vehicular Volume</b>		<b>XX</b>					
<u>Satisfied</u>		<u>Not Satisfied</u>		Vehicles Per Day on Major Street		Vehicles Per Day on Higher-Volume Minor Street Approach	
		<b>XX</b>		(Total of Both Approaches)		(One Direction Only)	
Number of lanes for moving traffic on each approach		Number of lanes for moving traffic on each approach		<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
<u>Major Street</u>		<u>Minor Street</u>					
1		1		8,000	5,600	2,400	1,680
2 + <b>24,849</b>		1 <b>940</b>		9,600	6,720 *	2,400	1,680
2 +		2 +		9,600	6,720	3,200	2,240
1		2 +		8,000	5,600	3,200	2,240
<b>CONDITION B - Interruption of Continuous Traffic</b>		<b>XX</b>					
<u>Satisfied</u>		<u>Not Satisfied</u>		Vehicles Per Day on Major Street		Vehicles Per Day on Higher-Volume Minor Street Approach	
		<b>XX</b>		(Total of Both Approaches)		(One Direction Only)	
Number of lanes for moving traffic on each approach		Number of lanes for moving traffic on each approach		<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
<u>Major Street</u>		<u>Minor Street</u>					
1		1		12,000	8,400	1,200	850
2 + <b>24,849</b>		1 <b>940</b>		14,400	10,080 *	1,200	850 *
2 +		2 +		14,400	10,080	1,600	1,120
1		2 +		12,000	8,400	1,600	1,120
<b>Combination of CONDITIONS A + B</b>		<b>XX</b>					
<u>Satisfied</u>		<u>Not Satisfied</u>		2 CONDITIONS		2 CONDITIONS	
		<b>XX</b>		80%		80%	
No one condition satisfied, but following conditions fulfilled 80% of more .....		<b>A</b>		<b>B</b>			
		<b>56%</b>		<b>100%</b>			

**Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.**

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.



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**APPENDIX 7.13:**

**HORIZON YEAR (2045) WITH PROJECT (PEAK) WITHOUT HEACOCK STREET  
EXTENSION OFF-RAMP QUEUING ANALYSIS WORKSHEETS**

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Queues

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



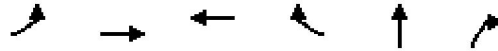
Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	1258	30	209	720	1062	342
v/c Ratio	0.76	0.04	2.03	0.42	1.90	0.55
Control Delay	16.3	3.1	511.2	18.5	430.5	12.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.3	3.1	511.2	18.5	430.5	12.3
Queue Length 50th (ft)	181	0	~131	147	~609	49
Queue Length 95th (ft)	255	10	m#241	197	#817	119
Internal Link Dist (ft)	844			286	1350	
Turn Bay Length (ft)		200	60			265
Base Capacity (vph)	1661	761	103	1710	560	623
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.04	2.03	0.42	1.90	0.55

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox Bl./Harley Knox Bl.



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	878	1440	865	1224	67	309
v/c Ratio	2.02	0.59	0.60	1.60	0.45	1.31
Control Delay	483.1	3.3	15.6	292.7	36.5	186.7
Queue Delay	0.0	0.8	0.0	0.0	0.0	0.0
Total Delay	483.1	4.1	15.6	292.7	36.5	186.7
Queue Length 50th (ft)	~519	48	121	~604	24	~105
Queue Length 95th (ft)	#675	m27	174	#829	#60	#243
Internal Link Dist (ft)		286	620		929	
Turn Bay Length (ft)	60					270
Base Capacity (vph)	434	2439	1433	767	148	236
Starvation Cap Reductn	0	628	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	2.02	0.80	0.60	1.60	0.45	1.31

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.



Queues

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



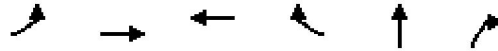
Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	951	104	682	435	567	246
v/c Ratio	0.50	0.11	2.70	0.23	1.25	0.42
Control Delay	9.6	2.0	786.3	8.6	156.0	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.6	2.0	786.3	8.6	156.0	5.2
Queue Length 50th (ft)	101	0	~439	69	~265	0
Queue Length 95th (ft)	143	17	m#556	m70	#433	45
Internal Link Dist (ft)	844			286	1350	
Turn Bay Length (ft)		200	60			265
Base Capacity (vph)	1890	914	253	1890	452	592
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.11	2.70	0.23	1.25	0.42

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox Bl./Harley Knox Bl.



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	521	998	1064	1207	56	370
v/c Ratio	1.34	0.46	0.84	1.42	0.20	1.03
Control Delay	186.5	4.4	25.1	212.5	23.7	74.4
Queue Delay	0.0	0.3	0.0	0.0	0.0	0.0
Total Delay	186.5	4.7	25.1	212.5	23.7	74.4
Queue Length 50th (ft)	~257	68	179	~492	18	~87
Queue Length 95th (ft)	#427	m67	#285	#716	45	#243
Internal Link Dist (ft)		286	620		929	
Turn Bay Length (ft)	60					270
Base Capacity (vph)	390	2188	1272	850	279	360
Starvation Cap Reductn	0	497	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.34	0.59	0.84	1.42	0.20	1.03

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

**APPENDIX 7.14:**

**HORIZON YEAR (2045) WITHOUT PROJECT WITH HEACOCK STREET EXTENSION OFF-  
RAMP QUEUING ANALYSIS WORKSHEETS**

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Queues

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	1258	30	220	720	1081	342
v/c Ratio	0.76	0.04	2.12	0.42	1.95	0.55
Control Delay	16.3	3.1	548.1	18.4	453.2	12.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.3	3.1	548.1	18.4	453.2	12.3
Queue Length 50th (ft)	181	0	~140	147	~625	49
Queue Length 95th (ft)	255	10	m#252	197	#835	119
Internal Link Dist (ft)	844			286	1350	
Turn Bay Length (ft)		200	60			265
Base Capacity (vph)	1661	761	104	1710	555	623
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.04	2.12	0.42	1.95	0.55

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox Bl./Harley Knox Bl.



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	878	1460	876	1238	67	327
v/c Ratio	2.02	0.60	0.61	1.61	0.45	1.39
Control Delay	483.1	3.5	15.7	300.9	36.5	218.0
Queue Delay	0.0	0.9	0.0	0.0	0.0	0.0
Total Delay	483.1	4.4	15.7	300.9	36.5	218.0
Queue Length 50th (ft)	~519	50	123	~615	24	~120
Queue Length 95th (ft)	#675	m27	176	#840	#60	#260
Internal Link Dist (ft)		286	620		929	
Turn Bay Length (ft)	60					270
Base Capacity (vph)	434	2417	1433	767	148	236
Starvation Cap Reductn	0	612	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	2.02	0.81	0.61	1.61	0.45	1.39

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	951	104	695	435	584	246
v/c Ratio	0.50	0.11	2.75	0.23	1.33	0.42
Control Delay	9.6	2.0	808.9	8.5	186.5	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.6	2.0	808.9	8.5	186.5	5.2
Queue Length 50th (ft)	101	0	~450	68	~283	0
Queue Length 95th (ft)	143	17	m#561	m69	#454	45
Internal Link Dist (ft)	844			286	1350	
Turn Bay Length (ft)		200	60			265
Base Capacity (vph)	1890	914	253	1890	440	592
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.11	2.75	0.23	1.33	0.42

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox Bl./Harley Knox Bl.



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	521	1014	1077	1233	56	373
v/c Ratio	1.34	0.47	0.85	1.47	0.20	1.05
Control Delay	186.5	4.3	25.7	233.1	23.7	82.7
Queue Delay	0.0	0.3	0.0	0.0	0.0	0.0
Total Delay	186.5	4.6	25.7	233.1	23.7	82.7
Queue Length 50th (ft)	~257	68	182	~517	18	~102
Queue Length 95th (ft)	#427	m66	#290	#742	45	#250
Internal Link Dist (ft)		286	620		929	
Turn Bay Length (ft)	60					270
Base Capacity (vph)	390	2148	1272	841	279	354
Starvation Cap Reductn	0	476	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.34	0.61	0.85	1.47	0.20	1.05

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.



**APPENDIX 7.15:**

**HORIZON YEAR (2045) WITH PROJECT (NON-PEAK) WITH HEACOCK STREET  
EXTENSION OFF-RAMP QUEUING ANALYSIS WORKSHEETS**

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Queues

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



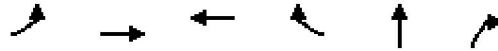
Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	1258	30	224	720	1090	342
v/c Ratio	0.76	0.04	2.13	0.42	1.96	0.55
Control Delay	16.3	3.1	555.6	18.4	460.3	12.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.3	3.1	555.6	18.4	460.3	12.3
Queue Length 50th (ft)	181	0	~143	147	~632	49
Queue Length 95th (ft)	255	10	m#255	197	#843	119
Internal Link Dist (ft)	844			286	1350	
Turn Bay Length (ft)		200	60			265
Base Capacity (vph)	1661	761	105	1710	555	623
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.04	2.13	0.42	1.96	0.55

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	878	1468	880	1245	67	336
v/c Ratio	2.02	0.61	0.61	1.62	0.45	1.43
Control Delay	483.1	3.6	15.7	304.9	36.5	236.6
Queue Delay	0.0	0.9	0.0	0.0	0.0	0.0
Total Delay	483.1	4.6	15.7	304.9	36.5	236.6
Queue Length 50th (ft)	~519	50	124	~621	24	~128
Queue Length 95th (ft)	#675	m27	177	#847	#60	#270
Internal Link Dist (ft)		286	620		929	
Turn Bay Length (ft)	60					270
Base Capacity (vph)	434	2417	1433	767	148	235
Starvation Cap Reductn	0	612	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	2.02	0.81	0.61	1.62	0.45	1.43

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



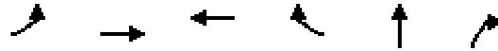
Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	951	104	700	435	591	246
v/c Ratio	0.50	0.11	2.77	0.23	1.35	0.41
Control Delay	9.6	2.0	817.6	8.5	197.1	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.6	2.0	817.6	8.5	197.1	5.2
Queue Length 50th (ft)	101	0	~455	67	~290	0
Queue Length 95th (ft)	143	17	m#561	m68	#461	45
Internal Link Dist (ft)	844			286	1350	
Turn Bay Length (ft)		200	60			265
Base Capacity (vph)	1890	914	253	1890	437	596
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.11	2.77	0.23	1.35	0.41

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox Bl./Harley Knox Bl.



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	521	1022	1083	1245	56	374
v/c Ratio	1.34	0.48	0.85	1.48	0.20	1.06
Control Delay	186.5	4.3	26.0	239.5	23.6	85.6
Queue Delay	0.0	0.3	0.0	0.0	0.0	0.0
Total Delay	186.5	4.6	26.0	239.5	23.6	85.6
Queue Length 50th (ft)	~257	68	184	~527	18	~104
Queue Length 95th (ft)	#427	m65	#293	#753	45	#252
Internal Link Dist (ft)		286	620		929	
Turn Bay Length (ft)	60					270
Base Capacity (vph)	390	2148	1272	841	284	352
Starvation Cap Reductn	0	479	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.34	0.61	0.85	1.48	0.20	1.06

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

**APPENDIX 7.16:**

**HORIZON YEAR (2045) WITH PROJECT (PEAK) WITH HEACOCK STREET EXTENSION  
OFF-RAMP QUEUING ANALYSIS WORKSHEETS**

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Queues

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



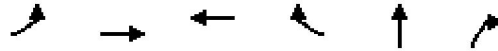
Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	1258	30	220	724	1062	342
v/c Ratio	0.76	0.04	2.12	0.42	1.90	0.55
Control Delay	16.3	3.1	548.0	18.5	430.5	12.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.3	3.1	548.0	18.5	430.5	12.4
Queue Length 50th (ft)	181	0	~140	148	~609	50
Queue Length 95th (ft)	255	10	m#250	198	#817	120
Internal Link Dist (ft)	844			286	1350	
Turn Bay Length (ft)		200	60			265
Base Capacity (vph)	1661	761	104	1710	560	622
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.04	2.12	0.42	1.90	0.55

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	878	1440	880	1224	71	309
v/c Ratio	2.02	0.59	0.61	1.61	0.48	1.31
Control Delay	483.1	3.3	15.7	301.3	37.9	186.7
Queue Delay	0.0	0.8	0.0	0.0	0.0	0.0
Total Delay	483.1	4.1	15.7	301.3	37.9	186.7
Queue Length 50th (ft)	~519	48	124	~611	25	~105
Queue Length 95th (ft)	#675	m27	177	#836	#67	#243
Internal Link Dist (ft)		286	620		929	
Turn Bay Length (ft)	60					270
Base Capacity (vph)	434	2439	1433	758	149	236
Starvation Cap Reductn	0	628	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	2.02	0.80	0.61	1.61	0.48	1.31

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



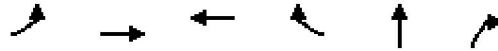
Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	951	166	682	435	567	277
v/c Ratio	0.50	0.18	2.70	0.23	1.25	0.45
Control Delay	9.6	1.8	786.5	8.5	156.0	5.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.6	1.8	786.5	8.5	156.0	5.3
Queue Length 50th (ft)	101	0	~439	69	~265	0
Queue Length 95th (ft)	143	21	m#563	m71	#433	47
Internal Link Dist (ft)	844			286	1350	
Turn Bay Length (ft)		200	60			265
Base Capacity (vph)	1890	942	253	1890	452	618
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.18	2.70	0.23	1.25	0.45

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox Bl./Harley Knox Bl.



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	521	998	1051	1207	73	370
v/c Ratio	1.34	0.46	0.83	1.44	0.26	1.03
Control Delay	186.5	4.4	24.5	220.3	24.5	74.4
Queue Delay	0.0	0.3	0.0	0.0	0.0	0.0
Total Delay	186.5	4.7	24.5	220.3	24.5	74.4
Queue Length 50th (ft)	~257	68	176	~501	23	~87
Queue Length 95th (ft)	#427	m67	#279	#725	55	#243
Internal Link Dist (ft)		286	620		929	
Turn Bay Length (ft)	60					270
Base Capacity (vph)	390	2188	1272	840	285	360
Starvation Cap Reductn	0	497	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.34	0.59	0.83	1.44	0.26	1.03

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

**APPENDIX 7.17:**

**HORIZON YEAR (2045) WITHOUT PROJECT WITHOUT HEACOCK STREET EXTENSION  
CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS WITH  
IMPROVEMENTS**

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Queues

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



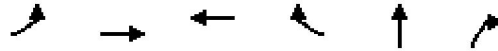
Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	1258	30	230	724	1087	342
v/c Ratio	0.76	0.04	2.21	0.42	1.94	0.55
Control Delay	16.3	3.1	589.5	18.4	450.2	12.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.3	3.1	589.5	18.4	450.2	12.4
Queue Length 50th (ft)	181	0	~148	148	~628	50
Queue Length 95th (ft)	255	10	m#260	198	#838	120
Internal Link Dist (ft)	844			286	1350	
Turn Bay Length (ft)		200	60			265
Base Capacity (vph)	1661	761	104	1710	560	622
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.04	2.21	0.42	1.94	0.55

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox Bl./Harley Knox Bl.



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	878	1465	891	1241	71	327
v/c Ratio	2.02	0.60	0.62	1.64	0.48	1.39
Control Delay	483.1	3.5	15.8	311.3	37.9	218.0
Queue Delay	0.0	0.9	0.0	0.0	0.0	0.0
Total Delay	483.1	4.4	15.8	311.3	37.9	218.0
Queue Length 50th (ft)	~519	50	126	~625	25	~120
Queue Length 95th (ft)	#675	m27	180	#850	#67	#260
Internal Link Dist (ft)		286	620		929	
Turn Bay Length (ft)	60					270
Base Capacity (vph)	434	2439	1433	758	149	236
Starvation Cap Reductn	0	628	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	2.02	0.81	0.62	1.64	0.48	1.39

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.



Queues

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



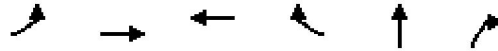
Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	951	166	695	435	584	277
v/c Ratio	0.50	0.18	2.75	0.23	1.29	0.45
Control Delay	9.6	1.8	809.1	8.5	171.4	5.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.6	1.8	809.1	8.5	171.4	5.3
Queue Length 50th (ft)	101	0	~450	68	~279	0
Queue Length 95th (ft)	143	21	m#570	m69	#449	47
Internal Link Dist (ft)	844			286	1350	
Turn Bay Length (ft)		200	60			265
Base Capacity (vph)	1890	942	253	1890	452	618
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.18	2.75	0.23	1.29	0.45

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	521	1014	1064	1235	73	373
v/c Ratio	1.34	0.46	0.84	1.47	0.26	1.05
Control Delay	186.5	4.3	25.1	235.1	24.5	80.8
Queue Delay	0.0	0.3	0.0	0.0	0.0	0.0
Total Delay	186.5	4.6	25.1	235.1	24.5	80.8
Queue Length 50th (ft)	~257	68	179	~524	23	~101
Queue Length 95th (ft)	#427	m66	#285	#749	55	#249
Internal Link Dist (ft)		286	620		929	
Turn Bay Length (ft)	60					270
Base Capacity (vph)	390	2188	1272	840	285	356
Starvation Cap Reductn	0	496	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.34	0.60	0.84	1.47	0.26	1.05

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

**APPENDIX 7.18:**

**HORIZON YEAR (2045) WITH PROJECT (NON-PEAK) WITHOUT HEACOCK STREET  
EXTENSION CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS WITH  
IMPROVEMENTS**

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Queues

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



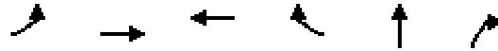
Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	1258	30	235	724	1099	342
v/c Ratio	0.76	0.04	2.26	0.42	1.96	0.55
Control Delay	16.3	3.1	610.4	18.4	459.6	12.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.3	3.1	610.4	18.4	459.6	12.4
Queue Length 50th (ft)	181	0	~147	148	~637	50
Queue Length 95th (ft)	255	10	m#264	198	#848	120
Internal Link Dist (ft)	844			286	1350	
Turn Bay Length (ft)		200	60			265
Base Capacity (vph)	1661	761	104	1710	560	622
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.04	2.26	0.42	1.96	0.55

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	878	1477	896	1249	71	336
v/c Ratio	2.02	0.61	0.63	1.65	0.48	1.42
Control Delay	483.1	3.6	15.9	316.0	37.9	234.0
Queue Delay	0.0	1.0	0.0	0.0	0.0	0.0
Total Delay	483.1	4.6	15.9	316.0	37.9	234.0
Queue Length 50th (ft)	~519	50	127	~631	25	~127
Queue Length 95th (ft)	#675	m27	181	#857	#67	#270
Internal Link Dist (ft)		286	620		929	
Turn Bay Length (ft)	60					270
Base Capacity (vph)	434	2439	1433	758	149	236
Starvation Cap Reductn	0	628	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	2.02	0.82	0.63	1.65	0.48	1.42

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



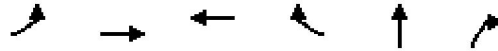
Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	951	166	700	435	591	277
v/c Ratio	0.50	0.18	2.77	0.23	1.31	0.45
Control Delay	9.6	1.8	817.8	8.4	177.8	5.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.6	1.8	817.8	8.4	177.8	5.3
Queue Length 50th (ft)	101	0	~455	67	~284	0
Queue Length 95th (ft)	143	21	m#570	m69	#455	47
Internal Link Dist (ft)	844			286	1350	
Turn Bay Length (ft)		200	60			265
Base Capacity (vph)	1890	942	253	1890	452	618
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.18	2.77	0.23	1.31	0.45

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox Bl./Harley Knox Bl.



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	521	1022	1070	1249	73	374
v/c Ratio	1.34	0.47	0.84	1.49	0.26	1.06
Control Delay	186.5	4.3	25.4	242.6	24.5	83.7
Queue Delay	0.0	0.3	0.0	0.0	0.0	0.0
Total Delay	186.5	4.6	25.4	242.6	24.5	83.7
Queue Length 50th (ft)	~257	68	181	~535	23	~103
Queue Length 95th (ft)	#427	m65	#287	#761	55	#252
Internal Link Dist (ft)		286	620		929	
Turn Bay Length (ft)	60					270
Base Capacity (vph)	390	2188	1272	840	285	354
Starvation Cap Reductn	0	496	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.34	0.60	0.84	1.49	0.26	1.06

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.



**APPENDIX 7.19:**

**HORIZON YEAR (2045) WITH PROJECT (PEAK) WITHOUT HEACOCK STREET  
EXTENSION CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS WITH  
IMPROVEMENTS**

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Timings

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

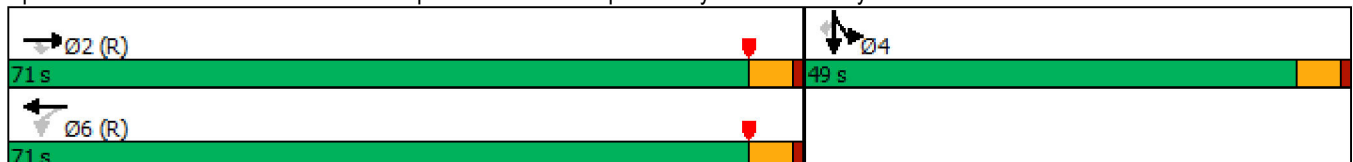


Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations	↑↑	↑	↑↑	↑	↑	↑	↑
Traffic Volume (vph)	1157	28	192	662	976	1	315
Future Volume (vph)	1157	28	192	662	976	1	315
Turn Type	NA	Perm	Perm	NA	Split	NA	Perm
Protected Phases	2			6	4	4	
Permitted Phases		2	6				4
Detector Phase	2	2	6	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	25.0	25.0	10.0	10.0	10.0
Total Split (s)	71.0	71.0	71.0	71.0	49.0	49.0	49.0
Total Split (%)	59.2%	59.2%	59.2%	59.2%	40.8%	40.8%	40.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None	None
Act Effct Green (s)	66.2	66.2	66.2	66.2	43.8	43.8	43.8
Actuated g/C Ratio	0.55	0.55	0.55	0.55	0.36	0.36	0.36
v/c Ratio	0.66	0.03	0.93	0.70	0.97	0.97	0.51
Control Delay	21.2	5.0	69.8	22.6	68.8	69.1	15.0
Queue Delay	0.2	0.0	0.0	1.6	45.8	45.6	0.0
Total Delay	21.4	5.0	69.8	24.2	114.6	114.7	15.0
LOS	C	A	E	C	F	F	B
Approach Delay	21.0			34.5		90.4	
Approach LOS	C			C		F	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection  
 Natural Cycle: 55  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.97  
 Intersection Signal Delay: 51.4  
 Intersection LOS: D  
 Intersection Capacity Utilization 106.1%  
 ICU Level of Service G  
 Analysis Period (min) 15

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

11/10/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑↑	↑					↑	↑	↑
Traffic Volume (veh/h)	0	1157	28	192	662	0	0	0	0	976	1	315
Future Volume (veh/h)	0	1157	28	192	662	0	0	0	0	976	1	315
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1826	1826	1604	1870	0				1693	1900	1781
Adj Flow Rate, veh/h	0	1258	30	209	720	0				1062	0	282
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	5	5	20	2	0				14	0	8
Cap, veh/h	0	1959	874	346	1056	0				1134	0	531
Arrive On Green	0.00	0.56	0.56	1.00	1.00	0.00				0.35	0.00	0.35
Sat Flow, veh/h	0	3561	1547	713	1870	0				3224	0	1510
Grp Volume(v), veh/h	0	1258	30	209	720	0				1062	0	282
Grp Sat Flow(s),veh/h/ln	0	1735	1547	357	1870	0				1612	0	1510
Q Serve(g_s), s	0.0	29.7	1.0	32.1	0.0	0.0				38.2	0.0	17.9
Cycle Q Clear(g_c), s	0.0	29.7	1.0	61.8	0.0	0.0				38.2	0.0	17.9
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1959	874	346	1056	0				1134	0	531
V/C Ratio(X)	0.00	0.64	0.03	0.60	0.68	0.00				0.94	0.00	0.53
Avail Cap(c_a), veh/h	0	1959	874	346	1056	0				1182	0	554
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.60	0.60	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	17.8	11.6	13.5	0.0	0.0				37.6	0.0	31.0
Incr Delay (d2), s/veh	0.0	1.6	0.1	4.6	2.2	0.0				13.3	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	11.2	0.4	2.0	0.6	0.0				16.4	0.0	6.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	19.5	11.7	18.2	2.2	0.0				50.9	0.0	31.9
LnGrp LOS	A	B	B	B	A	A				D	A	C
Approach Vol, veh/h		1288			929						1344	
Approach Delay, s/veh		19.3			5.8						46.9	
Approach LOS		B			A						D	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		72.8		47.2		72.8						
Change Period (Y+Rc), s		5.0		5.0		5.0						
Max Green Setting (Gmax), s		66.0		44.0		66.0						
Max Q Clear Time (g_c+I1), s		31.7		40.2		63.8						
Green Ext Time (p_c), s		6.5		2.0		1.3						

Intersection Summary

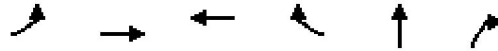
HCM 6th Ctrl Delay	26.2
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Timings

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

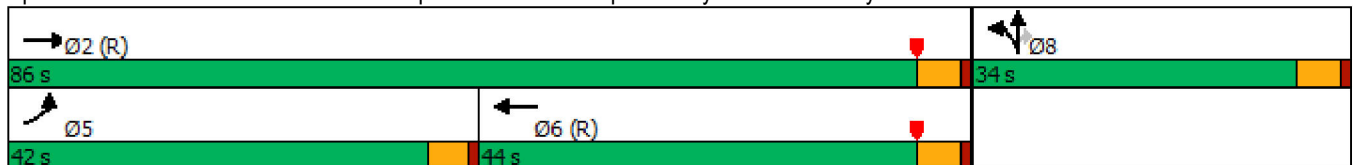


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations	↖↖	↕↕	↕↕	↗	↖	↗
Traffic Volume (vph)	808	1325	796	1126	4	284
Future Volume (vph)	808	1325	796	1126	4	284
Turn Type	Prot	NA	NA	Free	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				Free		8
Detector Phase	5	2	6		8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	9.5	26.0	24.0		10.0	10.0
Total Split (s)	42.0	86.0	44.0		34.0	34.0
Total Split (%)	35.0%	71.7%	36.7%		28.3%	28.3%
Yellow Time (s)	3.5	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0		5.0	5.0
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	C-Max	C-Max		Max	Max
Act Effct Green (s)	34.5	81.0	42.0	120.0	29.0	29.0
Actuated g/C Ratio	0.29	0.68	0.35	1.00	0.24	0.24
v/c Ratio	0.91	0.66	0.73	0.84	0.16	0.74
Control Delay	62.4	24.3	39.2	6.4	37.1	45.3
Queue Delay	3.5	49.2	0.0	0.0	0.3	0.0
Total Delay	65.9	73.5	39.2	6.4	37.4	45.3
LOS	E	E	D	A	D	D
Approach Delay		70.6	20.0		43.9	
Approach LOS		E	B		D	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 65  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.91  
 Intersection Signal Delay: 46.4  
 Intersection LOS: D  
 Intersection Capacity Utilization 106.1%  
 ICU Level of Service G  
 Analysis Period (min) 15

Splits and Phases: 2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox Bl./Harley Knox Bl.

11/10/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑			↑↑	↗		↖	↗			
Traffic Volume (veh/h)	808	1325	0	0	796	1126	58	4	284	0	0	0
Future Volume (veh/h)	808	1325	0	0	796	1126	58	4	284	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1841	1722	0	0	1796	1752	1811	1900	1811			
Adj Flow Rate, veh/h	878	1440	0	0	865	0	63	4	244			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	4	12	0	0	7	10	6	0	6			
Cap, veh/h	921	2209	0	0	1251		412	26	371			
Arrive On Green	0.54	1.00	0.00	0.00	0.37	0.00	0.24	0.24	0.24			
Sat Flow, veh/h	3401	3358	0	0	3503	1485	1706	108	1535			
Grp Volume(v), veh/h	878	1440	0	0	865	0	67	0	244			
Grp Sat Flow(s),veh/h/ln	1700	1636	0	0	1706	1485	1815	0	1535			
Q Serve(g_s), s	29.3	0.0	0.0	0.0	25.8	0.0	3.5	0.0	17.2			
Cycle Q Clear(g_c), s	29.3	0.0	0.0	0.0	25.8	0.0	3.5	0.0	17.2			
Prop In Lane	1.00		0.00	0.00		1.00	0.94		1.00			
Lane Grp Cap(c), veh/h	921	2209	0	0	1251		439	0	371			
V/C Ratio(X)	0.95	0.65	0.00	0.00	0.69		0.15	0.00	0.66			
Avail Cap(c_a), veh/h	1063	2209	0	0	1251		439	0	371			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.57	0.57	0.00	0.00	0.80	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	26.8	0.0	0.0	0.0	32.2	0.0	35.8	0.0	41.0			
Incr Delay (d2), s/veh	10.3	0.9	0.0	0.0	2.5	0.0	0.7	0.0	8.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	8.7	0.3	0.0	0.0	10.6	0.0	1.6	0.0	7.2			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.1	0.9	0.0	0.0	34.8	0.0	36.6	0.0	49.9			
LnGrp LOS	D	A	A	A	C		D	A	D			
Approach Vol, veh/h		2318			865	A		311				
Approach Delay, s/veh		14.6			34.8			47.0				
Approach LOS		B			C			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		86.0			37.0	49.0		34.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		81.0			37.5	39.0		29.0				
Max Q Clear Time (g_c+I1), s		2.0			31.3	27.8		19.2				
Green Ext Time (p_c), s		8.5			1.2	2.9		0.8				

Intersection Summary

HCM 6th Ctrl Delay	22.5
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Timings  
5: Heacock Street & Cactus Avenue

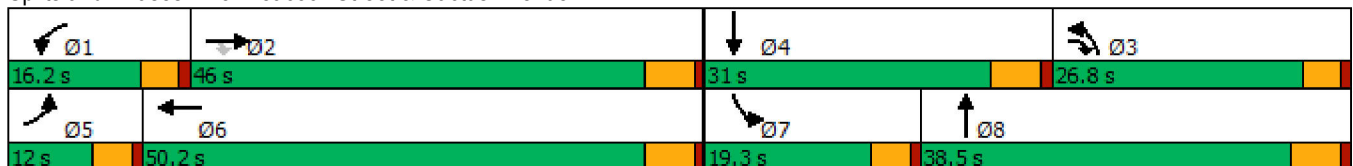


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↵	↑↑↑	↵	↵	↑↑↑	↵↵	↑↵	↵	↑↑
Traffic Volume (vph)	176	1067	762	67	2068	854	719	139	372
Future Volume (vph)	176	1067	762	67	2068	854	719	139	372
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	3	1	6	3	8	7	4
Permitted Phases			2						
Detector Phase	5	2	3	1	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.5	30.5	9.5	9.5	30.5	9.5	30.5	9.5	30.5
Total Split (s)	12.0	46.0	26.8	16.2	50.2	26.8	38.5	19.3	31.0
Total Split (%)	10.0%	38.3%	22.3%	13.5%	41.8%	22.3%	32.1%	16.1%	25.8%
Yellow Time (s)	3.5	4.5	3.5	3.5	4.5	3.5	4.5	3.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-2.0	0.0	0.0	-2.0	-2.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.5	3.5	4.5	4.5	3.5	2.5	4.5	3.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None
Act Effct Green (s)	8.5	47.8	71.1	8.5	46.8	25.3	31.0	13.2	20.0
Actuated g/C Ratio	0.07	0.42	0.62	0.07	0.41	0.22	0.27	0.12	0.17
v/c Ratio	1.33	0.48	0.69	0.50	1.01	1.12	0.78	0.67	0.75
Control Delay	230.5	26.7	11.7	63.9	54.2	110.3	45.0	65.0	49.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	230.5	26.7	11.7	63.9	54.2	110.3	45.0	65.0	49.5
LOS	F	C	B	E	D	F	D	E	D
Approach Delay		38.8			54.5		79.9		53.0
Approach LOS		D			D		E		D

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 114.6  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.33  
 Intersection Signal Delay: 55.8  
 Intersection LOS: E  
 Intersection Capacity Utilization 105.0%  
 ICU Level of Service G  
 Analysis Period (min) 15





























Splits and Phases: 5: Heacock Street & Cactus Avenue



HCM 6th Signalized Intersection Summary  
5: Heacock Street & Cactus Avenue

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 			 	
Traffic Volume (veh/h)	176	1067	762	67	2068	159	854	719	23	139	372	105
Future Volume (veh/h)	176	1067	762	67	2068	159	854	719	23	139	372	105
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1752	1900	1885	1885	1826	1841	1841	1870	1841	1841
Adj Flow Rate, veh/h	183	1111	664	70	2154	104	890	749	8	145	388	83
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	10	0	1	1	5	4	4	2	4	4
Cap, veh/h	134	2408	903	90	2209	106	747	997	11	188	485	103
Arrive On Green	0.11	0.64	0.41	0.05	0.62	0.40	0.32	0.41	0.27	0.11	0.16	0.16
Sat Flow, veh/h	1781	5611	1485	1810	5352	257	3478	3636	39	1781	2945	624
Grp Volume(v), veh/h	183	1111	664	70	1514	744	890	379	378	145	241	230
Grp Sat Flow(s),veh/h/ln	1781	1870	1485	1810	1885	1839	1739	1841	1834	1781	1841	1728
Q Serve(g_s), s	8.5	11.4	8.2	4.3	43.5	44.5	24.3	19.9	19.9	9.0	14.2	14.5
Cycle Q Clear(g_c), s	8.5	11.4	8.2	4.3	43.5	44.5	24.3	19.9	19.9	9.0	14.2	14.5
Prop In Lane	1.00		1.00	1.00		0.14	1.00		0.02	1.00		0.36
Lane Grp Cap(c), veh/h	134	2408	903	90	1556	759	747	505	503	188	303	285
V/C Ratio(X)	1.37	0.46	0.73	0.78	0.97	0.98	1.19	0.75	0.75	0.77	0.79	0.81
Avail Cap(c_a), veh/h	134	2408	903	187	1556	759	747	553	551	249	431	405
HCM Platoon Ratio	1.50	1.50	1.00	1.00	1.50	1.00	1.50	1.50	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.2	13.5	5.1	53.1	20.9	22.9	38.3	30.0	30.2	49.3	45.4	45.7
Incr Delay (d2), s/veh	205.6	0.1	2.8	5.2	16.7	27.6	99.2	4.4	4.4	7.1	4.1	5.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.1	3.7	4.1	2.0	16.2	19.7	19.1	7.8	7.9	4.2	6.6	6.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	255.8	13.6	7.9	58.4	37.6	50.4	137.5	34.4	34.6	56.4	49.6	50.9
LnGrp LOS	F	B	A	E	D	D	F	C	C	E	D	D
Approach Vol, veh/h		1958			2328			1647			616	
Approach Delay, s/veh		34.3			42.3			90.2			51.7	
Approach LOS		C			D			F			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.1	52.1	27.8	23.1	12.0	50.2	15.4	35.5				
Change Period (Y+Rc), s	4.5	5.5	5.5	* 5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	11.7	40.5	22.3	* 26	7.5	44.7	14.8	33.0				
Max Q Clear Time (g_c+I1), s	6.3	13.4	26.3	16.5	10.5	46.5	11.0	21.9				
Green Ext Time (p_c), s	0.0	6.7	0.0	1.1	0.0	0.0	0.1	2.1				

Intersection Summary

HCM 6th Ctrl Delay	52.8
HCM 6th LOS	D

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Timings  
6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

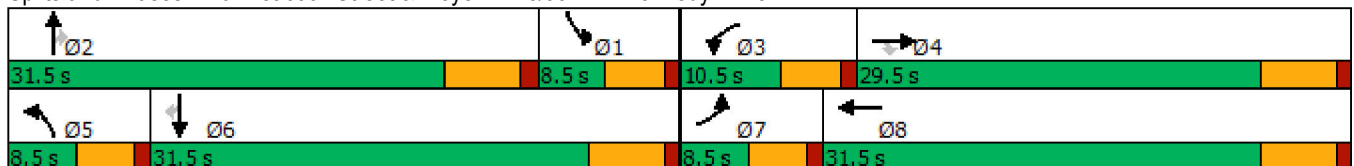
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Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	48	45	120	33	267	37	1054	58	127	804	24	
Future Volume (vph)	48	45	120	33	267	37	1054	58	127	804	24	
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	7	4		3	8	5	2		1	6		
Permitted Phases			4					2			6	
Detector Phase	7	4	4	3	8	5	2	2	1	6	6	
Switch Phase												
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	
Minimum Split (s)	8.5	23.5	23.5	8.5	31.5	8.5	30.5	30.5	8.5	23.5	23.5	
Total Split (s)	8.5	29.5	29.5	10.5	31.5	8.5	31.5	31.5	8.5	31.5	31.5	
Total Split (%)	10.6%	36.9%	36.9%	13.1%	39.4%	10.6%	39.4%	39.4%	10.6%	39.4%	39.4%	
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5	4.5	4.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	5.5	4.5	5.5	5.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max	
Act Effct Green (s)	4.1	13.5	13.5	5.5	12.5	4.1	26.6	26.6	4.1	30.6	30.6	
Actuated g/C Ratio	0.06	0.21	0.21	0.09	0.20	0.06	0.42	0.42	0.06	0.48	0.48	
v/c Ratio	0.48	0.13	0.22	0.22	0.62	0.35	0.73	0.07	0.58	0.50	0.03	
Control Delay	50.7	21.7	0.9	34.8	19.0	42.1	22.1	0.2	44.2	16.4	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	50.7	21.7	0.9	34.8	19.0	42.1	22.1	0.2	44.2	16.4	0.1	
LOS	D	C	A	C	B	D	C	A	D	B	A	
Approach Delay		16.5			19.9		21.6			19.6		
Approach LOS		B			B		C			B		

Intersection Summary

Cycle Length: 80  
 Actuated Cycle Length: 63.7  
 Natural Cycle: 80  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.73  
 Intersection Signal Delay: 20.3  
 Intersection LOS: C  
 Intersection Capacity Utilization 69.0%  
 ICU Level of Service C  
 Analysis Period (min) 15
























Splits and Phases: 6: Heacock Street & Meyer Drive/John F. Kennedy Drive















HCM 6th Signalized Intersection Summary  
 6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	45	120	33	267	236	37	1054	58	127	804	24
Future Volume (veh/h)	48	45	120	33	267	236	37	1054	58	127	804	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.97	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1648	1767	1811	1796	1841	1841	1781	1811	1767	1856	1767	1618
Adj Flow Rate, veh/h	50	47	89	34	278	210	39	1098	50	132	838	15
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	17	9	6	7	4	4	8	6	9	3	9	19
Cap, veh/h	58	368	319	48	392	286	52	1411	567	205	1532	587
Arrive On Green	0.04	0.21	0.21	0.03	0.20	0.20	0.03	0.39	0.39	0.06	0.43	0.43
Sat Flow, veh/h	1570	1767	1535	1711	1971	1438	1697	3622	1455	3428	3533	1354
Grp Volume(v), veh/h	50	47	89	34	259	229	39	1098	50	132	838	15
Grp Sat Flow(s),veh/h/ln	1570	1767	1535	1711	1841	1569	1697	1811	1455	1714	1767	1354
Q Serve(g_s), s	2.1	1.4	3.3	1.3	8.8	9.1	1.5	17.7	1.0	2.5	11.8	0.4
Cycle Q Clear(g_c), s	2.1	1.4	3.3	1.3	8.8	9.1	1.5	17.7	1.0	2.5	11.8	0.4
Prop In Lane	1.00		1.00	1.00		0.92	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	58	368	319	48	366	312	52	1411	567	205	1532	587
V/C Ratio(X)	0.86	0.13	0.28	0.71	0.71	0.73	0.75	0.78	0.09	0.64	0.55	0.03
Avail Cap(c_a), veh/h	94	635	552	154	717	611	102	1411	567	205	1532	587
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.0	21.5	22.2	32.2	24.9	25.1	32.1	17.9	6.5	30.7	14.0	10.8
Incr Delay (d2), s/veh	19.4	0.1	0.2	7.0	0.9	1.3	7.6	4.3	0.3	5.2	1.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.6	1.1	0.6	3.5	3.1	0.7	6.8	0.4	1.1	4.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.4	21.6	22.4	39.2	25.9	26.4	39.7	22.2	6.8	35.9	15.5	10.9
LnGrp LOS	D	C	C	D	C	C	D	C	A	D	B	B
Approach Vol, veh/h		186			522			1187			985	
Approach Delay, s/veh		30.0			27.0			22.1			18.1	
Approach LOS		C			C			C			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.5	31.5	6.4	19.4	6.6	34.4	7.0	18.8				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	4.0	* 26	6.0	24.0	4.0	26.0	4.0	26.0				
Max Q Clear Time (g_c+I1), s	4.5	19.7	3.3	5.3	3.5	13.8	4.1	11.1				
Green Ext Time (p_c), s	0.0	2.6	0.0	0.2	0.0	2.8	0.0	1.5				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			22.1									
HCM 6th LOS			C									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings  
11: Heacock Street & Cardinal Avenue

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	12	13	1069	61	52	924
Future Volume (vph)	12	13	1069	61	52	924
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	26.6	26.6	21.6	21.6	9.6	16.2
Total Split (s)	27.0	27.0	76.0	76.0	17.0	93.0
Total Split (%)	22.5%	22.5%	63.3%	63.3%	14.2%	77.5%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	13.0	13.0	41.6	41.6	7.4	48.3
Actuated g/C Ratio	0.23	0.23	0.74	0.74	0.13	0.86
v/c Ratio	0.04	0.04	0.44	0.05	0.24	0.37
Control Delay	24.8	13.5	9.0	3.3	32.2	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.8	13.5	9.0	3.3	32.2	4.1
LOS	C	B	A	A	C	A
Approach Delay	19.0		8.7			5.6
Approach LOS	B		A			A













Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 56	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.44	
Intersection Signal Delay: 7.4	Intersection LOS: A
Intersection Capacity Utilization 53.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 11: Heacock Street & Cardinal Avenue



HCM 6th Signalized Intersection Summary  
 11: Heacock Street & Cardinal Avenue

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	12	13	1069	61	52	924
Future Volume (veh/h)	12	13	1069	61	52	924
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1559	1441	1781	1870	1781	1693
Adj Flow Rate, veh/h	13	14	1162	66	57	1004
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	23	31	8	2	8	14
Cap, veh/h	95	78	1848	822	98	2199
Arrive On Green	0.06	0.06	0.52	0.52	0.06	0.68
Sat Flow, veh/h	1485	1221	3563	1585	1697	3300
Grp Volume(v), veh/h	13	14	1162	66	57	1004
Grp Sat Flow(s),veh/h/ln	1485	1221	1781	1585	1697	1608
Q Serve(g_s), s	0.4	0.5	10.0	0.9	1.4	6.1
Cycle Q Clear(g_c), s	0.4	0.5	10.0	0.9	1.4	6.1
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	95	78	1848	822	98	2199
V/C Ratio(X)	0.14	0.18	0.63	0.08	0.58	0.46
Avail Cap(c_a), veh/h	777	638	5940	2642	491	6517
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.9	19.0	7.4	5.2	19.7	3.1
Incr Delay (d2), s/veh	0.6	1.1	0.4	0.0	2.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.1	1.8	0.1	0.5	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	19.6	20.1	7.7	5.2	21.7	3.3
LnGrp LOS	B	C	A	A	C	A
Approach Vol, veh/h	27		1228			1061
Approach Delay, s/veh	19.8		7.6			4.3
Approach LOS	B		A			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	7.1	28.4			35.5	7.3
Change Period (Y+Rc), s	4.6	* 6.2			6.2	4.6
Max Green Setting (Gmax), s	12.4	* 71			86.8	22.4
Max Q Clear Time (g_c+I1), s	3.4	12.0			8.1	2.5
Green Ext Time (p_c), s	0.0	10.2			8.0	0.0

Intersection Summary

HCM 6th Ctrl Delay	6.2
HCM 6th LOS	A

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
12: Heacock Street & San Michele Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	31	82	5	39	341	753	2	55	478	116	52
Future Volume (vph)	31	82	5	39	341	753	2	55	478	116	52
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	1	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	4.0	5.0	4.0	5.0	5.0
Minimum Split (s)	9.5	30.5	30.5	8.5	30.5	8.5	8.5	34.5	8.5	34.5	34.5
Total Split (s)	10.0	36.4	36.4	11.6	38.0	35.0	8.5	37.0	35.0	63.5	63.5
Total Split (%)	8.3%	30.3%	30.3%	9.7%	31.7%	29.2%	7.1%	30.8%	29.2%	52.9%	52.9%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	3.5	4.5	3.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	4.5	5.5	4.5	5.5	5.5
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	None	Max	Max
Act Effct Green (s)	5.3	16.0	16.0	12.7	23.3	53.0	4.1	32.1	24.2	59.4	59.4
Actuated g/C Ratio	0.05	0.16	0.16	0.13	0.23	0.53	0.04	0.32	0.24	0.59	0.59
v/c Ratio	0.34	0.30	0.01	0.19	0.85	0.62	0.03	0.07	0.62	0.12	0.05
Control Delay	60.8	44.0	0.0	43.5	55.8	3.9	54.5	25.2	39.5	12.7	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.8	44.0	0.0	43.5	55.8	3.9	54.5	25.2	39.5	12.7	0.4
LOS	E	D	A	D	E	A	D	C	D	B	A
Approach Delay		46.8			20.9			26.0		31.5	
Approach LOS		D			C			C		C	

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 100.8	
Natural Cycle: 85	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay: 26.1	Intersection LOS: C
Intersection Capacity Utilization 66.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 12: Heacock Street & San Michele Road



HCM 6th Signalized Intersection Summary  
 12: Heacock Street & San Michele Road

Gateway Aviation TA (JN:13445)

11/10/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	82	5	39	341	753	2	55	10	478	116	52
Future Volume (veh/h)	31	82	5	39	341	753	2	55	10	478	116	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1856	1366	1796	1900	1856	1900	1856	1856	1811	1826	1856
Adj Flow Rate, veh/h	34	89	5	42	371	601	2	60	11	520	126	57
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	3	36	7	0	3	0	3	3	6	5	3
Cap, veh/h	43	128	80	310	430	743	4	902	161	825	1015	874
Arrive On Green	0.02	0.07	0.07	0.18	0.23	0.23	0.00	0.30	0.30	0.25	0.56	0.56
Sat Flow, veh/h	1810	1856	1158	1711	1900	1572	1810	2989	534	3346	1826	1572
Grp Volume(v), veh/h	34	89	5	42	371	601	2	35	36	520	126	57
Grp Sat Flow(s),veh/h/ln	1810	1856	1158	1711	1900	1572	1810	1763	1759	1673	1826	1572
Q Serve(g_s), s	1.9	4.9	0.4	2.1	19.6	8.3	0.1	1.5	1.5	14.5	3.4	1.3
Cycle Q Clear(g_c), s	1.9	4.9	0.4	2.1	19.6	8.3	0.1	1.5	1.5	14.5	3.4	1.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.30	1.00		1.00
Lane Grp Cap(c), veh/h	43	128	80	310	430	743	4	532	531	825	1015	874
V/C Ratio(X)	0.78	0.70	0.06	0.14	0.86	0.81	0.51	0.07	0.07	0.63	0.12	0.07
Avail Cap(c_a), veh/h	95	550	343	310	592	878	69	532	531	978	1015	874
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.6	47.5	36.4	35.8	38.8	23.5	52.0	25.9	26.0	35.1	11.1	5.7
Incr Delay (d2), s/veh	10.7	2.6	0.1	0.1	7.4	4.1	33.6	0.2	0.2	0.5	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	2.4	0.1	0.9	9.6	12.2	0.1	0.6	0.6	5.6	1.3	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.4	50.1	36.5	35.9	46.2	27.6	85.6	26.2	26.2	35.6	11.3	5.8
LnGrp LOS	E	D	D	D	D	C	F	C	C	D	B	A
Approach Vol, veh/h		128			1014			73			703	
Approach Delay, s/veh		52.5			34.7			27.8			28.8	
Approach LOS		D			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	31.2	37.0	23.4	12.7	4.7	63.5	7.0	29.1				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	30.5	* 32	7.1	30.9	4.0	58.0	5.5	32.5				
Max Q Clear Time (g_c+I1), s	16.5	3.5	4.1	6.9	2.1	5.4	3.9	21.6				
Green Ext Time (p_c), s	0.8	0.2	0.0	0.3	0.0	0.5	0.0	2.0				

Intersection Summary

HCM 6th Ctrl Delay	33.5
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
14: Indian Street & San Michele Road

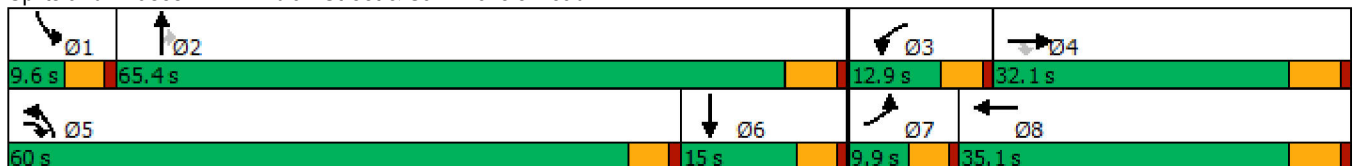


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↘	↑↑	↗↗	↘↘	↑↑	↗↗	↑	↗	↘	↑↑
Traffic Volume (vph)	15	205	363	186	894	1545	217	236	6	141
Future Volume (vph)	15	205	363	186	894	1545	217	236	6	141
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	5	3	8	5	2		1	6
Permitted Phases			4					2		
Detector Phase	7	4	5	3	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	10.0	5.0	8.8
Minimum Split (s)	9.6	31.8	9.6	9.6	31.8	9.6	32.8	32.8	9.6	14.6
Total Split (s)	9.9	32.1	60.0	12.9	35.1	60.0	65.4	65.4	9.6	15.0
Total Split (%)	8.3%	26.8%	50.0%	10.8%	29.3%	50.0%	54.5%	54.5%	8.0%	12.5%
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	3.6	4.8	4.8	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	4.6	5.8	5.8	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None	None
Act Effct Green (s)	5.2	20.2	80.5	8.2	29.4	54.4	65.7	65.7	5.0	9.6
Actuated g/C Ratio	0.05	0.18	0.72	0.07	0.26	0.48	0.59	0.59	0.04	0.09
v/c Ratio	0.27	0.42	0.15	0.76	1.04	0.94	0.23	0.23	0.08	0.57
Control Delay	65.7	43.4	4.2	71.0	81.0	39.3	13.3	2.3	56.8	56.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.7	43.4	4.2	71.0	81.0	39.3	13.3	2.3	56.8	56.5
LOS	E	D	A	E	F	D	B	A	E	E
Approach Delay		19.5			79.3		32.1			56.5
Approach LOS		B			E		C			E

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 112.2  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.04  
 Intersection Signal Delay: 44.6  
 Intersection LOS: D  
 Intersection Capacity Utilization 97.0%  
 ICU Level of Service F  
 Analysis Period (min) 15

Splits and Phases: 14: Indian Street & San Michele Road





HCM 6th Signalized Intersection Summary  
 14: Indian Street & San Michele Road

Gateway Aviation TA (JN:13445)

11/10/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	205	363	186	894	11	1545	217	236	6	141	14
Future Volume (veh/h)	15	205	363	186	894	11	1545	217	236	6	141	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.99	1.00		0.88
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1218	1470	1870	1826	1826	1826	1856	1752	1767	1900	1707	1707
Adj Flow Rate, veh/h	16	223	335	202	972	5	1679	236	175	7	153	12
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	46	29	2	5	5	5	3	10	9	0	13	13
Cap, veh/h	20	582	2137	248	914	5	1683	952	803	16	234	18
Arrive On Green	0.02	0.30	0.30	0.07	0.38	0.25	0.71	0.54	0.54	0.01	0.08	0.08
Sat Flow, veh/h	1160	2940	3170	3478	3629	19	3534	1752	1478	1810	3095	238
Grp Volume(v), veh/h	16	223	335	202	489	488	1679	236	175	7	83	82
Grp Sat Flow(s),veh/h/ln	1160	1470	1585	1739	1826	1822	1767	1752	1478	1810	1707	1626
Q Serve(g_s), s	1.6	7.0	4.2	6.7	29.3	29.3	54.9	8.3	7.1	0.4	5.5	5.7
Cycle Q Clear(g_c), s	1.6	7.0	4.2	6.7	29.3	29.3	54.9	8.3	7.1	0.4	5.5	5.7
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	1.00		0.15
Lane Grp Cap(c), veh/h	20	582	2137	248	460	459	1683	952	803	16	129	123
V/C Ratio(X)	0.79	0.38	0.16	0.81	1.06	1.06	1.00	0.25	0.22	0.44	0.64	0.67
Avail Cap(c_a), veh/h	53	665	2227	248	460	459	1683	952	803	78	153	145
HCM Platoon Ratio	1.00	1.50	1.50	1.00	1.50	1.00	1.50	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.9	35.3	6.0	53.2	36.2	36.3	16.5	14.0	13.8	57.4	52.2	52.3
Incr Delay (d2), s/veh	22.4	0.2	0.0	17.3	59.8	59.8	21.3	0.1	0.1	7.1	4.0	5.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	2.4	1.1	3.4	18.5	18.5	15.4	3.0	2.2	0.2	2.4	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	79.3	35.4	6.0	70.5	96.0	96.1	37.8	14.1	13.8	64.5	56.2	57.8
LnGrp LOS	E	D	A	E	F	F	D	B	B	E	E	E
Approach Vol, veh/h		574			1179			2090			172	
Approach Delay, s/veh		19.5			91.6			33.1			57.3	
Approach LOS		B			F			C			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.6	69.0	12.9	28.8	60.0	14.6	6.6	35.1				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	* 5.8	4.6	5.8				
Max Green Setting (Gmax), s	5.0	59.6	8.3	26.3	55.4	* 10	5.3	29.3				
Max Q Clear Time (g_c+I1), s	2.4	10.3	8.7	9.0	56.9	7.7	3.6	31.3				
Green Ext Time (p_c), s	0.0	1.0	0.0	1.5	0.0	0.1	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	49.4
HCM 6th LOS	D

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Timings  
15: Indian Street & Nandina Avenue



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↑	↗	↖	↗	↖↗	↖↗	↖	↗
Traffic Volume (vph)	8	35	156	36	44	356	1770	13	489
Future Volume (vph)	8	35	156	36	44	356	1770	13	489
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	5	3	8	5	2	1	6
Permitted Phases	4								
Detector Phase	7	4	5	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	29.8	9.6	9.6	29.8	9.6	26.8	9.6	26.8
Total Split (s)	9.7	29.9	29.0	10.0	30.2	29.0	70.4	9.7	51.1
Total Split (%)	8.1%	24.9%	24.2%	8.3%	25.2%	24.2%	58.7%	8.1%	42.6%
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	5.3	12.7	30.4	5.6	16.5	16.4	66.8	5.3	46.9
Actuated g/C Ratio	0.06	0.14	0.32	0.06	0.18	0.18	0.71	0.06	0.50
v/c Ratio	0.08	0.21	0.33	0.42	0.29	0.74	0.77	0.17	0.31
Control Delay	53.0	44.0	5.2	64.6	31.8	47.7	17.6	56.2	17.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.0	44.0	5.2	64.6	31.8	47.7	17.6	56.2	17.9
LOS	D	D	A	E	C	D	B	E	B
Approach Delay	13.9		43.1			22.4		18.9	
Approach LOS	B		D			C		B	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 93.6  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.77  
 Intersection Signal Delay: 22.0  
 Intersection LOS: C  
 Intersection Capacity Utilization 77.7%  
 ICU Level of Service D  
 Analysis Period (min) 15























Splits and Phases: 15: Indian Street & Nandina Avenue



HCM 6th Signalized Intersection Summary  
15: Indian Street & Nandina Avenue

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	35	156	36	44	24	356	1770	76	13	489	27
Future Volume (veh/h)	8	35	156	36	44	24	356	1770	76	13	489	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1248	1100	1559	1441	1441	1559	1841	1841	1411	1811	1811
Adj Flow Rate, veh/h	9	38	170	39	48	26	387	1924	83	14	532	29
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	44	54	23	31	31	23	4	4	33	6	6
Cap, veh/h	20	215	304	47	170	92	445	2057	88	21	1528	83
Arrive On Green	0.01	0.17	0.17	0.03	0.19	0.19	0.15	0.59	0.59	0.02	0.45	0.45
Sat Flow, veh/h	1810	1248	932	1485	879	476	2881	3501	150	1344	3404	185
Grp Volume(v), veh/h	9	38	170	39	0	74	387	1004	1004	14	283	278
Grp Sat Flow(s),veh/h/ln	1810	1248	932	1485	0	1355	1440	1841	1810	1344	1811	1778
Q Serve(g_s), s	0.5	2.8	16.2	2.8	0.0	5.0	14.2	53.4	55.4	1.1	11.0	11.0
Cycle Q Clear(g_c), s	0.5	2.8	16.2	2.8	0.0	5.0	14.2	53.4	55.4	1.1	11.0	11.0
Prop In Lane	1.00		1.00	1.00		0.35	1.00		0.08	1.00		0.10
Lane Grp Cap(c), veh/h	20	215	304	47	0	261	445	1081	1063	21	813	798
V/C Ratio(X)	0.45	0.18	0.56	0.82	0.00	0.28	0.87	0.93	0.94	0.66	0.35	0.35
Avail Cap(c_a), veh/h	85	279	352	74	0	306	651	1102	1083	63	813	798
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.1	38.2	30.0	51.9	0.0	37.2	44.6	20.2	20.6	52.8	19.4	19.4
Incr Delay (d2), s/veh	5.9	0.4	1.6	18.1	0.0	0.6	6.2	13.1	15.6	12.0	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.9	3.6	1.3	0.0	1.7	5.2	22.9	23.9	0.4	4.3	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.0	38.6	31.6	70.0	0.0	37.8	50.8	33.3	36.2	64.8	19.7	19.7
LnGrp LOS	E	D	C	E	A	D	D	C	D	E	B	B
Approach Vol, veh/h		217			113			2394			575	
Approach Delay, s/veh		33.9			48.9			37.3			20.8	
Approach LOS		C			D			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.3	69.2	8.0	24.4	21.3	54.3	5.8	26.6				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	5.1	64.6	5.4	24.1	24.4	45.3	5.1	24.4				
Max Q Clear Time (g_c+I1), s	3.1	57.4	4.8	18.2	16.2	13.0	2.5	7.0				
Green Ext Time (p_c), s	0.0	6.0	0.0	0.3	0.5	3.1	0.0	0.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			34.6									
HCM 6th LOS			C									

Timings  
16: Indian Av. & Harley Knox Bl.

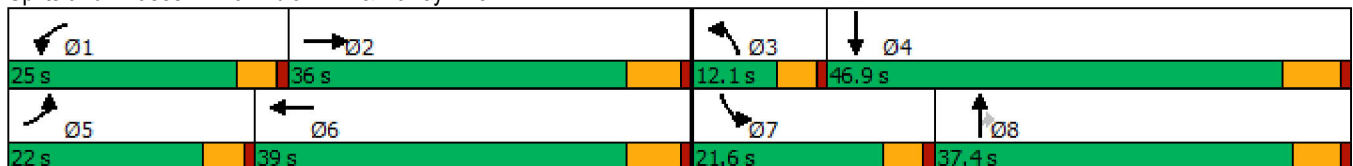


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↔↔	↕↕↔	↔	↕↕↔	↔↔	↕↕	↕	↔	↕↔
Traffic Volume (vph)	108	276	157	541	58	290	82	102	187
Future Volume (vph)	108	276	157	541	58	290	82	102	187
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	5	2	1	6	3	8		7	4
Permitted Phases							8		
Detector Phase	5	2	1	6	3	8	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2
Total Split (s)	22.0	36.0	25.0	39.0	12.1	37.4	37.4	21.6	46.9
Total Split (%)	18.3%	30.0%	20.8%	32.5%	10.1%	31.2%	31.2%	18.0%	39.1%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.4	4.4	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.4	5.4	4.6	6.2
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	9.4	17.9	12.6	24.7	6.6	16.0	16.0	10.1	18.3
Actuated g/C Ratio	0.12	0.24	0.17	0.33	0.09	0.21	0.21	0.13	0.24
v/c Ratio	0.43	0.32	0.58	0.55	0.23	0.45	0.20	0.47	0.36
Control Delay	42.3	24.6	42.5	22.7	42.7	31.0	1.4	43.3	22.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.3	24.6	42.5	22.7	42.7	31.0	1.4	43.3	22.2
LOS	D	C	D	C	D	C	A	D	C
Approach Delay		29.0		25.9		26.9			28.1
Approach LOS		C		C		C			C

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 75.7  
 Natural Cycle: 100  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.58  
 Intersection Signal Delay: 27.0  
 Intersection LOS: C  
 Intersection Capacity Utilization 52.4%  
 ICU Level of Service A  
 Analysis Period (min) 15

































Splits and Phases: 16: Indian Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 16: Indian Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 		 	 		 	 	 	 	 	 
Traffic Volume (veh/h)	108	276	56	157	541	302	58	290	82	102	187	71
Future Volume (veh/h)	108	276	56	157	541	302	58	290	82	102	187	71
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1011	1811	1811	1870	1856	1856	1737	1781	1796	1885	1811	1811
Adj Flow Rate, veh/h	117	300	7	171	588	111	63	315	66	111	203	-32
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	60	6	6	2	3	3	11	8	7	1	6	6
Cap, veh/h	156	1006	23	220	1040	193	184	644	290	144	735	0
Arrive On Green	0.08	0.20	0.20	0.12	0.24	0.24	0.06	0.19	0.19	0.08	0.21	0.00
Sat Flow, veh/h	1868	4971	115	1781	4292	797	3209	3385	1522	1795	3532	0
Grp Volume(v), veh/h	117	198	109	171	461	238	63	315	66	111	171	0
Grp Sat Flow(s),veh/h/ln	934	1648	1790	1781	1689	1712	1605	1692	1522	1795	1721	0
Q Serve(g_s), s	3.2	2.7	2.7	4.9	6.3	6.4	1.0	4.4	1.9	3.2	2.2	0.0
Cycle Q Clear(g_c), s	3.2	2.7	2.7	4.9	6.3	6.4	1.0	4.4	1.9	3.2	2.2	0.0
Prop In Lane	1.00		0.06	1.00		0.47	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	156	667	362	220	818	415	184	644	290	144	735	0
V/C Ratio(X)	0.75	0.30	0.30	0.78	0.56	0.58	0.34	0.49	0.23	0.77	0.23	0.00
Avail Cap(c_a), veh/h	618	1895	1029	692	2134	1082	458	2061	927	581	2665	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	23.5	17.8	17.8	22.3	17.5	17.5	23.8	19.0	18.0	23.7	17.1	0.0
Incr Delay (d2), s/veh	2.7	0.2	0.5	2.3	0.6	1.3	0.4	0.6	0.4	3.2	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.9	1.0	1.9	2.1	2.2	0.3	1.5	0.6	1.3	0.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.3	18.0	18.2	24.6	18.1	18.8	24.2	19.6	18.4	26.9	17.3	0.0
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	A
Approach Vol, veh/h		424			870			444			282	
Approach Delay, s/veh		20.4			19.6			20.1			21.0	
Approach LOS		C			B			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.1	16.4	7.6	17.4	9.0	18.5	8.8	16.2				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	20.4	30.2	7.5	40.7	17.4	33.2	17.0	* 32				
Max Q Clear Time (g_c+I1), s	6.9	4.7	3.0	4.2	5.2	8.4	5.2	6.4				
Green Ext Time (p_c), s	0.2	1.6	0.0	1.0	0.1	4.3	0.1	2.1				

Intersection Summary

HCM 6th Ctrl Delay	20.0
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

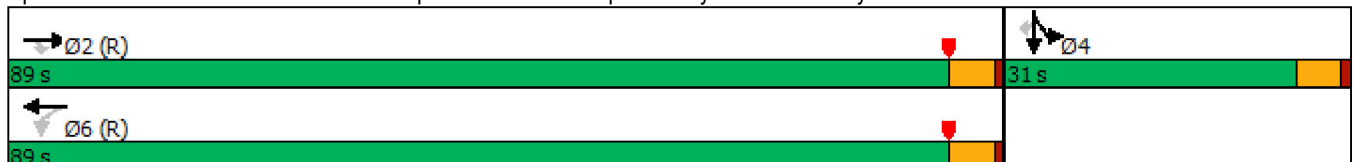


Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations	↑↑	↑	↑↑	↑	↑	↑	↑
Traffic Volume (vph)	875	96	627	400	522	0	226
Future Volume (vph)	875	96	627	400	522	0	226
Turn Type	NA	Perm	Perm	NA	Split	NA	Perm
Protected Phases	2			6	4	4	
Permitted Phases		2	6				4
Detector Phase	2	2	6	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	25.0	25.0	10.0	10.0	10.0
Total Split (s)	89.0	89.0	89.0	89.0	31.0	31.0	31.0
Total Split (%)	74.2%	74.2%	74.2%	74.2%	25.8%	25.8%	25.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None	None
Act Effct Green (s)	84.9	84.9	84.9	84.9	25.1	25.1	25.1
Actuated g/C Ratio	0.71	0.71	0.71	0.71	0.21	0.21	0.21
v/c Ratio	0.39	0.09	1.00	0.34	0.92	0.93	0.49
Control Delay	7.8	1.2	65.0	3.2	82.3	82.9	8.4
Queue Delay	0.2	0.0	0.0	0.5	2.5	2.5	0.0
Total Delay	8.0	1.2	65.0	3.7	84.7	85.4	8.4
LOS	A	A	E	A	F	F	A
Approach Delay	7.3			41.1		61.9	
Approach LOS	A			D		E	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.00  
 Intersection Signal Delay: 34.8  
 Intersection LOS: C  
 Intersection Capacity Utilization 69.0%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

11/10/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑↑	↑					↑	↑	↑
Traffic Volume (veh/h)	0	875	96	627	400	0	0	0	0	522	0	226
Future Volume (veh/h)	0	875	96	627	400	0	0	0	0	522	0	226
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1826	1885	1841	1826	0				1648	1900	1767
Adj Flow Rate, veh/h	0	951	104	682	435	0				567	0	186
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	5	1	4	5	0				17	0	9
Cap, veh/h	0	2485	1144	742	1308	0				629	0	300
Arrive On Green	0.00	0.72	0.72	1.00	1.00	0.00				0.20	0.00	0.20
Sat Flow, veh/h	0	3561	1597	1021	1826	0				3139	0	1497
Grp Volume(v), veh/h	0	951	104	682	435	0				567	0	186
Grp Sat Flow(s),veh/h/ln	0	1735	1597	511	1826	0				1570	0	1497
Q Serve(g_s), s	0.0	12.9	2.4	73.1	0.0	0.0				21.2	0.0	13.6
Cycle Q Clear(g_c), s	0.0	12.9	2.4	86.0	0.0	0.0				21.2	0.0	13.6
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2485	1144	742	1308	0				629	0	300
V/C Ratio(X)	0.00	0.38	0.09	0.92	0.33	0.00				0.90	0.00	0.62
Avail Cap(c_a), veh/h	0	2485	1144	742	1308	0				680	0	324
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.59	0.59	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	6.7	5.2	9.6	0.0	0.0				46.8	0.0	43.8
Incr Delay (d2), s/veh	0.0	0.4	0.2	12.2	0.4	0.0				14.6	0.0	3.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.0	0.7	1.4	0.1	0.0				9.3	0.0	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	7.1	5.3	21.8	0.4	0.0				61.4	0.0	47.0
LnGrp LOS	A	A	A	C	A	A				E	A	D
Approach Vol, veh/h		1055			1117						753	
Approach Delay, s/veh		6.9			13.5						57.8	
Approach LOS		A			B						E	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		91.0		29.0		91.0						
Change Period (Y+Rc), s		5.0		5.0		5.0						
Max Green Setting (Gmax), s		84.0		26.0		84.0						
Max Q Clear Time (g_c+I1), s		14.9		23.2		88.0						
Green Ext Time (p_c), s		4.6		0.9		0.0						

Intersection Summary

HCM 6th Ctrl Delay	22.5
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Timings

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

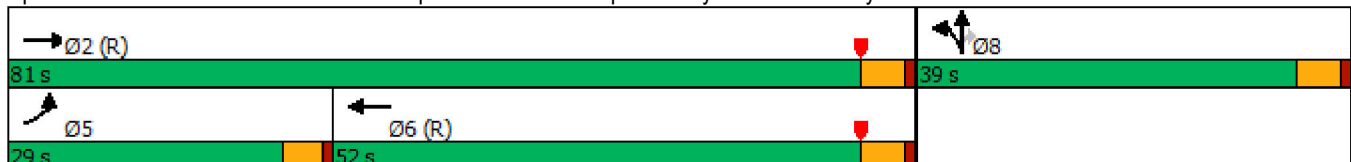


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations	↖↗	↕	↖↗	↖	↖	↖
Traffic Volume (vph)	479	918	979	1110	4	340
Future Volume (vph)	479	918	979	1110	4	340
Turn Type	Prot	NA	NA	Free	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				Free		8
Detector Phase	5	2	6		8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	9.5	26.0	24.0		10.0	10.0
Total Split (s)	29.0	81.0	52.0		39.0	39.0
Total Split (%)	24.2%	67.5%	43.3%		32.5%	32.5%
Yellow Time (s)	3.5	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0		5.0	5.0
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	C-Max	C-Max		Max	Max
Act Effct Green (s)	21.9	76.0	49.6	120.0	34.0	34.0
Actuated g/C Ratio	0.18	0.63	0.41	1.00	0.28	0.28
v/c Ratio	0.85	0.49	0.74	0.82	0.12	0.75
Control Delay	53.0	25.2	34.2	5.3	32.8	35.0
Queue Delay	0.1	2.0	0.0	0.0	0.0	0.0
Total Delay	53.0	27.3	34.2	5.3	32.8	35.0
LOS	D	C	C	A	C	D
Approach Delay		36.1	18.8		34.8	
Approach LOS		D	B		C	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 65  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.85  
 Intersection Signal Delay: 26.7  
 Intersection LOS: C  
 Intersection Capacity Utilization 69.0%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.





HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

11/10/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑			↑↑	↗		↖	↗			
Traffic Volume (veh/h)	479	918	0	0	979	1110	48	4	340	0	0	0
Future Volume (veh/h)	479	918	0	0	979	1110	48	4	340	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1841	1722	0	0	1841	1752	1663	1900	1663			
Adj Flow Rate, veh/h	521	998	0	0	1064	0	52	4	305			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	4	12	0	0	4	10	16	0	16			
Cap, veh/h	571	2072	0	0	1497		478	37	399			
Arrive On Green	0.34	1.00	0.00	0.00	0.43	0.00	0.28	0.28	0.28			
Sat Flow, veh/h	3401	3358	0	0	3589	1485	1686	130	1409			
Grp Volume(v), veh/h	521	998	0	0	1064	0	56	0	305			
Grp Sat Flow(s),veh/h/ln	1700	1636	0	0	1749	1485	1816	0	1409			
Q Serve(g_s), s	17.6	0.0	0.0	0.0	30.0	0.0	2.7	0.0	23.8			
Cycle Q Clear(g_c), s	17.6	0.0	0.0	0.0	30.0	0.0	2.7	0.0	23.8			
Prop In Lane	1.00		0.00	0.00		1.00	0.93		1.00			
Lane Grp Cap(c), veh/h	571	2072	0	0	1497		514	0	399			
V/C Ratio(X)	0.91	0.48	0.00	0.00	0.71		0.11	0.00	0.76			
Avail Cap(c_a), veh/h	694	2072	0	0	1497		514	0	399			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.85	0.85	0.00	0.00	0.62	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	39.0	0.0	0.0	0.0	28.2	0.0	31.8	0.0	39.3			
Incr Delay (d2), s/veh	11.7	0.7	0.0	0.0	1.8	0.0	0.4	0.0	13.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	6.7	0.2	0.0	0.0	12.2	0.0	1.2	0.0	9.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.7	0.7	0.0	0.0	30.0	0.0	32.2	0.0	52.3			
LnGrp LOS	D	A	A	A	C		C	A	D			
Approach Vol, veh/h		1519			1064	A		361				
Approach Delay, s/veh		17.8			30.0			49.2				
Approach LOS		B			C			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		81.0			24.6	56.4		39.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		76.0			24.5	47.0		34.0				
Max Q Clear Time (g_c+I1), s		2.0			19.6	32.0		25.8				
Green Ext Time (p_c), s		4.8			0.5	4.2		0.9				

Intersection Summary

HCM 6th Ctrl Delay	26.1
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Timings  
5: Heacock Street & Cactus Avenue

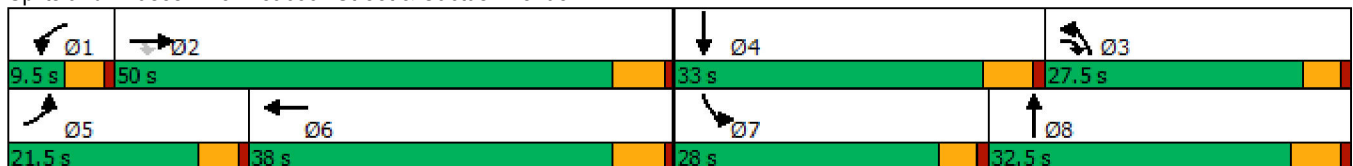


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↙	↑↑↑	↘	↙	↑↑↑	↘	↑↑	↙	↑↑
Traffic Volume (vph)	244	2146	1378	27	956	818	672	184	746
Future Volume (vph)	244	2146	1378	27	956	818	672	184	746
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	3	1	6	3	8	7	4
Permitted Phases			2						
Detector Phase	5	2	3	1	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.5	30.5	9.5	9.5	30.5	9.5	30.5	9.5	30.5
Total Split (s)	21.5	50.0	27.5	9.5	38.0	27.5	32.5	28.0	33.0
Total Split (%)	17.9%	41.7%	22.9%	7.9%	31.7%	22.9%	27.1%	23.3%	27.5%
Yellow Time (s)	3.5	4.5	3.5	3.5	4.5	3.5	4.5	3.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-2.0	0.0	0.0	-2.0	-2.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.5	3.5	4.5	4.5	3.5	2.5	4.5	3.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None
Act Effct Green (s)	17.5	47.2	69.3	5.0	31.8	25.0	35.0	17.1	28.1
Actuated g/C Ratio	0.15	0.41	0.60	0.04	0.27	0.21	0.30	0.15	0.24
v/c Ratio	0.89	0.98	1.32	0.36	0.73	1.11	0.68	0.69	0.94
Control Delay	80.8	48.6	169.9	68.9	40.7	108.3	40.6	60.1	62.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.8	48.6	169.9	68.9	40.7	108.3	40.6	60.1	62.1
LOS	F	D	F	E	D	F	D	E	E
Approach Delay		95.1			41.4		76.3		61.8
Approach LOS		F			D		E		E

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 116.4  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.32  
 Intersection Signal Delay: 78.6  
 Intersection LOS: E  
 Intersection Capacity Utilization 123.6%  
 ICU Level of Service H  
 Analysis Period (min) 15





























Splits and Phases: 5: Heacock Street & Cactus Avenue



HCM 6th Signalized Intersection Summary  
5: Heacock Street & Cactus Avenue

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 			 	
Traffic Volume (veh/h)	244	2146	1378	27	956	132	818	672	61	184	746	61
Future Volume (veh/h)	244	2146	1378	27	956	132	818	672	61	184	746	61
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1811	1826	1885	1885	1811	1870	1870	1900	1856	1856
Adj Flow Rate, veh/h	254	2235	732	28	996	76	852	700	28	192	777	17
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	1	6	5	1	1	6	2	2	0	3	3
Cap, veh/h	275	2218	873	44	1423	108	727	1134	45	235	856	19
Arrive On Green	0.23	0.59	0.38	0.03	0.41	0.26	0.32	0.48	0.31	0.13	0.24	0.23
Sat Flow, veh/h	1810	5656	1531	1739	5189	395	3450	3569	143	1810	3617	79
Grp Volume(v), veh/h	254	2235	732	28	723	349	852	367	361	192	399	395
Grp Sat Flow(s),veh/h/ln	1810	1885	1531	1739	1885	1814	1725	1870	1841	1810	1856	1841
Q Serve(g_s), s	16.3	46.5	13.6	1.9	18.8	19.3	25.0	17.2	17.5	12.2	24.8	24.8
Cycle Q Clear(g_c), s	16.3	46.5	13.6	1.9	18.8	19.3	25.0	17.2	17.5	12.2	24.8	24.8
Prop In Lane	1.00		1.00	1.00		0.22	1.00		0.08	1.00		0.04
Lane Grp Cap(c), veh/h	275	2218	873	44	1034	497	727	594	585	235	439	435
V/C Ratio(X)	0.92	1.01	0.84	0.63	0.70	0.70	1.17	0.62	0.62	0.82	0.91	0.91
Avail Cap(c_a), veh/h	275	2218	873	73	1097	528	727	594	585	374	446	443
HCM Platoon Ratio	1.50	1.50	1.00	1.00	1.50	1.00	1.50	1.50	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.1	24.4	9.9	57.2	30.9	32.8	40.5	25.7	26.4	50.2	44.0	44.0
Incr Delay (d2), s/veh	34.3	20.9	6.9	5.5	1.5	3.1	91.3	1.4	1.5	3.5	21.4	21.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.0	18.4	9.4	0.9	7.3	7.8	18.4	6.5	6.6	5.6	13.6	13.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	79.5	45.3	16.8	62.7	32.3	35.9	131.8	27.1	27.9	53.7	65.4	65.6
LnGrp LOS	E	F	B	E	C	D	F	C	C	D	E	E
Approach Vol, veh/h		3221			1100			1580			986	
Approach Delay, s/veh		41.5			34.2			83.8			63.2	
Approach LOS		D			C			F			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.5	50.0	28.5	32.5	21.5	36.0	18.9	42.2				
Change Period (Y+Rc), s	4.5	5.5	5.5	* 5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	5.0	44.5	23.0	* 28	17.0	32.5	23.5	27.0				
Max Q Clear Time (g_c+I1), s	3.9	48.5	27.0	26.8	18.3	21.3	14.2	19.5				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.3	0.0	3.4	0.2	1.7				

Intersection Summary

HCM 6th Ctrl Delay	53.2
HCM 6th LOS	D

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

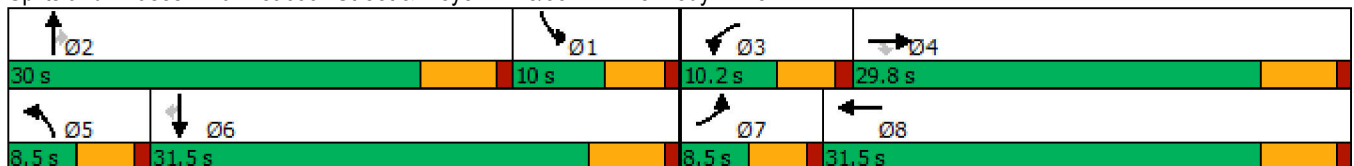
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Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	37	239	397	36	99	98	1045	87	362	1257	24	
Future Volume (vph)	37	239	397	36	99	98	1045	87	362	1257	24	
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	7	4		3	8	5	2		1	6		
Permitted Phases			4					2			6	
Detector Phase	7	4	4	3	8	5	2	2	1	6	6	
Switch Phase												
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	
Minimum Split (s)	8.5	23.5	23.5	8.5	31.5	8.5	29.5	29.5	8.5	23.5	23.5	
Total Split (s)	8.5	29.8	29.8	10.2	31.5	8.5	30.0	30.0	10.0	31.5	31.5	
Total Split (%)	10.6%	37.3%	37.3%	12.8%	39.4%	10.6%	37.5%	37.5%	12.5%	39.4%	39.4%	
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5	4.5	4.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	5.5	4.5	5.5	5.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max	
Act Effct Green (s)	4.1	14.4	14.4	5.4	15.3	4.1	25.1	25.1	5.6	26.7	26.7	
Actuated g/C Ratio	0.06	0.22	0.22	0.08	0.23	0.06	0.38	0.38	0.08	0.40	0.40	
v/c Ratio	0.34	0.64	0.73	0.26	0.31	0.91	0.84	0.12	1.31	0.96	0.03	
Control Delay	42.5	31.7	19.0	37.1	8.3	103.8	29.1	0.7	192.1	40.3	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	42.5	31.7	19.0	37.1	8.3	103.8	29.1	0.7	192.1	40.3	0.1	
LOS	D	C	B	D	A	F	C	A	F	D	A	
Approach Delay		24.8			11.5		33.1			73.1		
Approach LOS		C			B		C			E		

Intersection Summary

Cycle Length: 80  
 Actuated Cycle Length: 66.5  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.31  
 Intersection Signal Delay: 46.8  
 Intersection LOS: D  
 Intersection Capacity Utilization 75.6%  
 ICU Level of Service D  
 Analysis Period (min) 15
























Splits and Phases: 6: Heacock Street & Meyer Drive/John F. Kennedy Drive

















HCM 6th Signalized Intersection Summary  
 6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	239	397	36	99	194	98	1045	87	362	1257	24
Future Volume (veh/h)	37	239	397	36	99	194	98	1045	87	362	1257	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1900	1900	1885	1885	1900	1811	1900	1841	1796	1900
Adj Flow Rate, veh/h	40	260	264	39	108	151	107	1136	68	393	1366	13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	1	0	0	1	1	0	6	0	4	7	0
Cap, veh/h	57	384	328	56	383	324	109	1332	592	281	1456	653
Arrive On Green	0.03	0.20	0.20	0.03	0.20	0.20	0.06	0.37	0.37	0.08	0.41	0.41
Sat Flow, veh/h	1810	1885	1610	1810	1885	1598	1810	3622	1610	3401	3593	1610
Grp Volume(v), veh/h	40	260	264	39	108	151	107	1136	68	393	1366	13
Grp Sat Flow(s),veh/h/ln	1810	1885	1610	1810	1885	1598	1810	1811	1610	1700	1796	1610
Q Serve(g_s), s	1.5	8.5	10.4	1.4	3.2	5.5	3.9	19.2	1.3	5.5	24.3	0.3
Cycle Q Clear(g_c), s	1.5	8.5	10.4	1.4	3.2	5.5	3.9	19.2	1.3	5.5	24.3	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	57	384	328	56	383	324	109	1332	592	281	1456	653
V/C Ratio(X)	0.70	0.68	0.81	0.70	0.28	0.47	0.98	0.85	0.11	1.40	0.94	0.02
Avail Cap(c_a), veh/h	109	688	587	155	736	624	109	1332	592	281	1456	653
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.0	24.5	25.3	32.0	22.4	23.4	31.3	19.4	7.1	30.6	19.0	11.9
Incr Delay (d2), s/veh	5.8	0.8	1.8	5.7	0.1	0.4	81.1	7.1	0.4	200.0	12.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	3.6	3.7	0.7	1.3	1.9	4.0	7.9	0.6	9.8	10.6	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.7	25.3	27.1	37.7	22.6	23.8	112.4	26.5	7.5	230.5	31.8	11.9
LnGrp LOS	D	C	C	D	C	C	F	C	A	F	C	B
Approach Vol, veh/h		564			298			1311			1772	
Approach Delay, s/veh		27.0			25.2			32.5			75.7	
Approach LOS		C			C			C			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.0	30.0	6.6	19.1	8.5	32.5	6.6	19.0				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	5.5	* 25	5.7	24.3	4.0	26.0	4.0	26.0				
Max Q Clear Time (g_c+I1), s	7.5	21.2	3.4	12.4	5.9	26.3	3.5	7.5				
Green Ext Time (p_c), s	0.0	1.7	0.0	1.2	0.0	0.0	0.0	0.8				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			50.6									
HCM 6th LOS			D									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings  
11: Heacock Street & Cardinal Avenue

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			 			 
Traffic Volume (vph)	61	57	1059	20	18	1542
Future Volume (vph)	61	57	1059	20	18	1542
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	26.6	26.6	21.6	21.6	9.6	16.2
Total Split (s)	27.0	27.0	82.0	82.0	11.0	93.0
Total Split (%)	22.5%	22.5%	68.3%	68.3%	9.2%	77.5%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	12.6	12.6	50.9	50.9	5.9	51.1
Actuated g/C Ratio	0.18	0.18	0.74	0.74	0.09	0.75
v/c Ratio	0.20	0.17	0.44	0.02	0.13	0.68
Control Delay	30.1	9.9	6.7	2.9	38.9	8.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.1	9.9	6.7	2.9	38.9	8.9
LOS	C	A	A	A	D	A
Approach Delay	20.3		6.6			9.2
Approach LOS	C		A			A

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 68.4	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 8.7	Intersection LOS: A
Intersection Capacity Utilization 60.0%	ICU Level of Service B
Analysis Period (min) 15	













Splits and Phases: 11: Heacock Street & Cardinal Avenue



HCM 6th Signalized Intersection Summary  
 11: Heacock Street & Cardinal Avenue

Gateway Aviation TA (JN:13445)

11/10/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	61	57	1059	20	18	1542
Future Volume (veh/h)	61	57	1059	20	18	1542
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1752	1781	1693	1781	1752
Adj Flow Rate, veh/h	66	62	1151	22	20	1676
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	10	8	14	8	10
Cap, veh/h	258	215	2066	832	40	2259
Arrive On Green	0.14	0.14	0.58	0.58	0.02	0.68
Sat Flow, veh/h	1781	1485	3563	1434	1697	3416
Grp Volume(v), veh/h	66	62	1151	22	20	1676
Grp Sat Flow(s),veh/h/ln	1781	1485	1781	1434	1697	1664
Q Serve(g_s), s	2.0	2.3	12.3	0.4	0.7	19.9
Cycle Q Clear(g_c), s	2.0	2.3	12.3	0.4	0.7	19.9
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	258	215	2066	832	40	2259
V/C Ratio(X)	0.26	0.29	0.56	0.03	0.50	0.74
Avail Cap(c_a), veh/h	652	543	4507	1814	177	4721
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.2	23.3	8.0	5.5	29.5	6.4
Incr Delay (d2), s/veh	0.5	0.7	0.2	0.0	3.6	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.8	2.9	0.1	0.3	3.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	23.8	24.1	8.2	5.5	33.1	6.9
LnGrp LOS	C	C	A	A	C	A
Approach Vol, veh/h	128		1173			1696
Approach Delay, s/veh	23.9		8.2			7.2
Approach LOS	C		A			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	6.0	41.7			47.7	13.5
Change Period (Y+Rc), s	4.6	* 6.2			6.2	4.6
Max Green Setting (Gmax), s	6.4	* 77			86.8	22.4
Max Q Clear Time (g_c+11), s	2.7	14.3			21.9	4.3
Green Ext Time (p_c), s	0.0	9.9			19.6	0.3

Intersection Summary

HCM 6th Ctrl Delay	8.3
HCM 6th LOS	A

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
12: Heacock Street & San Michele Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBL	SBT	SBR	Ø5
Lane Configurations											
Traffic Volume (vph)	58	348	8	22	102	682	107	890	297	36	
Future Volume (vph)	58	348	8	22	102	682	107	890	297	36	
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	NA	Prot	NA	Perm	
Protected Phases	7	4		3	8	1	2	1	6		5
Permitted Phases			4			8				6	
Detector Phase	7	4	4	3	8	1	2	1	6	6	
Switch Phase											
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0
Minimum Split (s)	9.5	30.5	30.5	8.5	30.5	8.5	34.5	8.5	34.5	34.5	8.5
Total Split (s)	11.1	34.5	34.5	8.5	31.9	42.1	34.9	42.1	68.5	68.5	8.5
Total Split (%)	9.3%	28.8%	28.8%	7.1%	26.6%	35.1%	29.1%	35.1%	57.1%	57.1%	7%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5	5.5	
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	None	Max	Max	None
Act Effct Green (s)	12.1	24.8	24.8	4.1	15.0	54.8	29.9	34.2	68.6	68.6	
Actuated g/C Ratio	0.11	0.23	0.23	0.04	0.14	0.50	0.27	0.31	0.63	0.63	
v/c Ratio	0.30	0.88	0.02	0.34	0.43	0.61	0.17	0.85	0.28	0.03	
Control Delay	51.2	63.4	0.0	69.3	50.7	7.2	25.1	44.1	11.2	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	51.2	63.4	0.0	69.3	50.7	7.2	25.1	44.1	11.2	0.1	
LOS	D	E	A	E	D	A	C	D	B	A	
Approach Delay		60.4			14.4		25.1		34.8		
Approach LOS		E			B		C		C		

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 109.2  
 Natural Cycle: 105  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.88  
 Intersection Signal Delay: 32.0  
 Intersection LOS: C  
 Intersection Capacity Utilization 61.9%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 12: Heacock Street & San Michele Road





























HCM 6th Signalized Intersection Summary  
 12: Heacock Street & San Michele Road

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	348	8	22	102	682	0	107	40	890	297	36
Future Volume (veh/h)	58	348	8	22	102	682	0	107	40	890	297	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1870	1900	1826	1826	1885	1826	1900
Adj Flow Rate, veh/h	63	378	9	24	111	578	0	116	43	967	323	39
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	2	0	5	5	1	5	0
Cap, veh/h	271	418	345	34	170	616	2	676	240	1043	1131	997
Arrive On Green	0.15	0.22	0.22	0.02	0.09	0.09	0.00	0.27	0.27	0.30	0.62	0.62
Sat Flow, veh/h	1810	1900	1569	1810	1900	1585	1810	2509	891	3483	1826	1610
Grp Volume(v), veh/h	63	378	9	24	111	578	0	79	80	967	323	39
Grp Sat Flow(s),veh/h/ln	1810	1900	1569	1810	1900	1585	1810	1735	1666	1742	1826	1610
Q Serve(g_s), s	3.3	21.1	0.5	1.4	6.2	5.6	0.0	3.8	4.0	29.4	8.9	0.4
Cycle Q Clear(g_c), s	3.3	21.1	0.5	1.4	6.2	5.6	0.0	3.8	4.0	29.4	8.9	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.53	1.00		1.00
Lane Grp Cap(c), veh/h	271	418	345	34	170	616	2	467	449	1043	1131	997
V/C Ratio(X)	0.23	0.90	0.03	0.70	0.65	0.94	0.00	0.17	0.18	0.93	0.29	0.04
Avail Cap(c_a), veh/h	271	505	417	66	460	858	66	467	449	1200	1131	997
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.9	41.5	29.2	53.2	48.1	32.1	0.0	30.5	30.6	37.1	9.6	1.1
Incr Delay (d2), s/veh	0.2	16.0	0.0	9.2	1.6	12.3	0.0	0.8	0.9	10.7	0.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	11.8	0.2	0.7	2.9	15.7	0.0	1.6	1.7	13.2	3.2	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.1	57.5	29.2	62.4	49.7	44.4	0.0	31.3	31.5	47.8	10.3	1.2
LnGrp LOS	D	E	C	E	D	D	A	C	C	D	B	A
Approach Vol, veh/h		450			713			159			1329	
Approach Delay, s/veh		54.6			45.8			31.4			37.3	
Approach LOS		D			D			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	38.2	34.9	6.6	29.5	0.0	73.1	20.8	15.2				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	37.6	* 29	4.0	29.0	4.0	63.0	6.6	26.4				
Max Q Clear Time (g_c+I1), s	31.4	6.0	3.4	23.1	0.0	10.9	5.3	8.2				
Green Ext Time (p_c), s	1.3	0.4	0.0	0.8	0.0	1.1	0.0	1.3				

Intersection Summary

HCM 6th Ctrl Delay	42.2
HCM 6th LOS	D

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



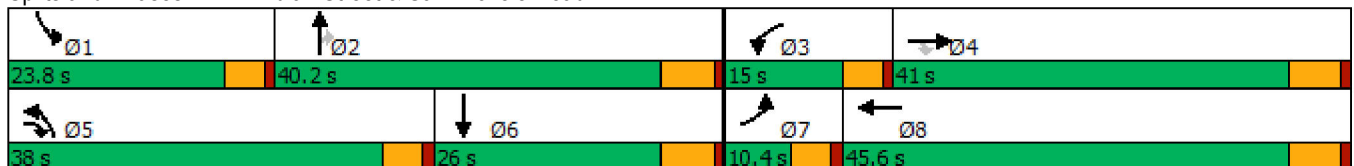
Timings  
14: Indian Street & San Michele Road

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	23	876	1526	248	505	762	196	223	155	380
Future Volume (vph)	23	876	1526	248	505	762	196	223	155	380
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	5	3	8	5	2		1	6
Permitted Phases			4					2		
Detector Phase	7	4	5	3	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	31.8	9.6	9.6	31.8	9.6	32.8	32.8	9.6	24.8
Total Split (s)	10.4	41.0	38.0	15.0	45.6	38.0	40.2	40.2	23.8	26.0
Total Split (%)	8.7%	34.2%	31.7%	12.5%	38.0%	31.7%	33.5%	33.5%	19.8%	21.7%
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	3.6	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	4.6	5.8	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None	None
Act Effct Green (s)	5.5	33.9	66.4	10.3	42.9	31.3	34.6	34.6	14.4	17.7
Actuated g/C Ratio	0.05	0.30	0.58	0.09	0.38	0.27	0.30	0.30	0.13	0.16
v/c Ratio	0.29	0.93	0.93	0.83	0.46	0.85	0.40	0.35	0.71	0.81
Control Delay	63.6	55.9	30.0	74.4	29.4	49.2	35.2	8.9	65.7	58.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.6	55.9	30.0	74.4	29.4	49.2	35.2	8.9	65.7	58.7
LOS	E	E	C	E	C	D	D	A	E	E
Approach Delay		39.7			43.0		39.3			60.6
Approach LOS		D			D		D			E

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 114.1  
 Natural Cycle: 105  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.93  
 Intersection Signal Delay: 42.5  
 Intersection LOS: D  
 Intersection Capacity Utilization 90.7%  
 ICU Level of Service E  
 Analysis Period (min) 15
























Splits and Phases: 14: Indian Street & San Michele Road



HCM 6th Signalized Intersection Summary  
 14: Indian Street & San Michele Road

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	876	1526	248	505	69	762	196	223	155	380	32
Future Volume (veh/h)	23	876	1526	248	505	69	762	196	223	155	380	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		1.00	1.00		0.64
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1796	1856	1826	1826	1796	1796	1856	1870	1841	1841
Adj Flow Rate, veh/h	25	952	1007	270	549	58	828	213	177	168	413	25
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	5	7	3	5	5	7	7	3	2	4	4
Cap, veh/h	42	1051	1484	310	1196	126	892	567	496	197	547	33
Arrive On Green	0.02	0.30	0.30	0.09	0.37	0.37	0.26	0.32	0.32	0.11	0.17	0.17
Sat Flow, veh/h	1739	3469	2591	3428	3238	341	3421	1796	1571	1781	3315	198
Grp Volume(v), veh/h	25	952	1007	270	309	298	828	213	177	168	226	212
Grp Sat Flow(s),veh/h/ln	1739	1735	1295	1714	1826	1754	1711	1796	1571	1781	1841	1672
Q Serve(g_s), s	1.6	30.3	31.9	8.9	14.8	14.9	27.2	10.6	10.0	10.7	13.5	13.9
Cycle Q Clear(g_c), s	1.6	30.3	31.9	8.9	14.8	14.9	27.2	10.6	10.0	10.7	13.5	13.9
Prop In Lane	1.00		1.00	1.00		0.19	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	42	1051	1484	310	675	648	892	567	496	197	304	276
V/C Ratio(X)	0.60	0.91	0.68	0.87	0.46	0.46	0.93	0.38	0.36	0.85	0.75	0.77
Avail Cap(c_a), veh/h	88	1061	1491	310	675	648	993	567	496	297	323	293
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.6	38.5	17.9	51.7	27.5	27.6	41.5	30.6	30.4	50.3	45.7	45.9
Incr Delay (d2), s/veh	5.1	10.7	1.0	21.8	0.2	0.2	12.9	0.2	0.2	9.4	7.3	9.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	13.8	8.8	4.7	6.2	6.0	12.4	4.4	3.7	5.1	6.5	6.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.7	49.2	18.9	73.5	27.7	27.8	54.3	30.7	30.5	59.6	53.1	55.5
LnGrp LOS	E	D	B	E	C	C	D	C	C	E	D	E
Approach Vol, veh/h		1984			877			1218			606	
Approach Delay, s/veh		34.0			41.8			46.8			55.7	
Approach LOS		C			D			D			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.3	42.1	15.0	40.7	34.6	24.8	7.4	48.3				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	19.2	34.4	10.4	35.2	33.4	20.2	5.8	39.8				
Max Q Clear Time (g_c+I1), s	12.7	12.6	10.9	33.9	29.2	15.9	3.6	16.9				
Green Ext Time (p_c), s	0.1	0.9	0.0	0.9	0.9	0.6	0.0	2.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			41.6									
HCM 6th LOS			D									

Timings  
15: Indian Street & Nandina Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	
Lane Configurations										
Traffic Volume (vph)	48	116	538	186	46	147	736	24	1575	
Future Volume (vph)	48	116	538	186	46	147	736	24	1575	
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA	
Protected Phases	7	4	5	3	8	5	2	1	6	
Permitted Phases	4									
Detector Phase	7	4	5	3	8	5	2	1	6	
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0	
Minimum Split (s)	9.6	24.8	9.6	9.6	29.8	9.6	26.8	9.6	26.8	
Total Split (s)	14.0	25.4	13.0	18.6	30.0	13.0	65.4	10.6	63.0	
Total Split (%)	11.7%	21.2%	10.8%	15.5%	25.0%	10.8%	54.5%	8.8%	52.5%	
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	3.6	4.8	3.6	4.8	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	4.6	5.8	4.6	5.8	
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	Min	None	Min	
Act Effct Green (s)	7.3	14.1	28.3	14.0	22.7	8.4	64.0	5.6	57.3	
Actuated g/C Ratio	0.06	0.12	0.25	0.12	0.20	0.07	0.56	0.05	0.50	
v/c Ratio	0.43	0.61	1.33	1.03	0.35	0.84	0.42	0.30	0.94	
Control Delay	63.0	60.1	193.8	122.0	26.6	87.2	16.3	63.0	38.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	63.0	60.1	193.8	122.0	26.6	87.2	16.3	63.0	38.8	
LOS	E	E	F	F	C	F	B	E	D	
Approach Delay	162.8				86.1		27.2		39.1	
Approach LOS	F				F		C		D	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 114.6  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.33  
 Intersection Signal Delay: 64.0  
 Intersection Capacity Utilization 100.8%  
 Analysis Period (min) 15  
 Intersection LOS: E  
 ICU Level of Service G























Splits and Phases: 15: Indian Street & Nandina Avenue

Ø1	Ø2	Ø3	Ø4
10.6 s	65.4 s	18.6 s	25.4 s
Ø5	Ø6	Ø7	Ø8
13 s	63 s	14 s	30 s

HCM 6th Signalized Intersection Summary  
 15: Indian Street & Nandina Avenue

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	116	538	186	46	66	147	736	75	24	1575	36
Future Volume (veh/h)	48	116	538	186	46	66	147	736	75	24	1575	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1722	1604	1633	1500	1500	1218	1870	1870	1796	1870	1870
Adj Flow Rate, veh/h	52	126	205	202	50	36	160	800	44	26	1712	19
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	12	20	18	27	27	46	2	2	7	2	2
Cap, veh/h	67	268	308	184	192	138	165	1847	102	42	1769	20
Arrive On Green	0.04	0.16	0.16	0.12	0.24	0.24	0.07	0.66	0.53	0.02	0.60	0.48
Sat Flow, veh/h	1810	1722	1359	1555	811	584	2321	3513	193	1711	3692	41
Grp Volume(v), veh/h	52	126	205	202	0	86	160	426	418	26	866	865
Grp Sat Flow(s),veh/h/ln	1810	1722	1359	1555	0	1395	1160	1870	1836	1711	1870	1863
Q Serve(g_s), s	3.4	7.9	16.3	14.0	0.0	5.9	8.1	12.9	13.3	1.8	52.2	52.5
Cycle Q Clear(g_c), s	3.4	7.9	16.3	14.0	0.0	5.9	8.1	12.9	13.3	1.8	52.2	52.5
Prop In Lane	1.00		1.00	1.00		0.42	1.00		0.11	1.00		0.02
Lane Grp Cap(c), veh/h	67	268	308	184	0	330	165	984	965	42	896	893
V/C Ratio(X)	0.77	0.47	0.67	1.10	0.00	0.26	0.97	0.43	0.43	0.63	0.97	0.97
Avail Cap(c_a), veh/h	144	285	321	184	0	330	165	984	965	87	904	900
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.25	1.00	1.00	1.25	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.5	45.5	41.7	52.2	0.0	36.7	54.9	11.8	12.4	57.2	22.8	23.0
Incr Delay (d2), s/veh	6.8	1.3	4.9	95.0	0.0	0.4	61.2	0.3	0.3	5.6	22.0	22.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	3.4	5.7	10.2	0.0	2.0	3.7	4.4	4.6	0.8	22.9	23.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.3	46.8	46.5	147.2	0.0	37.1	116.1	12.1	12.7	62.9	44.8	45.6
LnGrp LOS	E	D	D	F	A	D	F	B	B	E	D	D
Approach Vol, veh/h		383			288			1004			1757	
Approach Delay, s/veh		48.9			114.3			28.9			45.5	
Approach LOS		D			F			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.5	68.1	18.6	24.3	13.0	62.5	9.0	33.8				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	6.0	59.6	14.0	19.6	8.4	57.2	9.4	24.2				
Max Q Clear Time (g_c+I1), s	3.8	15.3	16.0	18.3	10.1	54.5	5.4	7.9				
Green Ext Time (p_c), s	0.0	5.2	0.0	0.2	0.0	2.2	0.0	0.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			46.8									
HCM 6th LOS			D									

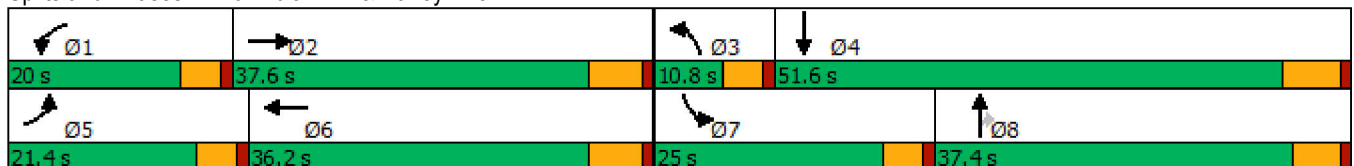
Timings  
16: Indian Av. & Harley Knox Bl.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	76	568	242	421	81	295	246	326	559
Future Volume (vph)	76	568	242	421	81	295	246	326	559
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	5	2	1	6	3	8		7	4
Permitted Phases							8		
Detector Phase	5	2	1	6	3	8	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2
Total Split (s)	21.4	37.6	20.0	36.2	10.8	37.4	37.4	25.0	51.6
Total Split (%)	17.8%	31.3%	16.7%	30.2%	9.0%	31.2%	31.2%	20.8%	43.0%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.4	4.4	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.4	5.4	4.6	6.2
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	7.3	19.2	15.7	29.9	6.0	16.9	16.9	20.8	33.1
Actuated g/C Ratio	0.08	0.21	0.17	0.32	0.06	0.18	0.18	0.22	0.35
v/c Ratio	0.38	0.66	0.88	0.37	0.44	0.56	0.53	0.88	0.60
Control Delay	48.9	35.6	69.9	23.5	53.0	38.9	8.4	61.8	27.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.9	35.6	69.9	23.5	53.0	38.9	8.4	61.8	27.3
LOS	D	D	E	C	D	D	A	E	C
Approach Delay		36.9		37.0		28.7			38.6
Approach LOS		D		D		C			D

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 93.4  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.88  
 Intersection Signal Delay: 35.9  
 Intersection LOS: D  
 Intersection Capacity Utilization 70.2%  
 ICU Level of Service C  
 Analysis Period (min) 15































Splits and Phases: 16: Indian Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 16: Indian Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  			  		 	 			 	
Traffic Volume (veh/h)	76	568	108	242	421	169	81	295	246	326	559	108
Future Volume (veh/h)	76	568	108	242	421	169	81	295	246	326	559	108
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1559	1841	1841	1885	1811	1811	1707	1678	1870	1900	1856	1856
Adj Flow Rate, veh/h	83	617	35	263	458	102	88	321	120	354	608	-345
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	23	4	4	1	6	6	13	15	2	0	3	3
Cap, veh/h	156	955	54	304	1298	280	174	480	235	396	1107	0
Arrive On Green	0.05	0.18	0.18	0.17	0.30	0.30	0.06	0.15	0.15	0.22	0.31	0.00
Sat Flow, veh/h	2881	5178	292	1795	4329	936	3155	3188	1564	1810	3618	0
Grp Volume(v), veh/h	83	438	214	263	381	179	88	321	120	354	263	0
Grp Sat Flow(s),veh/h/ln	1440	1841	1788	1795	1811	1643	1577	1594	1564	1810	1763	0
Q Serve(g_s), s	2.1	8.4	8.5	10.9	6.3	6.6	2.1	7.3	5.4	14.6	4.2	0.0
Cycle Q Clear(g_c), s	2.1	8.4	8.5	10.9	6.3	6.6	2.1	7.3	5.4	14.6	4.2	0.0
Prop In Lane	1.00		0.16	1.00		0.57	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	156	679	330	304	1086	492	174	480	235	396	1107	0
V/C Ratio(X)	0.53	0.64	0.65	0.86	0.35	0.36	0.51	0.67	0.51	0.89	0.24	0.00
Avail Cap(c_a), veh/h	632	1528	742	361	1438	652	255	1332	653	482	2090	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	35.3	28.9	28.9	31.0	21.0	21.1	35.2	30.7	29.9	29.1	19.5	0.0
Incr Delay (d2), s/veh	1.0	1.0	2.2	15.2	0.2	0.5	0.8	1.6	1.7	14.9	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	3.5	3.5	5.6	2.4	2.3	0.8	2.7	2.0	7.4	1.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.3	29.9	31.1	46.2	21.2	21.5	36.0	32.4	31.6	44.0	19.6	0.0
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	B	A
Approach Vol, veh/h		735			823			529			617	
Approach Delay, s/veh		31.0			29.2			32.8			33.6	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.6	19.9	8.8	30.3	8.7	28.8	21.4	17.7				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	15.4	31.8	6.2	45.4	16.8	30.4	20.4	* 32				
Max Q Clear Time (g_c+I1), s	12.9	10.5	4.1	6.2	4.1	8.6	16.6	9.3				
Green Ext Time (p_c), s	0.1	3.6	0.0	1.6	0.1	3.3	0.2	2.2				

Intersection Summary

HCM 6th Ctrl Delay	31.4
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

**APPENDIX 7.20:**

**HORIZON YEAR (2045) WITHOUT PROJECT WITH HEACOCK STREET EXTENSION  
CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS WITH  
IMPROVEMENTS**

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Timings

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

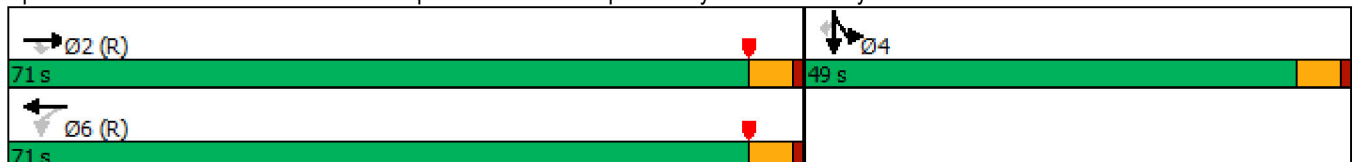


Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations	↑↑	↑	↑↑	↑	↑	↑	↑
Traffic Volume (vph)	1157	28	202	662	994	1	315
Future Volume (vph)	1157	28	202	662	994	1	315
Turn Type	NA	Perm	Perm	NA	Split	NA	Perm
Protected Phases	2			6	4	4	
Permitted Phases		2	6				4
Detector Phase	2	2	6	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	25.0	25.0	10.0	10.0	10.0
Total Split (s)	71.0	71.0	71.0	71.0	49.0	49.0	49.0
Total Split (%)	59.2%	59.2%	59.2%	59.2%	40.8%	40.8%	40.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None	None
Act Effct Green (s)	66.0	66.0	66.0	66.0	44.0	44.0	44.0
Actuated g/C Ratio	0.55	0.55	0.55	0.55	0.37	0.37	0.37
v/c Ratio	0.67	0.03	0.98	0.70	0.98	0.98	0.51
Control Delay	21.3	5.0	81.7	22.5	72.0	71.9	14.9
Queue Delay	0.2	0.0	0.0	1.7	42.9	42.9	0.0
Total Delay	21.5	5.0	81.7	24.2	114.9	114.8	14.9
LOS	C	A	F	C	F	F	B
Approach Delay	21.1			37.6		90.8	
Approach LOS	C			D		F	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection  
 Natural Cycle: 50  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.98  
 Intersection Signal Delay: 52.5  
 Intersection LOS: D  
 Intersection Capacity Utilization 108.0%  
 ICU Level of Service G  
 Analysis Period (min) 15

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

11/10/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑↑	↑					↑	↑	↑
Traffic Volume (veh/h)	0	1157	28	202	662	0	0	0	0	994	1	315
Future Volume (veh/h)	0	1157	28	202	662	0	0	0	0	994	1	315
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1826	1826	1604	1870	0				1693	1900	1781
Adj Flow Rate, veh/h	0	1258	30	220	720	0				1081	0	282
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	5	5	20	2	0				14	0	8
Cap, veh/h	0	1946	868	342	1049	0				1147	0	537
Arrive On Green	0.00	0.56	0.56	1.00	1.00	0.00				0.36	0.00	0.36
Sat Flow, veh/h	0	3561	1547	713	1870	0				3224	0	1510
Grp Volume(v), veh/h	0	1258	30	220	720	0				1081	0	282
Grp Sat Flow(s),veh/h/ln	0	1735	1547	357	1870	0				1612	0	1510
Q Serve(g_s), s	0.0	30.0	1.0	36.6	0.0	0.0				39.0	0.0	17.8
Cycle Q Clear(g_c), s	0.0	30.0	1.0	66.6	0.0	0.0				39.0	0.0	17.8
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1946	868	342	1049	0				1147	0	537
V/C Ratio(X)	0.00	0.65	0.03	0.64	0.69	0.00				0.94	0.00	0.53
Avail Cap(c_a), veh/h	0	1946	868	342	1049	0				1182	0	554
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.59	0.59	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	18.1	11.8	14.8	0.0	0.0				37.5	0.0	30.6
Incr Delay (d2), s/veh	0.0	1.7	0.1	5.4	2.2	0.0				14.4	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	11.4	0.4	2.3	0.6	0.0				16.8	0.0	6.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	19.8	11.9	20.3	2.2	0.0				51.8	0.0	31.5
LnGrp LOS	A	B	B	C	A	A				D	A	C
Approach Vol, veh/h		1288			940						1363	
Approach Delay, s/veh		19.6			6.4						47.6	
Approach LOS		B			A						D	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		72.3		47.7		72.3						
Change Period (Y+Rc), s		5.0		5.0		5.0						
Max Green Setting (Gmax), s		66.0		44.0		66.0						
Max Q Clear Time (g_c+I1), s		32.0		41.0		68.6						
Green Ext Time (p_c), s		6.5		1.7		0.0						

Intersection Summary

HCM 6th Ctrl Delay	26.8
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Timings

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

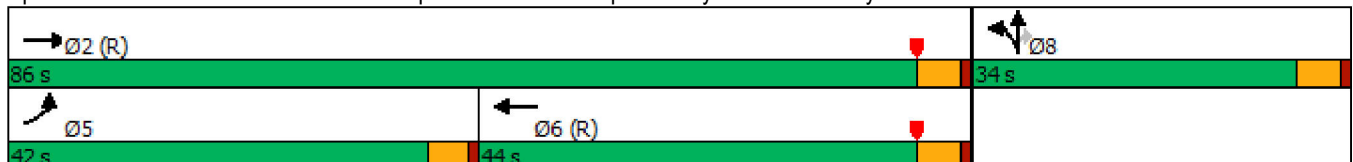


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations	↔↔	↑↑	↑↑	↔	↔	↔
Traffic Volume (vph)	808	1343	806	1139	4	301
Future Volume (vph)	808	1343	806	1139	4	301
Turn Type	Prot	NA	NA	Free	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				Free		8
Detector Phase	5	2	6		8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	9.5	26.0	24.0		10.0	10.0
Total Split (s)	42.0	86.0	44.0		34.0	34.0
Total Split (%)	35.0%	71.7%	36.7%		28.3%	28.3%
Yellow Time (s)	3.5	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0		5.0	5.0
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	C-Max	C-Max		Max	Max
Act Effct Green (s)	34.5	81.0	42.0	120.0	29.0	29.0
Actuated g/C Ratio	0.29	0.68	0.35	1.00	0.24	0.24
v/c Ratio	0.91	0.67	0.74	0.85	0.16	0.79
Control Delay	62.7	24.6	39.6	6.9	37.1	49.8
Queue Delay	3.5	49.1	0.0	0.0	0.3	0.0
Total Delay	66.2	73.8	39.6	6.9	37.4	49.8
LOS	E	E	D	A	D	D
Approach Delay		70.9	20.4		47.7	
Approach LOS		E	C		D	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 65  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.91  
 Intersection Signal Delay: 47.0  
 Intersection LOS: D  
 Intersection Capacity Utilization 108.0%  
 ICU Level of Service G  
 Analysis Period (min) 15

Splits and Phases: 2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox Bl./Harley Knox Bl.

11/10/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑			↑↑	↗		↖	↗			
Traffic Volume (veh/h)	808	1343	0	0	806	1139	58	4	301	0	0	0
Future Volume (veh/h)	808	1343	0	0	806	1139	58	4	301	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1841	1722	0	0	1796	1752	1811	1900	1811			
Adj Flow Rate, veh/h	878	1460	0	0	876	0	63	4	262			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	4	12	0	0	7	10	6	0	6			
Cap, veh/h	921	2209	0	0	1251		412	26	371			
Arrive On Green	0.54	1.00	0.00	0.00	0.37	0.00	0.24	0.24	0.24			
Sat Flow, veh/h	3401	3358	0	0	3503	1485	1706	108	1535			
Grp Volume(v), veh/h	878	1460	0	0	876	0	67	0	262			
Grp Sat Flow(s),veh/h/ln	1700	1636	0	0	1706	1485	1815	0	1535			
Q Serve(g_s), s	29.3	0.0	0.0	0.0	26.2	0.0	3.5	0.0	18.7			
Cycle Q Clear(g_c), s	29.3	0.0	0.0	0.0	26.2	0.0	3.5	0.0	18.7			
Prop In Lane	1.00		0.00	0.00		1.00	0.94		1.00			
Lane Grp Cap(c), veh/h	921	2209	0	0	1251		439	0	371			
V/C Ratio(X)	0.95	0.66	0.00	0.00	0.70		0.15	0.00	0.71			
Avail Cap(c_a), veh/h	1063	2209	0	0	1251		439	0	371			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.56	0.56	0.00	0.00	0.79	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	26.8	0.0	0.0	0.0	32.4	0.0	35.8	0.0	41.6			
Incr Delay (d2), s/veh	10.2	0.9	0.0	0.0	2.6	0.0	0.7	0.0	10.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	8.7	0.3	0.0	0.0	10.8	0.0	1.6	0.0	8.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.9	0.9	0.0	0.0	35.0	0.0	36.6	0.0	52.4			
LnGrp LOS	D	A	A	A	C		D	A	D			
Approach Vol, veh/h		2338			876	A		329				
Approach Delay, s/veh		14.4			35.0			49.2				
Approach LOS		B			C			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		86.0			37.0	49.0		34.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		81.0			37.5	39.0		29.0				
Max Q Clear Time (g_c+I1), s		2.0			31.3	28.2		20.7				
Green Ext Time (p_c), s		8.7			1.2	2.9		0.8				

Intersection Summary

HCM 6th Ctrl Delay	22.7
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Timings  
5: Heacock Street & Cactus Avenue

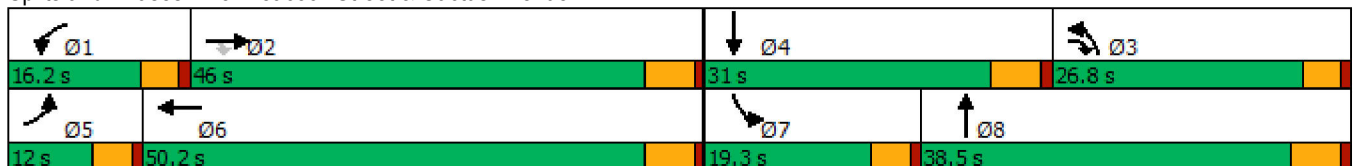


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↵	↑↑↑	↵	↵	↑↑↑	↵↵	↑↵	↵	↑↵
Traffic Volume (vph)	176	1067	783	81	2068	865	721	139	376
Future Volume (vph)	176	1067	783	81	2068	865	721	139	376
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	3	1	6	3	8	7	4
Permitted Phases			2						
Detector Phase	5	2	3	1	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.5	30.5	9.5	9.5	30.5	9.5	30.5	9.5	30.5
Total Split (s)	12.0	46.0	26.8	16.2	50.2	26.8	38.5	19.3	31.0
Total Split (%)	10.0%	38.3%	22.3%	13.5%	41.8%	22.3%	32.1%	16.1%	25.8%
Yellow Time (s)	3.5	4.5	3.5	3.5	4.5	3.5	4.5	3.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-2.0	0.0	0.0	-2.0	-2.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.5	3.5	4.5	4.5	3.5	2.5	4.5	3.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None
Act Effct Green (s)	8.5	47.3	70.7	9.1	46.8	25.4	31.2	13.3	20.1
Actuated g/C Ratio	0.07	0.41	0.62	0.08	0.41	0.22	0.27	0.12	0.18
v/c Ratio	1.34	0.48	0.72	0.56	1.01	1.13	0.79	0.67	0.75
Control Delay	232.0	27.2	13.3	65.8	54.7	114.4	45.2	65.1	49.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	232.0	27.2	13.3	65.8	54.7	114.4	45.2	65.1	49.7
LOS	F	C	B	E	D	F	D	E	D
Approach Delay		39.6			55.1		82.2		53.1
Approach LOS		D			E		F		D

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 114.8  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.34  
 Intersection Signal Delay: 56.8  
 Intersection LOS: E  
 Intersection Capacity Utilization 105.4%  
 ICU Level of Service G  
 Analysis Period (min) 15





























Splits and Phases: 5: Heacock Street & Cactus Avenue



HCM 6th Signalized Intersection Summary  
5: Heacock Street & Cactus Avenue

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 			 	
Traffic Volume (veh/h)	176	1067	783	81	2068	159	865	721	30	139	376	105
Future Volume (veh/h)	176	1067	783	81	2068	159	865	721	30	139	376	105
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1752	1900	1885	1885	1826	1841	1841	1870	1841	1841
Adj Flow Rate, veh/h	183	1111	686	84	2154	104	901	751	15	145	392	83
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	10	0	1	1	5	4	4	2	4	4
Cap, veh/h	134	2353	889	107	2207	106	746	989	20	188	489	103
Arrive On Green	0.11	0.63	0.40	0.06	0.62	0.39	0.32	0.41	0.27	0.11	0.17	0.16
Sat Flow, veh/h	1781	5611	1485	1810	5352	257	3478	3597	72	1781	2951	619
Grp Volume(v), veh/h	183	1111	686	84	1514	744	901	384	382	145	243	232
Grp Sat Flow(s),veh/h/ln	1781	1870	1485	1810	1885	1839	1739	1841	1828	1781	1841	1729
Q Serve(g_s), s	8.5	11.8	9.6	5.2	43.7	44.6	24.3	20.2	20.3	9.0	14.4	14.7
Cycle Q Clear(g_c), s	8.5	11.8	9.6	5.2	43.7	44.6	24.3	20.2	20.3	9.0	14.4	14.7
Prop In Lane	1.00		1.00	1.00		0.14	1.00		0.04	1.00		0.36
Lane Grp Cap(c), veh/h	134	2353	889	107	1554	758	746	506	503	188	305	287
V/C Ratio(X)	1.37	0.47	0.77	0.78	0.97	0.98	1.21	0.76	0.76	0.77	0.80	0.81
Avail Cap(c_a), veh/h	134	2353	889	187	1554	758	746	553	549	248	431	405
HCM Platoon Ratio	1.50	1.50	1.00	1.00	1.50	1.00	1.50	1.50	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.3	14.4	5.5	52.6	21.0	23.0	38.4	30.1	30.4	49.4	45.4	45.7
Incr Delay (d2), s/veh	206.3	0.1	3.8	4.7	16.9	27.9	105.8	4.7	4.8	7.2	4.4	5.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.2	3.9	4.7	2.4	16.3	19.8	19.8	8.0	8.1	4.3	6.7	6.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	256.6	14.5	9.3	57.3	37.9	50.8	144.2	34.8	35.2	56.5	49.8	51.1
LnGrp LOS	F	B	A	E	D	D	F	C	D	E	D	D
Approach Vol, veh/h		1980			2342			1667			620	
Approach Delay, s/veh		35.0			42.7			94.0			51.9	
Approach LOS		D			D			F			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.2	51.0	27.8	23.3	12.0	50.2	15.4	35.6				
Change Period (Y+Rc), s	4.5	5.5	5.5	* 5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	11.7	40.5	22.3	* 26	7.5	44.7	14.8	33.0				
Max Q Clear Time (g_c+I1), s	7.2	13.8	26.3	16.7	10.5	46.6	11.0	22.3				
Green Ext Time (p_c), s	0.0	6.7	0.0	1.1	0.0	0.0	0.1	2.1				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			54.2									
HCM 6th LOS			D									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings  
6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

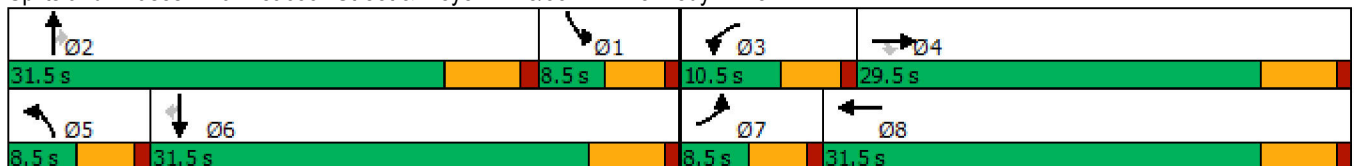
11/10/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	48	45	120	36	267	37	1075	60	127	842	24	
Future Volume (vph)	48	45	120	36	267	37	1075	60	127	842	24	
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	7	4		3	8	5	2		1	6		
Permitted Phases			4					2			6	
Detector Phase	7	4	4	3	8	5	2	2	1	6	6	
Switch Phase												
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	
Minimum Split (s)	8.5	23.5	23.5	8.5	31.5	8.5	30.5	30.5	8.5	23.5	23.5	
Total Split (s)	8.5	29.5	29.5	10.5	31.5	8.5	31.5	31.5	8.5	31.5	31.5	
Total Split (%)	10.6%	36.9%	36.9%	13.1%	39.4%	10.6%	39.4%	39.4%	10.6%	39.4%	39.4%	
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5	4.5	4.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	5.5	4.5	5.5	5.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max	
Act Effct Green (s)	4.1	13.5	13.5	5.5	12.5	4.1	26.6	26.6	4.1	30.6	30.6	
Actuated g/C Ratio	0.06	0.21	0.21	0.09	0.20	0.06	0.42	0.42	0.06	0.48	0.48	
v/c Ratio	0.48	0.13	0.22	0.25	0.62	0.35	0.75	0.08	0.58	0.52	0.03	
Control Delay	50.7	21.7	0.9	35.2	19.0	42.1	22.6	0.2	44.2	16.7	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	50.7	21.7	0.9	35.2	19.0	42.1	22.6	0.2	44.2	16.7	0.1	
LOS	D	C	A	D	B	D	C	A	D	B	A	
Approach Delay		16.5			20.1		22.0			19.8		
Approach LOS		B			C		C			B		

Intersection Summary

Cycle Length: 80  
 Actuated Cycle Length: 63.7  
 Natural Cycle: 80  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.75  
 Intersection Signal Delay: 20.5  
 Intersection LOS: C  
 Intersection Capacity Utilization 69.5%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 6: Heacock Street & Meyer Drive/John F. Kennedy Drive





























HCM 6th Signalized Intersection Summary  
 6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	45	120	36	267	236	37	1075	60	127	842	24
Future Volume (veh/h)	48	45	120	36	267	236	37	1075	60	127	842	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.97	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1648	1767	1811	1796	1841	1841	1781	1811	1767	1856	1767	1618
Adj Flow Rate, veh/h	50	47	89	38	278	210	39	1120	52	132	877	15
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	17	9	6	7	4	4	8	6	9	3	9	19
Cap, veh/h	58	364	316	52	392	286	52	1411	567	205	1532	587
Arrive On Green	0.04	0.21	0.21	0.03	0.20	0.20	0.03	0.39	0.39	0.06	0.43	0.43
Sat Flow, veh/h	1570	1767	1535	1711	1971	1438	1697	3622	1455	3428	3533	1354
Grp Volume(v), veh/h	50	47	89	38	259	229	39	1120	52	132	877	15
Grp Sat Flow(s),veh/h/ln	1570	1767	1535	1711	1841	1569	1697	1811	1455	1714	1767	1354
Q Serve(g_s), s	2.1	1.4	3.3	1.5	8.8	9.1	1.5	18.2	1.1	2.5	12.5	0.4
Cycle Q Clear(g_c), s	2.1	1.4	3.3	1.5	8.8	9.1	1.5	18.2	1.1	2.5	12.5	0.4
Prop In Lane	1.00		1.00	1.00		0.92	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	58	364	316	52	366	312	52	1411	567	205	1532	587
V/C Ratio(X)	0.86	0.13	0.28	0.73	0.71	0.73	0.75	0.79	0.09	0.64	0.57	0.03
Avail Cap(c_a), veh/h	94	635	552	154	717	611	102	1411	567	205	1532	587
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.0	21.6	22.4	32.1	24.9	25.1	32.1	18.0	6.4	30.7	14.3	10.8
Incr Delay (d2), s/veh	19.4	0.1	0.2	7.2	0.9	1.3	7.6	4.7	0.3	5.2	1.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.6	1.1	0.7	3.5	3.1	0.7	7.0	0.5	1.1	4.3	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.4	21.7	22.5	39.3	25.9	26.4	39.7	22.7	6.7	35.9	15.8	10.9
LnGrp LOS	D	C	C	D	C	C	D	C	A	D	B	B
Approach Vol, veh/h		186			526			1211			1024	
Approach Delay, s/veh		30.1			27.1			22.6			18.3	
Approach LOS		C			C			C			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.5	31.5	6.5	19.2	6.6	34.4	7.0	18.8				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	4.0	* 26	6.0	24.0	4.0	26.0	4.0	26.0				
Max Q Clear Time (g_c+I1), s	4.5	20.2	3.5	5.3	3.5	14.5	4.1	11.1				
Green Ext Time (p_c), s	0.0	2.5	0.0	0.2	0.0	2.9	0.0	1.5				

Intersection Summary













HCM 6th Ctrl Delay	22.4
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Timings  
11: Heacock Street & Cardinal Avenue

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	12	13	1125	61	52	958
Future Volume (vph)	12	13	1125	61	52	958
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	26.6	26.6	21.6	21.6	9.6	16.2
Total Split (s)	27.0	27.0	76.0	76.0	17.0	93.0
Total Split (%)	22.5%	22.5%	63.3%	63.3%	14.2%	77.5%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	13.1	13.1	43.0	43.0	7.5	49.8
Actuated g/C Ratio	0.23	0.23	0.75	0.75	0.13	0.87
v/c Ratio	0.04	0.04	0.46	0.05	0.25	0.38
Control Delay	25.9	14.0	9.1	3.1	33.3	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.9	14.0	9.1	3.1	33.3	4.1
LOS	C	B	A	A	C	A
Approach Delay	19.7		8.8			5.6
Approach LOS	B		A			A

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 57.4	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.46	
Intersection Signal Delay: 7.4	Intersection LOS: A
Intersection Capacity Utilization 55.1%	ICU Level of Service B
Analysis Period (min) 15	













Splits and Phases: 11: Heacock Street & Cardinal Avenue



HCM 6th Signalized Intersection Summary  
 11: Heacock Street & Cardinal Avenue

Gateway Aviation TA (JN:13445)

11/10/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	12	13	1125	61	52	958
Future Volume (veh/h)	12	13	1125	61	52	958
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1559	1441	1781	1870	1781	1693
Adj Flow Rate, veh/h	13	14	1223	66	57	1041
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	23	31	8	2	8	14
Cap, veh/h	95	78	1909	849	96	2235
Arrive On Green	0.06	0.06	0.54	0.54	0.06	0.70
Sat Flow, veh/h	1485	1221	3563	1585	1697	3300
Grp Volume(v), veh/h	13	14	1223	66	57	1041
Grp Sat Flow(s),veh/h/ln	1485	1221	1781	1585	1697	1608
Q Serve(g_s), s	0.4	0.5	10.9	0.9	1.5	6.5
Cycle Q Clear(g_c), s	0.4	0.5	10.9	0.9	1.5	6.5
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	95	78	1909	849	96	2235
V/C Ratio(X)	0.14	0.18	0.64	0.08	0.59	0.47
Avail Cap(c_a), veh/h	743	611	5681	2527	470	6234
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.8	19.9	7.4	5.0	20.6	3.1
Incr Delay (d2), s/veh	0.7	1.1	0.4	0.0	2.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.2	1.9	0.1	0.5	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	20.5	20.9	7.7	5.1	22.8	3.2
LnGrp LOS	C	C	A	A	C	A
Approach Vol, veh/h	27		1289			1098
Approach Delay, s/veh	20.7		7.6			4.2
Approach LOS	C		A			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	7.1	30.2			37.3	7.5
Change Period (Y+Rc), s	4.6	* 6.2			6.2	4.6
Max Green Setting (Gmax), s	12.4	* 71			86.8	22.4
Max Q Clear Time (g_c+I1), s	3.5	12.9			8.5	2.5
Green Ext Time (p_c), s	0.0	11.1			8.5	0.0

Intersection Summary

HCM 6th Ctrl Delay	6.2
HCM 6th LOS	A

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
12: Heacock Street & San Michele Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	31	82	5	39	341	800	2	64	503	125	52
Future Volume (vph)	31	82	5	39	341	800	2	64	503	125	52
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	1	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	4.0	5.0	4.0	5.0	5.0
Minimum Split (s)	9.5	30.5	30.5	8.5	30.5	8.5	8.5	34.5	8.5	34.5	34.5
Total Split (s)	10.0	36.4	36.4	11.6	38.0	35.0	8.5	37.0	35.0	63.5	63.5
Total Split (%)	8.3%	30.3%	30.3%	9.7%	31.7%	29.2%	7.1%	30.8%	29.2%	52.9%	52.9%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	3.5	4.5	3.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	4.5	5.5	4.5	5.5	5.5
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	None	Max	Max
Act Effct Green (s)	5.3	16.0	16.0	12.7	23.4	53.6	4.1	32.1	24.5	59.8	59.8
Actuated g/C Ratio	0.05	0.16	0.16	0.13	0.23	0.53	0.04	0.32	0.24	0.59	0.59
v/c Ratio	0.34	0.31	0.01	0.19	0.85	0.66	0.03	0.07	0.65	0.13	0.05
Control Delay	61.3	44.4	0.0	43.8	56.0	5.5	55.0	25.6	40.1	12.7	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.3	44.4	0.0	43.8	56.0	5.5	55.0	25.6	40.1	12.7	0.4
LOS	E	D	A	D	E	A	D	C	D	B	A
Approach Delay		47.2			21.4			26.3		32.0	
Approach LOS		D			C			C		C	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 101.3  
 Natural Cycle: 85  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.85  
 Intersection Signal Delay: 26.6  
 Intersection LOS: C  
 Intersection Capacity Utilization 69.1%  
 ICU Level of Service C  
 Analysis Period (min) 15

























Splits and Phases: 12: Heacock Street & San Michele Road



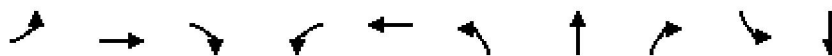
HCM 6th Signalized Intersection Summary  
 12: Heacock Street & San Michele Road

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	82	5	39	341	800	2	64	10	503	125	52
Future Volume (veh/h)	31	82	5	39	341	800	2	64	10	503	125	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1856	1366	1796	1900	1856	1900	1856	1856	1811	1826	1856
Adj Flow Rate, veh/h	34	89	5	42	371	653	2	70	11	547	136	57
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	3	36	7	0	3	0	3	3	6	5	3
Cap, veh/h	43	128	80	312	431	744	4	924	142	824	1014	873
Arrive On Green	0.02	0.07	0.07	0.18	0.23	0.23	0.00	0.30	0.30	0.25	0.56	0.56
Sat Flow, veh/h	1810	1856	1158	1711	1900	1572	1810	3063	471	3346	1826	1572
Grp Volume(v), veh/h	34	89	5	42	371	653	2	40	41	547	136	57
Grp Sat Flow(s),veh/h/ln	1810	1856	1158	1711	1900	1572	1810	1763	1771	1673	1826	1572
Q Serve(g_s), s	2.0	4.9	0.4	2.1	19.6	13.3	0.1	1.7	1.7	15.4	3.7	1.3
Cycle Q Clear(g_c), s	2.0	4.9	0.4	2.1	19.6	13.3	0.1	1.7	1.7	15.4	3.7	1.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.27	1.00		1.00
Lane Grp Cap(c), veh/h	43	128	80	312	431	744	4	532	534	824	1014	873
V/C Ratio(X)	0.78	0.70	0.06	0.13	0.86	0.88	0.51	0.07	0.08	0.66	0.13	0.07
Avail Cap(c_a), veh/h	95	549	343	312	591	877	69	532	534	977	1014	873
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.7	47.6	36.4	35.8	38.8	24.8	52.1	26.1	26.1	35.5	11.2	5.7
Incr Delay (d2), s/veh	10.8	2.6	0.1	0.1	7.2	8.0	33.6	0.3	0.3	0.8	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	2.4	0.1	0.9	9.6	14.7	0.1	0.7	0.7	6.0	1.4	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.5	50.1	36.5	35.9	46.0	32.8	85.7	26.3	26.4	36.3	11.4	5.9
LnGrp LOS	E	D	D	D	D	C	F	C	C	D	B	A
Approach Vol, veh/h		128			1066			83			740	
Approach Delay, s/veh		52.6			37.5			27.8			29.4	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	31.2	37.0	23.5	12.7	4.7	63.5	7.0	29.2				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	30.5	* 32	7.1	30.9	4.0	58.0	5.5	32.5				
Max Q Clear Time (g_c+I1), s	17.4	3.7	4.1	6.9	2.1	5.7	4.0	21.6				
Green Ext Time (p_c), s	0.9	0.2	0.0	0.3	0.0	0.5	0.0	2.1				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			35.1									
HCM 6th LOS			D									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings  
14: Indian Street & San Michele Road

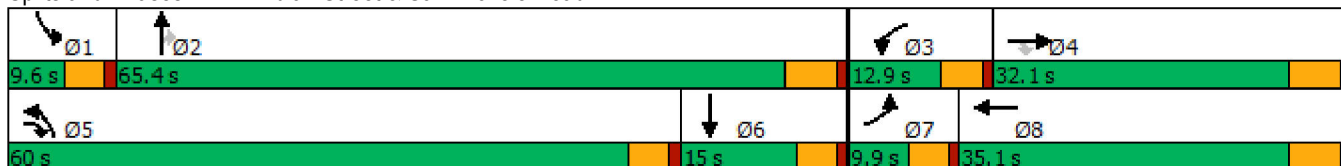


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↘	↑↑	↗↗	↘↘	↑↑	↗↗	↑	↗	↘	↑↑
Traffic Volume (vph)	15	211	383	186	904	1581	217	236	6	141
Future Volume (vph)	15	211	383	186	904	1581	217	236	6	141
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	5	3	8	5	2		1	6
Permitted Phases			4					2		
Detector Phase	7	4	5	3	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	10.0	5.0	8.8
Minimum Split (s)	9.6	31.8	9.6	9.6	31.8	9.6	32.8	32.8	9.6	14.6
Total Split (s)	9.9	32.1	60.0	12.9	35.1	60.0	65.4	65.4	9.6	15.0
Total Split (%)	8.3%	26.8%	50.0%	10.8%	29.3%	50.0%	54.5%	54.5%	8.0%	12.5%
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	3.6	4.8	4.8	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	4.6	5.8	5.8	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None	None
Act Effct Green (s)	5.2	20.3	81.6	8.2	29.4	55.5	66.7	66.7	5.0	9.6
Actuated g/C Ratio	0.05	0.18	0.72	0.07	0.26	0.49	0.59	0.59	0.04	0.08
v/c Ratio	0.27	0.43	0.15	0.77	1.06	0.95	0.23	0.23	0.08	0.58
Control Delay	66.0	43.9	4.3	72.0	88.1	40.9	13.2	2.3	56.8	57.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.0	43.9	4.3	72.0	88.1	40.9	13.2	2.3	56.8	57.0
LOS	E	D	A	E	F	D	B	A	E	E
Approach Delay		19.5			85.4		33.4			57.0
Approach LOS		B			F		C			E

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 113.3	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.06	
Intersection Signal Delay: 46.9	Intersection LOS: D
Intersection Capacity Utilization 98.3%	ICU Level of Service F
Analysis Period (min) 15	
























Splits and Phases: 14: Indian Street & San Michele Road



HCM 6th Signalized Intersection Summary  
 14: Indian Street & San Michele Road

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	211	383	186	904	11	1581	217	236	6	141	14
Future Volume (veh/h)	15	211	383	186	904	11	1581	217	236	6	141	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.99	1.00		0.88
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1218	1470	1870	1826	1826	1826	1856	1752	1767	1900	1707	1707
Adj Flow Rate, veh/h	16	229	356	202	983	5	1718	236	175	7	153	12
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	46	29	2	5	5	5	3	10	9	0	13	13
Cap, veh/h	20	582	2137	248	914	5	1683	952	803	16	234	18
Arrive On Green	0.02	0.30	0.30	0.07	0.38	0.25	0.71	0.54	0.54	0.01	0.08	0.08
Sat Flow, veh/h	1160	2940	3170	3478	3630	18	3534	1752	1478	1810	3095	238
Grp Volume(v), veh/h	16	229	356	202	495	493	1718	236	175	7	83	82
Grp Sat Flow(s),veh/h/ln	1160	1470	1585	1739	1826	1822	1767	1752	1478	1810	1707	1626
Q Serve(g_s), s	1.6	7.2	4.5	6.7	29.3	29.3	55.4	8.3	7.1	0.4	5.5	5.7
Cycle Q Clear(g_c), s	1.6	7.2	4.5	6.7	29.3	29.3	55.4	8.3	7.1	0.4	5.5	5.7
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	1.00		0.15
Lane Grp Cap(c), veh/h	20	582	2137	248	460	459	1683	952	803	16	129	123
V/C Ratio(X)	0.79	0.39	0.17	0.81	1.08	1.08	1.02	0.25	0.22	0.44	0.64	0.67
Avail Cap(c_a), veh/h	53	665	2227	248	460	459	1683	952	803	78	153	145
HCM Platoon Ratio	1.00	1.50	1.50	1.00	1.50	1.00	1.50	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.9	35.3	6.1	53.2	36.2	36.3	16.6	14.0	13.8	57.4	52.2	52.3
Incr Delay (d2), s/veh	22.4	0.2	0.0	17.3	63.6	63.6	27.3	0.1	0.1	7.1	4.0	5.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	2.4	1.2	3.4	19.0	19.0	16.9	3.0	2.2	0.2	2.4	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	79.3	35.5	6.1	70.5	99.8	99.9	43.9	14.1	13.8	64.5	56.2	57.8
LnGrp LOS	E	D	A	E	F	F	F	B	B	E	E	E
Approach Vol, veh/h		601			1190			2129			172	
Approach Delay, s/veh		19.2			94.9			38.1			57.3	
Approach LOS		B			F			D			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.6	69.0	12.9	28.8	60.0	14.6	6.6	35.1				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	* 5.8	4.6	5.8				
Max Green Setting (Gmax), s	5.0	59.6	8.3	26.3	55.4	* 10	5.3	29.3				
Max Q Clear Time (g_c+I1), s	2.4	10.3	8.7	9.2	57.4	7.7	3.6	31.3				
Green Ext Time (p_c), s	0.0	1.0	0.0	1.5	0.0	0.1	0.0	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			52.6									
HCM 6th LOS			D									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings  
15: Indian Street & Nandina Avenue



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↑	↗	↖	↗	↖↗	↖↗	↖	↖↗
Traffic Volume (vph)	8	35	165	36	44	365	1806	13	509
Future Volume (vph)	8	35	165	36	44	365	1806	13	509
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	5	3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	5	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	29.8	9.6	9.6	29.8	9.6	26.8	9.6	26.8
Total Split (s)	9.7	29.9	29.0	10.0	30.2	29.0	70.4	9.7	51.1
Total Split (%)	8.1%	24.9%	24.2%	8.3%	25.2%	24.2%	58.7%	8.1%	42.6%
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	5.2	12.6	30.8	5.5	16.4	16.5	68.3	5.2	48.8
Actuated g/C Ratio	0.05	0.13	0.32	0.06	0.17	0.17	0.71	0.05	0.51
v/c Ratio	0.09	0.22	0.35	0.44	0.29	0.77	0.79	0.18	0.32
Control Delay	53.2	44.3	5.1	66.3	32.0	49.8	18.0	56.7	18.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.2	44.3	5.1	66.3	32.0	49.8	18.0	56.7	18.0
LOS	D	D	A	E	C	D	B	E	B
Approach Delay		13.6			43.8		23.1		18.9
Approach LOS		B			D		C		B

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 95.7  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.79  
 Intersection Signal Delay: 22.5  
 Intersection LOS: C  
 Intersection Capacity Utilization 78.7%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 15: Indian Street & Nandina Avenue























↖ Ø1 9.7 s	↑ Ø2 70.4 s	↖ Ø3 10 s	→ Ø4 29.9 s
↗ Ø5 29 s	↓ Ø6 51.1 s	↗ Ø7 9.7 s	← Ø8 30.2 s



HCM 6th Signalized Intersection Summary  
 15: Indian Street & Nandina Avenue

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	35	165	36	44	24	365	1806	76	13	509	27
Future Volume (veh/h)	8	35	165	36	44	24	365	1806	76	13	509	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1248	1100	1559	1441	1441	1559	1841	1841	1411	1811	1811
Adj Flow Rate, veh/h	9	38	179	39	48	26	397	1963	83	14	553	29
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	44	54	23	31	31	23	4	4	33	6	6
Cap, veh/h	20	223	313	47	175	95	453	2048	86	21	1511	79
Arrive On Green	0.01	0.18	0.18	0.03	0.20	0.20	0.16	0.58	0.58	0.02	0.44	0.44
Sat Flow, veh/h	1810	1248	932	1485	879	476	2881	3504	147	1344	3411	179
Grp Volume(v), veh/h	9	38	179	39	0	74	397	1023	1023	14	293	289
Grp Sat Flow(s),veh/h/ln	1810	1248	932	1485	0	1355	1440	1841	1810	1344	1811	1779
Q Serve(g_s), s	0.5	2.8	17.3	2.9	0.0	5.1	14.8	57.1	59.3	1.1	11.8	11.9
Cycle Q Clear(g_c), s	0.5	2.8	17.3	2.9	0.0	5.1	14.8	57.1	59.3	1.1	11.8	11.9
Prop In Lane	1.00		1.00	1.00		0.35	1.00		0.08	1.00		0.10
Lane Grp Cap(c), veh/h	20	223	313	47	0	270	453	1076	1058	21	802	788
V/C Ratio(X)	0.46	0.17	0.57	0.83	0.00	0.27	0.88	0.95	0.97	0.66	0.37	0.37
Avail Cap(c_a), veh/h	84	274	351	73	0	301	639	1082	1064	62	802	788
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.0	38.2	30.0	52.9	0.0	37.2	45.3	21.4	21.8	53.8	20.4	20.4
Incr Delay (d2), s/veh	6.0	0.4	1.8	21.0	0.0	0.5	7.4	16.8	19.9	12.1	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.9	3.9	1.3	0.0	1.7	5.5	25.5	26.8	0.4	4.7	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.0	38.6	31.7	74.0	0.0	37.8	52.7	38.2	41.7	65.9	20.6	20.7
LnGrp LOS	E	D	C	E	A	D	D	D	D	E	C	C
Approach Vol, veh/h		226			113			2443			596	
Approach Delay, s/veh		34.0			50.3			42.0			21.7	
Approach LOS		C			D			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.3	70.0	8.1	25.5	21.9	54.5	5.8	27.7				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	5.1	64.6	5.4	24.1	24.4	45.3	5.1	24.4				
Max Q Clear Time (g_c+I1), s	3.1	61.3	4.9	19.3	16.8	13.9	2.5	7.1				
Green Ext Time (p_c), s	0.0	2.9	0.0	0.3	0.5	3.2	0.0	0.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			38.2									
HCM 6th LOS			D									



Timings  
16: Indian Av. & Harley Knox Bl.

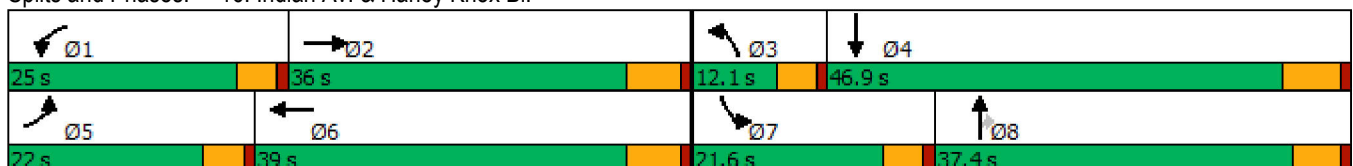


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↔↔	↕↕↔	↔	↕↕↔	↔↔	↕↕	↕	↔	↕↔
Traffic Volume (vph)	148	276	157	541	58	295	82	102	190
Future Volume (vph)	148	276	157	541	58	295	82	102	190
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	5	2	1	6	3	8		7	4
Permitted Phases							8		
Detector Phase	5	2	1	6	3	8	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2
Total Split (s)	22.0	36.0	25.0	39.0	12.1	37.4	37.4	21.6	46.9
Total Split (%)	18.3%	30.0%	20.8%	32.5%	10.1%	31.2%	31.2%	18.0%	39.1%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.4	4.4	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.4	5.4	4.6	6.2
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	11.0	20.0	12.8	21.8	6.5	16.1	16.1	10.1	18.6
Actuated g/C Ratio	0.14	0.26	0.16	0.28	0.08	0.21	0.21	0.13	0.24
v/c Ratio	0.52	0.29	0.59	0.64	0.24	0.46	0.21	0.48	0.41
Control Delay	42.6	24.3	43.9	25.4	43.8	32.0	1.4	44.7	21.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.6	24.3	43.9	25.4	43.8	32.0	1.4	44.7	21.0
LOS	D	C	D	C	D	C	A	D	C
Approach Delay		29.9		28.3		27.8			27.2
Approach LOS		C		C		C			C

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 78  
 Natural Cycle: 100  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.64  
 Intersection Signal Delay: 28.4  
 Intersection LOS: C  
 Intersection Capacity Utilization 52.4%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 16: Indian Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 16: Indian Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/10/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	148	276	56	157	541	302	58	295	82	102	190	97
Future Volume (veh/h)	148	276	56	157	541	302	58	295	82	102	190	97
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1011	1811	1811	1870	1856	1856	1737	1781	1796	1885	1811	1811
Adj Flow Rate, veh/h	161	300	7	171	588	111	63	321	66	111	207	-4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	60	6	6	2	3	3	11	8	7	1	6	6
Cap, veh/h	211	1133	26	219	1020	189	181	617	277	144	711	0
Arrive On Green	0.11	0.23	0.23	0.12	0.24	0.24	0.06	0.18	0.18	0.08	0.21	0.00
Sat Flow, veh/h	1868	4971	115	1781	4292	797	3209	3385	1522	1795	3532	0
Grp Volume(v), veh/h	161	198	109	171	461	238	63	321	66	111	203	0
Grp Sat Flow(s),veh/h/ln	934	1648	1790	1781	1689	1712	1605	1692	1522	1795	1721	0
Q Serve(g_s), s	4.6	2.7	2.7	5.1	6.6	6.8	1.0	4.7	2.0	3.3	2.7	0.0
Cycle Q Clear(g_c), s	4.6	2.7	2.7	5.1	6.6	6.8	1.0	4.7	2.0	3.3	2.7	0.0
Prop In Lane	1.00		0.06	1.00		0.47	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	211	751	408	219	803	407	181	617	277	144	711	0
V/C Ratio(X)	0.76	0.26	0.27	0.78	0.57	0.59	0.35	0.52	0.24	0.77	0.29	0.00
Avail Cap(c_a), veh/h	592	1814	986	662	2044	1036	439	1974	888	556	2553	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	23.6	17.4	17.4	23.3	18.5	18.5	24.9	20.3	19.2	24.7	18.4	0.0
Incr Delay (d2), s/veh	2.1	0.2	0.3	2.3	0.6	1.3	0.4	0.7	0.4	3.2	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.9	1.0	2.0	2.2	2.4	0.4	1.6	0.6	1.4	0.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.8	17.6	17.7	25.6	19.1	19.9	25.3	20.9	19.6	27.9	18.6	0.0
LnGrp LOS	C	B	B	C	B	B	C	C	B	C	B	A
Approach Vol, veh/h		468			870			450			314	
Approach Delay, s/veh		20.4			20.6			21.4			21.9	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.3	18.3	7.7	17.5	10.8	18.8	9.0	16.2				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	20.4	30.2	7.5	40.7	17.4	33.2	17.0	* 32				
Max Q Clear Time (g_c+I1), s	7.1	4.7	3.0	4.7	6.6	8.8	5.3	6.7				
Green Ext Time (p_c), s	0.2	1.6	0.0	1.2	0.2	4.3	0.1	2.1				

Intersection Summary

HCM 6th Ctrl Delay	20.9
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations	↑↑	↑	↖↗	↑	↖	↖	↑
Traffic Volume (vph)	875	96	639	400	537	0	226
Future Volume (vph)	875	96	639	400	537	0	226
Turn Type	NA	Perm	Perm	NA	Split	NA	Perm
Protected Phases	2			6	4	4	
Permitted Phases		2	6				4
Detector Phase	2	2	6	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	25.0	25.0	10.0	10.0	10.0
Total Split (s)	89.0	89.0	89.0	89.0	31.0	31.0	31.0
Total Split (%)	74.2%	74.2%	74.2%	74.2%	25.8%	25.8%	25.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0

Lead/Lag

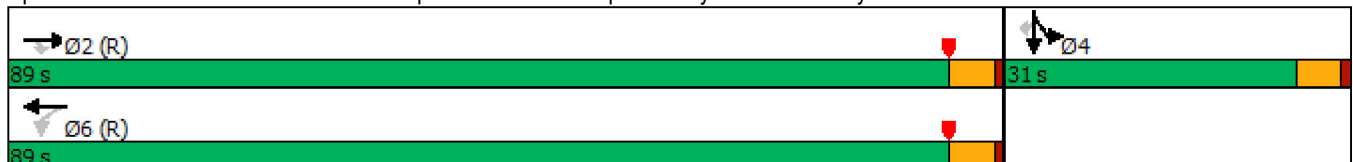
Lead-Lag Optimize?

Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None	None
Act Effct Green (s)	84.6	84.6	84.6	84.6	25.4	25.4	25.4
Actuated g/C Ratio	0.70	0.70	0.70	0.70	0.21	0.21	0.21
v/c Ratio	0.39	0.09	1.03	0.34	0.94	0.94	0.49
Control Delay	7.9	1.2	72.0	3.3	85.3	85.3	8.3
Queue Delay	0.2	0.0	0.0	0.5	4.9	4.9	0.0
Total Delay	8.1	1.2	72.0	3.8	90.2	90.2	8.3
LOS	A	A	E	A	F	F	A
Approach Delay	7.4			45.7		65.9	
Approach LOS	A			D		E	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection  
 Natural Cycle: 100  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.03  
 Intersection Signal Delay: 37.9  
 Intersection LOS: D  
 Intersection Capacity Utilization 95.2%  
 ICU Level of Service F  
 Analysis Period (min) 15

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

11/10/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑↑	↑					↑	↑	↑
Traffic Volume (veh/h)	0	875	96	639	400	0	0	0	0	537	0	226
Future Volume (veh/h)	0	875	96	639	400	0	0	0	0	537	0	226
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1826	1885	1841	1826	0				1648	1900	1767
Adj Flow Rate, veh/h	0	951	104	695	435	0				584	0	186
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	5	1	4	5	0				17	0	9
Cap, veh/h	0	2470	1137	736	1300	0				642	0	306
Arrive On Green	0.00	0.71	0.71	1.00	1.00	0.00				0.20	0.00	0.20
Sat Flow, veh/h	0	3561	1597	1021	1826	0				3139	0	1497
Grp Volume(v), veh/h	0	951	104	695	435	0				584	0	186
Grp Sat Flow(s),veh/h/ln	0	1735	1597	511	1826	0				1570	0	1497
Q Serve(g_s), s	0.0	13.0	2.4	72.4	0.0	0.0				21.8	0.0	13.5
Cycle Q Clear(g_c), s	0.0	13.0	2.4	85.5	0.0	0.0				21.8	0.0	13.5
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2470	1137	736	1300	0				642	0	306
V/C Ratio(X)	0.00	0.38	0.09	0.94	0.33	0.00				0.91	0.00	0.61
Avail Cap(c_a), veh/h	0	2470	1137	736	1300	0				680	0	324
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.58	0.58	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	6.9	5.3	10.6	0.0	0.0				46.6	0.0	43.3
Incr Delay (d2), s/veh	0.0	0.5	0.2	15.0	0.4	0.0				15.8	0.0	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.1	0.7	2.1	0.1	0.0				9.6	0.0	5.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	7.3	5.5	25.6	0.4	0.0				62.4	0.0	46.3
LnGrp LOS	A	A	A	C	A	A				E	A	D
Approach Vol, veh/h		1055			1130						770	
Approach Delay, s/veh		7.1			15.9						58.5	
Approach LOS		A			B						E	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		90.5		29.5		90.5						
Change Period (Y+Rc), s		5.0		5.0		5.0						
Max Green Setting (Gmax), s		84.0		26.0		84.0						
Max Q Clear Time (g_c+I1), s		15.0		23.8		87.5						
Green Ext Time (p_c), s		4.6		0.7		0.0						

Intersection Summary

HCM 6th Ctrl Delay	23.9
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Timings

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

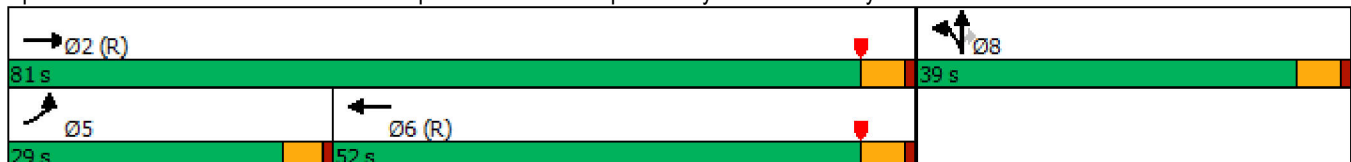


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	479	933	991	1134	4	343
Future Volume (vph)	479	933	991	1134	4	343
Turn Type	Prot	NA	NA	Free	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				Free		8
Detector Phase	5	2	6		8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	9.5	26.0	24.0		10.0	10.0
Total Split (s)	29.0	81.0	52.0		39.0	39.0
Total Split (%)	24.2%	67.5%	43.3%		32.5%	32.5%
Yellow Time (s)	3.5	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0		5.0	5.0
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	C-Max	C-Max		Max	Max
Act Effct Green (s)	21.9	76.0	49.6	120.0	34.0	34.0
Actuated g/C Ratio	0.18	0.63	0.41	1.00	0.28	0.28
v/c Ratio	0.85	0.50	0.75	0.84	0.12	0.76
Control Delay	52.9	25.6	34.5	6.1	32.8	36.4
Queue Delay	0.1	2.3	0.0	0.0	0.0	0.0
Total Delay	53.0	27.9	34.5	6.1	32.8	36.4
LOS	D	C	C	A	C	D
Approach Delay		36.4	19.3		36.0	
Approach LOS		D	B		D	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 70  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.85  
 Intersection Signal Delay: 27.1  
 Intersection LOS: C  
 Intersection Capacity Utilization 95.2%  
 ICU Level of Service F  
 Analysis Period (min) 15

Splits and Phases: 2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox Bl./Harley Knox Bl.

11/10/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑			↑↑	↗		↑	↗			
Traffic Volume (veh/h)	479	933	0	0	991	1134	48	4	343	0	0	0
Future Volume (veh/h)	479	933	0	0	991	1134	48	4	343	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1841	1722	0	0	1841	1752	1663	1900	1663			
Adj Flow Rate, veh/h	521	1014	0	0	1077	0	52	4	308			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	4	12	0	0	4	10	16	0	16			
Cap, veh/h	571	2072	0	0	1497		478	37	399			
Arrive On Green	0.34	1.00	0.00	0.00	0.43	0.00	0.28	0.28	0.28			
Sat Flow, veh/h	3401	3358	0	0	3589	1485	1686	130	1409			
Grp Volume(v), veh/h	521	1014	0	0	1077	0	56	0	308			
Grp Sat Flow(s),veh/h/ln	1700	1636	0	0	1749	1485	1816	0	1409			
Q Serve(g_s), s	17.6	0.0	0.0	0.0	30.5	0.0	2.7	0.0	24.1			
Cycle Q Clear(g_c), s	17.6	0.0	0.0	0.0	30.5	0.0	2.7	0.0	24.1			
Prop In Lane	1.00		0.00	0.00		1.00	0.93		1.00			
Lane Grp Cap(c), veh/h	571	2072	0	0	1497		514	0	399			
V/C Ratio(X)	0.91	0.49	0.00	0.00	0.72		0.11	0.00	0.77			
Avail Cap(c_a), veh/h	694	2072	0	0	1497		514	0	399			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.84	0.84	0.00	0.00	0.61	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	39.0	0.0	0.0	0.0	28.4	0.0	31.8	0.0	39.4			
Incr Delay (d2), s/veh	11.6	0.7	0.0	0.0	1.9	0.0	0.4	0.0	13.5			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	6.6	0.2	0.0	0.0	12.4	0.0	1.2	0.0	9.5			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.6	0.7	0.0	0.0	30.2	0.0	32.2	0.0	52.9			
LnGrp LOS	D	A	A	A	C		C	A	D			
Approach Vol, veh/h		1535			1077	A		364				
Approach Delay, s/veh		17.6			30.2			49.7				
Approach LOS		B			C			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		81.0			24.6	56.4		39.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		76.0			24.5	47.0		34.0				
Max Q Clear Time (g_c+I1), s		2.0			19.6	32.5		26.1				
Green Ext Time (p_c), s		4.9			0.5	4.2		0.8				

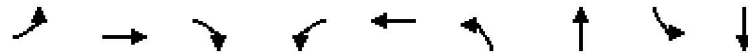
Intersection Summary

HCM 6th Ctrl Delay	26.1
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Timings  
5: Heacock Street & Cactus Avenue

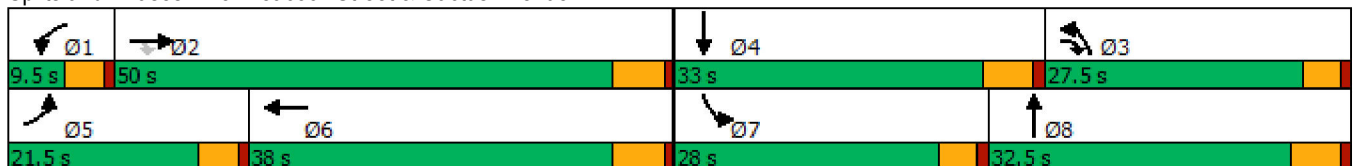


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↙	↑↑↑	↘	↙	↑↑↑	↘	↑↑	↙	↑↑
Traffic Volume (vph)	244	2146	1379	27	956	829	674	184	746
Future Volume (vph)	244	2146	1379	27	956	829	674	184	746
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	3	1	6	3	8	7	4
Permitted Phases			2						
Detector Phase	5	2	3	1	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.5	30.5	9.5	9.5	30.5	9.5	30.5	9.5	30.5
Total Split (s)	21.5	50.0	27.5	9.5	38.0	27.5	32.5	28.0	33.0
Total Split (%)	17.9%	41.7%	22.9%	7.9%	31.7%	22.9%	27.1%	23.3%	27.5%
Yellow Time (s)	3.5	4.5	3.5	3.5	4.5	3.5	4.5	3.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-2.0	0.0	0.0	-2.0	-2.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.5	3.5	4.5	4.5	3.5	2.5	4.5	3.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None
Act Effct Green (s)	17.5	47.2	69.3	5.0	31.8	25.0	35.0	17.1	28.1
Actuated g/C Ratio	0.15	0.41	0.60	0.04	0.27	0.21	0.30	0.15	0.24
v/c Ratio	0.89	0.98	1.32	0.36	0.73	1.12	0.69	0.69	0.94
Control Delay	80.8	48.6	170.3	68.9	40.7	113.6	40.7	60.1	62.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.8	48.6	170.3	68.9	40.7	113.6	40.7	60.1	62.1
LOS	F	D	F	E	D	F	D	E	E
Approach Delay		95.2			41.4		79.2		61.8
Approach LOS		F			D		E		E

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 116.4  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.32  
 Intersection Signal Delay: 79.3  
 Intersection LOS: E  
 Intersection Capacity Utilization 123.7%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 5: Heacock Street & Cactus Avenue

































HCM 6th Signalized Intersection Summary  
5: Heacock Street & Cactus Avenue

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 			 	
Traffic Volume (veh/h)	244	2146	1379	27	956	132	829	674	68	184	746	61
Future Volume (veh/h)	244	2146	1379	27	956	132	829	674	68	184	746	61
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1811	1826	1885	1885	1811	1870	1870	1900	1856	1856
Adj Flow Rate, veh/h	254	2235	733	28	996	76	864	702	35	192	777	17
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	1	6	5	1	1	6	2	2	0	3	3
Cap, veh/h	275	2218	873	44	1423	108	727	1121	56	235	856	19
Arrive On Green	0.23	0.59	0.38	0.03	0.41	0.26	0.32	0.48	0.31	0.13	0.24	0.23
Sat Flow, veh/h	1810	5656	1531	1739	5189	395	3450	3529	176	1810	3617	79
Grp Volume(v), veh/h	254	2235	733	28	723	349	864	372	365	192	399	395
Grp Sat Flow(s),veh/h/ln	1810	1885	1531	1739	1885	1814	1725	1870	1835	1810	1856	1841
Q Serve(g_s), s	16.3	46.5	13.7	1.9	18.8	19.3	25.0	17.6	17.9	12.2	24.8	24.8
Cycle Q Clear(g_c), s	16.3	46.5	13.7	1.9	18.8	19.3	25.0	17.6	17.9	12.2	24.8	24.8
Prop In Lane	1.00		1.00	1.00		0.22	1.00		0.10	1.00		0.04
Lane Grp Cap(c), veh/h	275	2218	873	44	1034	497	727	594	583	235	439	435
V/C Ratio(X)	0.92	1.01	0.84	0.63	0.70	0.70	1.19	0.63	0.63	0.82	0.91	0.91
Avail Cap(c_a), veh/h	275	2218	873	73	1097	528	727	594	583	374	446	443
HCM Platoon Ratio	1.50	1.50	1.00	1.00	1.50	1.00	1.50	1.50	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.1	24.4	9.9	57.2	30.9	32.8	40.5	25.8	26.7	50.2	44.0	44.0
Incr Delay (d2), s/veh	34.3	20.9	7.0	5.5	1.5	3.1	98.0	1.6	1.6	3.5	21.4	21.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.0	18.4	9.4	0.9	7.3	7.8	19.0	6.6	6.7	5.6	13.6	13.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	79.5	45.3	16.9	62.7	32.3	35.9	138.5	27.3	28.3	53.7	65.4	65.6
LnGrp LOS	E	F	B	E	C	D	F	C	C	D	E	E
Approach Vol, veh/h		3222			1100			1601			986	
Approach Delay, s/veh		41.6			34.2			87.5			63.2	
Approach LOS		D			C			F			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.5	50.0	28.5	32.5	21.5	36.0	18.9	42.2				
Change Period (Y+Rc), s	4.5	5.5	5.5	* 5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	5.0	44.5	23.0	* 28	17.0	32.5	23.5	27.0				
Max Q Clear Time (g_c+I1), s	3.9	48.5	27.0	26.8	18.3	21.3	14.2	19.9				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.3	0.0	3.4	0.2	1.6				

Intersection Summary

HCM 6th Ctrl Delay	54.1
HCM 6th LOS	D

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Timings  
6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

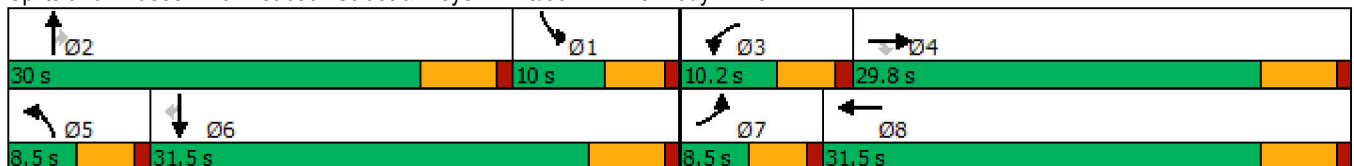
11/10/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	37	239	397	36	99	98	1066	89	362	1258	24
Future Volume (vph)	37	239	397	36	99	98	1066	89	362	1258	24
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4					2			6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Minimum Split (s)	8.5	23.5	23.5	8.5	31.5	8.5	29.5	29.5	8.5	23.5	23.5
Total Split (s)	8.5	29.8	29.8	10.2	31.5	8.5	30.0	30.0	10.0	31.5	31.5
Total Split (%)	10.6%	37.3%	37.3%	12.8%	39.4%	10.6%	37.5%	37.5%	12.5%	39.4%	39.4%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	5.5	4.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	4.1	14.4	14.4	5.4	15.3	4.1	25.1	25.1	5.6	26.7	26.7
Actuated g/C Ratio	0.06	0.22	0.22	0.08	0.23	0.06	0.38	0.38	0.08	0.40	0.40
v/c Ratio	0.34	0.64	0.73	0.26	0.31	0.91	0.86	0.12	1.31	0.96	0.03
Control Delay	42.5	31.7	19.0	37.1	8.3	103.8	30.2	0.8	192.1	40.4	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.5	31.7	19.0	37.1	8.3	103.8	30.2	0.8	192.1	40.4	0.1
LOS	D	C	B	D	A	F	C	A	F	D	A
Approach Delay		24.8			11.5		33.9			73.2	
Approach LOS		C			B		C			E	

Intersection Summary

Cycle Length: 80  
 Actuated Cycle Length: 66.5  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.31  
 Intersection Signal Delay: 47.0  
 Intersection LOS: D  
 Intersection Capacity Utilization 75.6%  
 ICU Level of Service D  
 Analysis Period (min) 15
























Splits and Phases: 6: Heacock Street & Meyer Drive/John F. Kennedy Drive















HCM 6th Signalized Intersection Summary  
 6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	239	397	36	99	194	98	1066	89	362	1258	24
Future Volume (veh/h)	37	239	397	36	99	194	98	1066	89	362	1258	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1900	1900	1885	1885	1900	1811	1900	1841	1796	1900
Adj Flow Rate, veh/h	40	260	264	39	108	151	107	1159	70	393	1367	13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	1	0	0	1	1	0	6	0	4	7	0
Cap, veh/h	57	384	328	56	383	324	109	1332	592	281	1456	653
Arrive On Green	0.03	0.20	0.20	0.03	0.20	0.20	0.06	0.37	0.37	0.08	0.41	0.41
Sat Flow, veh/h	1810	1885	1610	1810	1885	1598	1810	3622	1610	3401	3593	1610
Grp Volume(v), veh/h	40	260	264	39	108	151	107	1159	70	393	1367	13
Grp Sat Flow(s),veh/h/ln	1810	1885	1610	1810	1885	1598	1810	1811	1610	1700	1796	1610
Q Serve(g_s), s	1.5	8.5	10.4	1.4	3.2	5.5	3.9	19.8	1.4	5.5	24.3	0.3
Cycle Q Clear(g_c), s	1.5	8.5	10.4	1.4	3.2	5.5	3.9	19.8	1.4	5.5	24.3	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	57	384	328	56	383	324	109	1332	592	281	1456	653
V/C Ratio(X)	0.70	0.68	0.81	0.70	0.28	0.47	0.98	0.87	0.12	1.40	0.94	0.02
Avail Cap(c_a), veh/h	109	688	587	155	736	624	109	1332	592	281	1456	653
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.0	24.5	25.3	32.0	22.4	23.4	31.3	19.6	7.1	30.6	19.0	11.9
Incr Delay (d2), s/veh	5.8	0.8	1.8	5.7	0.1	0.4	81.1	8.0	0.4	200.0	12.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	3.6	3.7	0.7	1.3	1.9	4.0	8.2	0.7	9.8	10.6	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.7	25.3	27.1	37.7	22.6	23.8	112.4	27.5	7.5	230.5	31.9	11.9
LnGrp LOS	D	C	C	D	C	C	F	C	A	F	C	B
Approach Vol, veh/h		564			298			1336			1773	
Approach Delay, s/veh		27.0			25.2			33.3			75.8	
Approach LOS		C			C			C			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.0	30.0	6.6	19.1	8.5	32.5	6.6	19.0				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	5.5	* 25	5.7	24.3	4.0	26.0	4.0	26.0				
Max Q Clear Time (g_c+I1), s	7.5	21.8	3.4	12.4	5.9	26.3	3.5	7.5				
Green Ext Time (p_c), s	0.0	1.4	0.0	1.2	0.0	0.0	0.0	0.8				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			50.8									
HCM 6th LOS			D									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings  
11: Heacock Street & Cardinal Avenue

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	61	57	1077	20	18	1589
Future Volume (vph)	61	57	1077	20	18	1589
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	26.6	26.6	21.6	21.6	9.6	16.2
Total Split (s)	27.0	27.0	82.0	82.0	11.0	93.0
Total Split (%)	22.5%	22.5%	68.3%	68.3%	9.2%	77.5%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	12.6	12.6	51.5	51.5	6.0	53.9
Actuated g/C Ratio	0.18	0.18	0.72	0.72	0.08	0.76
v/c Ratio	0.21	0.17	0.46	0.02	0.14	0.70
Control Delay	32.1	10.5	7.8	3.2	40.9	8.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.1	10.5	7.8	3.2	40.9	8.9
LOS	C	B	A	A	D	A
Approach Delay	21.6		7.8			9.2
Approach LOS	C		A			A













Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 71.2	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.70	
Intersection Signal Delay: 9.2	Intersection LOS: A
Intersection Capacity Utilization 61.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 11: Heacock Street & Cardinal Avenue



HCM 6th Signalized Intersection Summary  
 11: Heacock Street & Cardinal Avenue

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	61	57	1077	20	18	1589
Future Volume (veh/h)	61	57	1077	20	18	1589
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1752	1781	1693	1781	1752
Adj Flow Rate, veh/h	66	62	1171	22	20	1727
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	10	8	14	8	10
Cap, veh/h	250	209	2119	853	40	2297
Arrive On Green	0.14	0.14	0.59	0.59	0.02	0.69
Sat Flow, veh/h	1781	1485	3563	1434	1697	3416
Grp Volume(v), veh/h	66	62	1171	22	20	1727
Grp Sat Flow(s),veh/h/ln	1781	1485	1781	1434	1697	1664
Q Serve(g_s), s	2.1	2.4	12.7	0.4	0.7	21.3
Cycle Q Clear(g_c), s	2.1	2.4	12.7	0.4	0.7	21.3
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	250	209	2119	853	40	2297
V/C Ratio(X)	0.26	0.30	0.55	0.03	0.50	0.75
Avail Cap(c_a), veh/h	625	521	4322	1740	170	4528
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.5	24.6	7.8	5.3	30.8	6.4
Incr Delay (d2), s/veh	0.6	0.8	0.2	0.0	3.6	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.9	3.0	0.1	0.3	3.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	25.0	25.4	8.0	5.3	34.4	6.9
LnGrp LOS	C	C	A	A	C	A
Approach Vol, veh/h	128		1193			1747
Approach Delay, s/veh	25.2		8.0			7.2
Approach LOS	C		A			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	6.1	44.2			50.2	13.6
Change Period (Y+Rc), s	4.6	* 6.2			6.2	4.6
Max Green Setting (Gmax), s	6.4	* 77			86.8	22.4
Max Q Clear Time (g_c+I1), s	2.7	14.7			23.3	4.4
Green Ext Time (p_c), s	0.0	10.2			20.7	0.3

Intersection Summary

HCM 6th Ctrl Delay	8.2
HCM 6th LOS	A

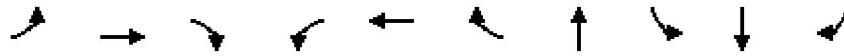
Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
12: Heacock Street & San Michele Road

Gateway Aviation TA (JN:13445)

11/10/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBL	SBT	SBR	Ø5
Lane Configurations	↖	↗	↘	↖	↗	↘	↕	↖	↗	↘	↖
Traffic Volume (vph)	58	348	8	22	102	683	124	916	318	36	
Future Volume (vph)	58	348	8	22	102	683	124	916	318	36	
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	NA	Prot	NA	Perm	
Protected Phases	7	4		3	8	1	2	1	6		5
Permitted Phases			4			8				6	
Detector Phase	7	4	4	3	8	1	2	1	6	6	
Switch Phase											
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0
Minimum Split (s)	9.5	30.5	30.5	8.5	30.5	8.5	34.5	8.5	34.5	34.5	8.5
Total Split (s)	11.1	34.5	34.5	8.5	31.9	42.1	34.9	42.1	68.5	68.5	8.5
Total Split (%)	9.3%	28.8%	28.8%	7.1%	26.6%	35.1%	29.1%	35.1%	57.1%	57.1%	7%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5	5.5	
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	None	Max	Max	None
Act Effct Green (s)	12.2	24.9	24.9	4.1	15.1	55.3	29.8	34.6	69.0	69.0	
Actuated g/C Ratio	0.11	0.23	0.23	0.04	0.14	0.50	0.27	0.32	0.63	0.63	
v/c Ratio	0.30	0.88	0.02	0.34	0.43	0.63	0.19	0.87	0.30	0.03	
Control Delay	51.3	63.7	0.0	69.6	50.9	8.6	27.7	45.4	11.5	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	51.3	63.7	0.0	69.6	50.9	8.6	27.7	45.4	11.5	0.1	
LOS	D	E	A	E	D	A	C	D	B	A	
Approach Delay		60.7			15.6		27.7		35.6		
Approach LOS		E			B		C		D		

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 109.7	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.88	
Intersection Signal Delay: 33.0	Intersection LOS: C
Intersection Capacity Utilization 62.4%	ICU Level of Service B
Analysis Period (min) 15	

























Splits and Phases: 12: Heacock Street & San Michele Road



HCM 6th Signalized Intersection Summary  
 12: Heacock Street & San Michele Road

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	348	8	22	102	683	0	124	40	916	318	36
Future Volume (veh/h)	58	348	8	22	102	683	0	124	40	916	318	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1870	1900	1826	1826	1885	1826	1900
Adj Flow Rate, veh/h	63	378	9	24	111	579	0	135	43	996	346	39
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	2	0	5	5	1	5	0
Cap, veh/h	270	417	344	34	169	626	2	694	213	1067	1135	1001
Arrive On Green	0.15	0.22	0.22	0.02	0.09	0.09	0.00	0.27	0.27	0.31	0.62	0.62
Sat Flow, veh/h	1810	1900	1569	1810	1900	1585	1810	2613	803	3483	1826	1610
Grp Volume(v), veh/h	63	378	9	24	111	579	0	88	90	996	346	39
Grp Sat Flow(s),veh/h/ln	1810	1900	1569	1810	1900	1585	1810	1735	1681	1742	1826	1610
Q Serve(g_s), s	3.4	21.5	0.5	1.5	6.3	4.6	0.0	4.3	4.6	30.7	9.8	0.4
Cycle Q Clear(g_c), s	3.4	21.5	0.5	1.5	6.3	4.6	0.0	4.3	4.6	30.7	9.8	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.48	1.00		1.00
Lane Grp Cap(c), veh/h	270	417	344	34	169	626	2	461	447	1067	1135	1001
V/C Ratio(X)	0.23	0.91	0.03	0.70	0.66	0.92	0.00	0.19	0.20	0.93	0.30	0.04
Avail Cap(c_a), veh/h	270	498	411	65	453	864	65	461	447	1184	1135	1001
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.5	42.1	29.7	54.0	48.8	31.9	0.0	31.4	31.5	37.3	9.8	1.1
Incr Delay (d2), s/veh	0.2	16.8	0.0	9.4	1.6	10.5	0.0	0.9	1.0	12.0	0.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	12.0	0.2	0.7	3.0	15.5	0.0	1.9	1.9	14.0	3.6	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.6	58.9	29.7	63.3	50.4	42.4	0.0	32.3	32.5	49.3	10.5	1.2
LnGrp LOS	D	E	C	E	D	D	A	C	C	D	B	A
Approach Vol, veh/h		450			714			178			1381	
Approach Delay, s/veh		55.9			44.4			32.4			38.2	
Approach LOS		E			D			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	39.4	34.9	6.6	29.8	0.0	74.3	21.0	15.3				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	37.6	* 29	4.0	29.0	4.0	63.0	6.6	26.4				
Max Q Clear Time (g_c+I1), s	32.7	6.6	3.5	23.5	0.0	11.8	5.4	8.3				
Green Ext Time (p_c), s	1.2	0.5	0.0	0.8	0.0	1.2	0.0	1.3				

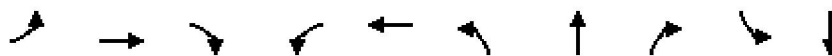
Intersection Summary

HCM 6th Ctrl Delay	42.3
HCM 6th LOS	D

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
14: Indian Street & San Michele Road

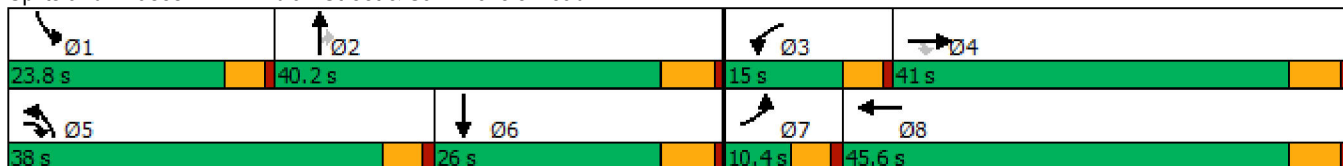


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↘	↑↑	↗↗	↘↘	↑↑	↗↗	↑	↗	↘	↑↑
Traffic Volume (vph)	23	882	1546	248	505	763	196	223	155	380
Future Volume (vph)	23	882	1546	248	505	763	196	223	155	380
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	5	3	8	5	2		1	6
Permitted Phases			4					2		
Detector Phase	7	4	5	3	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	31.8	9.6	9.6	31.8	9.6	32.8	32.8	9.6	24.8
Total Split (s)	10.4	41.0	38.0	15.0	45.6	38.0	40.2	40.2	23.8	26.0
Total Split (%)	8.7%	34.2%	31.7%	12.5%	38.0%	31.7%	33.5%	33.5%	19.8%	21.7%
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	3.6	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	4.6	5.8	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None	None
Act Effct Green (s)	5.5	34.1	66.6	10.3	43.1	31.3	34.6	34.6	14.4	17.7
Actuated g/C Ratio	0.05	0.30	0.58	0.09	0.38	0.27	0.30	0.30	0.13	0.15
v/c Ratio	0.29	0.94	0.94	0.84	0.46	0.85	0.40	0.35	0.72	0.81
Control Delay	63.6	56.5	31.4	74.7	29.4	49.4	35.2	8.9	65.9	58.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.6	56.5	31.4	74.7	29.4	49.4	35.2	8.9	65.9	58.8
LOS	E	E	C	E	C	D	D	A	E	E
Approach Delay		40.7			43.1		39.4			60.8
Approach LOS		D			D		D			E

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 114.4  
 Natural Cycle: 105  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.94  
 Intersection Signal Delay: 43.1  
 Intersection LOS: D  
 Intersection Capacity Utilization 91.4%  
 ICU Level of Service F  
 Analysis Period (min) 15

Splits and Phases: 14: Indian Street & San Michele Road




























HCM 6th Signalized Intersection Summary  
 14: Indian Street & San Michele Road

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	882	1546	248	505	69	763	196	223	155	380	32
Future Volume (veh/h)	23	882	1546	248	505	69	763	196	223	155	380	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		1.00	1.00		0.64
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1796	1856	1826	1826	1796	1796	1856	1870	1841	1841
Adj Flow Rate, veh/h	25	959	1028	270	549	58	829	213	177	168	413	25
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	5	7	3	5	5	7	7	3	2	4	4
Cap, veh/h	42	1056	1488	309	1200	126	893	566	495	197	545	32
Arrive On Green	0.02	0.30	0.30	0.09	0.37	0.37	0.26	0.31	0.31	0.11	0.16	0.16
Sat Flow, veh/h	1739	3469	2591	3428	3238	341	3421	1796	1571	1781	3315	198
Grp Volume(v), veh/h	25	959	1028	270	309	298	829	213	177	168	226	212
Grp Sat Flow(s),veh/h/ln	1739	1735	1296	1714	1826	1754	1711	1796	1571	1781	1841	1671
Q Serve(g_s), s	1.6	30.7	33.0	9.0	14.8	14.9	27.3	10.6	10.0	10.7	13.5	14.0
Cycle Q Clear(g_c), s	1.6	30.7	33.0	9.0	14.8	14.9	27.3	10.6	10.0	10.7	13.5	14.0
Prop In Lane	1.00		1.00	1.00		0.19	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	42	1056	1488	309	677	650	893	566	495	197	303	275
V/C Ratio(X)	0.60	0.91	0.69	0.87	0.46	0.46	0.93	0.38	0.36	0.85	0.75	0.77
Avail Cap(c_a), veh/h	87	1057	1489	309	677	650	990	566	495	296	322	292
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.8	38.6	18.1	51.9	27.5	27.6	41.6	30.7	30.5	50.5	46.0	46.2
Incr Delay (d2), s/veh	5.1	11.0	1.2	22.4	0.2	0.2	13.1	0.2	0.2	9.6	7.5	9.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	14.1	9.1	4.7	6.2	6.0	12.5	4.4	3.7	5.1	6.6	6.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.9	49.6	19.2	74.3	27.7	27.7	54.7	30.9	30.7	60.0	53.5	56.0
LnGrp LOS	E	D	B	E	C	C	D	C	C	E	D	E
Approach Vol, veh/h		2012			877			1219			606	
Approach Delay, s/veh		34.2			42.1			47.0			56.2	
Approach LOS		C			D			D			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.3	42.2	15.0	41.0	34.7	24.8	7.4	48.6				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	19.2	34.4	10.4	35.2	33.4	20.2	5.8	39.8				
Max Q Clear Time (g_c+I1), s	12.7	12.6	11.0	35.0	29.3	16.0	3.6	16.9				
Green Ext Time (p_c), s	0.1	0.9	0.0	0.2	0.8	0.6	0.0	2.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			41.8									
HCM 6th LOS			D									



Timings  
15: Indian Street & Nandina Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	
Lane Configurations										
Traffic Volume (vph)	48	116	559	186	46	164	737	24	1595	
Future Volume (vph)	48	116	559	186	46	164	737	24	1595	
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA	
Protected Phases	7	4	5	3	8	5	2	1	6	
Permitted Phases	4									
Detector Phase	7	4	5	3	8	5	2	1	6	
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0	
Minimum Split (s)	9.6	24.8	9.6	9.6	29.8	9.6	26.8	9.6	26.8	
Total Split (s)	14.0	25.4	13.0	18.6	30.0	13.0	65.4	10.6	63.0	
Total Split (%)	11.7%	21.2%	10.8%	15.5%	25.0%	10.8%	54.5%	8.8%	52.5%	
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	3.6	4.8	3.6	4.8	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	4.6	5.8	4.6	5.8	
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	Min	None	Min	
Act Effct Green (s)	7.3	14.1	28.3	14.0	22.7	8.4	64.0	5.6	57.3	
Actuated g/C Ratio	0.06	0.12	0.25	0.12	0.20	0.07	0.56	0.05	0.50	
v/c Ratio	0.43	0.61	1.38	1.03	0.35	0.93	0.42	0.30	0.95	
Control Delay	63.0	60.1	215.3	122.0	26.6	103.7	16.3	63.0	40.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	63.0	60.1	215.3	122.0	26.6	103.7	16.3	63.0	40.5	
LOS	E	E	F	F	C	F	B	E	D	
Approach Delay	180.3					86.1		31.0		40.8
Approach LOS	F					F		C		D

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 114.6  
 Natural Cycle: 110  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.38  
 Intersection Signal Delay: 69.5  
 Intersection LOS: E  
 Intersection Capacity Utilization 102.7%  
 ICU Level of Service G  
 Analysis Period (min) 15























Splits and Phases: 15: Indian Street & Nandina Avenue

Ø1	Ø2	Ø3	Ø4
10.6 s	65.4 s	18.6 s	25.4 s
Ø5	Ø6	Ø7	Ø8
13 s	63 s	14 s	30 s

HCM 6th Signalized Intersection Summary  
 15: Indian Street & Nandina Avenue

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	116	559	186	46	66	164	737	75	24	1595	36
Future Volume (veh/h)	48	116	559	186	46	66	164	737	75	24	1595	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1722	1604	1633	1500	1500	1218	1870	1870	1796	1870	1870
Adj Flow Rate, veh/h	52	126	228	202	50	36	178	801	44	26	1734	19
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	12	20	18	27	27	46	2	2	7	2	2
Cap, veh/h	67	281	317	181	197	142	162	1836	101	41	1760	19
Arrive On Green	0.04	0.16	0.16	0.12	0.24	0.24	0.07	0.65	0.52	0.02	0.60	0.48
Sat Flow, veh/h	1810	1722	1359	1555	811	584	2321	3513	193	1711	3693	40
Grp Volume(v), veh/h	52	126	228	202	0	86	178	426	419	26	877	876
Grp Sat Flow(s),veh/h/ln	1810	1722	1359	1555	0	1395	1160	1870	1836	1711	1870	1863
Q Serve(g_s), s	3.4	7.9	18.5	14.0	0.0	6.0	8.4	13.3	13.7	1.8	55.0	55.3
Cycle Q Clear(g_c), s	3.4	7.9	18.5	14.0	0.0	6.0	8.4	13.3	13.7	1.8	55.0	55.3
Prop In Lane	1.00		1.00	1.00		0.42	1.00		0.11	1.00		0.02
Lane Grp Cap(c), veh/h	67	281	317	181	0	339	162	977	959	41	892	888
V/C Ratio(X)	0.77	0.45	0.72	1.11	0.00	0.25	1.10	0.44	0.44	0.63	0.98	0.99
Avail Cap(c_a), veh/h	142	281	317	181	0	339	162	977	959	86	892	888
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.25	1.00	1.00	1.25	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.3	45.3	42.4	53.0	0.0	36.7	55.8	12.2	12.8	58.0	23.8	24.0
Incr Delay (d2), s/veh	6.8	1.1	7.7	100.4	0.0	0.4	98.6	0.3	0.3	5.7	26.1	26.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	3.4	6.7	10.4	0.0	2.0	4.6	4.6	4.7	0.8	25.0	25.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.0	46.4	50.0	153.4	0.0	37.1	154.4	12.5	13.1	63.8	49.9	50.8
LnGrp LOS	E	D	D	F	A	D	F	B	B	E	D	D
Approach Vol, veh/h		406			288			1023			1779	
Approach Delay, s/veh		50.7			118.7			37.5			50.5	
Approach LOS		D			F			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.5	68.5	18.6	25.4	13.0	63.0	9.1	34.9				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	6.0	59.6	14.0	19.6	8.4	57.2	9.4	24.2				
Max Q Clear Time (g_c+I1), s	3.8	15.7	16.0	20.5	10.4	57.3	5.4	8.0				
Green Ext Time (p_c), s	0.0	5.2	0.0	0.0	0.0	0.0	0.0	0.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			52.3									
HCM 6th LOS			D									

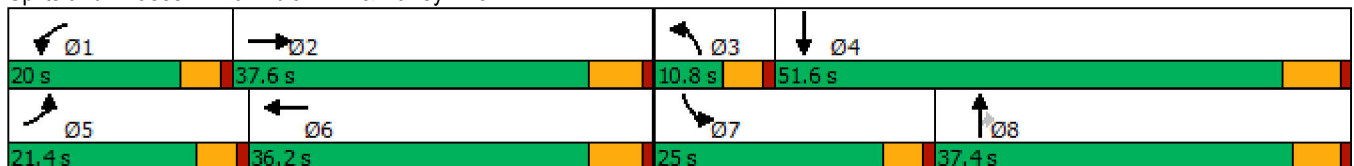
Timings  
16: Indian Av. & Harley Knox Bl.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	94	568	242	421	81	295	246	326	562
Future Volume (vph)	94	568	242	421	81	295	246	326	562
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	5	2	1	6	3	8		7	4
Permitted Phases							8		
Detector Phase	5	2	1	6	3	8	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2
Total Split (s)	21.4	37.6	20.0	36.2	10.8	37.4	37.4	25.0	51.6
Total Split (%)	17.8%	31.3%	16.7%	30.2%	9.0%	31.2%	31.2%	20.8%	43.0%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.4	4.4	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.4	5.4	4.6	6.2
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	7.9	19.2	15.7	29.4	6.0	16.9	16.9	20.8	33.1
Actuated g/C Ratio	0.08	0.21	0.17	0.31	0.06	0.18	0.18	0.22	0.35
v/c Ratio	0.42	0.66	0.88	0.38	0.44	0.56	0.53	0.88	0.64
Control Delay	48.8	35.6	69.9	24.0	53.1	38.9	8.4	61.9	27.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.8	35.6	69.9	24.0	53.1	38.9	8.4	61.9	27.9
LOS	D	D	E	C	D	D	A	E	C
Approach Delay		37.2		37.4		28.7			38.6
Approach LOS		D		D		C			D

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 93.4  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.88  
 Intersection Signal Delay: 36.1  
 Intersection LOS: D  
 Intersection Capacity Utilization 70.2%  
 ICU Level of Service C  
 Analysis Period (min) 15































Splits and Phases: 16: Indian Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 16: Indian Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  			  		 	 			 	
Traffic Volume (veh/h)	94	568	108	242	421	169	81	295	246	326	562	146
Future Volume (veh/h)	94	568	108	242	421	169	81	295	246	326	562	146
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1559	1841	1841	1885	1811	1811	1707	1678	1870	1900	1856	1856
Adj Flow Rate, veh/h	102	617	35	263	458	102	88	321	120	354	611	-303
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	23	4	4	1	6	6	13	15	2	0	3	3
Cap, veh/h	167	955	54	304	1282	277	174	480	235	396	1107	0
Arrive On Green	0.06	0.18	0.18	0.17	0.30	0.30	0.06	0.15	0.15	0.22	0.31	0.00
Sat Flow, veh/h	2881	5178	292	1795	4329	936	3155	3188	1564	1810	3618	0
Grp Volume(v), veh/h	102	438	214	263	381	179	88	321	120	354	308	0
Grp Sat Flow(s),veh/h/ln	1440	1841	1788	1795	1811	1643	1577	1594	1564	1810	1763	0
Q Serve(g_s), s	2.6	8.4	8.5	10.9	6.3	6.6	2.1	7.3	5.4	14.6	5.0	0.0
Cycle Q Clear(g_c), s	2.6	8.4	8.5	10.9	6.3	6.6	2.1	7.3	5.4	14.6	5.0	0.0
Prop In Lane	1.00		0.16	1.00		0.57	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	167	679	330	304	1072	486	174	480	235	396	1107	0
V/C Ratio(X)	0.61	0.64	0.65	0.86	0.36	0.37	0.51	0.67	0.51	0.89	0.28	0.00
Avail Cap(c_a), veh/h	632	1528	742	361	1438	652	255	1332	653	482	2090	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	35.2	28.9	28.9	31.0	21.2	21.3	35.2	30.7	29.9	29.1	19.7	0.0
Incr Delay (d2), s/veh	1.4	1.0	2.2	15.2	0.2	0.5	0.8	1.6	1.7	14.9	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	3.5	3.5	5.6	2.5	2.4	0.8	2.7	2.0	7.4	1.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.6	29.9	31.1	46.2	21.4	21.8	36.0	32.4	31.6	44.0	19.9	0.0
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	B	A
Approach Vol, veh/h		754			823			529			662	
Approach Delay, s/veh		31.2			29.4			32.8			32.8	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.6	19.9	8.8	30.3	9.0	28.5	21.4	17.7				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	15.4	31.8	6.2	45.4	16.8	30.4	20.4	* 32				
Max Q Clear Time (g_c+I1), s	12.9	10.5	4.1	7.0	4.6	8.6	16.6	9.3				
Green Ext Time (p_c), s	0.1	3.6	0.0	1.9	0.1	3.3	0.2	2.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				31.3								
HCM 6th LOS				C								
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

**APPENDIX 7.21:**

**HORIZON YEAR (2045) WITH PROJECT (NON-PEAK) WITH HEACOCK STREET  
EXTENSION CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS WITH  
IMPROVEMENTS**

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Timings

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

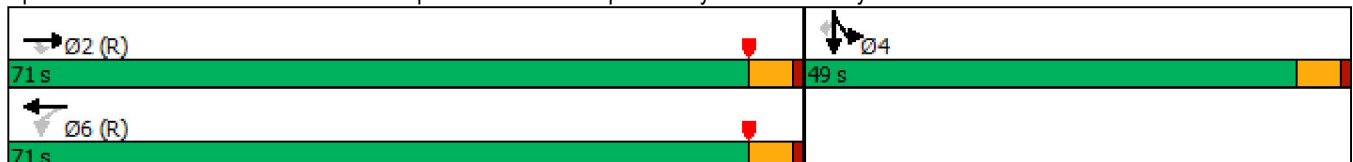


Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations	↑↑	↑	↑↑	↑	↑	↑	↑
Traffic Volume (vph)	1157	28	206	662	1002	1	315
Future Volume (vph)	1157	28	206	662	1002	1	315
Turn Type	NA	Perm	Perm	NA	Split	NA	Perm
Protected Phases	2			6	4	4	
Permitted Phases		2	6				4
Detector Phase	2	2	6	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	25.0	25.0	10.0	10.0	10.0
Total Split (s)	71.0	71.0	71.0	71.0	49.0	49.0	49.0
Total Split (%)	59.2%	59.2%	59.2%	59.2%	40.8%	40.8%	40.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None	None
Act Effct Green (s)	66.0	66.0	66.0	66.0	44.0	44.0	44.0
Actuated g/C Ratio	0.55	0.55	0.55	0.55	0.37	0.37	0.37
v/c Ratio	0.67	0.03	1.00	0.70	0.99	0.99	0.51
Control Delay	21.3	5.0	86.3	22.4	73.7	74.1	14.9
Queue Delay	0.2	0.0	0.0	1.7	41.5	41.1	0.0
Total Delay	21.5	5.0	86.3	24.1	115.2	115.2	14.9
LOS	C	A	F	C	F	F	B
Approach Delay	21.1			38.8		91.3	
Approach LOS	C			D		F	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection  
 Natural Cycle: 50  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.00  
 Intersection Signal Delay: 53.1  
 Intersection LOS: D  
 Intersection Capacity Utilization 108.8%  
 ICU Level of Service G  
 Analysis Period (min) 15

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

11/10/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑↑	↑					↑	↑	↑
Traffic Volume (veh/h)	0	1157	28	206	662	0	0	0	0	1002	1	315
Future Volume (veh/h)	0	1157	28	206	662	0	0	0	0	1002	1	315
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1826	1826	1604	1870	0				1693	1900	1781
Adj Flow Rate, veh/h	0	1258	30	224	720	0				1090	0	282
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	5	5	20	2	0				14	0	8
Cap, veh/h	0	1940	865	340	1046	0				1152	0	540
Arrive On Green	0.00	0.56	0.56	1.00	1.00	0.00				0.36	0.00	0.36
Sat Flow, veh/h	0	3561	1547	713	1870	0				3224	0	1510
Grp Volume(v), veh/h	0	1258	30	224	720	0				1090	0	282
Grp Sat Flow(s),veh/h/ln	0	1735	1547	357	1870	0				1612	0	1510
Q Serve(g_s), s	0.0	30.1	1.0	37.0	0.0	0.0				39.4	0.0	17.7
Cycle Q Clear(g_c), s	0.0	30.1	1.0	67.1	0.0	0.0				39.4	0.0	17.7
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1940	865	340	1046	0				1152	0	540
V/C Ratio(X)	0.00	0.65	0.03	0.66	0.69	0.00				0.95	0.00	0.52
Avail Cap(c_a), veh/h	0	1940	865	340	1046	0				1182	0	554
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.59	0.59	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	18.3	11.9	15.4	0.0	0.0				37.4	0.0	30.5
Incr Delay (d2), s/veh	0.0	1.7	0.1	5.8	2.2	0.0				14.9	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	11.4	0.4	2.5	0.6	0.0				17.1	0.0	6.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	20.0	12.0	21.2	2.2	0.0				52.3	0.0	31.3
LnGrp LOS	A	B	B	C	A	A				D	A	C
Approach Vol, veh/h		1288			944						1372	
Approach Delay, s/veh		19.8			6.7						48.0	
Approach LOS		B			A						D	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		72.1		47.9		72.1						
Change Period (Y+Rc), s		5.0		5.0		5.0						
Max Green Setting (Gmax), s		66.0		44.0		66.0						
Max Q Clear Time (g_c+I1), s		32.1		41.4		69.1						
Green Ext Time (p_c), s		6.5		1.5		0.0						

Intersection Summary

HCM 6th Ctrl Delay	27.1
HCM 6th LOS	C

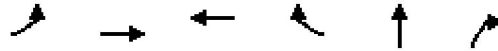
Notes

User approved volume balancing among the lanes for turning movement.



Timings

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

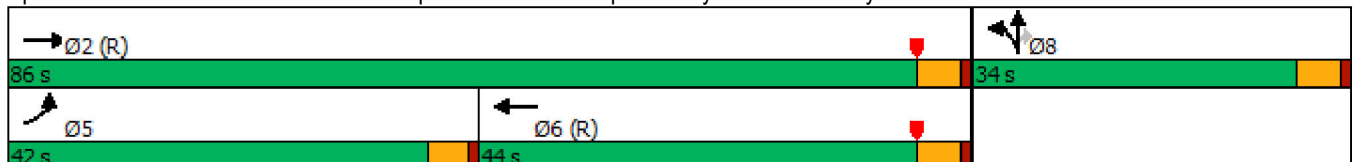


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations	↔↔	↑↑	↑↑	↔	↔	↔
Traffic Volume (vph)	808	1351	810	1145	4	309
Future Volume (vph)	808	1351	810	1145	4	309
Turn Type	Prot	NA	NA	Free	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				Free		8
Detector Phase	5	2	6		8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	9.5	26.0	24.0		10.0	10.0
Total Split (s)	42.0	86.0	44.0		34.0	34.0
Total Split (%)	35.0%	71.7%	36.7%		28.3%	28.3%
Yellow Time (s)	3.5	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0		5.0	5.0
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	C-Max	C-Max		Max	Max
Act Effct Green (s)	34.5	81.0	42.0	120.0	29.0	29.0
Actuated g/C Ratio	0.29	0.68	0.35	1.00	0.24	0.24
v/c Ratio	0.91	0.67	0.75	0.86	0.16	0.81
Control Delay	62.7	24.8	39.7	7.2	37.1	52.0
Queue Delay	3.5	49.1	0.0	0.0	0.3	0.0
Total Delay	66.2	73.9	39.7	7.2	37.4	52.0
LOS	E	E	D	A	D	D
Approach Delay		71.0	20.7		49.6	
Approach LOS		E	C		D	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 70  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.91  
 Intersection Signal Delay: 47.3  
 Intersection LOS: D  
 Intersection Capacity Utilization 108.8%  
 ICU Level of Service G  
 Analysis Period (min) 15

Splits and Phases: 2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox Bl./Harley Knox Bl.

11/10/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑			↑↑	↗		↖	↗			
Traffic Volume (veh/h)	808	1351	0	0	810	1145	58	4	309	0	0	0
Future Volume (veh/h)	808	1351	0	0	810	1145	58	4	309	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1841	1722	0	0	1796	1752	1811	1900	1811			
Adj Flow Rate, veh/h	878	1468	0	0	880	0	63	4	271			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	4	12	0	0	7	10	6	0	6			
Cap, veh/h	921	2209	0	0	1251		412	26	371			
Arrive On Green	0.54	1.00	0.00	0.00	0.37	0.00	0.24	0.24	0.24			
Sat Flow, veh/h	3401	3358	0	0	3503	1485	1706	108	1535			
Grp Volume(v), veh/h	878	1468	0	0	880	0	67	0	271			
Grp Sat Flow(s),veh/h/ln	1700	1636	0	0	1706	1485	1815	0	1535			
Q Serve(g_s), s	29.3	0.0	0.0	0.0	26.4	0.0	3.5	0.0	19.5			
Cycle Q Clear(g_c), s	29.3	0.0	0.0	0.0	26.4	0.0	3.5	0.0	19.5			
Prop In Lane	1.00		0.00	0.00		1.00	0.94		1.00			
Lane Grp Cap(c), veh/h	921	2209	0	0	1251		439	0	371			
V/C Ratio(X)	0.95	0.66	0.00	0.00	0.70		0.15	0.00	0.73			
Avail Cap(c_a), veh/h	1063	2209	0	0	1251		439	0	371			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.56	0.56	0.00	0.00	0.79	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	26.8	0.0	0.0	0.0	32.4	0.0	35.8	0.0	41.9			
Incr Delay (d2), s/veh	10.2	0.9	0.0	0.0	2.6	0.0	0.7	0.0	12.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	8.7	0.3	0.0	0.0	10.9	0.0	1.6	0.0	8.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.9	0.9	0.0	0.0	35.1	0.0	36.6	0.0	53.9			
LnGrp LOS	D	A	A	A	D		D	A	D			
Approach Vol, veh/h		2346			880	A		338				
Approach Delay, s/veh		14.4			35.1			50.4				
Approach LOS		B			D			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		86.0			37.0	49.0		34.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		81.0			37.5	39.0		29.0				
Max Q Clear Time (g_c+I1), s		2.0			31.3	28.4		21.5				
Green Ext Time (p_c), s		8.8			1.2	2.9		0.7				

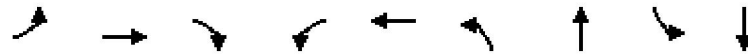
Intersection Summary

HCM 6th Ctrl Delay	22.9
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Timings  
5: Heacock Street & Cactus Avenue

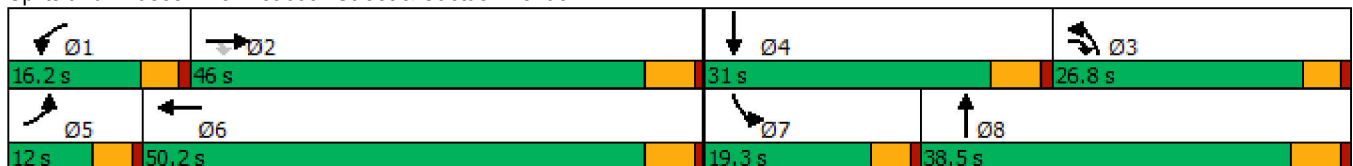


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↙	↑↑↑	↗	↙	↑↑↑	↗	↑↑	↙	↑↑
Traffic Volume (vph)	176	1067	793	87	2068	870	722	139	378
Future Volume (vph)	176	1067	793	87	2068	870	722	139	378
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	3	1	6	3	8	7	4
Permitted Phases			2						
Detector Phase	5	2	3	1	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.5	30.5	9.5	9.5	30.5	9.5	30.5	9.5	30.5
Total Split (s)	12.0	46.0	26.8	16.2	50.2	26.8	38.5	19.3	31.0
Total Split (%)	10.0%	38.3%	22.3%	13.5%	41.8%	22.3%	32.1%	16.1%	25.8%
Yellow Time (s)	3.5	4.5	3.5	3.5	4.5	3.5	4.5	3.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-2.0	0.0	0.0	-2.0	-2.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.5	3.5	4.5	4.5	3.5	2.5	4.5	3.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None
Act Effct Green (s)	8.5	47.1	70.4	9.4	46.8	25.4	31.3	13.3	20.2
Actuated g/C Ratio	0.07	0.41	0.61	0.08	0.41	0.22	0.27	0.12	0.18
v/c Ratio	1.34	0.48	0.74	0.59	1.01	1.14	0.79	0.67	0.75
Control Delay	232.1	27.5	14.2	67.1	55.0	117.3	45.3	65.2	49.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	232.1	27.5	14.2	67.1	55.0	117.3	45.3	65.2	49.8
LOS	F	C	B	E	D	F	D	E	D
Approach Delay		39.9			55.4		83.8		53.2
Approach LOS		D			E		F		D

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 114.9  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.34  
 Intersection Signal Delay: 57.4  
 Intersection LOS: E  
 Intersection Capacity Utilization 105.6%  
 ICU Level of Service G  
 Analysis Period (min) 15






























Splits and Phases: 5: Heacock Street & Cactus Avenue



HCM 6th Signalized Intersection Summary  
5: Heacock Street & Cactus Avenue

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 			 	
Traffic Volume (veh/h)	176	1067	793	87	2068	159	870	722	34	139	378	105
Future Volume (veh/h)	176	1067	793	87	2068	159	870	722	34	139	378	105
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1752	1900	1885	1885	1826	1841	1841	1870	1841	1841
Adj Flow Rate, veh/h	183	1111	696	91	2154	104	906	752	19	145	394	83
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	10	0	1	1	5	4	4	2	4	4
Cap, veh/h	134	2326	881	115	2205	106	746	984	25	187	491	102
Arrive On Green	0.11	0.62	0.40	0.06	0.62	0.39	0.32	0.41	0.27	0.11	0.17	0.16
Sat Flow, veh/h	1781	5611	1485	1810	5352	257	3478	3575	90	1781	2954	616
Grp Volume(v), veh/h	183	1111	696	91	1514	744	906	387	384	145	244	233
Grp Sat Flow(s),veh/h/ln	1781	1870	1485	1810	1885	1839	1739	1841	1824	1781	1841	1730
Q Serve(g_s), s	8.5	12.1	10.3	5.6	43.7	44.7	24.3	20.4	20.5	9.0	14.4	14.7
Cycle Q Clear(g_c), s	8.5	12.1	10.3	5.6	43.7	44.7	24.3	20.4	20.5	9.0	14.4	14.7
Prop In Lane	1.00		1.00	1.00		0.14	1.00		0.05	1.00		0.36
Lane Grp Cap(c), veh/h	134	2326	881	115	1553	758	746	507	502	187	306	288
V/C Ratio(X)	1.37	0.48	0.79	0.79	0.97	0.98	1.22	0.76	0.76	0.77	0.80	0.81
Avail Cap(c_a), veh/h	134	2326	881	187	1553	758	746	552	547	248	430	404
HCM Platoon Ratio	1.50	1.50	1.00	1.00	1.50	1.00	1.50	1.50	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.3	14.8	5.7	52.3	21.1	23.0	38.4	30.1	30.5	49.4	45.4	45.7
Incr Delay (d2), s/veh	206.6	0.1	4.5	4.5	17.0	28.0	108.9	4.9	5.0	7.2	4.5	5.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.2	4.0	4.9	2.6	16.4	19.8	20.1	8.1	8.2	4.3	6.8	6.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	256.9	14.9	10.2	56.8	38.1	51.0	147.3	35.0	35.5	56.6	49.9	51.2
LnGrp LOS	F	B	B	E	D	D	F	D	D	E	D	D
Approach Vol, veh/h		1990			2349			1677			622	
Approach Delay, s/veh		35.5			42.9			95.8			52.0	
Approach LOS		D			D			F			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.7	50.5	27.8	23.3	12.0	50.2	15.4	35.7				
Change Period (Y+Rc), s	4.5	5.5	5.5	* 5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	11.7	40.5	22.3	* 26	7.5	44.7	14.8	33.0				
Max Q Clear Time (g_c+I1), s	7.6	14.1	26.3	16.7	10.5	46.7	11.0	22.5				
Green Ext Time (p_c), s	0.0	6.7	0.0	1.1	0.0	0.0	0.1	2.1				

Intersection Summary

HCM 6th Ctrl Delay	54.9
HCM 6th LOS	D

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

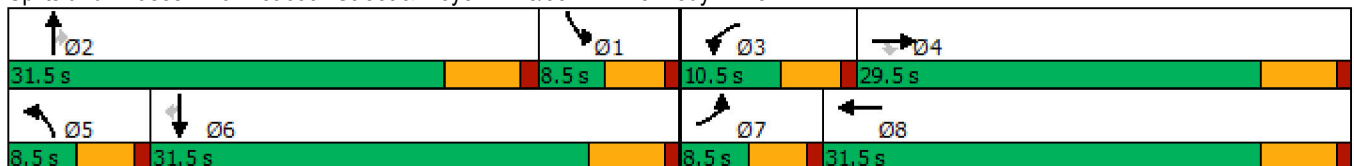
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Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	48	45	120	38	267	37	1084	60	127	861	24	
Future Volume (vph)	48	45	120	38	267	37	1084	60	127	861	24	
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	7	4		3	8	5	2		1	6		
Permitted Phases			4					2			6	
Detector Phase	7	4	4	3	8	5	2	2	1	6	6	
Switch Phase												
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	
Minimum Split (s)	8.5	23.5	23.5	8.5	31.5	8.5	30.5	30.5	8.5	23.5	23.5	
Total Split (s)	8.5	29.5	29.5	10.5	31.5	8.5	31.5	31.5	8.5	31.5	31.5	
Total Split (%)	10.6%	36.9%	36.9%	13.1%	39.4%	10.6%	39.4%	39.4%	10.6%	39.4%	39.4%	
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5	4.5	4.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	5.5	4.5	5.5	5.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max	
Act Effct Green (s)	4.1	13.5	13.5	5.5	12.5	4.1	26.6	26.6	4.1	30.6	30.6	
Actuated g/C Ratio	0.06	0.21	0.21	0.09	0.20	0.06	0.42	0.42	0.06	0.48	0.48	
v/c Ratio	0.48	0.13	0.22	0.26	0.62	0.35	0.75	0.08	0.58	0.54	0.03	
Control Delay	50.7	21.7	0.9	35.4	19.0	42.1	22.7	0.2	44.2	17.0	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	50.7	21.7	0.9	35.4	19.0	42.1	22.7	0.2	44.2	17.0	0.1	
LOS	D	C	A	D	B	D	C	A	D	B	A	
Approach Delay		16.5			20.2		22.2			20.0		
Approach LOS		B			C		C			B		

Intersection Summary

Cycle Length: 80  
 Actuated Cycle Length: 63.7  
 Natural Cycle: 80  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.75  
 Intersection Signal Delay: 20.7  
 Intersection LOS: C  
 Intersection Capacity Utilization 69.8%  
 ICU Level of Service C  
 Analysis Period (min) 15

























Splits and Phases: 6: Heacock Street & Meyer Drive/John F. Kennedy Drive



HCM 6th Signalized Intersection Summary  
 6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	45	120	38	267	236	37	1084	60	127	861	24
Future Volume (veh/h)	48	45	120	38	267	236	37	1084	60	127	861	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.97	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1648	1767	1811	1796	1841	1841	1781	1811	1767	1856	1767	1618
Adj Flow Rate, veh/h	50	47	89	40	278	210	39	1129	52	132	897	15
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	17	9	6	7	4	4	8	6	9	3	9	19
Cap, veh/h	58	362	314	54	392	286	52	1411	567	205	1532	587
Arrive On Green	0.04	0.20	0.20	0.03	0.20	0.20	0.03	0.39	0.39	0.06	0.43	0.43
Sat Flow, veh/h	1570	1767	1535	1711	1971	1438	1697	3622	1455	3428	3533	1354
Grp Volume(v), veh/h	50	47	89	40	259	229	39	1129	52	132	897	15
Grp Sat Flow(s),veh/h/ln	1570	1767	1535	1711	1841	1569	1697	1811	1455	1714	1767	1354
Q Serve(g_s), s	2.1	1.5	3.3	1.5	8.8	9.1	1.5	18.5	1.1	2.5	12.9	0.4
Cycle Q Clear(g_c), s	2.1	1.5	3.3	1.5	8.8	9.1	1.5	18.5	1.1	2.5	12.9	0.4
Prop In Lane	1.00		1.00	1.00		0.92	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	58	362	314	54	366	312	52	1411	567	205	1532	587
V/C Ratio(X)	0.86	0.13	0.28	0.75	0.71	0.73	0.75	0.80	0.09	0.64	0.59	0.03
Avail Cap(c_a), veh/h	94	635	552	154	717	611	102	1411	567	205	1532	587
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.0	21.7	22.4	32.1	24.9	25.1	32.1	18.1	6.4	30.7	14.4	10.8
Incr Delay (d2), s/veh	19.4	0.1	0.2	7.4	0.9	1.3	7.6	4.9	0.3	5.2	1.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.6	1.1	0.7	3.5	3.1	0.7	7.1	0.5	1.1	4.4	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.4	21.7	22.6	39.5	25.9	26.4	39.7	22.9	6.7	35.9	16.0	10.9
LnGrp LOS	D	C	C	D	C	C	D	C	A	D	B	B
Approach Vol, veh/h		186			528			1220			1044	
Approach Delay, s/veh		30.1			27.1			22.8			18.5	
Approach LOS		C			C			C			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.5	31.5	6.6	19.2	6.6	34.4	7.0	18.8				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	4.0	* 26	6.0	24.0	4.0	26.0	4.0	26.0				
Max Q Clear Time (g_c+I1), s	4.5	20.5	3.5	5.3	3.5	14.9	4.1	11.1				
Green Ext Time (p_c), s	0.0	2.5	0.0	0.2	0.0	2.9	0.0	1.5				

Intersection Summary

HCM 6th Ctrl Delay	22.5
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
11: Heacock Street & Cardinal Avenue

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	12	13	1151	61	52	974
Future Volume (vph)	12	13	1151	61	52	974
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	26.6	26.6	21.6	21.6	9.6	16.2
Total Split (s)	27.0	27.0	76.0	76.0	17.0	93.0
Total Split (%)	22.5%	22.5%	63.3%	63.3%	14.2%	77.5%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	13.1	13.1	44.1	44.1	7.6	50.9
Actuated g/C Ratio	0.22	0.22	0.75	0.75	0.13	0.87
v/c Ratio	0.04	0.04	0.47	0.05	0.25	0.38
Control Delay	26.9	14.5	9.0	3.0	34.1	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.9	14.5	9.0	3.0	34.1	4.0
LOS	C	B	A	A	C	A
Approach Delay	20.5		8.7			5.5
Approach LOS	C		A			A

Intersection Summary













Cycle Length: 120	
Actuated Cycle Length: 58.5	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.47	
Intersection Signal Delay: 7.4	Intersection LOS: A
Intersection Capacity Utilization 55.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 11: Heacock Street & Cardinal Avenue





HCM 6th Signalized Intersection Summary  
 11: Heacock Street & Cardinal Avenue

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	12	13	1151	61	52	974
Future Volume (veh/h)	12	13	1151	61	52	974
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1559	1441	1781	1870	1781	1693
Adj Flow Rate, veh/h	13	14	1251	66	57	1059
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	23	31	8	2	8	14
Cap, veh/h	94	78	1936	861	96	2252
Arrive On Green	0.06	0.06	0.54	0.54	0.06	0.70
Sat Flow, veh/h	1485	1221	3563	1585	1697	3300
Grp Volume(v), veh/h	13	14	1251	66	57	1059
Grp Sat Flow(s),veh/h/ln	1485	1221	1781	1585	1697	1608
Q Serve(g_s), s	0.4	0.5	11.3	0.9	1.5	6.7
Cycle Q Clear(g_c), s	0.4	0.5	11.3	0.9	1.5	6.7
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	94	78	1936	861	96	2252
V/C Ratio(X)	0.14	0.18	0.65	0.08	0.60	0.47
Avail Cap(c_a), veh/h	728	598	5565	2476	460	6106
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.2	20.3	7.3	5.0	21.1	3.1
Incr Delay (d2), s/veh	0.7	1.1	0.4	0.0	2.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.2	2.0	0.1	0.5	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	20.9	21.4	7.7	5.0	23.3	3.2
LnGrp LOS	C	C	A	A	C	A
Approach Vol, veh/h	27		1317			1116
Approach Delay, s/veh	21.1		7.6			4.2
Approach LOS	C		A			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	7.2	31.0			38.2	7.5
Change Period (Y+Rc), s	4.6	* 6.2			6.2	4.6
Max Green Setting (Gmax), s	12.4	* 71			86.8	22.4
Max Q Clear Time (g_c+I1), s	3.5	13.3			8.7	2.5
Green Ext Time (p_c), s	0.0	11.5			8.7	0.0

Intersection Summary

HCM 6th Ctrl Delay	6.2
HCM 6th LOS	A

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Timings  
12: Heacock Street & San Michele Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	31	82	5	39	341	822	2	68	515	129	52
Future Volume (vph)	31	82	5	39	341	822	2	68	515	129	52
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	1	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	4.0	5.0	4.0	5.0	5.0
Minimum Split (s)	9.5	30.5	30.5	8.5	30.5	8.5	8.5	34.5	8.5	34.5	34.5
Total Split (s)	10.0	36.4	36.4	11.6	38.0	35.0	8.5	37.0	35.0	63.5	63.5
Total Split (%)	8.3%	30.3%	30.3%	9.7%	31.7%	29.2%	7.1%	30.8%	29.2%	52.9%	52.9%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	3.5	4.5	3.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	4.5	5.5	4.5	5.5	5.5
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	None	Max	Max
Act Effct Green (s)	5.3	16.1	16.1	12.8	23.5	53.7	4.1	32.1	24.6	59.9	59.9
Actuated g/C Ratio	0.05	0.16	0.16	0.13	0.23	0.53	0.04	0.32	0.24	0.59	0.59
v/c Ratio	0.34	0.31	0.01	0.19	0.85	0.68	0.03	0.08	0.66	0.13	0.05
Control Delay	61.5	44.5	0.0	43.9	56.0	6.3	55.0	25.7	40.5	12.7	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.5	44.5	0.0	43.9	56.0	6.3	55.0	25.7	40.5	12.7	0.4
LOS	E	D	A	D	E	A	D	C	D	B	A
Approach Delay		47.3			21.6			26.4		32.3	
Approach LOS		D			C			C		C	

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 101.5	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay: 26.8	Intersection LOS: C
Intersection Capacity Utilization 70.5%	ICU Level of Service C
Analysis Period (min) 15	

























Splits and Phases: 12: Heacock Street & San Michele Road



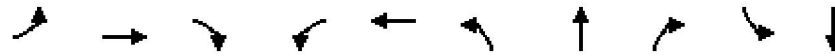
HCM 6th Signalized Intersection Summary  
 12: Heacock Street & San Michele Road

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	82	5	39	341	822	2	68	10	515	129	52
Future Volume (veh/h)	31	82	5	39	341	822	2	68	10	515	129	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1856	1366	1796	1900	1856	1900	1856	1856	1811	1826	1856
Adj Flow Rate, veh/h	34	89	5	42	371	676	2	74	11	560	140	57
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	3	36	7	0	3	0	3	3	6	5	3
Cap, veh/h	43	128	80	312	432	745	4	931	135	824	1013	873
Arrive On Green	0.02	0.07	0.07	0.18	0.23	0.23	0.00	0.30	0.30	0.25	0.56	0.56
Sat Flow, veh/h	1810	1856	1158	1711	1900	1572	1810	3088	449	3346	1826	1572
Grp Volume(v), veh/h	34	89	5	42	371	676	2	42	43	560	140	57
Grp Sat Flow(s),veh/h/ln	1810	1856	1158	1711	1900	1572	1810	1763	1775	1673	1826	1572
Q Serve(g_s), s	2.0	4.9	0.4	2.1	19.6	15.8	0.1	1.8	1.8	15.8	3.9	1.3
Cycle Q Clear(g_c), s	2.0	4.9	0.4	2.1	19.6	15.8	0.1	1.8	1.8	15.8	3.9	1.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.25	1.00		1.00
Lane Grp Cap(c), veh/h	43	128	80	312	432	745	4	531	535	824	1013	873
V/C Ratio(X)	0.78	0.70	0.06	0.13	0.86	0.91	0.51	0.08	0.08	0.68	0.14	0.07
Avail Cap(c_a), veh/h	95	549	342	312	591	876	69	531	535	977	1013	873
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.7	47.6	36.4	35.8	38.8	25.4	52.1	26.1	26.1	35.7	11.2	5.7
Incr Delay (d2), s/veh	10.8	2.6	0.1	0.1	7.2	10.9	33.6	0.3	0.3	1.0	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	2.4	0.1	0.9	9.5	16.1	0.1	0.7	0.8	6.2	1.5	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.5	50.1	36.6	35.9	45.9	36.3	85.7	26.4	26.4	36.7	11.5	5.9
LnGrp LOS	E	D	D	D	D	D	F	C	C	D	B	A
Approach Vol, veh/h		128			1089			87			757	
Approach Delay, s/veh		52.6			39.6			27.8			29.7	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	31.2	37.0	23.6	12.7	4.7	63.5	7.0	29.3				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	30.5	* 32	7.1	30.9	4.0	58.0	5.5	32.5				
Max Q Clear Time (g_c+I1), s	17.8	3.8	4.1	6.9	2.1	5.9	4.0	21.6				
Green Ext Time (p_c), s	0.9	0.2	0.0	0.3	0.0	0.5	0.0	2.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			36.2									
HCM 6th LOS			D									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings  
14: Indian Street & San Michele Road

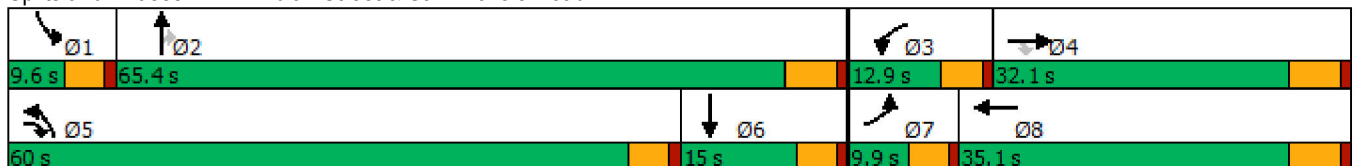


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↘	↑↑	↗↗	↘↘	↑↑	↗↗	↑	↗	↘	↑↑
Traffic Volume (vph)	15	213	392	186	909	1599	217	236	6	141
Future Volume (vph)	15	213	392	186	909	1599	217	236	6	141
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	5	3	8	5	2		1	6
Permitted Phases			4					2		
Detector Phase	7	4	5	3	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	10.0	5.0	8.8
Minimum Split (s)	9.6	31.8	9.6	9.6	31.8	9.6	32.8	32.8	9.6	14.6
Total Split (s)	9.9	32.1	60.0	12.9	35.1	60.0	65.4	65.4	9.6	15.0
Total Split (%)	8.3%	26.8%	50.0%	10.8%	29.3%	50.0%	54.5%	54.5%	8.0%	12.5%
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	3.6	4.8	4.8	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	4.6	5.8	5.8	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None	None
Act Effct Green (s)	5.2	20.3	81.6	8.2	29.4	55.5	66.7	66.7	5.0	9.6
Actuated g/C Ratio	0.05	0.18	0.72	0.07	0.26	0.49	0.59	0.59	0.04	0.08
v/c Ratio	0.27	0.44	0.16	0.77	1.07	0.96	0.23	0.23	0.08	0.58
Control Delay	66.0	44.0	4.3	72.0	89.8	42.6	13.2	2.3	56.8	57.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.0	44.0	4.3	72.0	89.8	42.6	13.2	2.3	56.8	57.0
LOS	E	D	A	E	F	D	B	A	E	E
Approach Delay		19.4			86.8		34.9			57.0
Approach LOS		B			F		C			E

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 113.3  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.07  
 Intersection Signal Delay: 47.9  
 Intersection LOS: D  
 Intersection Capacity Utilization 98.9%  
 ICU Level of Service F  
 Analysis Period (min) 15
























Splits and Phases: 14: Indian Street & San Michele Road



HCM 6th Signalized Intersection Summary  
 14: Indian Street & San Michele Road

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	213	392	186	909	11	1599	217	236	6	141	14
Future Volume (veh/h)	15	213	392	186	909	11	1599	217	236	6	141	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.99	1.00		0.88
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1218	1470	1870	1826	1826	1826	1856	1752	1767	1900	1707	1707
Adj Flow Rate, veh/h	16	232	366	202	988	5	1738	236	175	7	153	12
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	46	29	2	5	5	5	3	10	9	0	13	13
Cap, veh/h	20	582	2137	248	914	5	1683	952	803	16	234	18
Arrive On Green	0.02	0.30	0.30	0.07	0.38	0.25	0.71	0.54	0.54	0.01	0.08	0.08
Sat Flow, veh/h	1160	2940	3170	3478	3630	18	3534	1752	1478	1810	3095	238
Grp Volume(v), veh/h	16	232	366	202	497	496	1738	236	175	7	83	82
Grp Sat Flow(s),veh/h/ln	1160	1470	1585	1739	1826	1822	1767	1752	1478	1810	1707	1626
Q Serve(g_s), s	1.6	7.3	4.6	6.7	29.3	29.3	55.4	8.3	7.1	0.4	5.5	5.7
Cycle Q Clear(g_c), s	1.6	7.3	4.6	6.7	29.3	29.3	55.4	8.3	7.1	0.4	5.5	5.7
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	1.00		0.15
Lane Grp Cap(c), veh/h	20	582	2137	248	460	459	1683	952	803	16	129	123
V/C Ratio(X)	0.79	0.40	0.17	0.81	1.08	1.08	1.03	0.25	0.22	0.44	0.64	0.67
Avail Cap(c_a), veh/h	53	665	2227	248	460	459	1683	952	803	78	153	145
HCM Platoon Ratio	1.00	1.50	1.50	1.00	1.50	1.00	1.50	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.9	35.4	6.1	53.2	36.2	36.3	16.6	14.0	13.8	57.4	52.2	52.3
Incr Delay (d2), s/veh	22.4	0.2	0.0	17.3	65.4	65.4	30.8	0.1	0.1	7.1	4.0	5.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	2.5	1.2	3.4	19.3	19.2	17.7	3.0	2.2	0.2	2.4	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	79.3	35.5	6.1	70.5	101.6	101.7	47.4	14.1	13.8	64.5	56.2	57.8
LnGrp LOS	E	D	A	E	F	F	F	B	B	E	E	E
Approach Vol, veh/h		614			1195			2149			172	
Approach Delay, s/veh		19.1			96.4			41.0			57.3	
Approach LOS		B			F			D			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.6	69.0	12.9	28.8	60.0	14.6	6.6	35.1				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	* 5.8	4.6	5.8				
Max Green Setting (Gmax), s	5.0	59.6	8.3	26.3	55.4	* 10	5.3	29.3				
Max Q Clear Time (g_c+I1), s	2.4	10.3	8.7	9.3	57.4	7.7	3.6	31.3				
Green Ext Time (p_c), s	0.0	1.0	0.0	1.6	0.0	0.1	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	54.4
HCM 6th LOS	D

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
15: Indian Street & Nandina Avenue



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↑	↗	↖	↗	↖↗	↖↗	↖	↖↗
Traffic Volume (vph)	8	35	169	36	44	369	1824	13	518
Future Volume (vph)	8	35	169	36	44	369	1824	13	518
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	5	3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	5	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	29.8	9.6	9.6	29.8	9.6	26.8	9.6	26.8
Total Split (s)	9.7	29.9	29.0	10.0	30.2	29.0	70.4	9.7	51.1
Total Split (%)	8.1%	24.9%	24.2%	8.3%	25.2%	24.2%	58.7%	8.1%	42.6%
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	5.2	12.6	30.9	5.5	16.4	16.6	68.3	5.2	48.7
Actuated g/C Ratio	0.05	0.13	0.32	0.06	0.17	0.17	0.71	0.05	0.51
v/c Ratio	0.09	0.22	0.36	0.44	0.29	0.77	0.80	0.18	0.32
Control Delay	53.2	44.3	6.0	66.3	32.0	49.9	18.3	56.7	18.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.2	44.3	6.0	66.3	32.0	49.9	18.3	56.7	18.1
LOS	D	D	A	E	C	D	B	E	B
Approach Delay		14.2			43.8		23.4		19.0
Approach LOS		B			D		C		B

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 95.7	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay: 22.7	Intersection LOS: C
Intersection Capacity Utilization 79.2%	ICU Level of Service D
Analysis Period (min) 15	























Splits and Phases: 15: Indian Street & Nandina Avenue

↖ Ø1 9.7 s	↑ Ø2 70.4 s	↖ Ø3 10 s	→ Ø4 29.9 s
↗ Ø5 29 s	↓ Ø6 51.1 s	↗ Ø7 9.7 s	← Ø8 30.2 s

HCM 6th Signalized Intersection Summary  
 15: Indian Street & Nandina Avenue

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	35	169	36	44	24	369	1824	76	13	518	27
Future Volume (veh/h)	8	35	169	36	44	24	369	1824	76	13	518	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1248	1100	1559	1441	1441	1559	1841	1841	1411	1811	1811
Adj Flow Rate, veh/h	9	38	184	39	48	26	401	1983	83	14	563	29
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	44	54	23	31	31	23	4	4	33	6	6
Cap, veh/h	20	228	318	47	179	97	457	2041	85	21	1501	77
Arrive On Green	0.01	0.18	0.18	0.03	0.20	0.20	0.16	0.58	0.58	0.02	0.44	0.44
Sat Flow, veh/h	1810	1248	932	1485	879	476	2881	3506	145	1344	3415	176
Grp Volume(v), veh/h	9	38	184	39	0	74	401	1033	1033	14	298	294
Grp Sat Flow(s),veh/h/ln	1810	1248	932	1485	0	1355	1440	1841	1811	1344	1811	1779
Q Serve(g_s), s	0.5	2.8	18.0	2.9	0.0	5.1	15.1	59.2	61.5	1.1	12.2	12.3
Cycle Q Clear(g_c), s	0.5	2.8	18.0	2.9	0.0	5.1	15.1	59.2	61.5	1.1	12.2	12.3
Prop In Lane	1.00		1.00	1.00		0.35	1.00		0.08	1.00		0.10
Lane Grp Cap(c), veh/h	20	228	318	47	0	275	457	1072	1054	21	796	782
V/C Ratio(X)	0.46	0.17	0.58	0.83	0.00	0.27	0.88	0.96	0.98	0.66	0.37	0.38
Avail Cap(c_a), veh/h	83	271	351	72	0	298	634	1073	1056	62	796	782
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.5	38.2	30.0	53.4	0.0	37.2	45.6	22.0	22.5	54.2	20.8	20.9
Incr Delay (d2), s/veh	6.0	0.3	2.0	22.4	0.0	0.5	8.0	19.3	22.8	12.2	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.9	4.0	1.3	0.0	1.7	5.7	27.1	28.5	0.4	4.9	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.4	38.5	31.9	75.7	0.0	37.7	53.5	41.3	45.3	66.4	21.1	21.1
LnGrp LOS	E	D	C	E	A	D	D	D	D	E	C	C
Approach Vol, veh/h		231			113			2467			606	
Approach Delay, s/veh		34.1			50.8			45.0			22.2	
Approach LOS		C			D			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.4	70.3	8.1	26.0	22.2	54.5	5.8	28.3				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	5.1	64.6	5.4	24.1	24.4	45.3	5.1	24.4				
Max Q Clear Time (g_c+I1), s	3.1	63.5	4.9	20.0	17.1	14.3	2.5	7.1				
Green Ext Time (p_c), s	0.0	1.0	0.0	0.3	0.5	3.3	0.0	0.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			40.4									
HCM 6th LOS			D									

Timings  
16: Indian Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

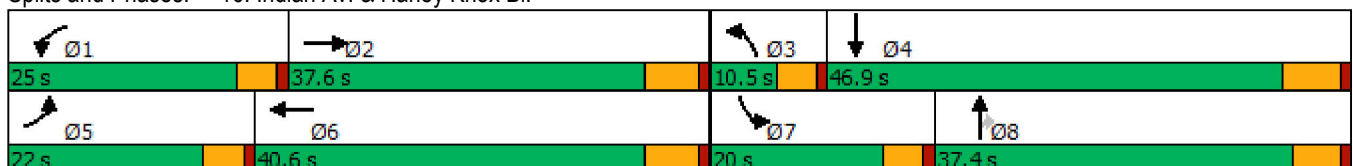
11/10/2020

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	167	276	157	541	58	298	82	102	191
Future Volume (vph)	167	276	157	541	58	298	82	102	191
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	5	2	1	6	3	8		7	4
Permitted Phases							8		
Detector Phase	5	2	1	6	3	8	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2
Total Split (s)	22.0	37.6	25.0	40.6	10.5	37.4	37.4	20.0	46.9
Total Split (%)	18.3%	31.3%	20.8%	33.8%	8.8%	31.2%	31.2%	16.7%	39.1%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.4	4.4	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.4	5.4	4.6	6.2
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	11.7	20.8	12.8	21.9	6.0	16.2	16.2	10.0	19.0
Actuated g/C Ratio	0.15	0.26	0.16	0.28	0.08	0.21	0.21	0.13	0.24
v/c Ratio	0.56	0.28	0.59	0.64	0.26	0.47	0.21	0.49	0.42
Control Delay	43.2	23.9	44.3	25.5	45.5	32.3	1.5	45.8	19.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.2	23.9	44.3	25.5	45.5	32.3	1.5	45.8	19.7
LOS	D	C	D	C	D	C	A	D	B
Approach Delay		30.4		28.5		28.3			26.4
Approach LOS		C		C		C			C

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 78.7  
 Natural Cycle: 100  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.64  
 Intersection Signal Delay: 28.5  
 Intersection LOS: C  
 Intersection Capacity Utilization 53.0%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 16: Indian Av. & Harley Knox Bl.




































HCM 6th Signalized Intersection Summary  
 16: Indian Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  		 	  		 	 			 	
Traffic Volume (veh/h)	167	276	56	157	541	302	58	298	82	102	191	109
Future Volume (veh/h)	167	276	56	157	541	302	58	298	82	102	191	109
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1011	1811	1811	1870	1856	1856	1737	1781	1796	1885	1811	1811
Adj Flow Rate, veh/h	182	300	52	171	588	308	63	324	82	111	208	69
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	60	6	6	2	3	3	11	8	7	1	6	6
Cap, veh/h	233	1271	213	216	996	464	171	543	244	144	479	154
Arrive On Green	0.12	0.30	0.30	0.12	0.30	0.30	0.05	0.16	0.16	0.08	0.19	0.19
Sat Flow, veh/h	1868	4263	716	1781	3377	1572	3209	3385	1522	1795	2558	825
Grp Volume(v), veh/h	182	230	122	171	588	308	63	324	82	111	138	139
Grp Sat Flow(s),veh/h/ln	934	1648	1682	1781	1689	1572	1605	1692	1522	1795	1721	1663
Q Serve(g_s), s	5.9	3.3	3.4	5.8	9.3	10.7	1.2	5.5	3.0	3.8	4.4	4.6
Cycle Q Clear(g_c), s	5.9	3.3	3.4	5.8	9.3	10.7	1.2	5.5	3.0	3.8	4.4	4.6
Prop In Lane	1.00		0.43	1.00		1.00	1.00		1.00	1.00		0.50
Lane Grp Cap(c), veh/h	233	983	502	216	996	464	171	543	244	144	322	311
V/C Ratio(X)	0.78	0.23	0.24	0.79	0.59	0.66	0.37	0.60	0.34	0.77	0.43	0.45
Avail Cap(c_a), veh/h	521	1680	858	583	1884	877	304	1736	781	443	1123	1085
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.5	16.5	16.6	26.6	18.8	19.3	28.5	24.3	23.2	28.1	22.4	22.5
Incr Delay (d2), s/veh	2.2	0.1	0.2	2.5	0.6	1.6	0.5	1.1	0.8	3.3	0.9	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	1.0	1.1	2.4	3.2	3.5	0.4	2.0	1.0	1.6	1.7	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.7	16.6	16.8	29.1	19.3	20.9	29.0	25.4	24.0	31.4	23.3	23.5
LnGrp LOS	C	B	B	C	B	C	C	C	C	C	C	C
Approach Vol, veh/h		534			1067			469			388	
Approach Delay, s/veh		20.8			21.4			25.6			25.7	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.2	24.4	7.9	17.9	12.4	24.2	9.6	16.2				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	20.4	31.8	5.9	40.7	17.4	34.8	15.4	* 32				
Max Q Clear Time (g_c+I1), s	7.8	5.4	3.2	6.6	7.9	12.7	5.8	7.5				
Green Ext Time (p_c), s	0.2	1.9	0.0	1.5	0.2	5.7	0.1	2.1				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				22.7								
HCM 6th LOS				C								
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												



Timings

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

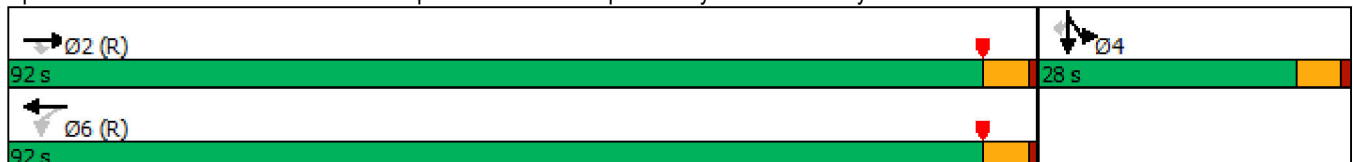


Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations	↑↑	↑	←←	↑	←	←	↑
Traffic Volume (vph)	875	96	644	400	544	0	226
Future Volume (vph)	875	96	644	400	544	0	226
Turn Type	NA	Perm	Perm	NA	Split	NA	Perm
Protected Phases	2			6	4	4	
Permitted Phases		2	6				4
Detector Phase	2	2	6	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	25.0	25.0	10.0	10.0	10.0
Total Split (s)	92.0	92.0	92.0	92.0	28.0	28.0	28.0
Total Split (%)	76.7%	76.7%	76.7%	76.7%	23.3%	23.3%	23.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None	None
Act Effct Green (s)	87.0	87.0	87.0	87.0	23.0	23.0	23.0
Actuated g/C Ratio	0.72	0.72	0.72	0.72	0.19	0.19	0.19
v/c Ratio	0.38	0.09	1.00	0.33	1.05	1.06	0.51
Control Delay	6.8	1.1	62.3	3.0	115.5	116.4	9.2
Queue Delay	0.3	0.0	0.0	0.5	13.9	14.1	0.0
Total Delay	7.1	1.1	62.3	3.6	129.4	130.5	9.2
LOS	A	A	E	A	F	F	A
Approach Delay	6.5			39.8		94.4	
Approach LOS	A			D		F	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection  
 Natural Cycle: 100  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.06  
 Intersection Signal Delay: 43.3  
 Intersection LOS: D  
 Intersection Capacity Utilization 95.6%  
 ICU Level of Service F  
 Analysis Period (min) 15

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

11/10/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑↑	↑					↑	↑	↑
Traffic Volume (veh/h)	0	875	96	644	400	0	0	0	0	544	0	226
Future Volume (veh/h)	0	875	96	644	400	0	0	0	0	544	0	226
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1826	1885	1841	1826	0				1648	1900	1767
Adj Flow Rate, veh/h	0	951	104	700	435	0				591	0	186
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	5	1	4	5	0				17	0	9
Cap, veh/h	0	2515	1158	754	1324	0				602	0	287
Arrive On Green	0.00	0.73	0.73	1.00	1.00	0.00				0.19	0.00	0.19
Sat Flow, veh/h	0	3561	1597	1021	1826	0				3139	0	1497
Grp Volume(v), veh/h	0	951	104	700	435	0				591	0	186
Grp Sat Flow(s),veh/h/ln	0	1735	1597	511	1826	0				1570	0	1497
Q Serve(g_s), s	0.0	12.5	2.3	74.5	0.0	0.0				22.5	0.0	13.8
Cycle Q Clear(g_c), s	0.0	12.5	2.3	87.0	0.0	0.0				22.5	0.0	13.8
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2515	1158	754	1324	0				602	0	287
V/C Ratio(X)	0.00	0.38	0.09	0.93	0.33	0.00				0.98	0.00	0.65
Avail Cap(c_a), veh/h	0	2515	1158	754	1324	0				602	0	287
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.57	0.57	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	6.3	4.9	9.7	0.0	0.0				48.3	0.0	44.8
Incr Delay (d2), s/veh	0.0	0.4	0.2	12.6	0.4	0.0				32.1	0.0	5.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.8	0.7	1.3	0.1	0.0				11.2	0.0	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	6.7	5.0	22.4	0.4	0.0				80.4	0.0	49.8
LnGrp LOS	A	A	A	C	A	A				F	A	D
Approach Vol, veh/h		1055			1135							777
Approach Delay, s/veh		6.5			13.9							73.1
Approach LOS		A			B							E
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		92.0		28.0		92.0						
Change Period (Y+Rc), s		5.0		5.0		5.0						
Max Green Setting (Gmax), s		87.0		23.0		87.0						
Max Q Clear Time (g_c+I1), s		14.5		24.5		89.0						
Green Ext Time (p_c), s		4.6		0.0		0.0						

Intersection Summary

HCM 6th Ctrl Delay	26.8
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Timings

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

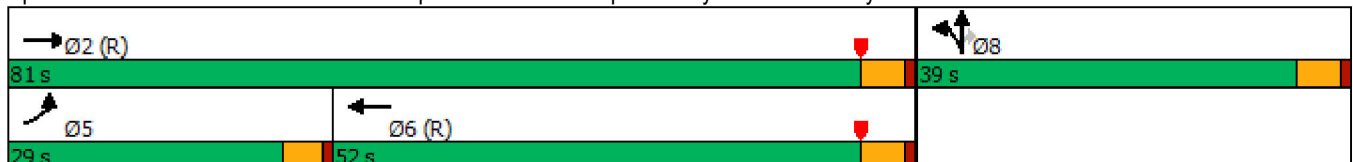


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations	↔↔	↑↑	↑↑	↔	↔	↔
Traffic Volume (vph)	479	940	996	1145	4	344
Future Volume (vph)	479	940	996	1145	4	344
Turn Type	Prot	NA	NA	Free	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				Free		8
Detector Phase	5	2	6		8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	9.5	26.0	24.0		10.0	10.0
Total Split (s)	29.0	81.0	52.0		39.0	39.0
Total Split (%)	24.2%	67.5%	43.3%		32.5%	32.5%
Yellow Time (s)	3.5	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0		5.0	5.0
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	C-Max	C-Max		Max	Max
Act Effct Green (s)	21.9	76.0	49.6	120.0	34.0	34.0
Actuated g/C Ratio	0.18	0.63	0.41	1.00	0.28	0.28
v/c Ratio	0.85	0.50	0.76	0.85	0.12	0.77
Control Delay	54.0	26.6	34.7	6.5	32.8	37.1
Queue Delay	0.1	2.8	0.0	0.0	0.0	0.0
Total Delay	54.1	29.4	34.7	6.5	32.8	37.1
LOS	D	C	C	A	C	D
Approach Delay		37.7	19.6		36.5	
Approach LOS		D	B		D	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 70  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.85  
 Intersection Signal Delay: 27.8  
 Intersection LOS: C  
 Intersection Capacity Utilization 95.6%  
 ICU Level of Service F  
 Analysis Period (min) 15

Splits and Phases: 2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

11/10/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑			↑↑	↔		↑	↔			
Traffic Volume (veh/h)	479	940	0	0	996	1145	48	4	344	0	0	0
Future Volume (veh/h)	479	940	0	0	996	1145	48	4	344	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1841	1722	0	0	1841	1752	1663	1900	1663			
Adj Flow Rate, veh/h	521	1022	0	0	1083	0	52	4	309			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	4	12	0	0	4	10	16	0	16			
Cap, veh/h	571	2072	0	0	1497		478	37	399			
Arrive On Green	0.34	1.00	0.00	0.00	0.43	0.00	0.28	0.28	0.28			
Sat Flow, veh/h	3401	3358	0	0	3589	1485	1686	130	1409			
Grp Volume(v), veh/h	521	1022	0	0	1083	0	56	0	309			
Grp Sat Flow(s),veh/h/ln	1700	1636	0	0	1749	1485	1816	0	1409			
Q Serve(g_s), s	17.6	0.0	0.0	0.0	30.8	0.0	2.7	0.0	24.2			
Cycle Q Clear(g_c), s	17.6	0.0	0.0	0.0	30.8	0.0	2.7	0.0	24.2			
Prop In Lane	1.00		0.00	0.00		1.00	0.93		1.00			
Lane Grp Cap(c), veh/h	571	2072	0	0	1497		514	0	399			
V/C Ratio(X)	0.91	0.49	0.00	0.00	0.72		0.11	0.00	0.77			
Avail Cap(c_a), veh/h	694	2072	0	0	1497		514	0	399			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.82	0.82	0.00	0.00	0.61	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	39.0	0.0	0.0	0.0	28.4	0.0	31.8	0.0	39.5			
Incr Delay (d2), s/veh	11.3	0.7	0.0	0.0	1.9	0.0	0.4	0.0	13.6			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	6.6	0.2	0.0	0.0	12.5	0.0	1.2	0.0	9.6			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.4	0.7	0.0	0.0	30.3	0.0	32.2	0.0	53.1			
LnGrp LOS	D	A	A	A	C		C	A	D			
Approach Vol, veh/h		1543			1083	A		365				
Approach Delay, s/veh		17.5			30.3			49.9				
Approach LOS		B			C			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		81.0			24.6	56.4		39.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		76.0			24.5	47.0		34.0				
Max Q Clear Time (g_c+I1), s		2.0			19.6	32.8		26.2				
Green Ext Time (p_c), s		5.0			0.5	4.2		0.8				

Intersection Summary

HCM 6th Ctrl Delay	26.1
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Timings  
5: Heacock Street & Cactus Avenue

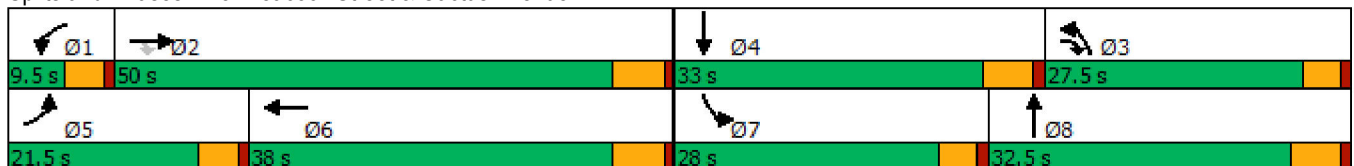


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↵	↑↑↑	↵	↵	↑↑↑	↵↵	↑↵	↵	↑↑
Traffic Volume (vph)	244	2146	1379	28	956	835	675	184	746
Future Volume (vph)	244	2146	1379	28	956	835	675	184	746
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	3	1	6	3	8	7	4
Permitted Phases			2						
Detector Phase	5	2	3	1	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.5	30.5	9.5	9.5	30.5	9.5	30.5	9.5	30.5
Total Split (s)	21.5	50.0	27.5	9.5	38.0	27.5	32.5	28.0	33.0
Total Split (%)	17.9%	41.7%	22.9%	7.9%	31.7%	22.9%	27.1%	23.3%	27.5%
Yellow Time (s)	3.5	4.5	3.5	3.5	4.5	3.5	4.5	3.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-2.0	0.0	0.0	-2.0	-2.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.5	3.5	4.5	4.5	3.5	2.5	4.5	3.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None
Act Effct Green (s)	17.5	47.2	69.3	5.0	31.8	25.0	35.0	17.1	28.1
Actuated g/C Ratio	0.15	0.41	0.60	0.04	0.27	0.21	0.30	0.15	0.24
v/c Ratio	0.89	0.98	1.32	0.38	0.73	1.13	0.69	0.69	0.94
Control Delay	80.8	48.6	170.9	69.6	40.7	116.3	40.9	60.1	62.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.8	48.6	170.9	69.6	40.7	116.3	40.9	60.1	62.1
LOS	F	D	F	E	D	F	D	E	E
Approach Delay		95.4			41.5		80.7		61.8
Approach LOS		F			D		F		E

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 116.4  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.32  
 Intersection Signal Delay: 79.8  
 Intersection LOS: E  
 Intersection Capacity Utilization 123.7%  
 ICU Level of Service H  
 Analysis Period (min) 15





























Splits and Phases: 5: Heacock Street & Cactus Avenue



HCM 6th Signalized Intersection Summary  
5: Heacock Street & Cactus Avenue

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 			 	
Traffic Volume (veh/h)	244	2146	1379	28	956	132	835	675	72	184	746	61
Future Volume (veh/h)	244	2146	1379	28	956	132	835	675	72	184	746	61
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1811	1826	1885	1885	1811	1870	1870	1900	1856	1856
Adj Flow Rate, veh/h	254	2235	733	29	996	76	870	703	39	192	777	17
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	1	6	5	1	1	6	2	2	0	3	3
Cap, veh/h	275	2217	872	45	1425	109	727	1113	62	235	855	19
Arrive On Green	0.23	0.59	0.38	0.03	0.41	0.26	0.32	0.48	0.31	0.13	0.24	0.23
Sat Flow, veh/h	1810	5656	1531	1739	5189	395	3450	3507	194	1810	3617	79
Grp Volume(v), veh/h	254	2235	733	29	723	349	870	375	367	192	399	395
Grp Sat Flow(s),veh/h/ln	1810	1885	1531	1739	1885	1814	1725	1870	1831	1810	1856	1841
Q Serve(g_s), s	16.3	46.5	13.7	2.0	18.8	19.3	25.0	17.8	18.1	12.3	24.8	24.8
Cycle Q Clear(g_c), s	16.3	46.5	13.7	2.0	18.8	19.3	25.0	17.8	18.1	12.3	24.8	24.8
Prop In Lane	1.00		1.00	1.00		0.22	1.00		0.11	1.00		0.04
Lane Grp Cap(c), veh/h	275	2217	872	45	1035	498	727	594	581	235	439	435
V/C Ratio(X)	0.93	1.01	0.84	0.64	0.70	0.70	1.20	0.63	0.63	0.82	0.91	0.91
Avail Cap(c_a), veh/h	275	2217	872	73	1097	528	727	594	581	374	446	442
HCM Platoon Ratio	1.50	1.50	1.00	1.00	1.50	1.00	1.50	1.50	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.2	24.4	9.9	57.2	30.8	32.7	40.6	25.9	26.8	50.3	44.0	44.1
Incr Delay (d2), s/veh	34.5	21.1	7.0	5.6	1.5	3.1	101.6	1.7	1.7	3.5	21.5	21.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.0	18.5	9.4	0.9	7.3	7.8	19.4	6.7	6.8	5.6	13.6	13.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	79.6	45.6	16.9	62.8	32.3	35.9	142.2	27.5	28.5	53.7	65.5	65.7
LnGrp LOS	E	F	B	E	C	D	F	C	C	D	E	E
Approach Vol, veh/h		3222			1101			1612			986	
Approach Delay, s/veh		41.7			34.2			89.6			63.3	
Approach LOS		D			C			F			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.6	50.0	28.5	32.5	21.5	36.1	18.9	42.2				
Change Period (Y+Rc), s	4.5	5.5	5.5	* 5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	5.0	44.5	23.0	* 28	17.0	32.5	23.5	27.0				
Max Q Clear Time (g_c+I1), s	4.0	48.5	27.0	26.8	18.3	21.3	14.3	20.1				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.3	0.0	3.4	0.2	1.6				

Intersection Summary

HCM 6th Ctrl Delay	54.8
HCM 6th LOS	D

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

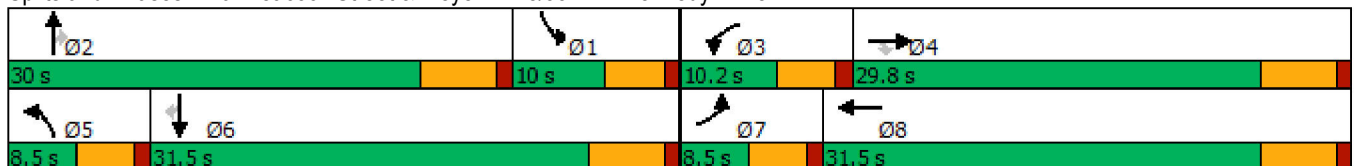
11/10/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	37	239	397	36	99	98	1076	90	362	1258	24	
Future Volume (vph)	37	239	397	36	99	98	1076	90	362	1258	24	
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	7	4		3	8	5	2		1	6		
Permitted Phases			4					2			6	
Detector Phase	7	4	4	3	8	5	2	2	1	6	6	
Switch Phase												
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	
Minimum Split (s)	8.5	23.5	23.5	8.5	31.5	8.5	29.5	29.5	8.5	23.5	23.5	
Total Split (s)	8.5	29.8	29.8	10.2	31.5	8.5	30.0	30.0	10.0	31.5	31.5	
Total Split (%)	10.6%	37.3%	37.3%	12.8%	39.4%	10.6%	37.5%	37.5%	12.5%	39.4%	39.4%	
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5	4.5	4.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	5.5	4.5	5.5	5.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max	
Act Effct Green (s)	4.1	14.4	14.4	5.4	15.3	4.1	25.1	25.1	5.6	26.7	26.7	
Actuated g/C Ratio	0.06	0.22	0.22	0.08	0.23	0.06	0.38	0.38	0.08	0.40	0.40	
v/c Ratio	0.34	0.64	0.73	0.26	0.31	0.91	0.86	0.12	1.31	0.96	0.03	
Control Delay	42.5	31.7	19.0	37.1	8.3	103.8	30.8	0.8	192.1	40.4	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	42.5	31.7	19.0	37.1	8.3	103.8	30.8	0.8	192.1	40.4	0.1	
LOS	D	C	B	D	A	F	C	A	F	D	A	
Approach Delay		24.8			11.5		34.3			73.2		
Approach LOS		C			B		C			E		

Intersection Summary

Cycle Length: 80	
Actuated Cycle Length: 66.5	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.31	
Intersection Signal Delay: 47.1	Intersection LOS: D
Intersection Capacity Utilization 75.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 6: Heacock Street & Meyer Drive/John F. Kennedy Drive





HCM 6th Signalized Intersection Summary  
6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

11/10/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↕		↖	↕	↗	↖↗	↕	↗
Traffic Volume (veh/h)	37	239	397	36	99	194	98	1076	90	362	1258	24
Future Volume (veh/h)	37	239	397	36	99	194	98	1076	90	362	1258	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1900	1900	1885	1885	1900	1811	1900	1841	1796	1900
Adj Flow Rate, veh/h	40	260	296	39	108	151	107	1170	71	393	1367	13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	1	0	0	1	1	0	6	0	4	7	0
Cap, veh/h	56	418	357	55	417	353	106	1301	578	274	1422	638
Arrive On Green	0.03	0.22	0.22	0.03	0.22	0.22	0.06	0.36	0.36	0.08	0.40	0.40
Sat Flow, veh/h	1810	1885	1610	1810	1885	1598	1810	3622	1610	3401	3593	1610
Grp Volume(v), veh/h	40	260	296	39	108	151	107	1170	71	393	1367	13
Grp Sat Flow(s),veh/h/ln	1810	1885	1610	1810	1885	1598	1810	1811	1610	1700	1796	1610
Q Serve(g_s), s	1.5	8.5	12.0	1.5	3.2	5.5	4.0	20.8	1.5	5.5	25.3	0.3
Cycle Q Clear(g_c), s	1.5	8.5	12.0	1.5	3.2	5.5	4.0	20.8	1.5	5.5	25.3	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	56	418	357	55	417	353	106	1301	578	274	1422	638
V/C Ratio(X)	0.71	0.62	0.83	0.70	0.26	0.43	1.01	0.90	0.12	1.43	0.96	0.02
Avail Cap(c_a), veh/h	106	672	574	151	719	609	106	1301	578	274	1422	638
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.7	24.0	25.3	32.7	22.0	22.9	32.1	20.7	7.7	31.3	20.1	12.5
Incr Delay (d2), s/veh	6.0	0.6	2.6	5.9	0.1	0.3	89.6	10.1	0.4	214.5	16.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	3.6	4.3	0.7	1.3	1.9	4.2	9.0	0.7	10.2	11.7	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.7	24.5	27.9	38.7	22.1	23.2	121.6	30.8	8.1	245.8	36.3	12.6
LnGrp LOS	D	C	C	D	C	C	F	C	A	F	D	B
Approach Vol, veh/h		596			298			1348			1773	
Approach Delay, s/veh		27.2			24.8			36.8			82.6	
Approach LOS		C			C			D			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.0	30.0	6.6	20.6	8.5	32.5	6.6	20.6				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	5.5	* 25	5.7	24.3	4.0	26.0	4.0	26.0				
Max Q Clear Time (g_c+I1), s	7.5	22.8	3.5	14.0	6.0	27.3	3.5	7.5				
Green Ext Time (p_c), s	0.0	0.9	0.0	1.1	0.0	0.0	0.0	0.8				

Intersection Summary













HCM 6th Ctrl Delay	54.7
HCM 6th LOS	D

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Timings  
11: Heacock Street & Cardinal Avenue

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	61	57	1086	20	18	1611
Future Volume (vph)	61	57	1086	20	18	1611
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	26.6	26.6	21.6	21.6	9.6	16.2
Total Split (s)	27.0	27.0	82.0	82.0	11.0	93.0
Total Split (%)	22.5%	22.5%	68.3%	68.3%	9.2%	77.5%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	12.6	12.6	52.9	52.9	6.0	55.3
Actuated g/C Ratio	0.17	0.17	0.73	0.73	0.08	0.76
v/c Ratio	0.21	0.18	0.46	0.02	0.14	0.70
Control Delay	33.1	10.7	7.7	3.2	41.9	8.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.1	10.7	7.7	3.2	41.9	8.9
LOS	C	B	A	A	D	A
Approach Delay	22.2		7.6			9.2
Approach LOS	C		A			A













Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 72.5	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.70	
Intersection Signal Delay: 9.1	Intersection LOS: A
Intersection Capacity Utilization 61.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 11: Heacock Street & Cardinal Avenue



HCM 6th Signalized Intersection Summary  
 11: Heacock Street & Cardinal Avenue

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	61	57	1086	20	18	1611
Future Volume (veh/h)	61	57	1086	20	18	1611
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1752	1781	1693	1781	1752
Adj Flow Rate, veh/h	66	62	1180	22	20	1751
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	10	8	14	8	10
Cap, veh/h	247	206	2143	863	40	2315
Arrive On Green	0.14	0.14	0.60	0.60	0.02	0.70
Sat Flow, veh/h	1781	1485	3563	1434	1697	3416
Grp Volume(v), veh/h	66	62	1180	22	20	1751
Grp Sat Flow(s),veh/h/ln	1781	1485	1781	1434	1697	1664
Q Serve(g_s), s	2.2	2.4	12.8	0.4	0.8	22.0
Cycle Q Clear(g_c), s	2.2	2.4	12.8	0.4	0.8	22.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	247	206	2143	863	40	2315
V/C Ratio(X)	0.27	0.30	0.55	0.03	0.51	0.76
Avail Cap(c_a), veh/h	613	511	4238	1706	167	4440
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.1	25.2	7.7	5.2	31.4	6.4
Incr Delay (d2), s/veh	0.6	0.8	0.2	0.0	3.7	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.9	3.1	0.1	0.3	3.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	25.7	26.0	7.9	5.3	35.1	6.9
LnGrp LOS	C	C	A	A	D	A
Approach Vol, veh/h	128		1202			1771
Approach Delay, s/veh	25.8		7.9			7.2
Approach LOS	C		A			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	6.1	45.3			51.5	13.6
Change Period (Y+Rc), s	4.6	* 6.2			6.2	4.6
Max Green Setting (Gmax), s	6.4	* 77			86.8	22.4
Max Q Clear Time (g_c+I1), s	2.8	14.8			24.0	4.4
Green Ext Time (p_c), s	0.0	10.3			21.3	0.3

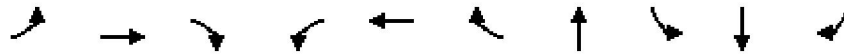
Intersection Summary

HCM 6th Ctrl Delay	8.2
HCM 6th LOS	A

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
12: Heacock Street & San Michele Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBL	SBT	SBR	Ø5
Lane Configurations	↖	↗	↘	↖	↗	↘	↕	↖	↗	↘	↖
Traffic Volume (vph)	58	348	8	22	102	684	132	928	328	36	
Future Volume (vph)	58	348	8	22	102	684	132	928	328	36	
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	NA	Prot	NA	Perm	
Protected Phases	7	4		3	8	1	2	1	6		5
Permitted Phases			4			8				6	
Detector Phase	7	4	4	3	8	1	2	1	6	6	
Switch Phase											
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0
Minimum Split (s)	9.5	30.5	30.5	8.5	30.5	8.5	34.5	8.5	34.5	34.5	8.5
Total Split (s)	11.1	34.5	34.5	8.5	31.9	42.1	34.9	42.1	68.5	68.5	8.5
Total Split (%)	9.3%	28.8%	28.8%	7.1%	26.6%	35.1%	29.1%	35.1%	57.1%	57.1%	7%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5	5.5	
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	None	Max	Max	None
Act Effct Green (s)	12.2	25.0	25.0	4.1	15.1	55.4	29.8	34.7	69.1	69.1	
Actuated g/C Ratio	0.11	0.23	0.23	0.04	0.14	0.50	0.27	0.32	0.63	0.63	
v/c Ratio	0.30	0.88	0.02	0.34	0.43	0.63	0.20	0.88	0.31	0.03	
Control Delay	51.4	63.7	0.0	69.7	50.9	9.2	28.6	46.1	11.6	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	51.4	63.7	0.0	69.7	50.9	9.2	28.6	46.1	11.6	0.1	
LOS	D	E	A	E	D	A	C	D	B	A	
Approach Delay		60.7			16.2		28.6		36.0		
Approach LOS		E			B		C		D		

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 109.9	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.88	
Intersection Signal Delay: 33.4	Intersection LOS: C
Intersection Capacity Utilization 62.7%	ICU Level of Service B
Analysis Period (min) 15	

























Splits and Phases: 12: Heacock Street & San Michele Road



HCM 6th Signalized Intersection Summary  
 12: Heacock Street & San Michele Road

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	348	8	22	102	684	0	132	40	928	328	36
Future Volume (veh/h)	58	348	8	22	102	684	0	132	40	928	328	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1870	1900	1826	1826	1885	1826	1900
Adj Flow Rate, veh/h	63	378	9	24	111	580	0	143	43	1009	357	39
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	2	0	5	5	1	5	0
Cap, veh/h	270	416	344	34	169	631	2	700	204	1077	1137	1003
Arrive On Green	0.15	0.22	0.22	0.02	0.09	0.09	0.00	0.26	0.26	0.31	0.62	0.62
Sat Flow, veh/h	1810	1900	1569	1810	1900	1585	1810	2651	771	3483	1826	1610
Grp Volume(v), veh/h	63	378	9	24	111	580	0	92	94	1009	357	39
Grp Sat Flow(s),veh/h/ln	1810	1900	1569	1810	1900	1585	1810	1735	1687	1742	1826	1610
Q Serve(g_s), s	3.4	21.6	0.5	1.5	6.3	4.2	0.0	4.6	4.8	31.4	10.2	0.4
Cycle Q Clear(g_c), s	3.4	21.6	0.5	1.5	6.3	4.2	0.0	4.6	4.8	31.4	10.2	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.46	1.00		1.00
Lane Grp Cap(c), veh/h	270	416	344	34	169	631	2	458	446	1077	1137	1003
V/C Ratio(X)	0.23	0.91	0.03	0.70	0.66	0.92	0.00	0.20	0.21	0.94	0.31	0.04
Avail Cap(c_a), veh/h	270	495	409	65	451	866	65	458	446	1177	1137	1003
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.7	42.4	30.0	54.3	49.1	31.8	0.0	31.8	31.9	37.4	9.8	1.1
Incr Delay (d2), s/veh	0.2	17.1	0.0	9.4	1.6	10.0	0.0	1.0	1.1	12.6	0.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	12.1	0.2	0.7	3.0	15.5	0.0	2.0	2.0	14.4	3.7	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.9	59.5	30.0	63.7	50.7	41.8	0.0	32.8	33.0	50.0	10.6	1.2
LnGrp LOS	D	E	C	E	D	D	A	C	C	D	B	A
Approach Vol, veh/h		450			715			186			1405	
Approach Delay, s/veh		56.4			43.9			32.9			38.6	
Approach LOS		E			D			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	39.9	34.9	6.6	29.9	0.0	74.8	21.1	15.4				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	37.6	* 29	4.0	29.0	4.0	63.0	6.6	26.4				
Max Q Clear Time (g_c+I1), s	33.4	6.8	3.5	23.6	0.0	12.2	5.4	8.3				
Green Ext Time (p_c), s	1.1	0.5	0.0	0.8	0.0	1.2	0.0	1.3				

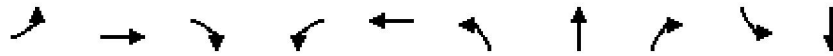
Intersection Summary

HCM 6th Ctrl Delay	42.5
HCM 6th LOS	D

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
14: Indian Street & San Michele Road

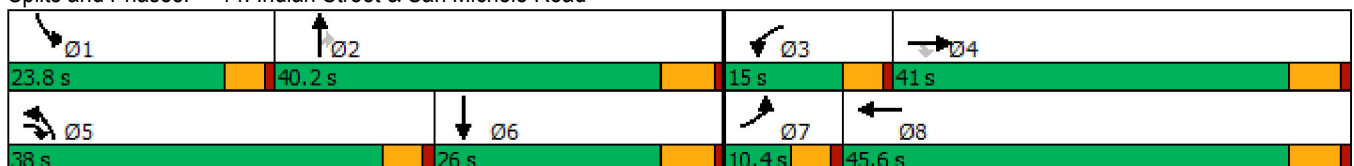


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↘	↑↑	↗↗	↘↘	↑↑	↗↗	↑	↗	↘	↑↑
Traffic Volume (vph)	23	884	1555	248	505	763	196	223	155	380
Future Volume (vph)	23	884	1555	248	505	763	196	223	155	380
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	5	3	8	5	2		1	6
Permitted Phases			4					2		
Detector Phase	7	4	5	3	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	31.8	9.6	9.6	31.8	9.6	32.8	32.8	9.6	24.8
Total Split (s)	10.4	41.0	38.0	15.0	45.6	38.0	40.2	40.2	23.8	26.0
Total Split (%)	8.7%	34.2%	31.7%	12.5%	38.0%	31.7%	33.5%	33.5%	19.8%	21.7%
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	3.6	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	4.6	5.8	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None	None
Act Effct Green (s)	5.5	34.1	66.7	10.3	43.1	31.3	34.7	34.7	14.4	17.7
Actuated g/C Ratio	0.05	0.30	0.58	0.09	0.38	0.27	0.30	0.30	0.13	0.15
v/c Ratio	0.29	0.94	0.95	0.84	0.46	0.85	0.40	0.35	0.72	0.81
Control Delay	63.7	56.7	32.2	74.8	29.4	49.4	35.2	8.9	66.0	58.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.7	56.7	32.2	74.8	29.4	49.4	35.2	8.9	66.0	58.8
LOS	E	E	C	E	C	D	D	A	E	E
Approach Delay		41.3			43.1		39.4			60.8
Approach LOS		D			D		D			E

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 114.4  
 Natural Cycle: 105  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.95  
 Intersection Signal Delay: 43.4  
 Intersection LOS: D  
 Intersection Capacity Utilization 91.7%  
 ICU Level of Service F  
 Analysis Period (min) 15
























Splits and Phases: 14: Indian Street & San Michele Road



HCM 6th Signalized Intersection Summary  
 14: Indian Street & San Michele Road

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	884	1555	248	505	69	763	196	223	155	380	32
Future Volume (veh/h)	23	884	1555	248	505	69	763	196	223	155	380	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		1.00	1.00		0.64
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1796	1856	1826	1826	1796	1796	1856	1870	1841	1841
Adj Flow Rate, veh/h	25	961	1038	270	549	58	829	213	177	168	413	25
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	5	7	3	5	5	7	7	3	2	4	4
Cap, veh/h	42	1057	1489	309	1201	126	893	566	495	197	545	32
Arrive On Green	0.02	0.30	0.30	0.09	0.37	0.37	0.26	0.31	0.31	0.11	0.16	0.16
Sat Flow, veh/h	1739	3469	2591	3428	3238	341	3421	1796	1571	1781	3315	198
Grp Volume(v), veh/h	25	961	1038	270	309	298	829	213	177	168	226	212
Grp Sat Flow(s),veh/h/ln	1739	1735	1296	1714	1826	1754	1711	1796	1571	1781	1841	1671
Q Serve(g_s), s	1.6	30.8	33.5	9.0	14.8	14.9	27.3	10.6	10.1	10.7	13.5	14.0
Cycle Q Clear(g_c), s	1.6	30.8	33.5	9.0	14.8	14.9	27.3	10.6	10.1	10.7	13.5	14.0
Prop In Lane	1.00		1.00	1.00		0.19	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	42	1057	1489	309	677	650	893	566	495	197	303	275
V/C Ratio(X)	0.60	0.91	0.70	0.87	0.46	0.46	0.93	0.38	0.36	0.85	0.75	0.77
Avail Cap(c_a), veh/h	87	1057	1489	309	677	650	989	566	495	296	322	292
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.8	38.6	18.2	51.9	27.5	27.6	41.6	30.8	30.6	50.5	46.0	46.2
Incr Delay (d2), s/veh	5.1	11.2	1.2	22.4	0.2	0.2	13.1	0.2	0.2	9.6	7.6	9.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	14.1	9.2	4.7	6.2	6.0	12.5	4.4	3.7	5.1	6.6	6.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.0	49.8	19.4	74.4	27.7	27.7	54.7	30.9	30.7	60.1	53.6	56.0
LnGrp LOS	E	D	B	E	C	C	D	C	C	E	D	E
Approach Vol, veh/h		2024			877			1219			606	
Approach Delay, s/veh		34.3			42.1			47.1			56.2	
Approach LOS		C			D			D			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.4	42.2	15.0	41.0	34.7	24.8	7.4	48.6				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	19.2	34.4	10.4	35.2	33.4	20.2	5.8	39.8				
Max Q Clear Time (g_c+I1), s	12.7	12.6	11.0	35.5	29.3	16.0	3.6	16.9				
Green Ext Time (p_c), s	0.1	0.9	0.0	0.0	0.8	0.6	0.0	2.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			41.9									
HCM 6th LOS			D									

Timings  
15: Indian Street & Nandina Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	
Lane Configurations										
Traffic Volume (vph)	48	116	569	186	46	172	737	24	1604	
Future Volume (vph)	48	116	569	186	46	172	737	24	1604	
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA	
Protected Phases	7	4	5	3	8	5	2	1	6	
Permitted Phases	4									
Detector Phase	7	4	5	3	8	5	2	1	6	
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0	
Minimum Split (s)	9.6	24.8	9.6	9.6	29.8	9.6	26.8	9.6	26.8	
Total Split (s)	14.0	25.4	13.0	18.6	30.0	13.0	65.4	10.6	63.0	
Total Split (%)	11.7%	21.2%	10.8%	15.5%	25.0%	10.8%	54.5%	8.8%	52.5%	
Yellow Time (s)	3.6	4.8	3.6	3.6	4.8	3.6	4.8	3.6	4.8	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	5.8	4.6	4.6	5.8	4.6	5.8	4.6	5.8	
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	Min	None	Min	
Act Effct Green (s)	7.3	14.1	28.3	14.0	22.7	8.4	64.0	5.6	57.3	
Actuated g/C Ratio	0.06	0.12	0.25	0.12	0.20	0.07	0.56	0.05	0.50	
v/c Ratio	0.43	0.61	1.40	1.03	0.35	0.98	0.42	0.30	0.96	
Control Delay	63.0	60.1	224.7	122.0	26.6	114.4	16.3	63.0	41.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	63.0	60.1	224.7	122.0	26.6	114.4	16.3	63.0	41.2	
LOS	E	E	F	F	C	F	B	E	D	
Approach Delay	188.1					86.1		33.5		41.5
Approach LOS	F					F		C		D

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 114.6	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.40	
Intersection Signal Delay: 72.2	Intersection LOS: E
Intersection Capacity Utilization 103.5%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 15: Indian Street & Nandina Avenue























Ø1	Ø2	Ø3	Ø4
10.6 s	65.4 s	18.6 s	25.4 s
Ø5	Ø6	Ø7	Ø8
13 s	63 s	14 s	30 s



HCM 6th Signalized Intersection Summary  
 15: Indian Street & Nandina Avenue

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	116	569	186	46	66	172	737	75	24	1604	36
Future Volume (veh/h)	48	116	569	186	46	66	172	737	75	24	1604	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1722	1604	1633	1500	1500	1218	1870	1870	1796	1870	1870
Adj Flow Rate, veh/h	52	126	238	202	50	36	187	801	44	26	1743	19
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	12	20	18	27	27	46	2	2	7	2	2
Cap, veh/h	67	281	317	181	197	142	162	1836	101	41	1760	19
Arrive On Green	0.04	0.16	0.16	0.12	0.24	0.24	0.07	0.65	0.52	0.02	0.60	0.48
Sat Flow, veh/h	1810	1722	1359	1555	811	584	2321	3513	193	1711	3693	40
Grp Volume(v), veh/h	52	126	238	202	0	86	187	426	419	26	882	880
Grp Sat Flow(s),veh/h/ln	1810	1722	1359	1555	0	1395	1160	1870	1836	1711	1870	1863
Q Serve(g_s), s	3.4	7.9	19.5	14.0	0.0	6.0	8.4	13.3	13.7	1.8	55.6	56.0
Cycle Q Clear(g_c), s	3.4	7.9	19.5	14.0	0.0	6.0	8.4	13.3	13.7	1.8	55.6	56.0
Prop In Lane	1.00		1.00	1.00		0.42	1.00		0.11	1.00		0.02
Lane Grp Cap(c), veh/h	67	281	317	181	0	339	162	977	959	41	892	888
V/C Ratio(X)	0.77	0.45	0.75	1.11	0.00	0.25	1.15	0.44	0.44	0.63	0.99	0.99
Avail Cap(c_a), veh/h	142	281	317	181	0	339	162	977	959	86	892	888
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.25	1.00	1.00	1.25	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.3	45.3	42.8	53.0	0.0	36.7	55.8	12.2	12.8	58.0	23.9	24.2
Incr Delay (d2), s/veh	6.8	1.1	9.6	100.4	0.0	0.4	117.1	0.3	0.3	5.7	27.3	28.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	3.4	7.2	10.4	0.0	2.0	5.0	4.6	4.7	0.8	25.5	25.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.0	46.4	52.3	153.4	0.0	37.1	172.9	12.5	13.1	63.8	51.2	52.1
LnGrp LOS	E	D	D	F	A	D	F	B	B	E	D	D
Approach Vol, veh/h		416			288			1032			1788	
Approach Delay, s/veh		52.0			118.7			41.8			51.9	
Approach LOS		D			F			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.5	68.5	18.6	25.4	13.0	63.0	9.1	34.9				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	6.0	59.6	14.0	19.6	8.4	57.2	9.4	24.2				
Max Q Clear Time (g_c+I1), s	3.8	15.7	16.0	21.5	10.4	58.0	5.4	8.0				
Green Ext Time (p_c), s	0.0	5.2	0.0	0.0	0.0	0.0	0.0	0.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			54.4									
HCM 6th LOS			D									



Timings  
16: Indian Av. & Harley Knox Bl.

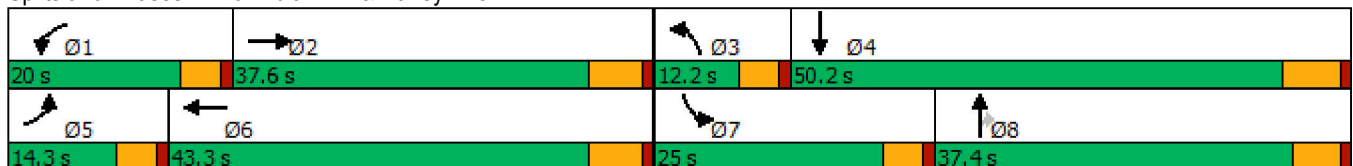


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↔↔	↕↕↔	↔	↕↕↔	↔↔	↕↕	↔	↔	↕↕
Traffic Volume (vph)	102	568	242	421	81	295	246	326	563
Future Volume (vph)	102	568	242	421	81	295	246	326	563
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	5	2	1	6	3	8		7	4
Permitted Phases							8		
Detector Phase	5	2	1	6	3	8	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2
Total Split (s)	14.3	37.6	20.0	43.3	12.2	37.4	37.4	25.0	50.2
Total Split (%)	11.9%	31.3%	16.7%	36.1%	10.2%	31.2%	31.2%	20.8%	41.8%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.4	4.4	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.4	5.4	4.6	6.2
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	7.9	20.5	15.7	28.3	6.7	17.5	17.5	20.8	33.0
Actuated g/C Ratio	0.08	0.22	0.16	0.30	0.07	0.18	0.18	0.22	0.35
v/c Ratio	0.47	0.69	0.89	0.44	0.40	0.56	0.55	0.90	0.67
Control Delay	51.3	37.0	74.0	24.9	51.5	39.2	10.4	65.6	29.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.3	37.0	74.0	24.9	51.5	39.2	10.4	65.6	29.6
LOS	D	D	E	C	D	D	B	E	C
Approach Delay		38.9		39.1		29.4			40.8
Approach LOS		D		D		C			D

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 95.2  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.90  
 Intersection Signal Delay: 37.8  
 Intersection LOS: D  
 Intersection Capacity Utilization 70.2%  
 ICU Level of Service C  
 Analysis Period (min) 15































Splits and Phases: 16: Indian Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 16: Indian Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  			  		 	 			 	
Traffic Volume (veh/h)	102	568	108	242	421	169	81	295	246	326	563	164
Future Volume (veh/h)	102	568	108	242	421	169	81	295	246	326	563	164
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1559	1841	1841	1885	1811	1811	1707	1678	1870	1900	1856	1856
Adj Flow Rate, veh/h	111	617	117	263	458	184	88	321	267	354	612	178
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	23	4	4	1	6	6	13	15	2	0	3	3
Cap, veh/h	162	847	158	287	1063	410	148	666	327	383	1007	292
Arrive On Green	0.06	0.20	0.20	0.16	0.30	0.30	0.05	0.21	0.21	0.21	0.37	0.37
Sat Flow, veh/h	2881	4253	794	1795	3509	1354	3155	3188	1564	1810	2695	782
Grp Volume(v), veh/h	111	484	250	263	429	213	88	321	267	354	400	390
Grp Sat Flow(s),veh/h/ln	1440	1675	1698	1795	1648	1567	1577	1594	1564	1810	1763	1715
Q Serve(g_s), s	3.6	13.0	13.3	13.9	10.0	10.6	2.6	8.5	15.7	18.5	17.7	17.8
Cycle Q Clear(g_c), s	3.6	13.0	13.3	13.9	10.0	10.6	2.6	8.5	15.7	18.5	17.7	17.8
Prop In Lane	1.00		0.47	1.00		0.86	1.00		1.00	1.00		0.46
Lane Grp Cap(c), veh/h	162	667	338	287	999	475	148	666	327	383	659	641
V/C Ratio(X)	0.69	0.73	0.74	0.92	0.43	0.45	0.59	0.48	0.82	0.92	0.61	0.61
Avail Cap(c_a), veh/h	290	1107	561	287	1284	611	249	1060	520	383	806	784
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.6	36.1	36.2	39.8	26.9	27.1	45.0	33.5	36.3	37.2	24.4	24.4
Incr Delay (d2), s/veh	1.9	1.5	3.2	31.5	0.3	0.7	1.4	0.5	5.5	27.2	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	5.1	5.5	8.3	3.8	3.8	1.0	3.2	6.2	10.6	7.0	6.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.5	37.6	39.4	71.3	27.2	27.7	46.4	34.1	41.8	64.3	25.3	25.4
LnGrp LOS	D	D	D	E	C	C	D	C	D	E	C	C
Approach Vol, veh/h		845			905			676			1144	
Approach Delay, s/veh		39.3			40.1			38.7			37.4	
Approach LOS		D			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.0	25.0	9.1	42.2	10.0	35.0	25.0	26.3				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	15.4	31.8	7.6	44.0	9.7	37.5	20.4	* 32				
Max Q Clear Time (g_c+I1), s	15.9	15.3	4.6	19.8	5.6	12.6	20.5	17.7				
Green Ext Time (p_c), s	0.0	3.9	0.0	4.7	0.1	4.0	0.0	2.4				

Intersection Summary

HCM 6th Ctrl Delay	38.8
HCM 6th LOS	D

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

**APPENDIX 7.22:**

**HORIZON YEAR (2045) WITH PROJECT (PEAK) WITH HEACOCK STREET EXTENSION  
CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS WITH  
IMPROVEMENTS**

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Timings

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

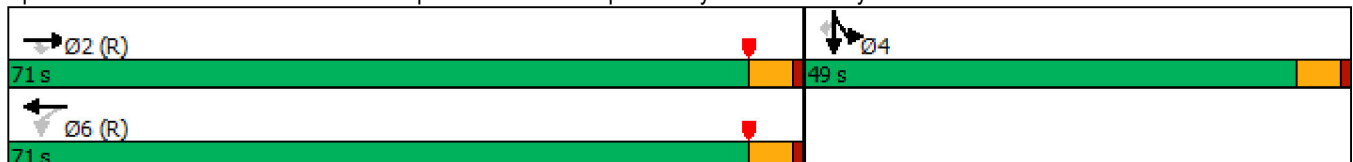


Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations	↑↑	↑	↑↑	↑	↑	↑	↑
Traffic Volume (vph)	1157	28	202	666	976	1	315
Future Volume (vph)	1157	28	202	666	976	1	315
Turn Type	NA	Perm	Perm	NA	Split	NA	Perm
Protected Phases	2			6	4	4	
Permitted Phases		2	6				4
Detector Phase	2	2	6	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	25.0	25.0	10.0	10.0	10.0
Total Split (s)	71.0	71.0	71.0	71.0	49.0	49.0	49.0
Total Split (%)	59.2%	59.2%	59.2%	59.2%	40.8%	40.8%	40.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None	None
Act Effct Green (s)	66.2	66.2	66.2	66.2	43.8	43.8	43.8
Actuated g/C Ratio	0.55	0.55	0.55	0.55	0.36	0.36	0.36
v/c Ratio	0.66	0.03	0.98	0.70	0.97	0.97	0.51
Control Delay	21.2	5.0	80.8	22.7	68.8	69.1	15.1
Queue Delay	0.2	0.0	0.0	1.7	45.8	45.6	0.0
Total Delay	21.4	5.0	80.8	24.3	114.6	114.7	15.1
LOS	C	A	F	C	F	F	B
Approach Delay	21.0			37.5		90.4	
Approach LOS	C			D		F	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection  
 Natural Cycle: 55  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.98  
 Intersection Signal Delay: 52.1  
 Intersection LOS: D  
 Intersection Capacity Utilization 106.5%  
 ICU Level of Service G  
 Analysis Period (min) 15

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

11/10/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑↑	↑					↑	↑	↑
Traffic Volume (veh/h)	0	1157	28	202	666	0	0	0	0	976	1	315
Future Volume (veh/h)	0	1157	28	202	666	0	0	0	0	976	1	315
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1826	1826	1604	1870	0				1693	1900	1781
Adj Flow Rate, veh/h	0	1258	30	220	724	0				1062	0	282
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	5	5	20	2	0				14	0	8
Cap, veh/h	0	1959	874	346	1056	0				1134	0	531
Arrive On Green	0.00	0.56	0.56	1.00	1.00	0.00				0.35	0.00	0.35
Sat Flow, veh/h	0	3561	1547	713	1870	0				3224	0	1510
Grp Volume(v), veh/h	0	1258	30	220	724	0				1062	0	282
Grp Sat Flow(s),veh/h/ln	0	1735	1547	357	1870	0				1612	0	1510
Q Serve(g_s), s	0.0	29.7	1.0	35.8	0.0	0.0				38.2	0.0	17.9
Cycle Q Clear(g_c), s	0.0	29.7	1.0	65.5	0.0	0.0				38.2	0.0	17.9
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1959	874	346	1056	0				1134	0	531
V/C Ratio(X)	0.00	0.64	0.03	0.64	0.69	0.00				0.94	0.00	0.53
Avail Cap(c_a), veh/h	0	1959	874	346	1056	0				1182	0	554
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.59	0.59	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	17.8	11.6	14.4	0.0	0.0				37.6	0.0	31.0
Incr Delay (d2), s/veh	0.0	1.6	0.1	5.2	2.2	0.0				13.3	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	11.2	0.4	2.3	0.6	0.0				16.4	0.0	6.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	19.5	11.7	19.5	2.2	0.0				50.9	0.0	31.9
LnGrp LOS	A	B	B	B	A	A				D	A	C
Approach Vol, veh/h		1288			944						1344	
Approach Delay, s/veh		19.3			6.2						46.9	
Approach LOS		B			A						D	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		72.8		47.2		72.8						
Change Period (Y+Rc), s		5.0		5.0		5.0						
Max Green Setting (Gmax), s		66.0		44.0		66.0						
Max Q Clear Time (g_c+I1), s		31.7		40.2		67.5						
Green Ext Time (p_c), s		6.5		2.0		0.0						

Intersection Summary

HCM 6th Ctrl Delay	26.2
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Timings

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

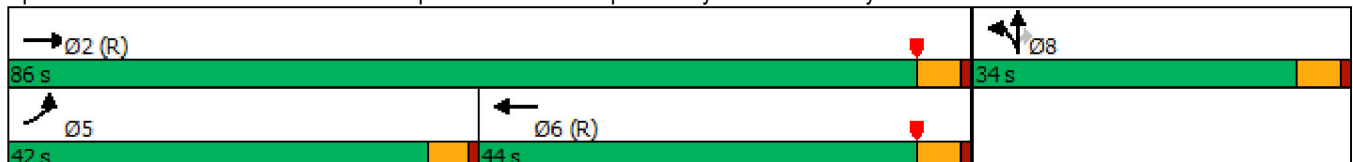


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations	↔↔	↑↑	↑↑	↔	↔	↔
Traffic Volume (vph)	808	1325	810	1126	7	284
Future Volume (vph)	808	1325	810	1126	7	284
Turn Type	Prot	NA	NA	Free	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				Free		8
Detector Phase	5	2	6		8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	9.5	26.0	24.0		10.0	10.0
Total Split (s)	42.0	86.0	44.0		34.0	34.0
Total Split (%)	35.0%	71.7%	36.7%		28.3%	28.3%
Yellow Time (s)	3.5	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0		5.0	5.0
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	C-Max	C-Max		Max	Max
Act Effct Green (s)	34.5	81.0	42.0	120.0	29.0	29.0
Actuated g/C Ratio	0.29	0.68	0.35	1.00	0.24	0.24
v/c Ratio	0.91	0.66	0.75	0.84	0.16	0.74
Control Delay	62.4	24.3	39.7	6.4	37.2	45.3
Queue Delay	3.5	49.2	0.0	0.0	0.4	0.0
Total Delay	65.9	73.5	39.7	6.4	37.6	45.3
LOS	E	E	D	A	D	D
Approach Delay		70.6	20.3		43.9	
Approach LOS		E	C		D	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 65  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.91  
 Intersection Signal Delay: 46.5  
 Intersection LOS: D  
 Intersection Capacity Utilization 106.5%  
 ICU Level of Service G  
 Analysis Period (min) 15

Splits and Phases: 2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

11/10/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑			↑↑	↗		↖	↗			
Traffic Volume (veh/h)	808	1325	0	0	810	1126	58	7	284	0	0	0
Future Volume (veh/h)	808	1325	0	0	810	1126	58	7	284	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1841	1722	0	0	1796	1752	1811	1900	1811			
Adj Flow Rate, veh/h	878	1440	0	0	880	0	63	8	244			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	4	12	0	0	7	10	6	0	6			
Cap, veh/h	921	2209	0	0	1251		390	50	371			
Arrive On Green	0.54	1.00	0.00	0.00	0.37	0.00	0.24	0.24	0.24			
Sat Flow, veh/h	3401	3358	0	0	3503	1485	1614	205	1535			
Grp Volume(v), veh/h	878	1440	0	0	880	0	71	0	244			
Grp Sat Flow(s),veh/h/ln	1700	1636	0	0	1706	1485	1819	0	1535			
Q Serve(g_s), s	29.3	0.0	0.0	0.0	26.4	0.0	3.7	0.0	17.2			
Cycle Q Clear(g_c), s	29.3	0.0	0.0	0.0	26.4	0.0	3.7	0.0	17.2			
Prop In Lane	1.00		0.00	0.00		1.00	0.89		1.00			
Lane Grp Cap(c), veh/h	921	2209	0	0	1251		440	0	371			
V/C Ratio(X)	0.95	0.65	0.00	0.00	0.70		0.16	0.00	0.66			
Avail Cap(c_a), veh/h	1063	2209	0	0	1251		440	0	371			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.57	0.57	0.00	0.00	0.80	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	26.8	0.0	0.0	0.0	32.4	0.0	35.9	0.0	41.0			
Incr Delay (d2), s/veh	10.3	0.9	0.0	0.0	2.7	0.0	0.8	0.0	8.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	8.7	0.3	0.0	0.0	10.9	0.0	1.7	0.0	7.2			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.1	0.9	0.0	0.0	35.1	0.0	36.7	0.0	49.9			
LnGrp LOS	D	A	A	A	D		D	A	D			
Approach Vol, veh/h		2318			880	A		315				
Approach Delay, s/veh		14.6			35.1			46.9				
Approach LOS		B			D			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		86.0			37.0	49.0		34.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		81.0			37.5	39.0		29.0				
Max Q Clear Time (g_c+I1), s		2.0			31.3	28.4		19.2				
Green Ext Time (p_c), s		8.5			1.2	2.9		0.8				

Intersection Summary

HCM 6th Ctrl Delay	22.6
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Timings  
5: Heacock Street & Cactus Avenue

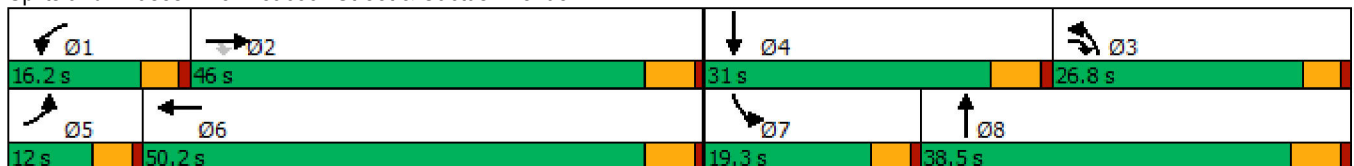


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↶	↶↶↶	↶	↶	↶↶↶	↶↶	↶↶	↶	↶↶
Traffic Volume (vph)	176	1067	762	67	2068	854	719	139	372
Future Volume (vph)	176	1067	762	67	2068	854	719	139	372
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	3	1	6	3	8	7	4
Permitted Phases			2						
Detector Phase	5	2	3	1	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.5	30.5	9.5	9.5	30.5	9.5	30.5	9.5	30.5
Total Split (s)	12.0	46.0	26.8	16.2	50.2	26.8	38.5	19.3	31.0
Total Split (%)	10.0%	38.3%	22.3%	13.5%	41.8%	22.3%	32.1%	16.1%	25.8%
Yellow Time (s)	3.5	4.5	3.5	3.5	4.5	3.5	4.5	3.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-2.0	0.0	0.0	-2.0	-2.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.5	3.5	4.5	4.5	3.5	2.5	4.5	3.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None
Act Effct Green (s)	8.5	47.8	71.1	8.5	46.8	25.3	31.0	13.2	20.0
Actuated g/C Ratio	0.07	0.42	0.62	0.07	0.41	0.22	0.27	0.12	0.17
v/c Ratio	1.33	0.48	0.69	0.50	1.01	1.12	0.78	0.67	0.75
Control Delay	230.5	26.7	11.7	63.9	54.2	110.3	45.0	65.0	49.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	230.5	26.7	11.7	63.9	54.2	110.3	45.0	65.0	49.5
LOS	F	C	B	E	D	F	D	E	D
Approach Delay		38.8			54.5		79.9		53.0
Approach LOS		D			D		E		D

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 114.6  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.33  
 Intersection Signal Delay: 55.8  
 Intersection LOS: E  
 Intersection Capacity Utilization 105.0%  
 ICU Level of Service G  
 Analysis Period (min) 15






























Splits and Phases: 5: Heacock Street & Cactus Avenue



HCM 6th Signalized Intersection Summary  
5: Heacock Street & Cactus Avenue

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 			 	
Traffic Volume (veh/h)	176	1067	762	67	2068	159	854	719	23	139	372	105
Future Volume (veh/h)	176	1067	762	67	2068	159	854	719	23	139	372	105
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1752	1900	1885	1885	1826	1841	1841	1870	1841	1841
Adj Flow Rate, veh/h	183	1111	664	70	2154	104	890	749	8	145	388	83
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	10	0	1	1	5	4	4	2	4	4
Cap, veh/h	134	2408	903	90	2209	106	747	997	11	188	485	103
Arrive On Green	0.11	0.64	0.41	0.05	0.62	0.40	0.32	0.41	0.27	0.11	0.16	0.16
Sat Flow, veh/h	1781	5611	1485	1810	5352	257	3478	3636	39	1781	2945	624
Grp Volume(v), veh/h	183	1111	664	70	1514	744	890	379	378	145	241	230
Grp Sat Flow(s),veh/h/ln	1781	1870	1485	1810	1885	1839	1739	1841	1834	1781	1841	1728
Q Serve(g_s), s	8.5	11.4	8.2	4.3	43.5	44.5	24.3	19.9	19.9	9.0	14.2	14.5
Cycle Q Clear(g_c), s	8.5	11.4	8.2	4.3	43.5	44.5	24.3	19.9	19.9	9.0	14.2	14.5
Prop In Lane	1.00		1.00	1.00		0.14	1.00		0.02	1.00		0.36
Lane Grp Cap(c), veh/h	134	2408	903	90	1556	759	747	505	503	188	303	285
V/C Ratio(X)	1.37	0.46	0.73	0.78	0.97	0.98	1.19	0.75	0.75	0.77	0.79	0.81
Avail Cap(c_a), veh/h	134	2408	903	187	1556	759	747	553	551	249	431	405
HCM Platoon Ratio	1.50	1.50	1.00	1.00	1.50	1.00	1.50	1.50	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.2	13.5	5.1	53.1	20.9	22.9	38.3	30.0	30.2	49.3	45.4	45.7
Incr Delay (d2), s/veh	205.6	0.1	2.8	5.2	16.7	27.6	99.2	4.4	4.4	7.1	4.1	5.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.1	3.7	4.1	2.0	16.2	19.7	19.1	7.8	7.9	4.2	6.6	6.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	255.8	13.6	7.9	58.4	37.6	50.4	137.5	34.4	34.6	56.4	49.6	50.9
LnGrp LOS	F	B	A	E	D	D	F	C	C	E	D	D
Approach Vol, veh/h		1958			2328			1647			616	
Approach Delay, s/veh		34.3			42.3			90.2			51.7	
Approach LOS		C			D			F			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.1	52.1	27.8	23.1	12.0	50.2	15.4	35.5				
Change Period (Y+Rc), s	4.5	5.5	5.5	* 5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	11.7	40.5	22.3	* 26	7.5	44.7	14.8	33.0				
Max Q Clear Time (g_c+I1), s	6.3	13.4	26.3	16.5	10.5	46.5	11.0	21.9				
Green Ext Time (p_c), s	0.0	6.7	0.0	1.1	0.0	0.0	0.1	2.1				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			52.8									
HCM 6th LOS			D									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings  
6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

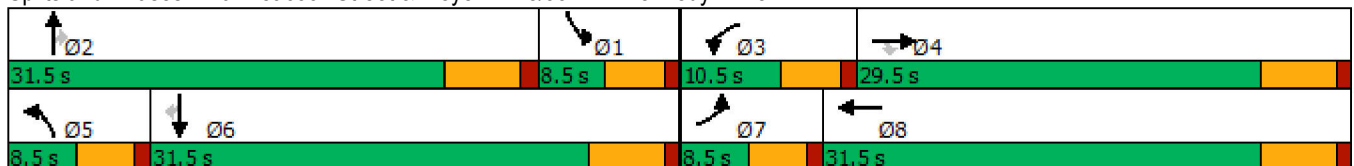
11/10/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	41	45	155	33	238	37	1033	62	127	804	22
Future Volume (vph)	41	45	155	33	238	37	1033	62	127	804	22
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4					2			6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Minimum Split (s)	8.5	23.5	23.5	8.5	31.5	8.5	30.5	30.5	8.5	23.5	23.5
Total Split (s)	8.5	29.5	29.5	10.5	31.5	8.5	31.5	31.5	8.5	31.5	31.5
Total Split (%)	10.6%	36.9%	36.9%	13.1%	39.4%	10.6%	39.4%	39.4%	10.6%	39.4%	39.4%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	5.5	4.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	4.1	12.7	12.7	5.4	11.7	4.1	26.7	26.7	4.1	32.4	32.4
Actuated g/C Ratio	0.07	0.20	0.20	0.09	0.19	0.07	0.42	0.42	0.07	0.51	0.51
v/c Ratio	0.41	0.13	0.30	0.22	0.59	0.34	0.71	0.08	0.57	0.47	0.03
Control Delay	45.9	22.0	2.4	34.5	17.8	41.6	21.1	0.2	43.4	14.6	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.9	22.0	2.4	34.5	17.8	41.6	21.1	0.2	43.4	14.6	0.0
LOS	D	C	A	C	B	D	C	A	D	B	A
Approach Delay		13.5			18.9		20.6			18.1	
Approach LOS		B			B		C			B	

Intersection Summary

Cycle Length: 80  
 Actuated Cycle Length: 63  
 Natural Cycle: 80  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.71  
 Intersection Signal Delay: 18.9  
 Intersection LOS: B  
 Intersection Capacity Utilization 67.5%  
 ICU Level of Service C  
 Analysis Period (min) 15

























Splits and Phases: 6: Heacock Street & Meyer Drive/John F. Kennedy Drive



HCM 6th Signalized Intersection Summary  
 6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	45	155	33	238	230	37	1033	62	127	804	22
Future Volume (veh/h)	41	45	155	33	238	230	37	1033	62	127	804	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.97	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1648	1767	1811	1796	1841	1841	1781	1811	1767	1856	1767	1618
Adj Flow Rate, veh/h	43	47	125	34	248	204	39	1076	55	132	838	13
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	17	9	6	7	4	4	8	6	9	3	9	19
Cap, veh/h	52	344	299	48	361	284	53	1435	577	209	1560	598
Arrive On Green	0.03	0.19	0.19	0.03	0.19	0.19	0.03	0.40	0.40	0.06	0.44	0.44
Sat Flow, veh/h	1570	1767	1535	1711	1901	1497	1697	3622	1455	3428	3533	1354
Grp Volume(v), veh/h	43	47	125	34	240	212	39	1076	55	132	838	13
Grp Sat Flow(s),veh/h/ln	1570	1767	1535	1711	1841	1557	1697	1811	1455	1714	1767	1354
Q Serve(g_s), s	1.8	1.4	4.7	1.3	8.0	8.4	1.5	16.7	1.1	2.5	11.4	0.4
Cycle Q Clear(g_c), s	1.8	1.4	4.7	1.3	8.0	8.4	1.5	16.7	1.1	2.5	11.4	0.4
Prop In Lane	1.00		1.00	1.00		0.96	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	52	344	299	48	349	295	53	1435	577	209	1560	598
V/C Ratio(X)	0.83	0.14	0.42	0.71	0.69	0.72	0.74	0.75	0.10	0.63	0.54	0.02
Avail Cap(c_a), veh/h	96	646	561	156	729	617	103	1435	577	209	1560	598
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.5	21.9	23.2	31.6	24.8	24.9	31.5	17.0	6.1	30.1	13.4	10.3
Incr Delay (d2), s/veh	11.6	0.1	0.3	6.8	0.9	1.2	7.4	3.6	0.3	4.6	1.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.6	1.5	0.6	3.2	2.8	0.7	6.3	0.5	1.0	3.8	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.1	21.9	23.5	38.5	25.7	26.2	38.9	20.7	6.4	34.7	14.8	10.4
LnGrp LOS	D	C	C	D	C	C	D	C	A	C	B	B
Approach Vol, veh/h		215			486			1170			983	
Approach Delay, s/veh		27.1			26.8			20.6			17.4	
Approach LOS		C			C			C			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.5	31.5	6.3	18.3	6.5	34.5	6.7	17.9				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	4.0	* 26	6.0	24.0	4.0	26.0	4.0	26.0				
Max Q Clear Time (g_c+I1), s	4.5	18.7	3.3	6.7	3.5	13.4	3.8	10.4				
Green Ext Time (p_c), s	0.0	2.9	0.0	0.3	0.0	2.9	0.0	1.4				

Intersection Summary

HCM 6th Ctrl Delay	21.0
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
11: Heacock Street & Cardinal Avenue

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	12	13	1069	61	52	924
Future Volume (vph)	12	13	1069	61	52	924
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	26.6	26.6	21.6	21.6	9.6	16.2
Total Split (s)	27.0	27.0	76.0	76.0	17.0	93.0
Total Split (%)	22.5%	22.5%	63.3%	63.3%	14.2%	77.5%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	13.0	13.0	41.6	41.6	7.4	48.3
Actuated g/C Ratio	0.23	0.23	0.74	0.74	0.13	0.86
v/c Ratio	0.04	0.04	0.44	0.05	0.24	0.37
Control Delay	24.8	13.5	9.0	3.3	32.2	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.8	13.5	9.0	3.3	32.2	4.1
LOS	C	B	A	A	C	A
Approach Delay	19.0		8.7			5.6
Approach LOS	B		A			A













Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 56	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.44	
Intersection Signal Delay: 7.4	Intersection LOS: A
Intersection Capacity Utilization 53.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 11: Heacock Street & Cardinal Avenue



HCM 6th Signalized Intersection Summary  
 11: Heacock Street & Cardinal Avenue

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	12	13	1069	61	52	924
Future Volume (veh/h)	12	13	1069	61	52	924
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1559	1441	1781	1870	1781	1693
Adj Flow Rate, veh/h	13	14	1162	66	57	1004
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	23	31	8	2	8	14
Cap, veh/h	95	78	1848	822	98	2199
Arrive On Green	0.06	0.06	0.52	0.52	0.06	0.68
Sat Flow, veh/h	1485	1221	3563	1585	1697	3300
Grp Volume(v), veh/h	13	14	1162	66	57	1004
Grp Sat Flow(s),veh/h/ln	1485	1221	1781	1585	1697	1608
Q Serve(g_s), s	0.4	0.5	10.0	0.9	1.4	6.1
Cycle Q Clear(g_c), s	0.4	0.5	10.0	0.9	1.4	6.1
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	95	78	1848	822	98	2199
V/C Ratio(X)	0.14	0.18	0.63	0.08	0.58	0.46
Avail Cap(c_a), veh/h	777	638	5940	2642	491	6517
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.9	19.0	7.4	5.2	19.7	3.1
Incr Delay (d2), s/veh	0.6	1.1	0.4	0.0	2.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.1	1.8	0.1	0.5	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	19.6	20.1	7.7	5.2	21.7	3.3
LnGrp LOS	B	C	A	A	C	A
Approach Vol, veh/h	27		1228			1061
Approach Delay, s/veh	19.8		7.6			4.3
Approach LOS	B		A			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	7.1	28.4			35.5	7.3
Change Period (Y+Rc), s	4.6	* 6.2			6.2	4.6
Max Green Setting (Gmax), s	12.4	* 71			86.8	22.4
Max Q Clear Time (g_c+I1), s	3.4	12.0			8.1	2.5
Green Ext Time (p_c), s	0.0	10.2			8.0	0.0

Intersection Summary

HCM 6th Ctrl Delay	6.2
HCM 6th LOS	A

Notes

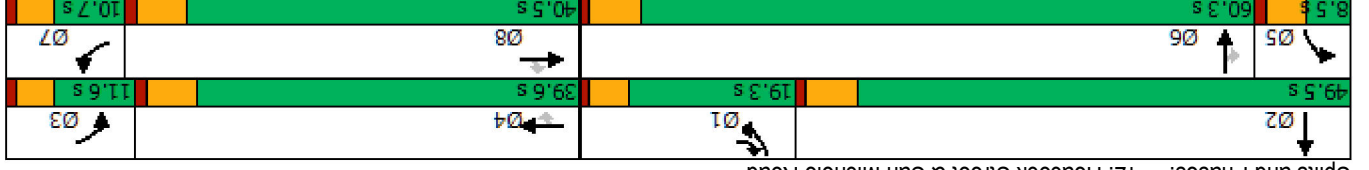
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
Traffic Volume (vph)	31	4	39	341	311	311	1	497	93	491	52
Future Volume (vph)	31	4	39	341	311	311	1	497	93	491	52
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8	1	5	2	1	6	6	6
Permitted Phases	4	4	4	8	8	8	5	2	1	6	6
Detector Phase	7	4	4	8	8	8	5	2	1	6	6
Switch Phase	4.0	5.0	5.0	4.0	5.0	4.0	4.0	5.0	4.0	5.0	5.0
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	4.0	5.0	4.0	5.0	5.0
Minimum Split (s)	9.5	30.5	30.5	8.5	30.5	8.5	8.5	34.5	8.5	34.5	34.5
Total Split (s)	10.7	39.6	39.6	11.6	40.5	19.3	8.5	49.5	19.3	60.3	60.3
Total Split (%)	8.9%	33.0%	33.0%	9.7%	33.8%	16.1%	7.1%	41.3%	16.1%	50.3%	50.3%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	3.5	4.5	3.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	4.5	5.5	4.5	5.5	5.5
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	Max
Act Effort Green (s)	5.7	16.0	16.0	13.5	23.7	39.6	4.1	45.1	10.3	58.5	58.5
Actuated g/C Ratio	0.06	0.16	0.16	0.13	0.24	0.39	0.04	0.45	0.10	0.58	0.58
v/c Ratio	0.32	0.30	0.01	0.18	0.83	0.40	0.01	0.35	0.55	0.51	0.05
Control Delay	59.4	44.6	0.0	42.2	53.5	9.9	55.0	21.9	58.0	18.1	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.4	44.6	0.0	42.2	53.5	9.9	55.0	21.9	58.0	18.1	0.4
LOS	E	D	A	D	D	A	D	C	E	B	A
Approach Delay	47.2	33.2	21.9	22.5	21.9	22.5	21.9	22.5	21.9	22.5	22.5
Approach LOS	D	C	C	C	C	C	C	C	C	C	C

Intersection Summary											
Cycle Length: 120											
Actuated Cycle Length: 100.7											
Natural Cycle: 85											
Control Type: Actuated-Uncoordinated											
Maximum v/c Ratio: 0.83											
Intersection Signal Delay: 27.6											
Intersection LOS: C											
Intersection Capacity Utilization 67.1%											
ICU Level of Service C											
Analysis Period (min) 15											

Splits and Phases: 12: Heacock Street & San Michele Road





























HCM 6th Signalized Intersection Summary  
 12: Heacock Street & San Michele Road

Gateway Aviation TA (JN:13445)

11/10/2020













												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	82	4	39	341	311	1	497	10	93	491	52
Future Volume (veh/h)	31	82	4	39	341	311	1	497	10	93	491	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1856	1366	1796	1900	1856	1900	1856	1856	1811	1826	1856
Adj Flow Rate, veh/h	34	89	4	42	371	121	1	540	11	101	534	57
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	3	36	7	0	3	0	3	3	6	5	3
Cap, veh/h	44	130	81	301	421	505	2	1565	32	172	1007	867
Arrive On Green	0.02	0.07	0.07	0.18	0.22	0.22	0.00	0.44	0.44	0.10	0.55	0.55
Sat Flow, veh/h	1810	1856	1158	1711	1900	1572	1810	3533	72	1725	1826	1572
Grp Volume(v), veh/h	34	89	4	42	371	121	1	269	282	101	534	57
Grp Sat Flow(s),veh/h/ln	1810	1856	1158	1711	1900	1572	1810	1763	1843	1725	1826	1572
Q Serve(g_s), s	1.9	4.7	0.3	2.1	18.8	0.0	0.1	10.0	10.0	5.6	18.4	1.2
Cycle Q Clear(g_c), s	1.9	4.7	0.3	2.1	18.8	0.0	0.1	10.0	10.0	5.6	18.4	1.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	44	130	81	301	421	505	2	781	816	172	1007	867
V/C Ratio(X)	0.77	0.69	0.05	0.14	0.88	0.24	0.50	0.34	0.35	0.59	0.53	0.07
Avail Cap(c_a), veh/h	113	637	397	301	669	711	73	781	816	257	1007	867
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.2	45.1	34.2	34.6	37.4	24.8	49.6	18.2	18.2	42.8	14.1	5.4
Incr Delay (d2), s/veh	9.8	2.4	0.1	0.1	5.2	0.1	58.7	1.2	1.2	1.2	2.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	2.2	0.1	0.8	8.9	2.0	0.1	3.9	4.1	2.3	7.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.0	47.5	34.3	34.7	42.6	24.9	108.2	19.4	19.4	44.0	16.1	5.5
LnGrp LOS	E	D	C	C	D	C	F	B	B	D	B	A
Approach Vol, veh/h		127			534			552			692	
Approach Delay, s/veh		49.9			38.0			19.5			19.3	
Approach LOS		D			D			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.4	49.5	22.0	12.5	4.6	60.3	6.9	27.5				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	14.8	* 44	7.1	34.1	4.0	54.8	6.2	35.0				
Max Q Clear Time (g_c+I1), s	7.6	12.0	4.1	6.7	2.1	20.4	3.9	20.8				
Green Ext Time (p_c), s	0.1	1.7	0.0	0.3	0.0	1.9	0.0	1.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			26.6									
HCM 6th LOS			C									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												



HCM Unsignalized Intersection Capacity Analysis  
 13: Webster Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/13/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Right Turn Channelized			MOYes			MOYes			MOYes			MOYes
Traffic Volume (veh/h)	110	751	474	112	1030	143	143	447	110	86	272	412
Future Volume (veh/h)	110	751	474	112	1030	143	143	447	110	86	272	412
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	120	816	515	122	1120	155	155	486	120	93	296	448
Approach Volume (veh/h)		936			1242			641			389	
Crossing Volume (veh/h)		511			761			1029			1397#	
High Capacity (veh/h)		925			757			608			448	
High v/c (veh/h)		1.01			1.64			1.05			0.87	
Low Capacity (veh/h)		747			599			470			335	
Low v/c (veh/h)		1.25			2.07			1.36			1.16	
<b>Intersection Summary</b>												
Maximum v/c High			1.64									
Maximum v/c Low			2.07									
Intersection Capacity Utilization			70.8%			ICU Level of Service					C	
# Crossing flow exceeds 1200, method is not applicable												

Timings 14: Indian Street & San Michele Road

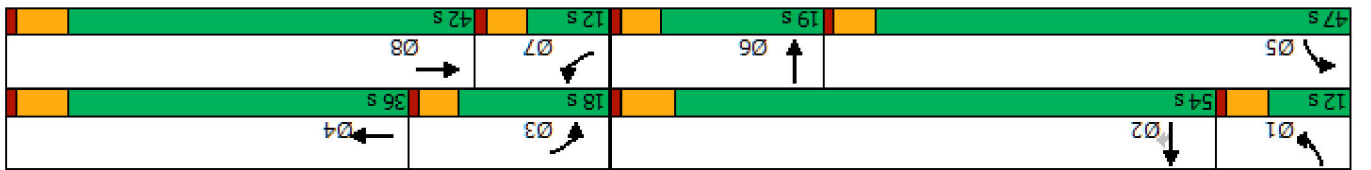
Gateway Aviation TA (JN:13445)  
11/10/2020



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↘	↘↘	↘↘	↘↘	↘↘	↘↘	↘	↘	↘↘
Traffic Volume (vph)	6	29	120	109	576	28	106	5	21
Future Volume (vph)	6	29	120	109	576	28	106	5	21
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6	
Permitted Phases						2			
Detector Phase	7	4	3	8	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	8.8
Minimum Split (s)	9.6	31.8	9.6	31.8	9.6	32.8	32.8	9.6	14.6
Total Split (s)	12.0	36.0	18.0	42.0	47.0	54.0	54.0	12.0	19.0
Total Split (%)	10.0%	30.0%	15.0%	35.0%	39.2%	45.0%	45.0%	10.0%	15.8%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	4.8	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	5.8	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	5.8	13.3	7.3	21.1	15.8	17.4	17.4	5.7	10.1
Actuated g/C Ratio	0.11	0.25	0.13	0.39	0.29	0.32	0.32	0.11	0.19
v/c Ratio	0.05	0.22	0.27	0.09	0.58	0.05	0.18	0.03	0.04
Control Delay	33.0	7.0	28.3	13.7	21.6	16.2	2.8	33.0	24.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.0	7.0	28.3	13.7	21.6	16.2	2.8	33.0	24.8
LOS	C	A	C	B	C	B	A	C	C
Approach Delay	7.9	21.1	18.6	26.1	26.1	26.1	26.1	26.1	26.1
Approach LOS	A	C	B	C	C	B	A	C	C

Intersection Summary  
 Cycle Length: 120  
 Actuated Cycle Length: 54.1  
 Natural Cycle: 85  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.58  
 Intersection Signal Delay: 17.6  
 Intersection LOS: B  
 Intersection Capacity Utilization 52.6%  
 ICU Level of Service A  
 Analysis Period (min) 15































Splits and Phases: 14: Indian Street & San Michele Road



HCM 6th Signalized Intersection Summary  
 14: Indian Street & San Michele Road

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 		 	 		 		 	 	 	 
Traffic Volume (veh/h)	6	29	150	120	109	6	576	28	106	5	21	5
Future Volume (veh/h)	6	29	150	120	109	6	576	28	106	5	21	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.94
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1218	1470	1470	1826	1826	1826	1856	1752	1767	1900	1707	1707
Adj Flow Rate, veh/h	7	32	103	130	118	0	626	30	33	5	23	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	46	29	29	5	5	5	3	10	9	0	13	13
Cap, veh/h	11	295	250	272	985	0	791	592	499	12	374	32
Arrive On Green	0.01	0.20	0.20	0.08	0.27	0.00	0.22	0.34	0.34	0.01	0.12	0.12
Sat Flow, veh/h	1160	1470	1246	3478	3652	0	3534	1752	1477	1810	3086	263
Grp Volume(v), veh/h	7	32	103	130	118	0	626	30	33	5	13	12
Grp Sat Flow(s),veh/h/ln	1160	1470	1246	1739	1826	0	1767	1752	1477	1810	1707	1641
Q Serve(g_s), s	0.3	1.0	4.0	2.0	1.3	0.0	9.2	0.6	0.8	0.2	0.4	0.4
Cycle Q Clear(g_c), s	0.3	1.0	4.0	2.0	1.3	0.0	9.2	0.6	0.8	0.2	0.4	0.4
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		0.16
Lane Grp Cap(c), veh/h	11	295	250	272	985	0	791	592	499	12	207	199
V/C Ratio(X)	0.65	0.11	0.41	0.48	0.12	0.00	0.79	0.05	0.07	0.41	0.06	0.06
Avail Cap(c_a), veh/h	155	804	681	843	2392	0	2712	1528	1289	242	445	428
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.3	18.0	19.2	24.4	15.2	0.0	20.2	12.3	12.4	27.3	21.5	21.5
Incr Delay (d2), s/veh	22.4	0.1	0.4	0.5	0.0	0.0	0.7	0.0	0.0	8.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.3	1.0	0.7	0.5	0.0	3.2	0.2	0.2	0.1	0.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.6	18.1	19.6	24.9	15.3	0.0	20.9	12.3	12.4	35.5	21.5	21.6
LnGrp LOS	D	B	B	C	B	A	C	B	B	D	C	C
Approach Vol, veh/h		142			248			689				30
Approach Delay, s/veh		20.8			20.3			20.1				23.9
Approach LOS		C			C			C				C
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.0	24.5	8.9	16.9	17.0	12.5	5.1	20.7				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	* 5.8	4.6	5.8				
Max Green Setting (Gmax), s	7.4	48.2	13.4	30.2	42.4	* 14	7.4	36.2				
Max Q Clear Time (g_c+I1), s	2.2	2.8	4.0	6.0	11.2	2.4	2.3	3.3				
Green Ext Time (p_c), s	0.0	0.1	0.1	0.4	1.1	0.0	0.0	0.4				

Intersection Summary

HCM 6th Ctrl Delay	20.4
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
16: Indian Av. & Harley Knox Bl.

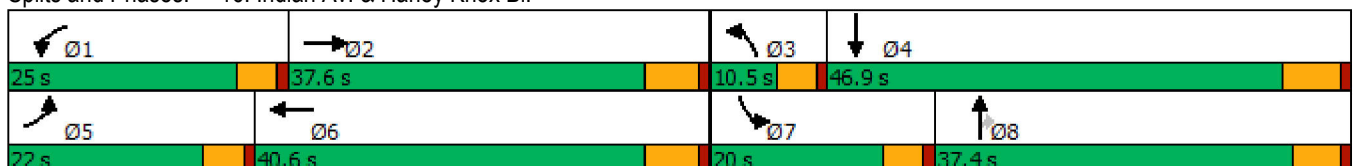


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↔↔	↕↕↔	↔	↕↕↔	↔↔	↕↕	↕	↔	↕↔
Traffic Volume (vph)	108	633	157	1051	148	290	82	102	187
Future Volume (vph)	108	633	157	1051	148	290	82	102	187
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	5	2	1	6	3	8		7	4
Permitted Phases							8		
Detector Phase	5	2	1	6	3	8	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2
Total Split (s)	22.0	37.6	25.0	40.6	10.5	37.4	37.4	20.0	46.9
Total Split (%)	18.3%	31.3%	20.8%	33.8%	8.8%	31.2%	31.2%	16.7%	39.1%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.4	4.4	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.4	5.4	4.6	6.2
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	9.5	32.2	13.1	35.9	6.0	16.1	16.1	10.1	19.3
Actuated g/C Ratio	0.10	0.35	0.14	0.39	0.06	0.17	0.17	0.11	0.21
v/c Ratio	0.52	0.48	0.68	0.76	0.78	0.54	0.23	0.57	0.55
Control Delay	50.4	26.3	53.5	28.5	71.3	38.6	1.7	53.5	18.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.4	26.3	53.5	28.5	71.3	38.6	1.7	53.5	18.1
LOS	D	C	D	C	E	D	A	D	B
Approach Delay		29.3		31.1		42.1			25.8
Approach LOS		C		C		D			C

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 92.4  
 Natural Cycle: 100  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.78  
 Intersection Signal Delay: 31.6  
 Intersection LOS: C  
 Intersection Capacity Utilization 64.2%  
 ICU Level of Service C  
 Analysis Period (min) 15































Splits and Phases: 16: Indian Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 16: Indian Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  			  		 	 			 	
Traffic Volume (veh/h)	108	633	108	157	1051	302	148	290	82	102	187	184
Future Volume (veh/h)	108	633	108	157	1051	302	148	290	82	102	187	184
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1011	1811	1811	1870	1856	1856	1737	1781	1796	1885	1811	1811
Adj Flow Rate, veh/h	117	688	108	171	1142	308	161	315	82	111	203	151
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	60	6	6	2	3	3	11	8	7	1	6	6
Cap, veh/h	154	1513	235	213	1539	415	237	523	235	143	309	219
Arrive On Green	0.08	0.35	0.35	0.12	0.39	0.39	0.07	0.15	0.15	0.08	0.16	0.16
Sat Flow, veh/h	1868	4316	670	1781	3969	1071	3209	3385	1522	1795	1925	1362
Grp Volume(v), veh/h	117	524	272	171	972	478	161	315	82	111	180	174
Grp Sat Flow(s),veh/h/ln	934	1648	1690	1781	1689	1663	1605	1692	1522	1795	1721	1566
Q Serve(g_s), s	4.4	8.8	8.9	6.7	17.7	17.7	3.5	6.2	3.5	4.3	7.0	7.5
Cycle Q Clear(g_c), s	4.4	8.8	8.9	6.7	17.7	17.7	3.5	6.2	3.5	4.3	7.0	7.5
Prop In Lane	1.00		0.40	1.00		0.64	1.00		1.00	1.00		0.87
Lane Grp Cap(c), veh/h	154	1155	592	213	1309	645	237	523	235	143	276	251
V/C Ratio(X)	0.76	0.45	0.46	0.80	0.74	0.74	0.68	0.60	0.35	0.78	0.65	0.69
Avail Cap(c_a), veh/h	453	1462	750	507	1639	807	264	1511	679	386	977	889
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.2	18.0	18.0	30.7	18.9	18.9	32.4	28.3	27.1	32.4	28.2	28.4
Incr Delay (d2), s/veh	2.9	0.3	0.6	2.7	1.4	2.8	4.4	1.1	0.9	3.4	2.6	3.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	2.9	3.1	2.8	6.2	6.3	1.4	2.4	1.2	1.9	2.8	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.1	18.3	18.6	33.4	20.3	21.7	36.8	29.4	28.0	35.7	30.8	31.8
LnGrp LOS	D	B	B	C	C	C	D	C	C	D	C	C
Approach Vol, veh/h		913			1621			558			465	
Approach Delay, s/veh		20.5			22.1			31.3			32.4	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.2	30.9	9.9	17.7	10.5	33.6	10.3	17.3				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	20.4	31.8	5.9	40.7	17.4	34.8	15.4	* 32				
Max Q Clear Time (g_c+I1), s	8.7	10.9	5.5	9.5	6.4	19.7	6.3	8.2				
Green Ext Time (p_c), s	0.2	4.6	0.0	2.0	0.1	8.1	0.1	2.1				

Intersection Summary

HCM 6th Ctrl Delay	24.5
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

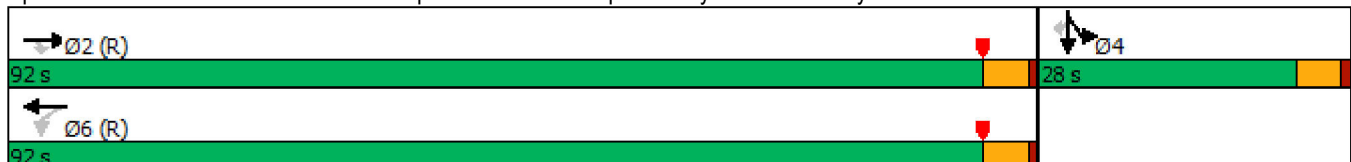


Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations	↑↑	↑	↑↑	↑	↑	↑	↑
Traffic Volume (vph)	875	153	627	400	522	0	255
Future Volume (vph)	875	153	627	400	522	0	255
Turn Type	NA	Perm	Perm	NA	Split	NA	Perm
Protected Phases	2			6	4	4	
Permitted Phases		2	6				4
Detector Phase	2	2	6	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	25.0	25.0	10.0	10.0	10.0
Total Split (s)	92.0	92.0	92.0	92.0	28.0	28.0	28.0
Total Split (%)	76.7%	76.7%	76.7%	76.7%	23.3%	23.3%	23.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None	None
Act Effect Green (s)	87.0	87.0	87.0	87.0	23.0	23.0	23.0
Actuated g/C Ratio	0.72	0.72	0.72	0.72	0.19	0.19	0.19
v/c Ratio	0.38	0.14	0.97	0.33	1.01	1.01	0.55
Control Delay	6.8	1.0	56.5	3.0	105.1	105.9	9.3
Queue Delay	0.2	0.0	0.0	0.5	7.6	7.8	0.0
Total Delay	7.0	1.0	56.5	3.5	112.7	113.7	9.3
LOS	A	A	E	A	F	F	A
Approach Delay	6.1			35.9		79.1	
Approach LOS	A			D		E	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.01  
 Intersection Signal Delay: 36.9  
 Intersection LOS: D  
 Intersection Capacity Utilization 69.0%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

11/10/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑↑	↑					↑	↑	↑
Traffic Volume (veh/h)	0	875	153	627	400	0	0	0	0	522	0	255
Future Volume (veh/h)	0	875	153	627	400	0	0	0	0	522	0	255
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1826	1885	1841	1826	0				1648	1900	1767
Adj Flow Rate, veh/h	0	951	166	682	435	0				567	0	217
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	5	1	4	5	0				17	0	9
Cap, veh/h	0	2515	1158	718	1324	0				602	0	287
Arrive On Green	0.00	0.73	0.73	1.00	1.00	0.00				0.19	0.00	0.19
Sat Flow, veh/h	0	3561	1597	963	1826	0				3139	0	1497
Grp Volume(v), veh/h	0	951	166	682	435	0				567	0	217
Grp Sat Flow(s),veh/h/ln	0	1735	1597	481	1826	0				1570	0	1497
Q Serve(g_s), s	0.0	12.5	3.8	74.5	0.0	0.0				21.4	0.0	16.4
Cycle Q Clear(g_c), s	0.0	12.5	3.8	87.0	0.0	0.0				21.4	0.0	16.4
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2515	1158	718	1324	0				602	0	287
V/C Ratio(X)	0.00	0.38	0.14	0.95	0.33	0.00				0.94	0.00	0.76
Avail Cap(c_a), veh/h	0	2515	1158	718	1324	0				602	0	287
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.60	0.60	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	6.3	5.1	10.8	0.0	0.0				47.8	0.0	45.8
Incr Delay (d2), s/veh	0.0	0.4	0.3	16.4	0.4	0.0				23.4	0.0	10.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.8	1.1	1.6	0.1	0.0				10.0	0.0	6.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	6.7	5.3	27.3	0.4	0.0				71.2	0.0	56.8
LnGrp LOS	A	A	A	C	A	A				E	A	E
Approach Vol, veh/h		1117			1117						784	
Approach Delay, s/veh		6.5			16.8						67.2	
Approach LOS		A			B						E	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		92.0		28.0		92.0						
Change Period (Y+Rc), s		5.0		5.0		5.0						
Max Green Setting (Gmax), s		87.0		23.0		87.0						
Max Q Clear Time (g_c+I1), s		14.5		23.4		89.0						
Green Ext Time (p_c), s		4.7		0.0		0.0						

Intersection Summary

HCM 6th Ctrl Delay	26.1
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Timings

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

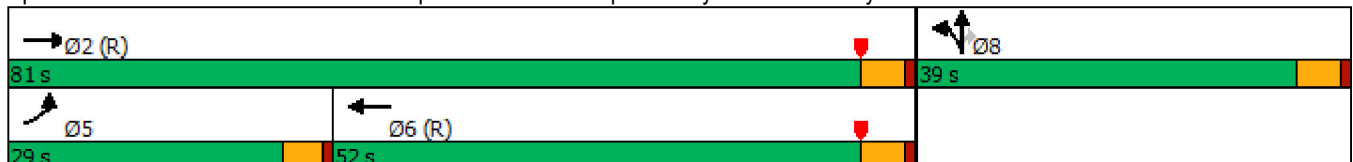


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations	↔↔	↑↑	↑↑	↔	↔	↔
Traffic Volume (vph)	479	918	967	1110	8	340
Future Volume (vph)	479	918	967	1110	8	340
Turn Type	Prot	NA	NA	Free	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				Free		8
Detector Phase	5	2	6		8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	9.5	26.0	24.0		10.0	10.0
Total Split (s)	29.0	81.0	52.0		39.0	39.0
Total Split (%)	24.2%	67.5%	43.3%		32.5%	32.5%
Yellow Time (s)	3.5	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0		5.0	5.0
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	C-Max	C-Max		Max	Max
Act Effct Green (s)	21.9	76.0	49.6	120.0	34.0	34.0
Actuated g/C Ratio	0.18	0.63	0.41	1.00	0.28	0.28
v/c Ratio	0.85	0.49	0.73	0.82	0.15	0.75
Control Delay	54.0	26.0	33.9	5.3	33.3	35.0
Queue Delay	0.1	2.3	0.0	0.0	0.0	0.0
Total Delay	54.1	28.3	33.9	5.3	33.3	35.0
LOS	D	C	C	A	C	D
Approach Delay		37.1	18.6		34.8	
Approach LOS		D	B		C	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 65  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.85  
 Intersection Signal Delay: 27.0  
 Intersection LOS: C  
 Intersection Capacity Utilization 69.0%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.





HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

11/10/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑			↑↑	↔		↔	↔			
Traffic Volume (veh/h)	479	918	0	0	967	1110	59	8	340	0	0	0
Future Volume (veh/h)	479	918	0	0	967	1110	59	8	340	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1841	1722	0	0	1841	1752	1663	1900	1663			
Adj Flow Rate, veh/h	521	998	0	0	1051	0	64	9	305			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	4	12	0	0	4	10	16	0	16			
Cap, veh/h	571	2072	0	0	1497		452	64	399			
Arrive On Green	0.34	1.00	0.00	0.00	0.43	0.00	0.28	0.28	0.28			
Sat Flow, veh/h	3401	3358	0	0	3589	1485	1596	224	1409			
Grp Volume(v), veh/h	521	998	0	0	1051	0	73	0	305			
Grp Sat Flow(s),veh/h/ln	1700	1636	0	0	1749	1485	1820	0	1409			
Q Serve(g_s), s	17.6	0.0	0.0	0.0	29.5	0.0	3.6	0.0	23.8			
Cycle Q Clear(g_c), s	17.6	0.0	0.0	0.0	29.5	0.0	3.6	0.0	23.8			
Prop In Lane	1.00		0.00	0.00		1.00	0.88		1.00			
Lane Grp Cap(c), veh/h	571	2072	0	0	1497		516	0	399			
V/C Ratio(X)	0.91	0.48	0.00	0.00	0.70		0.14	0.00	0.76			
Avail Cap(c_a), veh/h	694	2072	0	0	1497		516	0	399			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.84	0.84	0.00	0.00	0.62	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	39.0	0.0	0.0	0.0	28.1	0.0	32.1	0.0	39.3			
Incr Delay (d2), s/veh	11.6	0.7	0.0	0.0	1.7	0.0	0.6	0.0	13.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	6.6	0.2	0.0	0.0	12.0	0.0	1.6	0.0	9.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.6	0.7	0.0	0.0	29.8	0.0	32.7	0.0	52.3			
LnGrp LOS	D	A	A	A	C		C	A	D			
Approach Vol, veh/h		1519			1051	A		378				
Approach Delay, s/veh		17.8			29.8			48.5				
Approach LOS		B			C			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		81.0			24.6	56.4		39.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		76.0			24.5	47.0		34.0				
Max Q Clear Time (g_c+I1), s		2.0			19.6	31.5		25.8				
Green Ext Time (p_c), s		4.8			0.5	4.2		0.9				

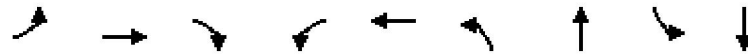
Intersection Summary

HCM 6th Ctrl Delay	26.0
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Timings  
5: Heacock Street & Cactus Avenue

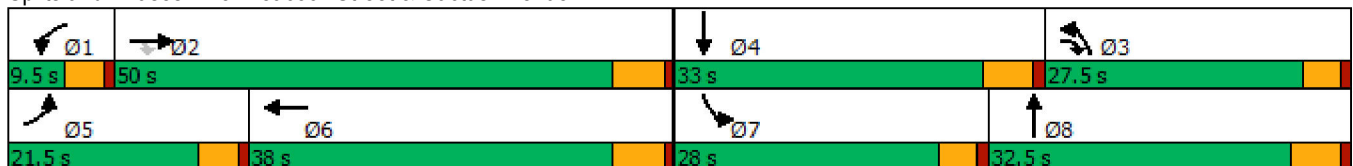


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↙	↑↑↑	↘	↙	↑↑↑	↘	↑↑	↙	↑↑
Traffic Volume (vph)	244	2146	1378	27	956	818	672	184	746
Future Volume (vph)	244	2146	1378	27	956	818	672	184	746
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	3	1	6	3	8	7	4
Permitted Phases			2						
Detector Phase	5	2	3	1	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.5	30.5	9.5	9.5	30.5	9.5	30.5	9.5	30.5
Total Split (s)	21.5	50.0	27.5	9.5	38.0	27.5	32.5	28.0	33.0
Total Split (%)	17.9%	41.7%	22.9%	7.9%	31.7%	22.9%	27.1%	23.3%	27.5%
Yellow Time (s)	3.5	4.5	3.5	3.5	4.5	3.5	4.5	3.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-2.0	0.0	0.0	-2.0	-2.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.5	3.5	4.5	4.5	3.5	2.5	4.5	3.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None
Act Effct Green (s)	17.5	47.2	69.3	5.0	31.8	25.0	35.0	17.1	28.1
Actuated g/C Ratio	0.15	0.41	0.60	0.04	0.27	0.21	0.30	0.15	0.24
v/c Ratio	0.89	0.98	1.32	0.36	0.73	1.11	0.68	0.69	0.94
Control Delay	80.8	48.6	169.9	68.9	40.7	108.3	40.6	60.1	62.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.8	48.6	169.9	68.9	40.7	108.3	40.6	60.1	62.1
LOS	F	D	F	E	D	F	D	E	E
Approach Delay		95.1			41.4		76.3		61.8
Approach LOS		F			D		E		E

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 116.4  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.32  
 Intersection Signal Delay: 78.6  
 Intersection LOS: E  
 Intersection Capacity Utilization 123.6%  
 ICU Level of Service H  
 Analysis Period (min) 15





























Splits and Phases: 5: Heacock Street & Cactus Avenue



HCM 6th Signalized Intersection Summary  
5: Heacock Street & Cactus Avenue

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 			 	
Traffic Volume (veh/h)	244	2146	1378	27	956	132	818	672	61	184	746	61
Future Volume (veh/h)	244	2146	1378	27	956	132	818	672	61	184	746	61
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1811	1826	1885	1885	1811	1870	1870	1900	1856	1856
Adj Flow Rate, veh/h	254	2235	732	28	996	76	852	700	28	192	777	17
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	1	6	5	1	1	6	2	2	0	3	3
Cap, veh/h	275	2218	873	44	1423	108	727	1134	45	235	856	19
Arrive On Green	0.23	0.59	0.38	0.03	0.41	0.26	0.32	0.48	0.31	0.13	0.24	0.23
Sat Flow, veh/h	1810	5656	1531	1739	5189	395	3450	3569	143	1810	3617	79
Grp Volume(v), veh/h	254	2235	732	28	723	349	852	367	361	192	399	395
Grp Sat Flow(s),veh/h/ln	1810	1885	1531	1739	1885	1814	1725	1870	1841	1810	1856	1841
Q Serve(g_s), s	16.3	46.5	13.6	1.9	18.8	19.3	25.0	17.2	17.5	12.2	24.8	24.8
Cycle Q Clear(g_c), s	16.3	46.5	13.6	1.9	18.8	19.3	25.0	17.2	17.5	12.2	24.8	24.8
Prop In Lane	1.00		1.00	1.00		0.22	1.00		0.08	1.00		0.04
Lane Grp Cap(c), veh/h	275	2218	873	44	1034	497	727	594	585	235	439	435
V/C Ratio(X)	0.92	1.01	0.84	0.63	0.70	0.70	1.17	0.62	0.62	0.82	0.91	0.91
Avail Cap(c_a), veh/h	275	2218	873	73	1097	528	727	594	585	374	446	443
HCM Platoon Ratio	1.50	1.50	1.00	1.00	1.50	1.00	1.50	1.50	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.1	24.4	9.9	57.2	30.9	32.8	40.5	25.7	26.4	50.2	44.0	44.0
Incr Delay (d2), s/veh	34.3	20.9	6.9	5.5	1.5	3.1	91.3	1.4	1.5	3.5	21.4	21.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.0	18.4	9.4	0.9	7.3	7.8	18.4	6.5	6.6	5.6	13.6	13.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	79.5	45.3	16.8	62.7	32.3	35.9	131.8	27.1	27.9	53.7	65.4	65.6
LnGrp LOS	E	F	B	E	C	D	F	C	C	D	E	E
Approach Vol, veh/h		3221			1100			1580			986	
Approach Delay, s/veh		41.5			34.2			83.8			63.2	
Approach LOS		D			C			F			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.5	50.0	28.5	32.5	21.5	36.0	18.9	42.2				
Change Period (Y+Rc), s	4.5	5.5	5.5	* 5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	5.0	44.5	23.0	* 28	17.0	32.5	23.5	27.0				
Max Q Clear Time (g_c+I1), s	3.9	48.5	27.0	26.8	18.3	21.3	14.2	19.5				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.3	0.0	3.4	0.2	1.7				

Intersection Summary

HCM 6th Ctrl Delay	53.2
HCM 6th LOS	D

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

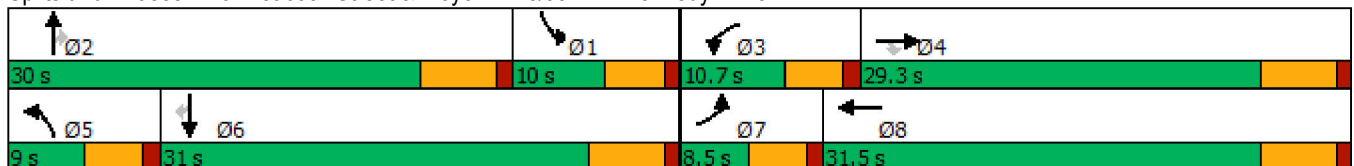
11/10/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	35	218	386	47	99	135	1045	134	362	1208	24	
Future Volume (vph)	35	218	386	47	99	135	1045	134	362	1208	24	
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	7	4		3	8	5	2		1	6		
Permitted Phases			4					2			6	
Detector Phase	7	4	4	3	8	5	2	2	1	6	6	
Switch Phase												
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	
Minimum Split (s)	8.5	23.5	23.5	8.5	31.5	8.5	29.5	29.5	8.5	23.5	23.5	
Total Split (s)	8.5	29.3	29.3	10.7	31.5	9.0	30.0	30.0	10.0	31.0	31.0	
Total Split (%)	10.6%	36.6%	36.6%	13.4%	39.4%	11.3%	37.5%	37.5%	12.5%	38.8%	38.8%	
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5	4.5	4.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	5.5	4.5	5.5	5.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max	
Act Effct Green (s)	4.1	13.6	13.6	5.7	14.8	4.6	25.2	25.2	5.6	26.2	26.2	
Actuated g/C Ratio	0.06	0.21	0.21	0.09	0.22	0.07	0.38	0.38	0.08	0.40	0.40	
v/c Ratio	0.32	0.61	0.72	0.31	0.32	1.11	0.83	0.18	1.30	0.93	0.03	
Control Delay	41.7	31.3	18.3	37.4	8.4	149.0	28.6	3.2	187.8	36.5	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	41.7	31.3	18.3	37.4	8.4	149.0	28.6	3.2	187.8	36.5	0.1	
LOS	D	C	B	D	A	F	C	A	F	D	A	
Approach Delay		24.0			12.4		38.4			70.3		
Approach LOS		C			B		D			E		

Intersection Summary

Cycle Length: 80  
 Actuated Cycle Length: 66.1  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.30  
 Intersection Signal Delay: 46.8  
 Intersection LOS: D  
 Intersection Capacity Utilization 73.5%  
 ICU Level of Service D  
 Analysis Period (min) 15

























Splits and Phases: 6: Heacock Street & Meyer Drive/John F. Kennedy Drive



HCM 6th Signalized Intersection Summary  
 6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	218	386	47	99	194	135	1045	134	362	1208	24
Future Volume (veh/h)	35	218	386	47	99	194	135	1045	134	362	1208	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1900	1900	1885	1885	1900	1811	1900	1841	1796	1900
Adj Flow Rate, veh/h	38	237	257	51	108	151	147	1136	119	393	1313	13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	1	0	0	1	1	0	6	0	4	7	0
Cap, veh/h	55	373	319	66	385	327	122	1332	592	281	1428	640
Arrive On Green	0.03	0.20	0.20	0.04	0.20	0.20	0.07	0.37	0.37	0.08	0.40	0.40
Sat Flow, veh/h	1810	1885	1610	1810	1885	1598	1810	3622	1610	3401	3593	1610
Grp Volume(v), veh/h	38	237	257	51	108	151	147	1136	119	393	1313	13
Grp Sat Flow(s),veh/h/ln	1810	1885	1610	1810	1885	1598	1810	1811	1610	1700	1796	1610
Q Serve(g_s), s	1.4	7.7	10.2	1.9	3.2	5.5	4.5	19.3	2.4	5.5	23.1	0.3
Cycle Q Clear(g_c), s	1.4	7.7	10.2	1.9	3.2	5.5	4.5	19.3	2.4	5.5	23.1	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	55	373	319	66	385	327	122	1332	592	281	1428	640
V/C Ratio(X)	0.69	0.63	0.81	0.77	0.28	0.46	1.20	0.85	0.20	1.40	0.92	0.02
Avail Cap(c_a), veh/h	109	673	575	168	735	623	122	1332	592	281	1428	640
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.0	24.5	25.5	31.8	22.4	23.3	31.1	19.4	7.1	30.6	19.1	12.2
Incr Delay (d2), s/veh	5.7	0.7	1.8	6.8	0.1	0.4	146.0	7.1	0.8	200.3	11.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	3.2	3.6	0.9	1.3	1.9	6.7	7.9	1.1	9.8	9.8	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.7	25.2	27.3	38.6	22.5	23.7	177.1	26.5	7.9	230.9	30.1	12.2
LnGrp LOS	D	C	C	D	C	C	F	C	A	F	C	B
Approach Vol, veh/h		532			310			1402			1719	
Approach Delay, s/veh		27.1			25.7			40.7			75.8	
Approach LOS		C			C			D			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.0	30.0	6.9	18.7	9.0	32.0	6.5	19.1				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	5.5	* 25	6.2	23.8	4.5	25.5	4.0	26.0				
Max Q Clear Time (g_c+I1), s	7.5	21.3	3.9	12.2	6.5	25.1	3.4	7.5				
Green Ext Time (p_c), s	0.0	1.7	0.0	1.1	0.0	0.2	0.0	0.8				













Intersection Summary

HCM 6th Ctrl Delay	53.0
HCM 6th LOS	D

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
11: Heacock Street & Cardinal Avenue

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	61	57	1059	20	18	1542
Future Volume (vph)	61	57	1059	20	18	1542
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	26.6	26.6	21.6	21.6	9.6	16.2
Total Split (s)	27.0	27.0	82.0	82.0	11.0	93.0
Total Split (%)	22.5%	22.5%	68.3%	68.3%	9.2%	77.5%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effect Green (s)	12.6	12.6	50.9	50.9	5.9	51.1
Actuated g/C Ratio	0.18	0.18	0.74	0.74	0.09	0.75
v/c Ratio	0.20	0.17	0.44	0.02	0.13	0.68
Control Delay	30.1	9.9	6.7	2.9	38.9	8.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.1	9.9	6.7	2.9	38.9	8.9
LOS	C	A	A	A	D	A
Approach Delay	20.3		6.6			9.2
Approach LOS	C		A			A

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 68.4	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 8.7	Intersection LOS: A
Intersection Capacity Utilization 60.0%	ICU Level of Service B
Analysis Period (min) 15	













Splits and Phases: 11: Heacock Street & Cardinal Avenue



HCM 6th Signalized Intersection Summary  
 11: Heacock Street & Cardinal Avenue

Gateway Aviation TA (JN:13445)

11/10/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	61	57	1059	20	18	1542
Future Volume (veh/h)	61	57	1059	20	18	1542
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1752	1781	1693	1781	1752
Adj Flow Rate, veh/h	66	46	1151	22	20	1676
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	10	8	14	8	10
Cap, veh/h	250	208	2071	834	40	2267
Arrive On Green	0.14	0.14	0.58	0.58	0.02	0.68
Sat Flow, veh/h	1781	1485	3563	1434	1697	3416
Grp Volume(v), veh/h	66	46	1151	22	20	1676
Grp Sat Flow(s),veh/h/ln	1781	1485	1781	1434	1697	1664
Q Serve(g_s), s	2.0	1.7	12.1	0.4	0.7	19.5
Cycle Q Clear(g_c), s	2.0	1.7	12.1	0.4	0.7	19.5
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	250	208	2071	834	40	2267
V/C Ratio(X)	0.26	0.22	0.56	0.03	0.50	0.74
Avail Cap(c_a), veh/h	660	550	4564	1837	180	4781
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.2	23.0	7.8	5.4	29.1	6.2
Incr Delay (d2), s/veh	0.6	0.5	0.2	0.0	3.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.6	2.8	0.1	0.3	2.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	23.8	23.6	8.1	5.4	32.7	6.7
LnGrp LOS	C	C	A	A	C	A
Approach Vol, veh/h	112		1173			1696
Approach Delay, s/veh	23.7		8.0			7.0
Approach LOS	C		A			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	6.0	41.3			47.4	13.1
Change Period (Y+Rc), s	4.6	* 6.2			6.2	4.6
Max Green Setting (Gmax), s	6.4	* 77			86.8	22.4
Max Q Clear Time (g_c+11), s	2.7	14.1			21.5	4.0
Green Ext Time (p_c), s	0.0	9.9			19.6	0.3

Intersection Summary

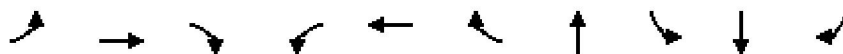
HCM 6th Ctrl Delay	8.0
HCM 6th LOS	A

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Timings  
12: Heacock Street & San Michele Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBL	SBT	SBR	Ø5
Lane Configurations	↖	↗	↘	↖	↗	↘	↕	↖	↗	↘	
Traffic Volume (vph)	58	348	6	22	102	574	509	323	835	36	
Future Volume (vph)	58	348	6	22	102	574	509	323	835	36	
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	NA	Prot	NA	Perm	
Protected Phases	7	4		3	8	1	2	1	6		5
Permitted Phases			4			8				6	
Detector Phase	7	4	4	3	8	1	2	1	6	6	
Switch Phase											
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0
Minimum Split (s)	9.5	30.5	30.5	8.5	30.5	8.5	34.5	8.5	34.5	34.5	8.5
Total Split (s)	9.5	31.5	31.5	8.5	30.5	38.9	41.1	38.9	71.5	71.5	8.5
Total Split (%)	7.9%	26.3%	26.3%	7.1%	25.4%	32.4%	34.3%	32.4%	59.6%	59.6%	7%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5	5.5	4.5
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	None	Max	Max	None
Act Effct Green (s)	12.0	24.3	24.3	4.0	12.5	48.8	35.9	30.7	71.2	71.2	
Actuated g/C Ratio	0.11	0.22	0.22	0.04	0.11	0.44	0.32	0.28	0.64	0.64	
v/c Ratio	0.31	0.91	0.01	0.35	0.52	0.71	0.54	0.68	0.78	0.03	
Control Delay	53.7	70.9	0.0	70.2	55.5	25.5	34.3	44.0	21.9	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	53.7	70.9	0.0	70.2	55.5	25.5	34.3	44.0	21.9	0.1	
LOS	D	E	A	E	E	C	C	D	C	A	
Approach Delay		67.4			31.3		34.3		27.2		
Approach LOS		E			C		C		C		

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 111.4  
 Natural Cycle: 105  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.91  
 Intersection Signal Delay: 35.4  
 Intersection LOS: D  
 Intersection Capacity Utilization 78.6%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 12: Heacock Street & San Michele Road





























HCM 6th Signalized Intersection Summary  
 12: Heacock Street & San Michele Road

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	348	6	22	102	574	0	509	40	323	835	36
Future Volume (veh/h)	58	348	6	22	102	574	0	509	40	323	835	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1870	1900	1826	1826	1885	1826	1900
Adj Flow Rate, veh/h	63	378	7	24	111	461	0	553	43	351	908	39
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	2	0	5	5	1	5	0
Cap, veh/h	271	414	342	35	167	508	2	1087	84	418	1128	995
Arrive On Green	0.15	0.22	0.22	0.02	0.09	0.09	0.00	0.33	0.33	0.23	0.62	0.62
Sat Flow, veh/h	1810	1900	1569	1810	1900	1585	1810	3262	253	1795	1826	1610
Grp Volume(v), veh/h	63	378	7	24	111	461	0	294	302	351	908	39
Grp Sat Flow(s),veh/h/ln	1810	1900	1569	1810	1900	1585	1810	1735	1780	1795	1826	1610
Q Serve(g_s), s	3.3	20.7	0.3	1.4	6.0	4.9	0.0	14.5	14.6	19.9	40.4	0.4
Cycle Q Clear(g_c), s	3.3	20.7	0.3	1.4	6.0	4.9	0.0	14.5	14.6	19.9	40.4	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	271	414	342	35	167	508	2	578	593	418	1128	995
V/C Ratio(X)	0.23	0.91	0.02	0.70	0.67	0.91	0.00	0.51	0.51	0.84	0.81	0.04
Avail Cap(c_a), veh/h	271	462	382	68	445	740	68	578	593	578	1128	995
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.0	40.8	28.6	52.1	47.2	34.8	0.0	28.6	28.6	39.1	15.5	1.1
Incr Delay (d2), s/veh	0.2	19.9	0.0	9.0	1.7	8.7	0.0	3.2	3.1	5.8	6.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	12.0	0.1	0.7	2.8	12.0	0.0	6.2	6.3	8.9	15.6	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.2	60.7	28.6	61.1	48.9	43.5	0.0	31.8	31.7	44.8	21.7	1.1
LnGrp LOS	D	E	C	E	D	D	A	C	C	D	C	A
Approach Vol, veh/h		448			596			596			1298	
Approach Delay, s/veh		57.3			45.2			31.7			27.3	
Approach LOS		E			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	30.4	41.1	6.5	28.8	0.0	71.5	20.5	14.9				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	34.4	* 36	4.0	26.0	4.0	66.0	5.0	25.0				
Max Q Clear Time (g_c+I1), s	21.9	16.6	3.4	22.7	0.0	42.4	5.3	8.0				
Green Ext Time (p_c), s	0.4	1.8	0.0	0.5	0.0	3.9	0.0	1.1				

Intersection Summary

HCM 6th Ctrl Delay	36.4
HCM 6th LOS	D













Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM Unsignalized Intersection Capacity Analysis  
 13: Webster Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/13/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Right Turn Channelized			MOYes			MOYes			MOYes			MOYes
Traffic Volume (veh/h)	138	439	521	152	1018	121	321	391	138	173	615	477
Future Volume (veh/h)	138	439	521	152	1018	121	321	391	138	173	615	477
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	150	477	566	165	1107	132	349	425	150	188	668	518
Approach Volume (veh/h)		627			1272			774			856	
Crossing Volume (veh/h)		1021			924			815			1621#	
High Capacity (veh/h)		612			663			724			371	
High v/c (veh/h)		1.02			1.92			1.07			2.31	
Low Capacity (veh/h)		474			517			570			272	
Low v/c (veh/h)		1.32			2.46			1.36			3.15	
<b>Intersection Summary</b>												
Maximum v/c High			2.31									
Maximum v/c Low			3.15									
Intersection Capacity Utilization			80.5%		ICU Level of Service						D	
# Crossing flow exceeds 1200, method is not applicable												

Timings  
14: Indian Street & San Michele Road

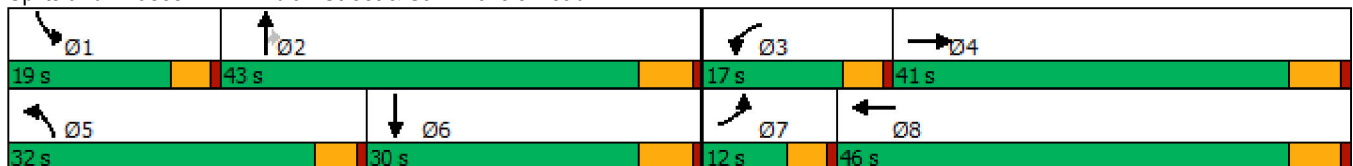


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↖	↗	↖	↗	↖	↗	↗	↖	↗
Traffic Volume (vph)	28	171	165	225	447	122	121	88	194
Future Volume (vph)	28	171	165	225	447	122	121	88	194
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8	5	2		1	6
Permitted Phases							2		
Detector Phase	7	4	3	8	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	31.8	9.6	31.8	9.6	32.8	32.8	9.6	24.8
Total Split (s)	12.0	41.0	17.0	46.0	32.0	43.0	43.0	19.0	30.0
Total Split (%)	10.0%	34.2%	14.2%	38.3%	26.7%	35.8%	35.8%	15.8%	25.0%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	6.0	14.8	8.5	24.2	14.7	20.5	20.5	8.6	11.9
Actuated g/C Ratio	0.08	0.21	0.12	0.34	0.21	0.29	0.29	0.12	0.17
v/c Ratio	0.20	0.76	0.42	0.27	0.67	0.26	0.21	0.43	0.41
Control Delay	39.6	15.5	35.3	17.8	32.3	25.5	4.6	38.9	29.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.6	15.5	35.3	17.8	32.3	25.5	4.6	38.9	29.8
LOS	D	B	D	B	C	C	A	D	C
Approach Delay		16.4		24.1		26.3			32.4
Approach LOS		B		C		C			C

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 71.5  
 Natural Cycle: 85  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.76  
 Intersection Signal Delay: 23.4  
 Intersection LOS: C  
 Intersection Capacity Utilization 73.3%  
 ICU Level of Service D  
 Analysis Period (min) 15























Splits and Phases: 14: Indian Street & San Michele Road



HCM 6th Signalized Intersection Summary  
 14: Indian Street & San Michele Road

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	171	511	165	225	70	447	122	121	88	194	27
Future Volume (veh/h)	28	171	511	165	225	70	447	122	121	88	194	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		1.00	1.00		0.68
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1856	1826	1826	1796	1796	1856	1870	1841	1841
Adj Flow Rate, veh/h	30	186	-97	179	245	59	486	133	67	96	211	19
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	5	5	3	5	5	7	7	3	2	4	4
Cap, veh/h	55	655	0	270	671	158	602	665	582	124	846	73
Arrive On Green	0.03	0.19	0.00	0.08	0.24	0.24	0.18	0.37	0.37	0.07	0.26	0.26
Sat Flow, veh/h	1739	3561	0	3428	2840	667	3421	1796	1571	1781	3200	277
Grp Volume(v), veh/h	30	89	0	179	155	149	486	133	67	96	118	112
Grp Sat Flow(s),veh/h/ln	1739	1735	0	1714	1826	1682	1711	1796	1571	1781	1841	1636
Q Serve(g_s), s	1.2	1.5	0.0	3.6	5.1	5.3	9.7	3.6	2.0	3.8	3.6	3.8
Cycle Q Clear(g_c), s	1.2	1.5	0.0	3.6	5.1	5.3	9.7	3.6	2.0	3.8	3.6	3.8
Prop In Lane	1.00		0.00	1.00		0.40	1.00		1.00	1.00		0.17
Lane Grp Cap(c), veh/h	55	655	0	270	431	397	602	665	582	124	486	432
V/C Ratio(X)	0.55	0.14	0.00	0.66	0.36	0.37	0.81	0.20	0.12	0.77	0.24	0.26
Avail Cap(c_a), veh/h	181	1716	0	597	1032	950	1318	939	821	361	626	557
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.0	24.0	0.0	31.9	22.7	22.8	28.2	15.2	14.7	32.5	20.6	20.7
Incr Delay (d2), s/veh	3.2	0.0	0.0	1.0	0.2	0.2	1.0	0.1	0.0	3.8	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.6	0.0	1.4	2.0	1.9	3.6	1.2	0.6	1.6	1.4	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.1	24.1	0.0	32.9	22.9	23.0	29.2	15.3	14.8	36.4	20.7	20.8
LnGrp LOS	D	C	A	C	C	C	C	B	B	D	C	C
Approach Vol, veh/h		119			483			686			326	
Approach Delay, s/veh		27.4			26.6			25.1			25.3	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.6	32.2	10.2	19.2	17.1	24.6	6.8	22.6				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	14.4	37.2	12.4	35.2	27.4	24.2	7.4	40.2				
Max Q Clear Time (g_c+I1), s	5.8	5.6	5.6	3.5	11.7	5.8	3.2	7.3				
Green Ext Time (p_c), s	0.1	0.5	0.2	0.3	0.8	0.6	0.0	1.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			25.8									
HCM 6th LOS			C									

Timings  
16: Indian Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/10/2020

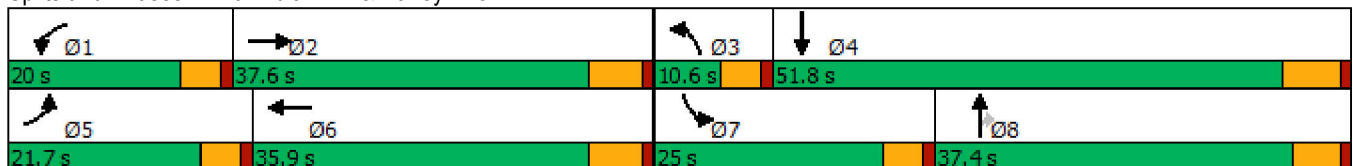


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↔↔	↕↕↔	↔	↕↕↔	↔↔	↕↕	↕	↔	↕↔
Traffic Volume (vph)	326	768	242	730	118	295	246	326	559
Future Volume (vph)	326	768	242	730	118	295	246	326	559
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	5	2	1	6	3	8		7	4
Permitted Phases							8		
Detector Phase	5	2	1	6	3	8	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2
Total Split (s)	21.7	37.6	20.0	35.9	10.6	37.4	37.4	25.0	51.8
Total Split (%)	18.1%	31.3%	16.7%	29.9%	8.8%	31.2%	31.2%	20.8%	43.2%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.4	4.4	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.4	5.4	4.6	6.2
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	16.5	29.2	15.4	28.1	6.0	31.0	31.0	20.5	44.6
Actuated g/C Ratio	0.14	0.25	0.13	0.24	0.05	0.27	0.27	0.18	0.38
v/c Ratio	0.88	0.78	1.11	0.82	0.81	0.38	0.44	1.12	0.96
Control Delay	73.1	44.6	139.1	46.6	89.7	37.0	6.5	131.5	44.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	73.1	44.6	139.1	46.6	89.7	37.0	6.5	131.5	44.6
LOS	E	D	F	D	F	D	A	F	D
Approach Delay		52.3		66.2		35.0			63.0
Approach LOS		D		E		D			E

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 116.5	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.12	
Intersection Signal Delay: 56.9	Intersection LOS: E
Intersection Capacity Utilization 88.9%	ICU Level of Service E
Analysis Period (min) 15	
































Splits and Phases: 16: Indian Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 16: Indian Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  			  		 	 			 	 
Traffic Volume (veh/h)	326	768	108	242	730	169	118	295	246	326	559	651
Future Volume (veh/h)	326	768	108	242	730	169	118	295	246	326	559	651
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1559	1841	1841	1885	1811	1811	1707	1678	1870	1900	1856	1856
Adj Flow Rate, veh/h	354	835	90	263	793	157	128	321	158	354	608	436
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	23	4	4	1	6	6	13	15	2	0	3	3
Cap, veh/h	407	1067	114	265	987	194	182	705	346	354	705	505
Arrive On Green	0.14	0.23	0.23	0.15	0.24	0.24	0.06	0.22	0.22	0.20	0.36	0.36
Sat Flow, veh/h	2881	4608	494	1795	4146	814	3155	3188	1564	1810	1960	1405
Grp Volume(v), veh/h	354	606	319	263	629	321	128	321	158	354	547	497
Grp Sat Flow(s),veh/h/ln	1440	1675	1752	1795	1648	1664	1577	1594	1564	1810	1763	1603
Q Serve(g_s), s	12.5	17.7	17.8	15.2	18.7	19.0	4.2	9.1	9.1	20.4	30.0	30.0
Cycle Q Clear(g_c), s	12.5	17.7	17.8	15.2	18.7	19.0	4.2	9.1	9.1	20.4	30.0	30.0
Prop In Lane	1.00		0.28	1.00		0.49	1.00		1.00	1.00		0.88
Lane Grp Cap(c), veh/h	407	776	406	265	785	396	182	705	346	354	634	576
V/C Ratio(X)	0.87	0.78	0.79	0.99	0.80	0.81	0.70	0.46	0.46	1.00	0.86	0.86
Avail Cap(c_a), veh/h	473	1023	535	265	952	481	182	979	481	354	772	702
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.8	37.5	37.6	44.3	37.4	37.5	48.2	35.1	35.1	41.9	31.0	31.0
Incr Delay (d2), s/veh	12.9	2.9	5.7	52.5	4.1	8.4	10.0	0.5	0.9	47.5	8.5	9.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	7.1	7.8	10.4	7.6	8.3	1.8	3.4	3.4	13.3	13.4	12.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.7	40.4	43.3	96.8	41.5	45.9	58.2	35.6	36.1	89.4	39.5	40.3
LnGrp LOS	E	D	D	F	D	D	E	D	D	F	D	D
Approach Vol, veh/h		1279			1213			607			1398	
Approach Delay, s/veh		45.6			54.7			40.5			52.4	
Approach LOS		D			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.0	29.9	10.6	43.6	19.3	30.6	25.0	29.2				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	15.4	31.8	6.0	45.6	17.1	30.1	20.4	* 32				
Max Q Clear Time (g_c+I1), s	17.2	19.8	6.2	32.0	14.5	21.0	22.4	11.1				
Green Ext Time (p_c), s	0.0	4.2	0.0	5.4	0.2	3.8	0.0	2.3				

Intersection Summary

HCM 6th Ctrl Delay	49.5
HCM 6th LOS	D

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

**APPENDIX 7.23:**

**HORIZON YEAR (2045) WITH PROJECT (NON-PEAK) WITH HEACOCK STREET  
EXTENSION CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS WITH  
IMPROVEMENTS**

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Timings

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

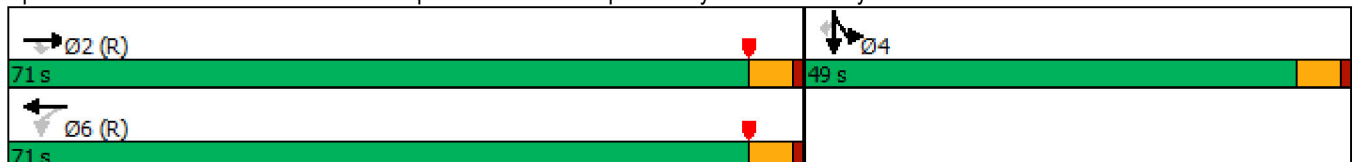


Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations	↑↑	↑	↑↑	↑	↑	↑	↑
Traffic Volume (vph)	1157	28	212	666	999	1	315
Future Volume (vph)	1157	28	212	666	999	1	315
Turn Type	NA	Perm	Perm	NA	Split	NA	Perm
Protected Phases	2			6	4	4	
Permitted Phases		2	6				4
Detector Phase	2	2	6	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	25.0	25.0	10.0	10.0	10.0
Total Split (s)	71.0	71.0	71.0	71.0	49.0	49.0	49.0
Total Split (%)	59.2%	59.2%	59.2%	59.2%	40.8%	40.8%	40.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None	None
Act Effct Green (s)	66.0	66.0	66.0	66.0	44.0	44.0	44.0
Actuated g/C Ratio	0.55	0.55	0.55	0.55	0.37	0.37	0.37
v/c Ratio	0.67	0.03	1.03	0.71	0.99	0.99	0.51
Control Delay	21.3	5.0	92.4	22.6	73.3	73.2	15.1
Queue Delay	0.2	0.0	0.0	1.7	41.8	41.8	0.0
Total Delay	21.5	5.0	92.4	24.3	115.1	115.1	15.1
LOS	C	A	F	C	F	F	B
Approach Delay	21.1			40.7		91.2	
Approach LOS	C			D		F	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection  
 Natural Cycle: 50  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.03  
 Intersection Signal Delay: 53.5  
 Intersection LOS: D  
 Intersection Capacity Utilization 108.5%  
 ICU Level of Service G  
 Analysis Period (min) 15

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

11/10/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑↑	↑					↑	↑	↑
Traffic Volume (veh/h)	0	1157	28	212	666	0	0	0	0	999	1	315
Future Volume (veh/h)	0	1157	28	212	666	0	0	0	0	999	1	315
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1826	1826	1604	1870	0				1693	1900	1781
Adj Flow Rate, veh/h	0	1258	30	230	724	0				1087	0	282
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	5	5	20	2	0				14	0	8
Cap, veh/h	0	1942	866	341	1047	0				1150	0	539
Arrive On Green	0.00	0.56	0.56	1.00	1.00	0.00				0.36	0.00	0.36
Sat Flow, veh/h	0	3561	1547	713	1870	0				3224	0	1510
Grp Volume(v), veh/h	0	1258	30	230	724	0				1087	0	282
Grp Sat Flow(s),veh/h/ln	0	1735	1547	357	1870	0				1612	0	1510
Q Serve(g_s), s	0.0	30.1	1.0	37.1	0.0	0.0				39.3	0.0	17.7
Cycle Q Clear(g_c), s	0.0	30.1	1.0	67.2	0.0	0.0				39.3	0.0	17.7
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1942	866	341	1047	0				1150	0	539
V/C Ratio(X)	0.00	0.65	0.03	0.68	0.69	0.00				0.94	0.00	0.52
Avail Cap(c_a), veh/h	0	1942	866	341	1047	0				1182	0	554
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.57	0.57	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	18.2	11.9	15.8	0.0	0.0				37.4	0.0	30.5
Incr Delay (d2), s/veh	0.0	1.7	0.1	6.0	2.2	0.0				14.7	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	11.4	0.4	2.6	0.6	0.0				17.0	0.0	6.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	19.9	11.9	21.8	2.2	0.0				52.1	0.0	31.4
LnGrp LOS	A	B	B	C	A	A				D	A	C
Approach Vol, veh/h		1288			954						1369	
Approach Delay, s/veh		19.7			6.9						47.9	
Approach LOS		B			A						D	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		72.2		47.8		72.2						
Change Period (Y+Rc), s		5.0		5.0		5.0						
Max Green Setting (Gmax), s		66.0		44.0		66.0						
Max Q Clear Time (g_c+I1), s		32.1		41.3		69.2						
Green Ext Time (p_c), s		6.5		1.6		0.0						

Intersection Summary

HCM 6th Ctrl Delay	27.0
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Timings

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

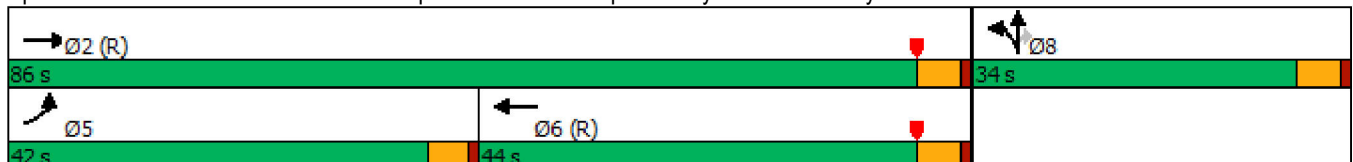


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	808	1348	820	1142	7	301
Future Volume (vph)	808	1348	820	1142	7	301
Turn Type	Prot	NA	NA	Free	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				Free		8
Detector Phase	5	2	6		8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	9.5	26.0	24.0		10.0	10.0
Total Split (s)	42.0	86.0	44.0		34.0	34.0
Total Split (%)	35.0%	71.7%	36.7%		28.3%	28.3%
Yellow Time (s)	3.5	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0		5.0	5.0
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	C-Max	C-Max		Max	Max
Act Effct Green (s)	34.5	81.0	42.0	120.0	29.0	29.0
Actuated g/C Ratio	0.29	0.68	0.35	1.00	0.24	0.24
v/c Ratio	0.91	0.67	0.76	0.86	0.16	0.79
Control Delay	62.7	24.7	40.0	7.0	37.2	49.8
Queue Delay	3.5	49.1	0.0	0.0	0.4	0.0
Total Delay	66.2	73.9	40.0	7.0	37.6	49.8
LOS	E	E	D	A	D	D
Approach Delay		71.0	20.8		47.6	
Approach LOS		E	C		D	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 65  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.91  
 Intersection Signal Delay: 47.1  
 Intersection LOS: D  
 Intersection Capacity Utilization 108.5%  
 ICU Level of Service G  
 Analysis Period (min) 15

Splits and Phases: 2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

11/10/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑			↑↑	↔		↔	↔			
Traffic Volume (veh/h)	808	1348	0	0	820	1142	58	7	301	0	0	0
Future Volume (veh/h)	808	1348	0	0	820	1142	58	7	301	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1841	1722	0	0	1796	1752	1811	1900	1811			
Adj Flow Rate, veh/h	878	1465	0	0	891	0	63	8	262			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	4	12	0	0	7	10	6	0	6			
Cap, veh/h	921	2209	0	0	1251		390	50	371			
Arrive On Green	0.54	1.00	0.00	0.00	0.37	0.00	0.24	0.24	0.24			
Sat Flow, veh/h	3401	3358	0	0	3503	1485	1614	205	1535			
Grp Volume(v), veh/h	878	1465	0	0	891	0	71	0	262			
Grp Sat Flow(s),veh/h/ln	1700	1636	0	0	1706	1485	1819	0	1535			
Q Serve(g_s), s	29.3	0.0	0.0	0.0	26.9	0.0	3.7	0.0	18.7			
Cycle Q Clear(g_c), s	29.3	0.0	0.0	0.0	26.9	0.0	3.7	0.0	18.7			
Prop In Lane	1.00		0.00	0.00		1.00	0.89		1.00			
Lane Grp Cap(c), veh/h	921	2209	0	0	1251		440	0	371			
V/C Ratio(X)	0.95	0.66	0.00	0.00	0.71		0.16	0.00	0.71			
Avail Cap(c_a), veh/h	1063	2209	0	0	1251		440	0	371			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.56	0.56	0.00	0.00	0.79	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	26.8	0.0	0.0	0.0	32.6	0.0	35.9	0.0	41.6			
Incr Delay (d2), s/veh	10.2	0.9	0.0	0.0	2.8	0.0	0.8	0.0	10.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	8.7	0.3	0.0	0.0	11.1	0.0	1.7	0.0	8.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.9	0.9	0.0	0.0	35.3	0.0	36.7	0.0	52.4			
LnGrp LOS	D	A	A	A	D		D	A	D			
Approach Vol, veh/h		2343			891	A		333				
Approach Delay, s/veh		14.4			35.3			49.1				
Approach LOS		B			D			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		86.0			37.0	49.0		34.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		81.0			37.5	39.0		29.0				
Max Q Clear Time (g_c+I1), s		2.0			31.3	28.9		20.7				
Green Ext Time (p_c), s		8.8			1.2	2.9		0.8				

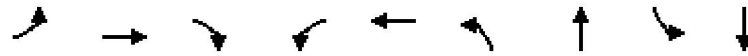
Intersection Summary

HCM 6th Ctrl Delay	22.9
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Timings  
5: Heacock Street & Cactus Avenue

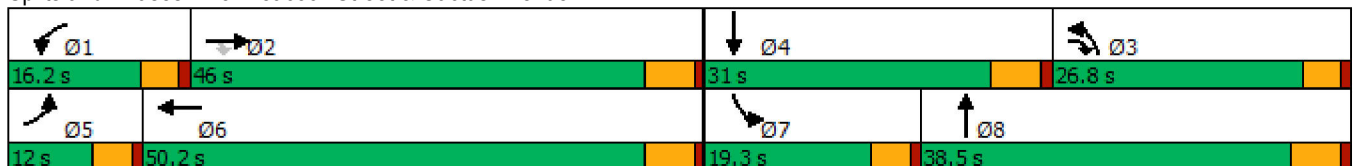


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↵	↑↑↑	↵	↵	↑↑↑	↵↵	↑↵	↵	↑↑
Traffic Volume (vph)	176	1067	778	81	2068	862	721	139	376
Future Volume (vph)	176	1067	778	81	2068	862	721	139	376
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	3	1	6	3	8	7	4
Permitted Phases			2						
Detector Phase	5	2	3	1	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.5	30.5	9.5	9.5	30.5	9.5	30.5	9.5	30.5
Total Split (s)	12.0	46.0	26.8	16.2	50.2	26.8	38.5	19.3	31.0
Total Split (%)	10.0%	38.3%	22.3%	13.5%	41.8%	22.3%	32.1%	16.1%	25.8%
Yellow Time (s)	3.5	4.5	3.5	3.5	4.5	3.5	4.5	3.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-2.0	0.0	0.0	-2.0	-2.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.5	3.5	4.5	4.5	3.5	2.5	4.5	3.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None
Act Effct Green (s)	8.5	47.3	70.7	9.1	46.8	25.4	31.2	13.3	20.1
Actuated g/C Ratio	0.07	0.41	0.62	0.08	0.41	0.22	0.27	0.12	0.18
v/c Ratio	1.34	0.48	0.72	0.56	1.01	1.12	0.79	0.67	0.75
Control Delay	232.0	27.2	13.1	65.8	54.7	113.1	45.2	65.1	49.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	232.0	27.2	13.1	65.8	54.7	113.1	45.2	65.1	49.7
LOS	F	C	B	E	D	F	D	E	D
Approach Delay		39.6			55.1		81.5		53.1
Approach LOS		D			E		F		D

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 114.8	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.34	
Intersection Signal Delay: 56.6	Intersection LOS: E
Intersection Capacity Utilization 105.3%	ICU Level of Service G
Analysis Period (min) 15	





























Splits and Phases: 5: Heacock Street & Cactus Avenue



HCM 6th Signalized Intersection Summary  
5: Heacock Street & Cactus Avenue

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 			 	
Traffic Volume (veh/h)	176	1067	778	81	2068	159	862	721	30	139	376	105
Future Volume (veh/h)	176	1067	778	81	2068	159	862	721	30	139	376	105
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1752	1900	1885	1885	1826	1841	1841	1870	1841	1841
Adj Flow Rate, veh/h	183	1111	680	84	2154	104	898	751	15	145	392	83
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	10	0	1	1	5	4	4	2	4	4
Cap, veh/h	134	2353	889	107	2207	106	746	989	20	188	489	103
Arrive On Green	0.11	0.63	0.40	0.06	0.62	0.39	0.32	0.41	0.27	0.11	0.17	0.16
Sat Flow, veh/h	1781	5611	1485	1810	5352	257	3478	3597	72	1781	2951	619
Grp Volume(v), veh/h	183	1111	680	84	1514	744	898	384	382	145	243	232
Grp Sat Flow(s),veh/h/ln	1781	1870	1485	1810	1885	1839	1739	1841	1828	1781	1841	1729
Q Serve(g_s), s	8.5	11.8	9.5	5.2	43.7	44.6	24.3	20.2	20.3	9.0	14.4	14.7
Cycle Q Clear(g_c), s	8.5	11.8	9.5	5.2	43.7	44.6	24.3	20.2	20.3	9.0	14.4	14.7
Prop In Lane	1.00		1.00	1.00		0.14	1.00		0.04	1.00		0.36
Lane Grp Cap(c), veh/h	134	2353	889	107	1554	758	746	506	503	188	305	287
V/C Ratio(X)	1.37	0.47	0.77	0.78	0.97	0.98	1.20	0.76	0.76	0.77	0.80	0.81
Avail Cap(c_a), veh/h	134	2353	889	187	1554	758	746	553	549	248	431	405
HCM Platoon Ratio	1.50	1.50	1.00	1.00	1.50	1.00	1.50	1.50	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.3	14.4	5.4	52.6	21.0	23.0	38.4	30.1	30.4	49.4	45.4	45.7
Incr Delay (d2), s/veh	206.3	0.1	3.6	4.7	16.9	27.9	104.2	4.7	4.8	7.2	4.4	5.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.2	3.9	4.5	2.4	16.3	19.8	19.6	8.0	8.1	4.3	6.7	6.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	256.6	14.5	9.1	57.3	37.9	50.8	142.6	34.8	35.2	56.5	49.8	51.1
LnGrp LOS	F	B	A	E	D	D	F	C	D	E	D	D
Approach Vol, veh/h		1974			2342			1664			620	
Approach Delay, s/veh		35.0			42.7			93.0			51.9	
Approach LOS		D			D			F			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.2	51.0	27.8	23.3	12.0	50.2	15.4	35.6				
Change Period (Y+Rc), s	4.5	5.5	5.5	* 5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	11.7	40.5	22.3	* 26	7.5	44.7	14.8	33.0				
Max Q Clear Time (g_c+I1), s	7.2	13.8	26.3	16.7	10.5	46.6	11.0	22.3				
Green Ext Time (p_c), s	0.0	6.7	0.0	1.1	0.0	0.0	0.1	2.1				

Intersection Summary

HCM 6th Ctrl Delay	54.0
HCM 6th LOS	D

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

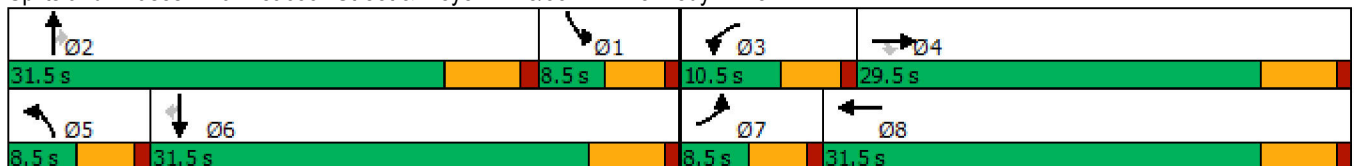
11/10/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	41	45	155	36	238	37	1051	64	127	837	22
Future Volume (vph)	41	45	155	36	238	37	1051	64	127	837	22
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4					2			6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Minimum Split (s)	8.5	23.5	23.5	8.5	31.5	8.5	30.5	30.5	8.5	23.5	23.5
Total Split (s)	8.5	29.5	29.5	10.5	31.5	8.5	31.5	31.5	8.5	31.5	31.5
Total Split (%)	10.6%	36.9%	36.9%	13.1%	39.4%	10.6%	39.4%	39.4%	10.6%	39.4%	39.4%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	5.5	4.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	4.1	12.7	12.7	5.5	11.7	4.1	26.7	26.7	4.1	32.4	32.4
Actuated g/C Ratio	0.07	0.20	0.20	0.09	0.19	0.07	0.42	0.42	0.07	0.51	0.51
v/c Ratio	0.41	0.13	0.30	0.25	0.59	0.34	0.72	0.08	0.57	0.49	0.03
Control Delay	45.9	22.0	2.4	34.9	17.8	41.6	21.4	0.2	43.4	14.9	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.9	22.0	2.4	34.9	17.8	41.6	21.4	0.2	43.4	14.9	0.0
LOS	D	C	A	C	B	D	C	A	D	B	A
Approach Delay		13.5			19.0		20.9			18.2	
Approach LOS		B			B		C			B	

Intersection Summary

Cycle Length: 80  
 Actuated Cycle Length: 63  
 Natural Cycle: 80  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.72  
 Intersection Signal Delay: 19.0  
 Intersection LOS: B  
 Intersection Capacity Utilization 68.0%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 6: Heacock Street & Meyer Drive/John F. Kennedy Drive




























HCM 6th Signalized Intersection Summary  
 6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	45	155	36	238	230	37	1051	64	127	837	22
Future Volume (veh/h)	41	45	155	36	238	230	37	1051	64	127	837	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.97	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1648	1767	1811	1796	1841	1841	1781	1811	1767	1856	1767	1618
Adj Flow Rate, veh/h	43	47	125	38	248	204	39	1095	57	132	872	13
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	17	9	6	7	4	4	8	6	9	3	9	19
Cap, veh/h	52	340	295	52	361	284	53	1435	577	209	1560	598
Arrive On Green	0.03	0.19	0.19	0.03	0.19	0.19	0.03	0.40	0.40	0.06	0.44	0.44
Sat Flow, veh/h	1570	1767	1535	1711	1901	1497	1697	3622	1455	3428	3533	1354
Grp Volume(v), veh/h	43	47	125	38	240	212	39	1095	57	132	872	13
Grp Sat Flow(s),veh/h/ln	1570	1767	1535	1711	1841	1557	1697	1811	1455	1714	1767	1354
Q Serve(g_s), s	1.8	1.4	4.7	1.4	8.0	8.4	1.5	17.2	1.1	2.5	12.0	0.4
Cycle Q Clear(g_c), s	1.8	1.4	4.7	1.4	8.0	8.4	1.5	17.2	1.1	2.5	12.0	0.4
Prop In Lane	1.00		1.00	1.00		0.96	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	52	340	295	52	349	295	53	1435	577	209	1560	598
V/C Ratio(X)	0.83	0.14	0.42	0.73	0.69	0.72	0.74	0.76	0.10	0.63	0.56	0.02
Avail Cap(c_a), veh/h	96	646	561	156	729	617	103	1435	577	209	1560	598
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.5	22.0	23.3	31.5	24.8	24.9	31.5	17.1	6.1	30.1	13.6	10.3
Incr Delay (d2), s/veh	11.6	0.1	0.4	7.1	0.9	1.2	7.4	3.9	0.3	4.6	1.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.6	1.5	0.6	3.2	2.8	0.7	6.4	0.5	1.0	4.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.1	22.1	23.7	38.6	25.7	26.2	38.9	21.0	6.4	34.7	15.0	10.4
LnGrp LOS	D	C	C	D	C	C	D	C	A	C	B	B
Approach Vol, veh/h		215			490			1191			1017	
Approach Delay, s/veh		27.2			26.9			20.9			17.5	
Approach LOS		C			C			C			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.5	31.5	6.5	18.1	6.5	34.5	6.7	17.9				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	4.0	* 26	6.0	24.0	4.0	26.0	4.0	26.0				
Max Q Clear Time (g_c+I1), s	4.5	19.2	3.4	6.7	3.5	14.0	3.8	10.4				
Green Ext Time (p_c), s	0.0	2.8	0.0	0.3	0.0	2.9	0.0	1.4				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			21.2									
HCM 6th LOS			C									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												



Timings  
11: Heacock Street & Cardinal Avenue

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	12	13	1130	61	52	961
Future Volume (vph)	12	13	1130	61	52	961
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	26.6	26.6	21.6	21.6	9.6	16.2
Total Split (s)	27.0	27.0	76.0	76.0	17.0	93.0
Total Split (%)	22.5%	22.5%	63.3%	63.3%	14.2%	77.5%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	13.1	13.1	43.1	43.1	7.5	49.9
Actuated g/C Ratio	0.23	0.23	0.75	0.75	0.13	0.87
v/c Ratio	0.04	0.04	0.47	0.05	0.25	0.38
Control Delay	26.0	14.1	9.1	3.1	33.3	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.0	14.1	9.1	3.1	33.3	4.1
LOS	C	B	A	A	C	A
Approach Delay	19.8		8.8			5.6
Approach LOS	B		A			A

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 57.5	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.47	
Intersection Signal Delay: 7.5	Intersection LOS: A
Intersection Capacity Utilization 55.2%	ICU Level of Service B
Analysis Period (min) 15	













Splits and Phases: 11: Heacock Street & Cardinal Avenue



HCM 6th Signalized Intersection Summary  
 11: Heacock Street & Cardinal Avenue

Gateway Aviation TA (JN:13445)

11/10/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	12	13	1130	61	52	961
Future Volume (veh/h)	12	13	1130	61	52	961
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1559	1441	1781	1870	1781	1693
Adj Flow Rate, veh/h	13	14	1228	66	57	1045
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	23	31	8	2	8	14
Cap, veh/h	95	78	1913	851	96	2238
Arrive On Green	0.06	0.06	0.54	0.54	0.06	0.70
Sat Flow, veh/h	1485	1221	3563	1585	1697	3300
Grp Volume(v), veh/h	13	14	1228	66	57	1045
Grp Sat Flow(s),veh/h/ln	1485	1221	1781	1585	1697	1608
Q Serve(g_s), s	0.4	0.5	10.9	0.9	1.5	6.6
Cycle Q Clear(g_c), s	0.4	0.5	10.9	0.9	1.5	6.6
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	95	78	1913	851	96	2238
V/C Ratio(X)	0.14	0.18	0.64	0.08	0.59	0.47
Avail Cap(c_a), veh/h	740	608	5660	2518	468	6211
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.9	19.9	7.3	5.0	20.7	3.1
Incr Delay (d2), s/veh	0.7	1.1	0.4	0.0	2.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.2	2.0	0.1	0.5	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	20.5	21.0	7.7	5.1	22.9	3.2
LnGrp LOS	C	C	A	A	C	A
Approach Vol, veh/h	27		1294			1102
Approach Delay, s/veh	20.8		7.6			4.2
Approach LOS	C		A			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	7.1	30.3			37.5	7.5
Change Period (Y+Rc), s	4.6	* 6.2			6.2	4.6
Max Green Setting (Gmax), s	12.4	* 71			86.8	22.4
Max Q Clear Time (g_c+I1), s	3.5	12.9			8.6	2.5
Green Ext Time (p_c), s	0.0	11.2			8.5	0.0

Intersection Summary

HCM 6th Ctrl Delay	6.2
HCM 6th LOS	A

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
12: Heacock Street & San Michele Road  
Gateway Aviation TA (JN:13445)  
11/10/2020

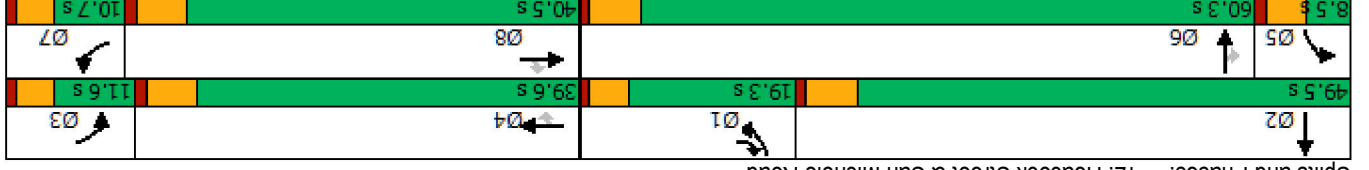


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
Traffic Volume (vph)	31	82	4	39	341	316	1	553	96	525	52
Future Volume (vph)	31	82	4	39	341	316	1	553	96	525	52
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	4	3	8	1	5	2	1	6	6
Permitted Phases		4	4		8						
Detector Phase	7	4	4	3	8	1	5	2	1	6	6
Switch Phase	4.0	5.0	5.0	4.0	5.0	4.0	4.0	5.0	4.0	5.0	5.0
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	4.0	5.0	4.0	5.0	5.0
Minimum Split (s)	9.5	30.5	30.5	8.5	30.5	8.5	8.5	34.5	8.5	34.5	34.5
Total Split (s)	10.7	39.6	39.6	11.6	40.5	19.3	8.5	49.5	19.3	60.3	60.3
Total Split (%)	8.9%	33.0%	33.0%	9.7%	33.8%	16.1%	7.1%	41.3%	16.1%	50.3%	50.3%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	3.5	4.5	3.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	4.5	5.5	4.5	5.5	5.5
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	Max
Act Effort Green (s)	5.7	16.1	16.1	13.6	23.9	40.5	4.1	45.1	10.9	59.2	59.2
Actuated g/C Ratio	0.06	0.16	0.16	0.13	0.24	0.40	0.04	0.44	0.11	0.58	0.58
v/c Ratio	0.32	0.30	0.01	0.18	0.83	0.41	0.01	0.40	0.54	0.54	0.05
Control Delay	60.0	45.1	0.0	42.5	53.9	11.6	55.0	22.9	56.7	18.8	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.0	45.1	0.0	42.5	53.9	11.6	55.0	22.9	56.7	18.8	0.4
LOS	E	D	A	D	D	B	D	C	E	B	A
Approach Delay	47.6	34.1	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.8	22.8
Approach LOS	D	C	C	C	C	C	C	C	C	C	C

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 101.6
Natural Cycle: 85
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 28.1
Intersection Capacity Utilization 68.9%
ICU Level of Service C
Analysis Period (min) 15

























Splits and Phases: 12: Heacock Street & San Michele Road



HCM 6th Signalized Intersection Summary  
 12: Heacock Street & San Michele Road

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	82	4	39	341	316	1	553	10	96	525	52
Future Volume (veh/h)	31	82	4	39	341	316	1	553	10	96	525	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1856	1366	1796	1900	1856	1900	1856	1856	1811	1826	1856
Adj Flow Rate, veh/h	34	89	4	42	371	126	1	601	11	104	571	57
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	3	36	7	0	3	0	3	3	6	5	3
Cap, veh/h	44	130	81	301	421	505	2	1568	29	172	1007	867
Arrive On Green	0.02	0.07	0.07	0.18	0.22	0.22	0.00	0.44	0.44	0.10	0.55	0.55
Sat Flow, veh/h	1810	1856	1158	1711	1900	1572	1810	3542	65	1725	1826	1572
Grp Volume(v), veh/h	34	89	4	42	371	126	1	299	313	104	571	57
Grp Sat Flow(s),veh/h/ln	1810	1856	1158	1711	1900	1572	1810	1763	1844	1725	1826	1572
Q Serve(g_s), s	1.9	4.7	0.3	2.1	18.8	0.0	0.1	11.3	11.3	5.7	20.3	1.2
Cycle Q Clear(g_c), s	1.9	4.7	0.3	2.1	18.8	0.0	0.1	11.3	11.3	5.7	20.3	1.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	44	130	81	301	421	505	2	781	817	172	1007	867
V/C Ratio(X)	0.77	0.69	0.05	0.14	0.88	0.25	0.50	0.38	0.38	0.60	0.57	0.07
Avail Cap(c_a), veh/h	113	637	397	301	669	711	73	781	817	257	1007	867
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.2	45.1	34.2	34.6	37.4	24.9	49.6	18.6	18.6	42.8	14.5	5.4
Incr Delay (d2), s/veh	9.8	2.4	0.1	0.1	5.2	0.1	58.7	1.4	1.4	1.3	2.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	2.2	0.1	0.8	8.9	2.1	0.1	4.5	4.7	2.4	7.8	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.0	47.5	34.3	34.7	42.6	25.0	108.3	20.0	19.9	44.1	16.9	5.5
LnGrp LOS	E	D	C	C	D	C	F	B	B	D	B	A
Approach Vol, veh/h		127			539			613			732	
Approach Delay, s/veh		49.9			37.9			20.1			19.8	
Approach LOS		D			D			C			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.4	49.5	22.0	12.5	4.6	60.3	6.9	27.5				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	14.8	* 44	7.1	34.1	4.0	54.8	6.2	35.0				
Max Q Clear Time (g_c+I1), s	7.7	13.3	4.1	6.7	2.1	22.3	3.9	20.8				
Green Ext Time (p_c), s	0.1	2.0	0.0	0.3	0.0	2.1	0.0	1.2				

Intersection Summary

HCM 6th Ctrl Delay	26.7
HCM 6th LOS	C













Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM Unsignalized Intersection Capacity Analysis  
 13: Webster Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/13/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Right Turn Channelized			MOYes			MOYes			MOYes			MOYes
Traffic Volume (veh/h)	146	760	474	112	1039	153	143	447	110	92	272	432
Future Volume (veh/h)	146	760	474	112	1039	153	143	447	110	92	272	432
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	159	826	515	122	1129	166	155	486	120	100	296	470
Approach Volume (veh/h)		985			1251			641			396	
Crossing Volume (veh/h)		518			800			1085			1406#	
High Capacity (veh/h)		920			733			580			445	
High v/c (veh/h)		1.07			1.71			1.10			0.89	
Low Capacity (veh/h)		743			578			447			332	
Low v/c (veh/h)		1.33			2.16			1.43			1.19	
<b>Intersection Summary</b>												
Maximum v/c High			1.71									
Maximum v/c Low			2.16									
Intersection Capacity Utilization			72.0%		ICU Level of Service						C	
# Crossing flow exceeds 1200, method is not applicable												

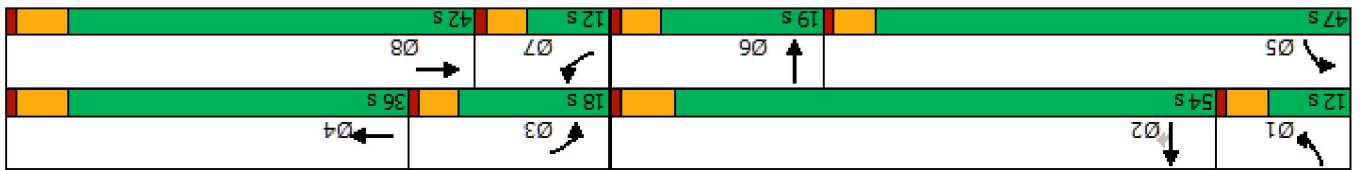


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↘	↘↘	↘↘	↘↘	↘↘	↘↘	↘	↘	↘↘
Traffic Volume (vph)	6	29	120	109	581	28	106	5	21
Future Volume (vph)	6	29	120	109	581	28	106	5	21
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6	
Permitted Phases						2			
Detector Phase	7	4	3	8	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	8.8
Minimum Split (s)	9.6	31.8	9.6	31.8	9.6	32.8	32.8	9.6	14.6
Total Split (s)	12.0	36.0	18.0	42.0	47.0	54.0	54.0	12.0	19.0
Total Split (%)	10.0%	30.0%	15.0%	35.0%	39.2%	45.0%	45.0%	10.0%	15.8%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	4.8	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	5.8	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	5.8	13.3	7.3	21.1	15.9	17.4	17.4	5.7	10.1
Actuated g/C Ratio	0.11	0.25	0.13	0.39	0.29	0.32	0.32	0.11	0.19
v/c Ratio	0.05	0.22	0.27	0.09	0.58	0.05	0.18	0.03	0.04
Control Delay	33.0	7.0	28.4	13.7	21.6	16.2	2.8	33.0	25.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.0	7.0	28.4	13.7	21.6	16.2	2.8	33.0	25.0
LOS	C	A	C	B	C	B	A	C	C
Approach Delay	7.9	21.2	18.6	26.2					
Approach LOS	A	C	B	C					

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 54.2  
 Natural Cycle: 85  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.58  
 Intersection Signal Delay: 17.6  
 Intersection LOS: B  
 Intersection Capacity Utilization 52.7%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 14: Indian Street & San Michele Road



HCM 6th Signalized Intersection Summary  
 14: Indian Street & San Michele Road

Gateway Aviation TA (JN:13445)

11/10/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	29	153	120	109	6	581	28	106	5	21	5
Future Volume (veh/h)	6	29	153	120	109	6	581	28	106	5	21	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.94
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1218	1470	1470	1826	1826	1826	1856	1752	1767	1900	1707	1707
Adj Flow Rate, veh/h	7	32	106	130	118	0	632	30	33	5	23	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	46	29	29	5	5	5	3	10	9	0	13	13
Cap, veh/h	11	294	249	271	983	0	796	595	502	12	373	32
Arrive On Green	0.01	0.20	0.20	0.08	0.27	0.00	0.23	0.34	0.34	0.01	0.12	0.12
Sat Flow, veh/h	1160	1470	1246	3478	3652	0	3534	1752	1477	1810	3086	263
Grp Volume(v), veh/h	7	32	106	130	118	0	632	30	33	5	13	12
Grp Sat Flow(s),veh/h/ln	1160	1470	1246	1739	1826	0	1767	1752	1477	1810	1707	1641
Q Serve(g_s), s	0.3	1.0	4.1	2.0	1.4	0.0	9.3	0.6	0.8	0.2	0.4	0.4
Cycle Q Clear(g_c), s	0.3	1.0	4.1	2.0	1.4	0.0	9.3	0.6	0.8	0.2	0.4	0.4
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		0.16
Lane Grp Cap(c), veh/h	11	294	249	271	983	0	796	595	502	12	206	198
V/C Ratio(X)	0.65	0.11	0.42	0.48	0.12	0.00	0.79	0.05	0.07	0.41	0.06	0.06
Avail Cap(c_a), veh/h	155	802	679	841	2386	0	2705	1524	1285	242	444	427
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.4	18.1	19.4	24.5	15.3	0.0	20.2	12.3	12.4	27.4	21.6	21.6
Incr Delay (d2), s/veh	22.4	0.1	0.4	0.5	0.0	0.0	0.7	0.0	0.0	8.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.3	1.0	0.7	0.5	0.0	3.2	0.2	0.2	0.1	0.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.7	18.2	19.8	24.9	15.3	0.0	20.9	12.3	12.4	35.6	21.6	21.6
LnGrp LOS	D	B	B	C	B	A	C	B	B	D	C	C
Approach Vol, veh/h		145			248			695				30
Approach Delay, s/veh		20.9			20.4			20.2				23.9
Approach LOS		C			C			C				C
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.0	24.6	8.9	16.9	17.1	12.5	5.1	20.7				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	* 5.8	4.6	5.8				
Max Green Setting (Gmax), s	7.4	48.2	13.4	30.2	42.4	* 14	7.4	36.2				
Max Q Clear Time (g_c+I1), s	2.2	2.8	4.0	6.1	11.3	2.4	2.3	3.4				
Green Ext Time (p_c), s	0.0	0.1	0.1	0.4	1.1	0.0	0.0	0.4				

Intersection Summary

HCM 6th Ctrl Delay	20.4
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
16: Indian Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/10/2020

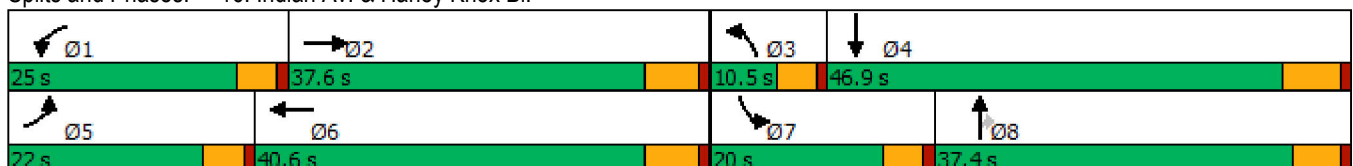


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↔↔	↕↕↔	↔	↕↕↔	↔↔	↕↕	↕	↔	↕↔
Traffic Volume (vph)	117	639	157	1061	148	295	82	102	190
Future Volume (vph)	117	639	157	1061	148	295	82	102	190
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	5	2	1	6	3	8		7	4
Permitted Phases							8		
Detector Phase	5	2	1	6	3	8	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2
Total Split (s)	22.0	37.6	25.0	40.6	10.5	37.4	37.4	20.0	46.9
Total Split (%)	18.3%	31.3%	20.8%	33.8%	8.8%	31.2%	31.2%	16.7%	39.1%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.4	4.4	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.4	5.4	4.6	6.2
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	9.9	32.6	13.2	35.8	6.0	16.3	16.3	10.1	19.5
Actuated g/C Ratio	0.11	0.35	0.14	0.38	0.06	0.18	0.18	0.11	0.21
v/c Ratio	0.55	0.48	0.68	0.77	0.79	0.55	0.23	0.57	0.56
Control Delay	50.6	26.3	53.8	29.2	72.4	38.9	1.7	53.8	18.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.6	26.3	53.8	29.2	72.4	38.9	1.7	53.8	18.1
LOS	D	C	D	C	E	D	A	D	B
Approach Delay		29.6		31.8		42.5			25.7
Approach LOS		C		C		D			C

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 93  
 Natural Cycle: 100  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.79  
 Intersection Signal Delay: 32.0  
 Intersection LOS: C  
 Intersection Capacity Utilization 64.7%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 16: Indian Av. & Harley Knox Bl.



































HCM 6th Signalized Intersection Summary  
 16: Indian Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  			  		 	 			 	
Traffic Volume (veh/h)	117	639	108	157	1061	302	148	295	82	102	190	193
Future Volume (veh/h)	117	639	108	157	1061	302	148	295	82	102	190	193
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1011	1811	1811	1870	1856	1856	1737	1781	1796	1885	1811	1811
Adj Flow Rate, veh/h	127	695	108	171	1153	308	161	321	82	111	207	161
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	60	6	6	2	3	3	11	8	7	1	6	6
Cap, veh/h	165	1533	236	212	1533	409	236	536	241	143	310	230
Arrive On Green	0.09	0.35	0.35	0.12	0.39	0.39	0.07	0.16	0.16	0.08	0.16	0.16
Sat Flow, veh/h	1868	4323	665	1781	3979	1063	3209	3385	1522	1795	1886	1395
Grp Volume(v), veh/h	127	528	275	171	979	482	161	321	82	111	188	180
Grp Sat Flow(s),veh/h/ln	934	1648	1691	1781	1689	1664	1605	1692	1522	1795	1721	1560
Q Serve(g_s), s	4.9	9.1	9.2	6.9	18.5	18.5	3.6	6.5	3.5	4.5	7.5	8.0
Cycle Q Clear(g_c), s	4.9	9.1	9.2	6.9	18.5	18.5	3.6	6.5	3.5	4.5	7.5	8.0
Prop In Lane	1.00		0.39	1.00		0.64	1.00		1.00	1.00		0.89
Lane Grp Cap(c), veh/h	165	1169	600	212	1301	641	236	536	241	143	283	257
V/C Ratio(X)	0.77	0.45	0.46	0.81	0.75	0.75	0.68	0.60	0.34	0.78	0.66	0.70
Avail Cap(c_a), veh/h	442	1425	731	494	1598	787	257	1473	662	376	952	863
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.8	18.2	18.3	31.6	19.6	19.6	33.2	28.8	27.5	33.2	28.8	29.0
Incr Delay (d2), s/veh	2.8	0.3	0.5	2.7	1.6	3.3	5.0	1.1	0.8	3.4	2.7	3.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	3.0	3.2	2.9	6.5	6.7	1.5	2.5	1.2	1.9	3.1	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.6	18.5	18.8	34.3	21.2	22.8	38.2	29.9	28.4	36.6	31.5	32.5
LnGrp LOS	D	B	B	C	C	C	D	C	C	D	C	C
Approach Vol, veh/h		930			1632			564			479	
Approach Delay, s/veh		20.9			23.0			32.0			33.0	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.4	31.9	10.0	18.3	11.1	34.1	10.5	17.8				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	20.4	31.8	5.9	40.7	17.4	34.8	15.4	* 32				
Max Q Clear Time (g_c+I1), s	8.9	11.2	5.6	10.0	6.9	20.5	6.5	8.5				
Green Ext Time (p_c), s	0.2	4.6	0.0	2.1	0.1	7.9	0.1	2.1				

Intersection Summary

HCM 6th Ctrl Delay	25.2
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

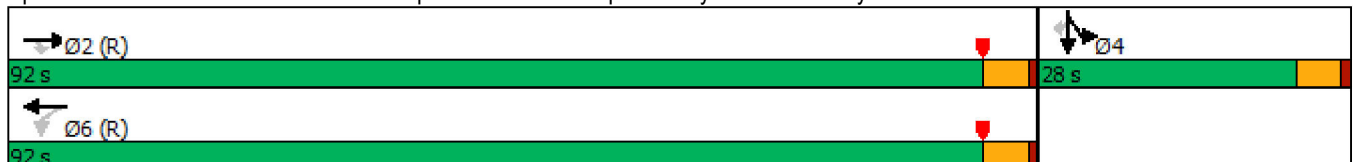


Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations	↑↑	↑	↑↑	↑	↑	↑	↑
Traffic Volume (vph)	875	153	639	400	537	0	255
Future Volume (vph)	875	153	639	400	537	0	255
Turn Type	NA	Perm	Perm	NA	Split	NA	Perm
Protected Phases	2			6	4	4	
Permitted Phases		2	6				4
Detector Phase	2	2	6	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	25.0	25.0	10.0	10.0	10.0
Total Split (s)	92.0	92.0	92.0	92.0	28.0	28.0	28.0
Total Split (%)	76.7%	76.7%	76.7%	76.7%	23.3%	23.3%	23.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None	None
Act Effct Green (s)	87.0	87.0	87.0	87.0	23.0	23.0	23.0
Actuated g/C Ratio	0.72	0.72	0.72	0.72	0.19	0.19	0.19
v/c Ratio	0.38	0.14	0.99	0.33	1.04	1.04	0.55
Control Delay	6.8	1.0	60.6	3.1	112.7	112.7	9.3
Queue Delay	0.3	0.0	0.0	0.5	13.3	13.3	0.0
Total Delay	7.1	1.0	60.6	3.6	126.0	126.0	9.3
LOS	A	A	E	A	F	F	A
Approach Delay	6.2			38.7		88.5	
Approach LOS	A			D		F	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection  
 Natural Cycle: 100  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.04  
 Intersection Signal Delay: 40.8  
 Intersection LOS: D  
 Intersection Capacity Utilization 95.8%  
 ICU Level of Service F  
 Analysis Period (min) 15

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

11/10/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑↑	↑					↑	↑	↑
Traffic Volume (veh/h)	0	875	153	639	400	0	0	0	0	537	0	255
Future Volume (veh/h)	0	875	153	639	400	0	0	0	0	537	0	255
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1826	1885	1841	1826	0				1648	1900	1767
Adj Flow Rate, veh/h	0	951	166	695	435	0				584	0	217
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	5	1	4	5	0				17	0	9
Cap, veh/h	0	2515	1158	718	1324	0				602	0	287
Arrive On Green	0.00	0.73	0.73	1.00	1.00	0.00				0.19	0.00	0.19
Sat Flow, veh/h	0	3561	1597	963	1826	0				3139	0	1497
Grp Volume(v), veh/h	0	951	166	695	435	0				584	0	217
Grp Sat Flow(s),veh/h/ln	0	1735	1597	481	1826	0				1570	0	1497
Q Serve(g_s), s	0.0	12.5	3.8	74.5	0.0	0.0				22.2	0.0	16.4
Cycle Q Clear(g_c), s	0.0	12.5	3.8	87.0	0.0	0.0				22.2	0.0	16.4
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2515	1158	718	1324	0				602	0	287
V/C Ratio(X)	0.00	0.38	0.14	0.97	0.33	0.00				0.97	0.00	0.76
Avail Cap(c_a), veh/h	0	2515	1158	718	1324	0				602	0	287
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.59	0.59	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	6.3	5.1	11.4	0.0	0.0				48.2	0.0	45.8
Incr Delay (d2), s/veh	0.0	0.4	0.3	19.1	0.4	0.0				29.3	0.0	10.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.8	1.1	1.9	0.1	0.0				10.8	0.0	6.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	6.7	5.3	30.6	0.4	0.0				77.5	0.0	56.8
LnGrp LOS	A	A	A	C	A	A				E	A	E
Approach Vol, veh/h		1117			1130						801	
Approach Delay, s/veh		6.5			19.0						71.9	
Approach LOS		A			B						E	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		92.0		28.0		92.0						
Change Period (Y+Rc), s		5.0		5.0		5.0						
Max Green Setting (Gmax), s		87.0		23.0		87.0						
Max Q Clear Time (g_c+I1), s		14.5		24.2		89.0						
Green Ext Time (p_c), s		4.7		0.0		0.0						

Intersection Summary

HCM 6th Ctrl Delay	28.3
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Timings

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

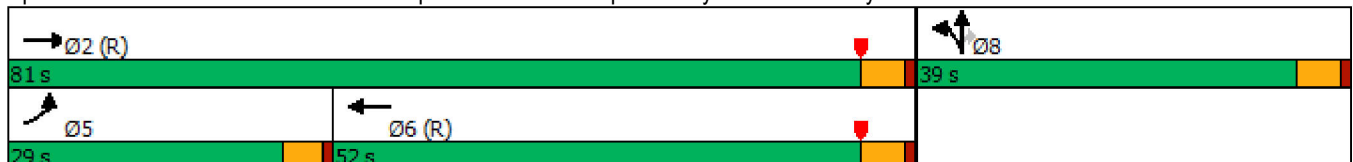


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations	↗↘	↑↑	↗↘	↗	↖	↗
Traffic Volume (vph)	479	933	979	1136	8	343
Future Volume (vph)	479	933	979	1136	8	343
Turn Type	Prot	NA	NA	Free	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				Free		8
Detector Phase	5	2	6		8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	9.5	26.0	24.0		10.0	10.0
Total Split (s)	29.0	81.0	52.0		39.0	39.0
Total Split (%)	24.2%	67.5%	43.3%		32.5%	32.5%
Yellow Time (s)	3.5	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0		5.0	5.0
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	C-Max	C-Max		Max	Max
Act Effct Green (s)	21.9	76.0	49.6	120.0	34.0	34.0
Actuated g/C Ratio	0.18	0.63	0.41	1.00	0.28	0.28
v/c Ratio	0.85	0.50	0.74	0.84	0.15	0.76
Control Delay	54.0	26.5	34.2	6.1	33.3	36.4
Queue Delay	0.1	2.6	0.0	0.0	0.0	0.0
Total Delay	54.1	29.1	34.2	6.1	33.3	36.4
LOS	D	C	C	A	C	D
Approach Delay		37.6	19.1		35.9	
Approach LOS		D	B		D	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 70  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.85  
 Intersection Signal Delay: 27.5  
 Intersection LOS: C  
 Intersection Capacity Utilization 95.8%  
 ICU Level of Service F  
 Analysis Period (min) 15

Splits and Phases: 2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox Bl./Harley Knox Bl.

11/10/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↖↖			↖↖	↖↗		↖↖	↖↗			
Traffic Volume (veh/h)	479	933	0	0	979	1136	59	8	343	0	0	0
Future Volume (veh/h)	479	933	0	0	979	1136	59	8	343	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1841	1722	0	0	1841	1752	1663	1900	1663			
Adj Flow Rate, veh/h	521	1014	0	0	1064	0	64	9	308			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	4	12	0	0	4	10	16	0	16			
Cap, veh/h	571	2072	0	0	1497		452	64	399			
Arrive On Green	0.34	1.00	0.00	0.00	0.43	0.00	0.28	0.28	0.28			
Sat Flow, veh/h	3401	3358	0	0	3589	1485	1596	224	1409			
Grp Volume(v), veh/h	521	1014	0	0	1064	0	73	0	308			
Grp Sat Flow(s),veh/h/ln	1700	1636	0	0	1749	1485	1820	0	1409			
Q Serve(g_s), s	17.6	0.0	0.0	0.0	30.0	0.0	3.6	0.0	24.1			
Cycle Q Clear(g_c), s	17.6	0.0	0.0	0.0	30.0	0.0	3.6	0.0	24.1			
Prop In Lane	1.00		0.00	0.00		1.00	0.88		1.00			
Lane Grp Cap(c), veh/h	571	2072	0	0	1497		516	0	399			
V/C Ratio(X)	0.91	0.49	0.00	0.00	0.71		0.14	0.00	0.77			
Avail Cap(c_a), veh/h	694	2072	0	0	1497		516	0	399			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.83	0.83	0.00	0.00	0.62	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	39.0	0.0	0.0	0.0	28.2	0.0	32.1	0.0	39.4			
Incr Delay (d2), s/veh	11.5	0.7	0.0	0.0	1.8	0.0	0.6	0.0	13.5			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	6.6	0.2	0.0	0.0	12.2	0.0	1.6	0.0	9.5			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.5	0.7	0.0	0.0	30.0	0.0	32.7	0.0	52.9			
LnGrp LOS	D	A	A	A	C		C	A	D			
Approach Vol, veh/h		1535			1064	A		381				
Approach Delay, s/veh		17.6			30.0			49.0				
Approach LOS		B			C			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		81.0			24.6	56.4		39.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		76.0			24.5	47.0		34.0				
Max Q Clear Time (g_c+I1), s		2.0			19.6	32.0		26.1				
Green Ext Time (p_c), s		4.9			0.5	4.2		0.9				

Intersection Summary

HCM 6th Ctrl Delay	26.0
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Timings  
5: Heacock Street & Cactus Avenue

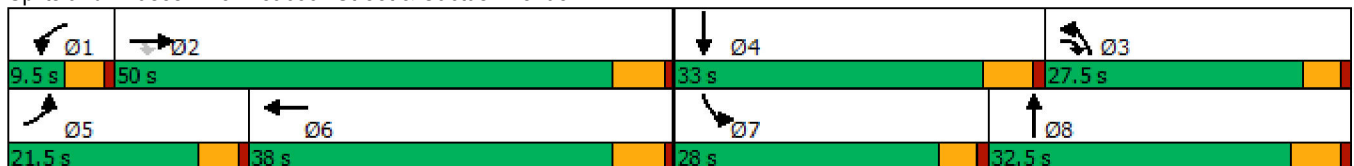


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↙	↑↑↑	↘	↙	↑↑↑	↙↘	↑↘	↙	↑↑
Traffic Volume (vph)	244	2146	1378	27	956	827	674	184	746
Future Volume (vph)	244	2146	1378	27	956	827	674	184	746
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	3	1	6	3	8	7	4
Permitted Phases			2						
Detector Phase	5	2	3	1	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.5	30.5	9.5	9.5	30.5	9.5	30.5	9.5	30.5
Total Split (s)	21.5	50.0	27.5	9.5	38.0	27.5	32.5	28.0	33.0
Total Split (%)	17.9%	41.7%	22.9%	7.9%	31.7%	22.9%	27.1%	23.3%	27.5%
Yellow Time (s)	3.5	4.5	3.5	3.5	4.5	3.5	4.5	3.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-2.0	0.0	0.0	-2.0	-2.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.5	3.5	4.5	4.5	3.5	2.5	4.5	3.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None
Act Effct Green (s)	17.5	47.2	69.3	5.0	31.8	25.0	35.0	17.1	28.1
Actuated g/C Ratio	0.15	0.41	0.60	0.04	0.27	0.21	0.30	0.15	0.24
v/c Ratio	0.89	0.98	1.32	0.36	0.73	1.12	0.69	0.69	0.94
Control Delay	80.8	48.6	169.9	68.9	40.7	112.2	40.7	60.1	62.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.8	48.6	169.9	68.9	40.7	112.2	40.7	60.1	62.1
LOS	F	D	F	E	D	F	D	E	E
Approach Delay		95.1			41.4		78.4		61.8
Approach LOS		F			D		E		E

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 116.4  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.32  
 Intersection Signal Delay: 79.1  
 Intersection LOS: E  
 Intersection Capacity Utilization 123.6%  
 ICU Level of Service H  
 Analysis Period (min) 15





























Splits and Phases: 5: Heacock Street & Cactus Avenue



HCM 6th Signalized Intersection Summary  
5: Heacock Street & Cactus Avenue

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 			 	
Traffic Volume (veh/h)	244	2146	1378	27	956	132	827	674	68	184	746	61
Future Volume (veh/h)	244	2146	1378	27	956	132	827	674	68	184	746	61
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1811	1826	1885	1885	1811	1870	1870	1900	1856	1856
Adj Flow Rate, veh/h	254	2235	732	28	996	76	861	702	35	192	777	17
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	1	6	5	1	1	6	2	2	0	3	3
Cap, veh/h	275	2218	873	44	1423	108	727	1121	56	235	856	19
Arrive On Green	0.23	0.59	0.38	0.03	0.41	0.26	0.32	0.48	0.31	0.13	0.24	0.23
Sat Flow, veh/h	1810	5656	1531	1739	5189	395	3450	3529	176	1810	3617	79
Grp Volume(v), veh/h	254	2235	732	28	723	349	861	372	365	192	399	395
Grp Sat Flow(s),veh/h/ln	1810	1885	1531	1739	1885	1814	1725	1870	1835	1810	1856	1841
Q Serve(g_s), s	16.3	46.5	13.6	1.9	18.8	19.3	25.0	17.6	17.9	12.2	24.8	24.8
Cycle Q Clear(g_c), s	16.3	46.5	13.6	1.9	18.8	19.3	25.0	17.6	17.9	12.2	24.8	24.8
Prop In Lane	1.00		1.00	1.00		0.22	1.00		0.10	1.00		0.04
Lane Grp Cap(c), veh/h	275	2218	873	44	1034	497	727	594	583	235	439	435
V/C Ratio(X)	0.92	1.01	0.84	0.63	0.70	0.70	1.18	0.63	0.63	0.82	0.91	0.91
Avail Cap(c_a), veh/h	275	2218	873	73	1097	528	727	594	583	374	446	443
HCM Platoon Ratio	1.50	1.50	1.00	1.00	1.50	1.00	1.50	1.50	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.1	24.4	9.9	57.2	30.9	32.8	40.5	25.8	26.7	50.2	44.0	44.0
Incr Delay (d2), s/veh	34.3	20.9	6.9	5.5	1.5	3.1	96.3	1.6	1.6	3.5	21.4	21.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.0	18.4	9.4	0.9	7.3	7.8	18.9	6.6	6.7	5.6	13.6	13.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	79.5	45.3	16.8	62.7	32.3	35.9	136.8	27.3	28.3	53.7	65.4	65.6
LnGrp LOS	E	F	B	E	C	D	F	C	C	D	E	E
Approach Vol, veh/h		3221			1100			1598			986	
Approach Delay, s/veh		41.5			34.2			86.5			63.2	
Approach LOS		D			C			F			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.5	50.0	28.5	32.5	21.5	36.0	18.9	42.2				
Change Period (Y+Rc), s	4.5	5.5	5.5	* 5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	5.0	44.5	23.0	* 28	17.0	32.5	23.5	27.0				
Max Q Clear Time (g_c+I1), s	3.9	48.5	27.0	26.8	18.3	21.3	14.2	19.9				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.3	0.0	3.4	0.2	1.6				

Intersection Summary

HCM 6th Ctrl Delay	53.9
HCM 6th LOS	D

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Timings  
6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

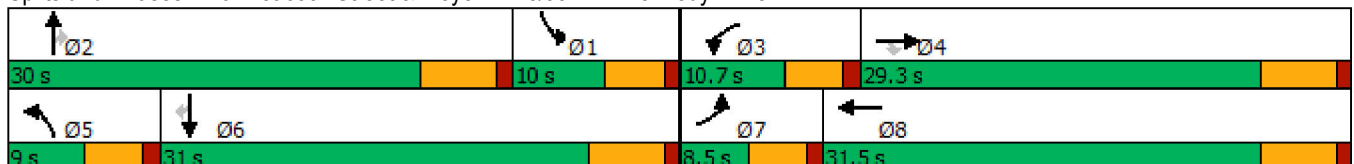
11/10/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	35	218	386	47	99	135	1063	136	362	1209	24	
Future Volume (vph)	35	218	386	47	99	135	1063	136	362	1209	24	
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	7	4		3	8	5	2		1	6		
Permitted Phases			4					2			6	
Detector Phase	7	4	4	3	8	5	2	2	1	6	6	
Switch Phase												
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	
Minimum Split (s)	8.5	23.5	23.5	8.5	31.5	8.5	29.5	29.5	8.5	23.5	23.5	
Total Split (s)	8.5	29.3	29.3	10.7	31.5	9.0	30.0	30.0	10.0	31.0	31.0	
Total Split (%)	10.6%	36.6%	36.6%	13.4%	39.4%	11.3%	37.5%	37.5%	12.5%	38.8%	38.8%	
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5	4.5	4.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	5.5	4.5	5.5	5.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max	
Act Effct Green (s)	4.1	13.6	13.6	5.7	14.8	4.6	25.2	25.2	5.6	26.2	26.2	
Actuated g/C Ratio	0.06	0.21	0.21	0.09	0.22	0.07	0.38	0.38	0.08	0.40	0.40	
v/c Ratio	0.32	0.61	0.72	0.31	0.32	1.11	0.85	0.18	1.30	0.93	0.03	
Control Delay	41.7	31.3	18.3	37.4	8.4	149.0	29.4	3.4	187.8	36.6	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	41.7	31.3	18.3	37.4	8.4	149.0	29.4	3.4	187.8	36.6	0.1	
LOS	D	C	B	D	A	F	C	A	F	D	A	
Approach Delay		24.0			12.4		38.9			70.3		
Approach LOS		C			B		D			E		

Intersection Summary

Cycle Length: 80  
 Actuated Cycle Length: 66.1  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.30  
 Intersection Signal Delay: 47.0  
 Intersection LOS: D  
 Intersection Capacity Utilization 73.6%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 6: Heacock Street & Meyer Drive/John F. Kennedy Drive





























HCM 6th Signalized Intersection Summary  
 6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	218	386	47	99	194	135	1063	136	362	1209	24
Future Volume (veh/h)	35	218	386	47	99	194	135	1063	136	362	1209	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1900	1900	1885	1885	1900	1811	1900	1841	1796	1900
Adj Flow Rate, veh/h	38	237	257	51	108	151	147	1155	121	393	1314	13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	1	0	0	1	1	0	6	0	4	7	0
Cap, veh/h	55	373	319	66	385	327	122	1332	592	281	1428	640
Arrive On Green	0.03	0.20	0.20	0.04	0.20	0.20	0.07	0.37	0.37	0.08	0.40	0.40
Sat Flow, veh/h	1810	1885	1610	1810	1885	1598	1810	3622	1610	3401	3593	1610
Grp Volume(v), veh/h	38	237	257	51	108	151	147	1155	121	393	1314	13
Grp Sat Flow(s),veh/h/ln	1810	1885	1610	1810	1885	1598	1810	1811	1610	1700	1796	1610
Q Serve(g_s), s	1.4	7.7	10.2	1.9	3.2	5.5	4.5	19.7	2.4	5.5	23.2	0.3
Cycle Q Clear(g_c), s	1.4	7.7	10.2	1.9	3.2	5.5	4.5	19.7	2.4	5.5	23.2	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	55	373	319	66	385	327	122	1332	592	281	1428	640
V/C Ratio(X)	0.69	0.63	0.81	0.77	0.28	0.46	1.20	0.87	0.20	1.40	0.92	0.02
Avail Cap(c_a), veh/h	109	673	575	168	735	623	122	1332	592	281	1428	640
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.0	24.5	25.5	31.8	22.4	23.3	31.1	19.6	7.2	30.6	19.1	12.2
Incr Delay (d2), s/veh	5.7	0.7	1.8	6.8	0.1	0.4	146.0	7.8	0.8	200.3	11.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	3.2	3.6	0.9	1.3	1.9	6.7	8.2	1.2	9.8	9.8	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.7	25.2	27.3	38.6	22.5	23.7	177.1	27.4	7.9	230.9	30.1	12.2
LnGrp LOS	D	C	C	D	C	C	F	C	A	F	C	B
Approach Vol, veh/h		532			310			1423			1720	
Approach Delay, s/veh		27.1			25.7			41.2			75.9	
Approach LOS		C			C			D			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.0	30.0	6.9	18.7	9.0	32.0	6.5	19.1				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	5.5	* 25	6.2	23.8	4.5	25.5	4.0	26.0				
Max Q Clear Time (g_c+I1), s	7.5	21.7	3.9	12.2	6.5	25.2	3.4	7.5				
Green Ext Time (p_c), s	0.0	1.5	0.0	1.1	0.0	0.2	0.0	0.8				

Intersection Summary

HCM 6th Ctrl Delay	53.1
HCM 6th LOS	D

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
11: Heacock Street & Cardinal Avenue

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	61	57	1077	20	18	1592
Future Volume (vph)	61	57	1077	20	18	1592
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	26.6	26.6	21.6	21.6	9.6	16.2
Total Split (s)	27.0	27.0	82.0	82.0	11.0	93.0
Total Split (%)	22.5%	22.5%	68.3%	68.3%	9.2%	77.5%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	12.6	12.6	51.6	51.6	6.0	54.0
Actuated g/C Ratio	0.18	0.18	0.72	0.72	0.08	0.76
v/c Ratio	0.21	0.17	0.46	0.02	0.14	0.70
Control Delay	32.2	10.6	7.8	3.2	41.1	8.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.2	10.6	7.8	3.2	41.1	8.9
LOS	C	B	A	A	D	A
Approach Delay	21.7		7.7			9.2
Approach LOS	C		A			A

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 71.3	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.70	
Intersection Signal Delay: 9.2	Intersection LOS: A
Intersection Capacity Utilization 61.3%	ICU Level of Service B
Analysis Period (min) 15	













Splits and Phases: 11: Heacock Street & Cardinal Avenue



HCM 6th Signalized Intersection Summary  
 11: Heacock Street & Cardinal Avenue

Gateway Aviation TA (JN:13445)

11/10/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	61	57	1077	20	18	1592
Future Volume (veh/h)	61	57	1077	20	18	1592
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1752	1781	1693	1781	1752
Adj Flow Rate, veh/h	66	62	1171	22	20	1730
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	10	8	14	8	10
Cap, veh/h	250	208	2122	854	40	2300
Arrive On Green	0.14	0.14	0.60	0.60	0.02	0.69
Sat Flow, veh/h	1781	1485	3563	1434	1697	3416
Grp Volume(v), veh/h	66	62	1171	22	20	1730
Grp Sat Flow(s),veh/h/ln	1781	1485	1781	1434	1697	1664
Q Serve(g_s), s	2.1	2.4	12.7	0.4	0.7	21.4
Cycle Q Clear(g_c), s	2.1	2.4	12.7	0.4	0.7	21.4
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	250	208	2122	854	40	2300
V/C Ratio(X)	0.26	0.30	0.55	0.03	0.50	0.75
Avail Cap(c_a), veh/h	624	520	4311	1736	170	4517
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.6	24.7	7.8	5.3	30.9	6.4
Incr Delay (d2), s/veh	0.6	0.8	0.2	0.0	3.6	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.9	3.0	0.1	0.3	3.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	25.1	25.5	8.0	5.3	34.5	6.9
LnGrp LOS	C	C	A	A	C	A
Approach Vol, veh/h	128		1193			1750
Approach Delay, s/veh	25.3		8.0			7.2
Approach LOS	C		A			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	6.1	44.3			50.4	13.6
Change Period (Y+Rc), s	4.6	* 6.2			6.2	4.6
Max Green Setting (Gmax), s	6.4	* 77			86.8	22.4
Max Q Clear Time (g_c+I1), s	2.7	14.7			23.4	4.4
Green Ext Time (p_c), s	0.0	10.2			20.8	0.3

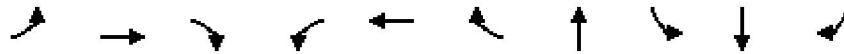
Intersection Summary

HCM 6th Ctrl Delay	8.2
HCM 6th LOS	A

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
12: Heacock Street & San Michele Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBL	SBT	SBR	Ø5
Lane Configurations	↖	↗	↘	↖	↗	↘	↕	↖	↗	↘	
Traffic Volume (vph)	58	348	6	22	102	574	527	326	882	36	
Future Volume (vph)	58	348	6	22	102	574	527	326	882	36	
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	NA	Prot	NA	Perm	
Protected Phases	7	4		3	8	1	2	1	6		5
Permitted Phases			4			8				6	
Detector Phase	7	4	4	3	8	1	2	1	6	6	
Switch Phase											
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0
Minimum Split (s)	9.5	30.5	30.5	8.5	30.5	8.5	34.5	8.5	34.5	34.5	8.5
Total Split (s)	9.5	31.5	31.5	8.5	30.5	38.9	41.1	38.9	71.5	71.5	8.5
Total Split (%)	7.9%	26.3%	26.3%	7.1%	25.4%	32.4%	34.3%	32.4%	59.6%	59.6%	7%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5	5.5	
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	None	Max	Max	None
Act Effct Green (s)	12.0	24.3	24.3	4.0	12.5	48.8	35.9	30.7	71.2	71.2	
Actuated g/C Ratio	0.11	0.22	0.22	0.04	0.11	0.44	0.32	0.28	0.64	0.64	
v/c Ratio	0.31	0.91	0.01	0.35	0.52	0.71	0.56	0.68	0.83	0.03	
Control Delay	53.7	70.9	0.0	70.2	55.5	25.5	34.6	44.3	24.5	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	53.7	70.9	0.0	70.2	55.5	25.5	34.6	44.3	24.5	0.1	
LOS	D	E	A	E	E	C	C	D	C	A	
Approach Delay		67.4			31.3		34.6		29.0		
Approach LOS		E			C		C		C		

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 111.4	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.91	
Intersection Signal Delay: 36.0	Intersection LOS: D
Intersection Capacity Utilization 81.1%	ICU Level of Service D
Analysis Period (min) 15	

























Splits and Phases: 12: Heacock Street & San Michele Road



HCM 6th Signalized Intersection Summary  
 12: Heacock Street & San Michele Road

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	348	6	22	102	574	0	527	40	326	882	36
Future Volume (veh/h)	58	348	6	22	102	574	0	527	40	326	882	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1870	1900	1826	1826	1885	1826	1900
Adj Flow Rate, veh/h	63	378	7	24	111	461	0	573	43	354	959	39
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	2	0	5	5	1	5	0
Cap, veh/h	271	414	342	35	167	508	2	1090	82	418	1128	995
Arrive On Green	0.15	0.22	0.22	0.02	0.09	0.09	0.00	0.33	0.33	0.23	0.62	0.62
Sat Flow, veh/h	1810	1900	1569	1810	1900	1585	1810	3271	245	1795	1826	1610
Grp Volume(v), veh/h	63	378	7	24	111	461	0	303	313	354	959	39
Grp Sat Flow(s),veh/h/ln	1810	1900	1569	1810	1900	1585	1810	1735	1782	1795	1826	1610
Q Serve(g_s), s	3.3	20.7	0.3	1.4	6.0	4.9	0.0	15.1	15.2	20.1	45.2	0.4
Cycle Q Clear(g_c), s	3.3	20.7	0.3	1.4	6.0	4.9	0.0	15.1	15.2	20.1	45.2	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	271	414	342	35	167	508	2	578	594	418	1128	995
V/C Ratio(X)	0.23	0.91	0.02	0.70	0.67	0.91	0.00	0.52	0.53	0.85	0.85	0.04
Avail Cap(c_a), veh/h	271	462	382	68	445	740	68	578	594	578	1128	995
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.0	40.8	28.6	52.1	47.2	34.8	0.0	28.8	28.8	39.1	16.4	1.1
Incr Delay (d2), s/veh	0.2	19.9	0.0	9.0	1.7	8.7	0.0	3.4	3.3	6.2	8.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	12.0	0.1	0.7	2.8	12.0	0.0	6.4	6.6	9.1	17.8	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.2	60.7	28.6	61.1	48.9	43.5	0.0	32.2	32.1	45.4	24.5	1.1
LnGrp LOS	D	E	C	E	D	D	A	C	C	D	C	A
Approach Vol, veh/h		448			596			616			1352	
Approach Delay, s/veh		57.3			45.2			32.1			29.3	
Approach LOS		E			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	30.4	41.1	6.5	28.8	0.0	71.5	20.5	14.9				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	34.4	* 36	4.0	26.0	4.0	66.0	5.0	25.0				
Max Q Clear Time (g_c+I1), s	22.1	17.2	3.4	22.7	0.0	47.2	5.3	8.0				
Green Ext Time (p_c), s	0.4	1.9	0.0	0.5	0.0	4.1	0.0	1.1				

Intersection Summary

HCM 6th Ctrl Delay	37.2
HCM 6th LOS	D













Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM Unsignalized Intersection Capacity Analysis  
 13: Webster Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/13/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Right Turn Channelized			MOYes			MOYes			MOYes			MOYes
Traffic Volume (veh/h)	139	456	521	152	1039	121	321	391	138	179	615	497
Future Volume (veh/h)	139	456	521	152	1039	121	321	391	138	179	615	497
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	151	496	566	165	1129	132	349	425	150	195	668	540
Approach Volume (veh/h)		647			1294			774			863	
Crossing Volume (veh/h)		1028			925			842			1643#	
High Capacity (veh/h)		608			662			708			364	
High v/c (veh/h)		1.06			1.95			1.09			2.37	
Low Capacity (veh/h)		471			517			557			266	
Low v/c (veh/h)		1.37			2.50			1.39			3.25	
<b>Intersection Summary</b>												
Maximum v/c High			2.37									
Maximum v/c Low			3.25									
Intersection Capacity Utilization			81.7%		ICU Level of Service						D	
# Crossing flow exceeds 1200, method is not applicable												

Timings  
14: Indian Street & San Michele Road

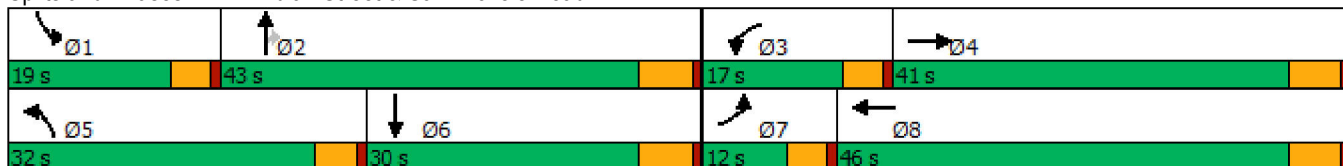


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↙	↕	↙	↕	↙	↕	↗	↙	↕
Traffic Volume (vph)	28	171	165	225	447	122	121	88	194
Future Volume (vph)	28	171	165	225	447	122	121	88	194
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8	5	2		1	6
Permitted Phases							2		
Detector Phase	7	4	3	8	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	31.8	9.6	31.8	9.6	32.8	32.8	9.6	24.8
Total Split (s)	12.0	41.0	17.0	46.0	32.0	43.0	43.0	19.0	30.0
Total Split (%)	10.0%	34.2%	14.2%	38.3%	26.7%	35.8%	35.8%	15.8%	25.0%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	6.0	14.8	8.5	24.3	14.7	20.6	20.6	8.6	11.9
Actuated g/C Ratio	0.08	0.21	0.12	0.34	0.21	0.29	0.29	0.12	0.17
v/c Ratio	0.20	0.76	0.42	0.26	0.67	0.26	0.21	0.43	0.41
Control Delay	39.7	15.7	35.4	17.8	32.4	25.5	4.6	39.0	29.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.7	15.7	35.4	17.8	32.4	25.5	4.6	39.0	29.8
LOS	D	B	D	B	C	C	A	D	C
Approach Delay		16.6		24.1		26.3			32.5
Approach LOS		B		C		C			C

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 71.6  
 Natural Cycle: 85  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.76  
 Intersection Signal Delay: 23.5  
 Intersection LOS: C  
 Intersection Capacity Utilization 73.4%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 14: Indian Street & San Michele Road



























HCM 6th Signalized Intersection Summary  
 14: Indian Street & San Michele Road

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	171	514	165	225	70	447	122	121	88	194	27
Future Volume (veh/h)	28	171	514	165	225	70	447	122	121	88	194	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		1.00	1.00		0.68
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1856	1826	1826	1796	1796	1856	1870	1841	1841
Adj Flow Rate, veh/h	30	186	-93	179	245	59	486	133	67	96	211	19
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	5	5	3	5	5	7	7	3	2	4	4
Cap, veh/h	55	655	0	270	671	158	602	665	582	124	846	73
Arrive On Green	0.03	0.19	0.00	0.08	0.24	0.24	0.18	0.37	0.37	0.07	0.26	0.26
Sat Flow, veh/h	1739	3561	0	3428	2840	667	3421	1796	1571	1781	3200	277
Grp Volume(v), veh/h	30	93	0	179	155	149	486	133	67	96	118	112
Grp Sat Flow(s),veh/h/ln	1739	1735	0	1714	1826	1682	1711	1796	1571	1781	1841	1636
Q Serve(g_s), s	1.2	1.6	0.0	3.6	5.1	5.3	9.7	3.6	2.0	3.8	3.6	3.8
Cycle Q Clear(g_c), s	1.2	1.6	0.0	3.6	5.1	5.3	9.7	3.6	2.0	3.8	3.6	3.8
Prop In Lane	1.00		0.00	1.00		0.40	1.00		1.00	1.00		0.17
Lane Grp Cap(c), veh/h	55	655	0	270	431	397	602	665	582	124	486	432
V/C Ratio(X)	0.55	0.14	0.00	0.66	0.36	0.37	0.81	0.20	0.12	0.77	0.24	0.26
Avail Cap(c_a), veh/h	181	1716	0	597	1032	950	1318	939	821	361	626	557
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.0	24.1	0.0	31.9	22.7	22.8	28.2	15.2	14.7	32.5	20.6	20.7
Incr Delay (d2), s/veh	3.2	0.0	0.0	1.0	0.2	0.2	1.0	0.1	0.0	3.8	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.6	0.0	1.4	2.0	1.9	3.6	1.2	0.6	1.6	1.4	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.1	24.1	0.0	32.9	22.9	23.0	29.2	15.3	14.8	36.4	20.7	20.8
LnGrp LOS	D	C	A	C	C	C	C	B	B	D	C	C
Approach Vol, veh/h		123			483			686			326	
Approach Delay, s/veh		27.3			26.6			25.1			25.3	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.6	32.2	10.2	19.2	17.1	24.6	6.8	22.6				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	14.4	37.2	12.4	35.2	27.4	24.2	7.4	40.2				
Max Q Clear Time (g_c+I1), s	5.8	5.6	5.6	3.6	11.7	5.8	3.2	7.3				
Green Ext Time (p_c), s	0.1	0.5	0.2	0.3	0.8	0.6	0.0	1.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			25.8									
HCM 6th LOS			C									



Timings  
16: Indian Av. & Harley Knox Bl.

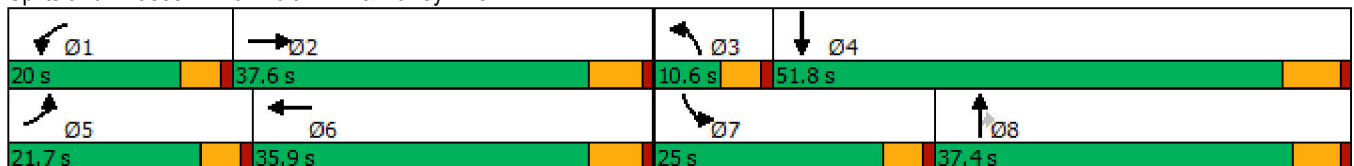


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↔↔	↕↕↔	↔	↕↕↔	↔↔	↕↕	↕	↔	↕↔
Traffic Volume (vph)	343	774	242	730	118	295	246	326	562
Future Volume (vph)	343	774	242	730	118	295	246	326	562
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	5	2	1	6	3	8		7	4
Permitted Phases							8		
Detector Phase	5	2	1	6	3	8	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2
Total Split (s)	21.7	37.6	20.0	35.9	10.6	37.4	37.4	25.0	51.8
Total Split (%)	18.1%	31.3%	16.7%	29.9%	8.8%	31.2%	31.2%	20.8%	43.2%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.4	4.4	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.4	5.4	4.6	6.2
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	16.8	29.6	15.4	28.2	6.0	32.0	32.0	20.4	45.6
Actuated g/C Ratio	0.14	0.25	0.13	0.24	0.05	0.27	0.27	0.17	0.39
v/c Ratio	0.92	0.78	1.13	0.83	0.82	0.38	0.43	1.13	0.97
Control Delay	79.0	45.1	144.4	47.5	91.8	36.8	6.4	137.2	46.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.0	45.1	144.4	47.5	91.8	36.8	6.4	137.2	46.1
LOS	E	D	F	D	F	D	A	F	D
Approach Delay		54.6		68.0		35.3			65.1
Approach LOS		D		E		D			E

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 117.9  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.13  
 Intersection Signal Delay: 58.7  
 Intersection LOS: E  
 Intersection Capacity Utilization 89.7%  
 ICU Level of Service E  
 Analysis Period (min) 15































Splits and Phases: 16: Indian Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 16: Indian Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  			  		 	 			 	
Traffic Volume (veh/h)	343	774	108	242	730	169	118	295	246	326	562	672
Future Volume (veh/h)	343	774	108	242	730	169	118	295	246	326	562	672
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1559	1841	1841	1885	1811	1811	1707	1678	1870	1900	1856	1856
Adj Flow Rate, veh/h	373	841	90	263	793	157	128	321	158	354	611	458
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	23	4	4	1	6	6	13	15	2	0	3	3
Cap, veh/h	423	1100	117	258	976	192	177	731	359	345	699	523
Arrive On Green	0.15	0.24	0.24	0.14	0.24	0.24	0.06	0.23	0.23	0.19	0.36	0.36
Sat Flow, veh/h	2881	4611	491	1795	4146	814	3155	3188	1564	1810	1921	1438
Grp Volume(v), veh/h	373	610	321	263	629	321	128	321	158	354	561	508
Grp Sat Flow(s),veh/h/ln	1440	1675	1752	1795	1648	1664	1577	1594	1564	1810	1763	1597
Q Serve(g_s), s	13.6	18.2	18.3	15.4	19.3	19.6	4.3	9.2	9.3	20.4	31.8	31.8
Cycle Q Clear(g_c), s	13.6	18.2	18.3	15.4	19.3	19.6	4.3	9.2	9.3	20.4	31.8	31.8
Prop In Lane	1.00		0.28	1.00		0.49	1.00		1.00	1.00		0.90
Lane Grp Cap(c), veh/h	423	799	418	258	776	392	177	731	359	345	641	581
V/C Ratio(X)	0.88	0.76	0.77	1.02	0.81	0.82	0.72	0.44	0.44	1.03	0.87	0.88
Avail Cap(c_a), veh/h	460	994	520	258	926	468	177	952	467	345	750	680
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.8	38.0	38.0	45.9	38.7	38.8	49.8	35.4	35.4	43.4	31.8	31.8
Incr Delay (d2), s/veh	15.9	2.8	5.4	61.0	4.7	9.4	12.0	0.4	0.8	55.7	10.0	11.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	7.3	8.0	11.0	8.0	8.7	1.9	3.5	3.5	14.1	14.4	13.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.7	40.7	43.4	106.9	43.4	48.2	61.8	35.8	36.2	99.1	41.8	42.8
LnGrp LOS	E	D	D	F	D	D	E	D	D	F	D	D
Approach Vol, veh/h		1304			1213			607			1423	
Approach Delay, s/veh		47.1			58.4			41.4			56.4	
Approach LOS		D			E			D			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.0	31.4	10.6	45.2	20.3	31.0	25.0	30.8				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	15.4	31.8	6.0	45.6	17.1	30.1	20.4	* 32				
Max Q Clear Time (g_c+I1), s	17.4	20.3	6.3	33.8	15.6	21.6	22.4	11.3				
Green Ext Time (p_c), s	0.0	4.2	0.0	5.1	0.1	3.7	0.0	2.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				52.3								
HCM 6th LOS				D								
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

**APPENDIX 7.24:**

**HORIZON YEAR (2045) WITH PROJECT (PEAK) WITH HEACOCK STREET EXTENSION  
CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS WITH  
IMPROVEMENTS**

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Timings

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

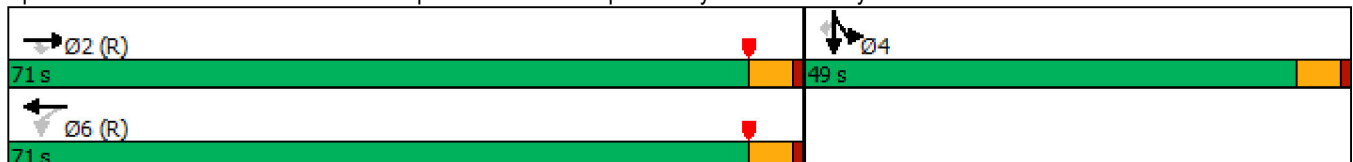


Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations	↑↑	↑	↖↗	↑	↖	↖	↑
Traffic Volume (vph)	1157	28	216	666	1010	1	315
Future Volume (vph)	1157	28	216	666	1010	1	315
Turn Type	NA	Perm	Perm	NA	Split	NA	Perm
Protected Phases	2			6	4	4	
Permitted Phases		2	6				4
Detector Phase	2	2	6	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	25.0	25.0	10.0	10.0	10.0
Total Split (s)	71.0	71.0	71.0	71.0	49.0	49.0	49.0
Total Split (%)	59.2%	59.2%	59.2%	59.2%	40.8%	40.8%	40.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None	None
Act Effct Green (s)	66.0	66.0	66.0	66.0	44.0	44.0	44.0
Actuated g/C Ratio	0.55	0.55	0.55	0.55	0.37	0.37	0.37
v/c Ratio	0.67	0.03	1.05	0.71	1.00	1.00	0.51
Control Delay	21.3	5.0	98.3	22.5	76.0	76.0	15.1
Queue Delay	0.2	0.0	0.0	1.7	39.5	39.5	0.0
Total Delay	21.5	5.0	98.3	24.2	115.5	115.5	15.1
LOS	C	A	F	C	F	F	B
Approach Delay	21.1			42.4		91.7	
Approach LOS	C			D		F	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection  
 Natural Cycle: 50  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.05  
 Intersection Signal Delay: 54.2  
 Intersection LOS: D  
 Intersection Capacity Utilization 109.4%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

11/10/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑↑	↑					↑	↑	↑
Traffic Volume (veh/h)	0	1157	28	216	666	0	0	0	0	1010	1	315
Future Volume (veh/h)	0	1157	28	216	666	0	0	0	0	1010	1	315
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1826	1826	1604	1870	0				1693	1900	1781
Adj Flow Rate, veh/h	0	1258	30	235	724	0				1099	0	282
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	5	5	20	2	0				14	0	8
Cap, veh/h	0	1934	863	338	1043	0				1158	0	542
Arrive On Green	0.00	0.56	0.56	1.00	1.00	0.00				0.36	0.00	0.36
Sat Flow, veh/h	0	3561	1547	713	1870	0				3224	0	1510
Grp Volume(v), veh/h	0	1258	30	235	724	0				1099	0	282
Grp Sat Flow(s),veh/h/ln	0	1735	1547	357	1870	0				1612	0	1510
Q Serve(g_s), s	0.0	30.2	1.0	36.7	0.0	0.0				39.8	0.0	17.7
Cycle Q Clear(g_c), s	0.0	30.2	1.0	66.9	0.0	0.0				39.8	0.0	17.7
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1934	863	338	1043	0				1158	0	542
V/C Ratio(X)	0.00	0.65	0.03	0.70	0.69	0.00				0.95	0.00	0.52
Avail Cap(c_a), veh/h	0	1934	863	338	1043	0				1182	0	554
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.56	0.56	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	18.4	12.0	16.4	0.0	0.0				37.4	0.0	30.3
Incr Delay (d2), s/veh	0.0	1.7	0.1	6.5	2.2	0.0				15.5	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	11.5	0.4	2.8	0.6	0.0				17.3	0.0	6.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	20.1	12.1	22.9	2.2	0.0				52.8	0.0	31.1
LnGrp LOS	A	C	B	C	A	A				D	A	C
Approach Vol, veh/h		1288			959						1381	
Approach Delay, s/veh		19.9			7.2						48.4	
Approach LOS		B			A						D	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		71.9		48.1		71.9						
Change Period (Y+Rc), s		5.0		5.0		5.0						
Max Green Setting (Gmax), s		66.0		44.0		66.0						
Max Q Clear Time (g_c+I1), s		32.2		41.8		68.9						
Green Ext Time (p_c), s		6.5		1.3		0.0						

Intersection Summary

HCM 6th Ctrl Delay	27.4
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Timings

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

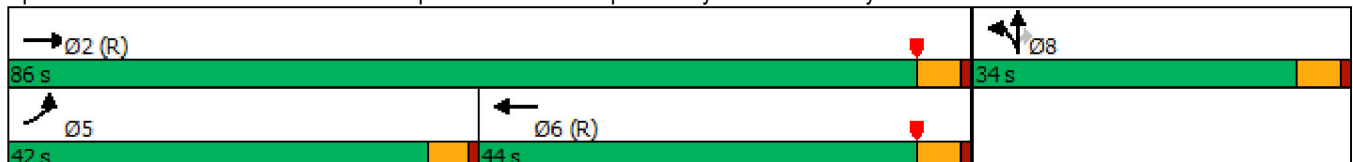


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations	↔↔	↑↑	↑↑	↔	↔	↔
Traffic Volume (vph)	808	1359	824	1149	7	309
Future Volume (vph)	808	1359	824	1149	7	309
Turn Type	Prot	NA	NA	Free	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				Free		8
Detector Phase	5	2	6		8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	9.5	26.0	24.0		10.0	10.0
Total Split (s)	42.0	86.0	44.0		34.0	34.0
Total Split (%)	35.0%	71.7%	36.7%		28.3%	28.3%
Yellow Time (s)	3.5	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0		5.0	5.0
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	C-Max	C-Max		Max	Max
Act Effct Green (s)	34.5	81.0	42.0	120.0	29.0	29.0
Actuated g/C Ratio	0.29	0.68	0.35	1.00	0.24	0.24
v/c Ratio	0.91	0.68	0.76	0.86	0.16	0.81
Control Delay	62.7	24.9	40.2	7.4	37.2	52.0
Queue Delay	3.5	49.1	0.0	0.0	0.4	0.0
Total Delay	66.2	74.1	40.2	7.4	37.6	52.0
LOS	E	E	D	A	D	D
Approach Delay		71.1	21.1		49.5	
Approach LOS		E	C		D	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 70  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.91  
 Intersection Signal Delay: 47.5  
 Intersection LOS: D  
 Intersection Capacity Utilization 109.4%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox Bl./Harley Knox Bl.

11/10/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑			↑↑	↗		↖	↗			
Traffic Volume (veh/h)	808	1359	0	0	824	1149	58	7	309	0	0	0
Future Volume (veh/h)	808	1359	0	0	824	1149	58	7	309	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1841	1722	0	0	1796	1752	1811	1900	1811			
Adj Flow Rate, veh/h	878	1477	0	0	896	0	63	8	271			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	4	12	0	0	7	10	6	0	6			
Cap, veh/h	921	2209	0	0	1251		390	50	371			
Arrive On Green	0.54	1.00	0.00	0.00	0.37	0.00	0.24	0.24	0.24			
Sat Flow, veh/h	3401	3358	0	0	3503	1485	1614	205	1535			
Grp Volume(v), veh/h	878	1477	0	0	896	0	71	0	271			
Grp Sat Flow(s),veh/h/ln	1700	1636	0	0	1706	1485	1819	0	1535			
Q Serve(g_s), s	29.3	0.0	0.0	0.0	27.1	0.0	3.7	0.0	19.5			
Cycle Q Clear(g_c), s	29.3	0.0	0.0	0.0	27.1	0.0	3.7	0.0	19.5			
Prop In Lane	1.00		0.00	0.00		1.00	0.89		1.00			
Lane Grp Cap(c), veh/h	921	2209	0	0	1251		440	0	371			
V/C Ratio(X)	0.95	0.67	0.00	0.00	0.72		0.16	0.00	0.73			
Avail Cap(c_a), veh/h	1063	2209	0	0	1251		440	0	371			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.55	0.55	0.00	0.00	0.79	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	26.8	0.0	0.0	0.0	32.6	0.0	35.9	0.0	41.9			
Incr Delay (d2), s/veh	10.0	0.9	0.0	0.0	2.8	0.0	0.8	0.0	12.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	8.7	0.3	0.0	0.0	11.2	0.0	1.7	0.0	8.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.8	0.9	0.0	0.0	35.5	0.0	36.7	0.0	53.9			
LnGrp LOS	D	A	A	A	D		D	A	D			
Approach Vol, veh/h		2355			896	A		342				
Approach Delay, s/veh		14.3			35.5			50.3				
Approach LOS		B			D			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		86.0			37.0	49.0		34.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		81.0			37.5	39.0		29.0				
Max Q Clear Time (g_c+I1), s		2.0			31.3	29.1		21.5				
Green Ext Time (p_c), s		8.9			1.2	2.9		0.8				

Intersection Summary

HCM 6th Ctrl Delay	23.0
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Timings  
5: Heacock Street & Cactus Avenue

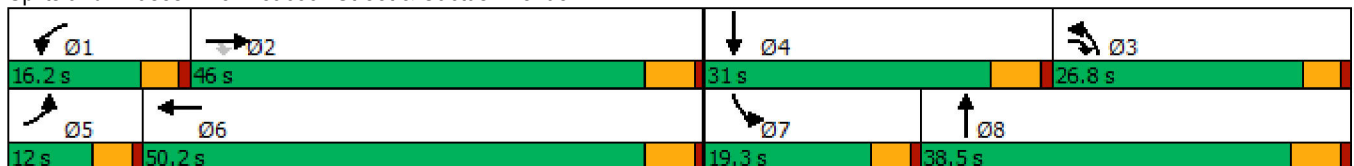


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↘	↑↑↑	↗	↘	↑↑↑	↗	↑↑	↘	↑↑
Traffic Volume (vph)	176	1067	785	87	2068	866	722	139	378
Future Volume (vph)	176	1067	785	87	2068	866	722	139	378
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	3	1	6	3	8	7	4
Permitted Phases			2						
Detector Phase	5	2	3	1	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.5	30.5	9.5	9.5	30.5	9.5	30.5	9.5	30.5
Total Split (s)	12.0	46.0	26.8	16.2	50.2	26.8	38.5	19.3	31.0
Total Split (%)	10.0%	38.3%	22.3%	13.5%	41.8%	22.3%	32.1%	16.1%	25.8%
Yellow Time (s)	3.5	4.5	3.5	3.5	4.5	3.5	4.5	3.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-2.0	0.0	0.0	-2.0	-2.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.5	3.5	4.5	4.5	3.5	2.5	4.5	3.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None
Act Effct Green (s)	8.5	47.1	70.4	9.4	46.8	25.4	31.3	13.3	20.2
Actuated g/C Ratio	0.07	0.41	0.61	0.08	0.41	0.22	0.27	0.12	0.18
v/c Ratio	1.34	0.48	0.73	0.59	1.01	1.13	0.79	0.67	0.75
Control Delay	232.1	27.5	13.8	67.1	55.0	115.5	45.3	65.2	49.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	232.1	27.5	13.8	67.1	55.0	115.5	45.3	65.2	49.8
LOS	F	C	B	E	D	F	D	E	D
Approach Delay		39.9			55.4		82.8		53.2
Approach LOS		D			E		F		D

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 114.9  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.34  
 Intersection Signal Delay: 57.2  
 Intersection LOS: E  
 Intersection Capacity Utilization 105.5%  
 ICU Level of Service G  
 Analysis Period (min) 15





























Splits and Phases: 5: Heacock Street & Cactus Avenue



HCM 6th Signalized Intersection Summary  
5: Heacock Street & Cactus Avenue

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 			 	
Traffic Volume (veh/h)	176	1067	785	87	2068	159	866	722	34	139	378	105
Future Volume (veh/h)	176	1067	785	87	2068	159	866	722	34	139	378	105
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1752	1900	1885	1885	1826	1841	1841	1870	1841	1841
Adj Flow Rate, veh/h	183	1111	688	91	2154	104	902	752	19	145	394	83
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	10	0	1	1	5	4	4	2	4	4
Cap, veh/h	134	2326	881	115	2205	106	746	984	25	187	491	102
Arrive On Green	0.11	0.62	0.40	0.06	0.62	0.39	0.32	0.41	0.27	0.11	0.17	0.16
Sat Flow, veh/h	1781	5611	1485	1810	5352	257	3478	3575	90	1781	2954	616
Grp Volume(v), veh/h	183	1111	688	91	1514	744	902	387	384	145	244	233
Grp Sat Flow(s),veh/h/ln	1781	1870	1485	1810	1885	1839	1739	1841	1824	1781	1841	1730
Q Serve(g_s), s	8.5	12.1	10.1	5.6	43.7	44.7	24.3	20.4	20.5	9.0	14.4	14.7
Cycle Q Clear(g_c), s	8.5	12.1	10.1	5.6	43.7	44.7	24.3	20.4	20.5	9.0	14.4	14.7
Prop In Lane	1.00		1.00	1.00		0.14	1.00		0.05	1.00		0.36
Lane Grp Cap(c), veh/h	134	2326	881	115	1553	758	746	507	502	187	306	288
V/C Ratio(X)	1.37	0.48	0.78	0.79	0.97	0.98	1.21	0.76	0.76	0.77	0.80	0.81
Avail Cap(c_a), veh/h	134	2326	881	187	1553	758	746	552	547	248	430	404
HCM Platoon Ratio	1.50	1.50	1.00	1.00	1.50	1.00	1.50	1.50	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.3	14.8	5.6	52.3	21.1	23.0	38.4	30.1	30.5	49.4	45.4	45.7
Incr Delay (d2), s/veh	206.6	0.1	4.2	4.5	17.0	28.0	106.7	4.9	5.0	7.2	4.5	5.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.2	4.0	4.8	2.6	16.4	19.8	19.8	8.1	8.2	4.3	6.8	6.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	256.9	14.9	9.8	56.8	38.1	51.0	145.1	35.0	35.5	56.6	49.9	51.2
LnGrp LOS	F	B	A	E	D	D	F	D	D	E	D	D
Approach Vol, veh/h		1982			2349			1673			622	
Approach Delay, s/veh		35.5			42.9			94.5			52.0	
Approach LOS		D			D			F			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.7	50.5	27.8	23.3	12.0	50.2	15.4	35.7				
Change Period (Y+Rc), s	4.5	5.5	5.5	* 5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	11.7	40.5	22.3	* 26	7.5	44.7	14.8	33.0				
Max Q Clear Time (g_c+I1), s	7.6	14.1	26.3	16.7	10.5	46.7	11.0	22.5				
Green Ext Time (p_c), s	0.0	6.7	0.0	1.1	0.0	0.0	0.1	2.1				

Intersection Summary

HCM 6th Ctrl Delay	54.6
HCM 6th LOS	D

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

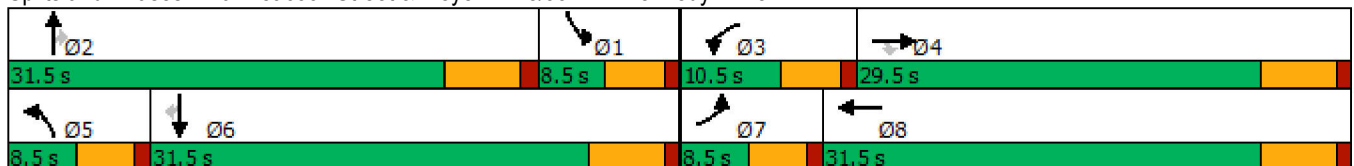
11/10/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	41	45	155	38	238	37	1059	64	127	853	22	
Future Volume (vph)	41	45	155	38	238	37	1059	64	127	853	22	
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	7	4		3	8	5	2		1	6		
Permitted Phases			4					2			6	
Detector Phase	7	4	4	3	8	5	2	2	1	6	6	
Switch Phase												
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	
Minimum Split (s)	8.5	23.5	23.5	8.5	31.5	8.5	30.5	30.5	8.5	23.5	23.5	
Total Split (s)	8.5	29.5	29.5	10.5	31.5	8.5	31.5	31.5	8.5	31.5	31.5	
Total Split (%)	10.6%	36.9%	36.9%	13.1%	39.4%	10.6%	39.4%	39.4%	10.6%	39.4%	39.4%	
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5	4.5	4.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	5.5	4.5	5.5	5.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max	
Act Effct Green (s)	4.1	12.7	12.7	5.5	11.7	4.1	26.6	26.6	4.1	32.4	32.4	
Actuated g/C Ratio	0.07	0.20	0.20	0.09	0.19	0.07	0.42	0.42	0.07	0.51	0.51	
v/c Ratio	0.41	0.13	0.29	0.26	0.59	0.34	0.73	0.08	0.57	0.50	0.03	
Control Delay	45.9	22.0	2.4	35.1	17.8	41.6	21.6	0.2	43.4	15.1	0.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	45.9	22.0	2.4	35.1	17.8	41.6	21.6	0.2	43.4	15.1	0.0	
LOS	D	C	A	D	B	D	C	A	D	B	A	
Approach Delay		13.5			19.1		21.1			18.3		
Approach LOS		B			B		C			B		

Intersection Summary

Cycle Length: 80  
 Actuated Cycle Length: 63  
 Natural Cycle: 80  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.73  
 Intersection Signal Delay: 19.2  
 Intersection LOS: B  
 Intersection Capacity Utilization 68.3%  
 ICU Level of Service C  
 Analysis Period (min) 15

























Splits and Phases: 6: Heacock Street & Meyer Drive/John F. Kennedy Drive



HCM 6th Signalized Intersection Summary  
 6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	45	155	38	238	230	37	1059	64	127	853	22
Future Volume (veh/h)	41	45	155	38	238	230	37	1059	64	127	853	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.97	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1648	1767	1811	1796	1841	1841	1781	1811	1767	1856	1767	1618
Adj Flow Rate, veh/h	43	47	125	40	248	204	39	1103	57	132	889	13
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	17	9	6	7	4	4	8	6	9	3	9	19
Cap, veh/h	52	338	294	54	361	284	53	1435	577	209	1560	598
Arrive On Green	0.03	0.19	0.19	0.03	0.19	0.19	0.03	0.40	0.40	0.06	0.44	0.44
Sat Flow, veh/h	1570	1767	1535	1711	1901	1497	1697	3622	1455	3428	3533	1354
Grp Volume(v), veh/h	43	47	125	40	240	212	39	1103	57	132	889	13
Grp Sat Flow(s),veh/h/ln	1570	1767	1535	1711	1841	1557	1697	1811	1455	1714	1767	1354
Q Serve(g_s), s	1.8	1.5	4.7	1.5	8.0	8.4	1.5	17.3	1.1	2.5	12.3	0.4
Cycle Q Clear(g_c), s	1.8	1.5	4.7	1.5	8.0	8.4	1.5	17.3	1.1	2.5	12.3	0.4
Prop In Lane	1.00		1.00	1.00		0.96	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	52	338	294	54	349	295	53	1435	577	209	1560	598
V/C Ratio(X)	0.83	0.14	0.43	0.74	0.69	0.72	0.74	0.77	0.10	0.63	0.57	0.02
Avail Cap(c_a), veh/h	96	646	561	156	729	617	103	1435	577	209	1560	598
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.5	22.0	23.4	31.5	24.8	24.9	31.5	17.2	6.0	30.1	13.7	10.3
Incr Delay (d2), s/veh	11.6	0.1	0.4	7.2	0.9	1.2	7.4	4.0	0.3	4.6	1.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.6	1.5	0.7	3.2	2.8	0.7	6.5	0.5	1.0	4.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.1	22.1	23.7	38.7	25.7	26.2	38.9	21.2	6.4	34.7	15.2	10.4
LnGrp LOS	D	C	C	D	C	C	D	C	A	C	B	B
Approach Vol, veh/h		215			492			1199			1034	
Approach Delay, s/veh		27.3			26.9			21.1			17.6	
Approach LOS		C			C			C			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.5	31.5	6.6	18.1	6.5	34.5	6.7	17.9				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	4.0	* 26	6.0	24.0	4.0	26.0	4.0	26.0				
Max Q Clear Time (g_c+I1), s	4.5	19.3	3.5	6.7	3.5	14.3	3.8	10.4				
Green Ext Time (p_c), s	0.0	2.8	0.0	0.3	0.0	3.0	0.0	1.4				

Intersection Summary

HCM 6th Ctrl Delay	21.3
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
11: Heacock Street & Cardinal Avenue

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	12	13	1159	61	52	978
Future Volume (vph)	12	13	1159	61	52	978
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	26.6	26.6	21.6	21.6	9.6	16.2
Total Split (s)	27.0	27.0	76.0	76.0	17.0	93.0
Total Split (%)	22.5%	22.5%	63.3%	63.3%	14.2%	77.5%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	13.1	13.1	44.3	44.3	7.6	51.1
Actuated g/C Ratio	0.22	0.22	0.75	0.75	0.13	0.87
v/c Ratio	0.04	0.04	0.47	0.05	0.25	0.39
Control Delay	27.0	14.5	9.0	3.0	34.3	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.0	14.5	9.0	3.0	34.3	4.0
LOS	C	B	A	A	C	A
Approach Delay	20.5		8.7			5.5
Approach LOS	C		A			A

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 58.7	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.47	
Intersection Signal Delay: 7.4	Intersection LOS: A
Intersection Capacity Utilization 56.0%	ICU Level of Service B
Analysis Period (min) 15	













Splits and Phases: 11: Heacock Street & Cardinal Avenue



HCM 6th Signalized Intersection Summary  
 11: Heacock Street & Cardinal Avenue

Gateway Aviation TA (JN:13445)

11/10/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	12	13	1159	61	52	978
Future Volume (veh/h)	12	13	1159	61	52	978
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1559	1441	1781	1870	1781	1693
Adj Flow Rate, veh/h	13	14	1260	66	57	1063
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	23	31	8	2	8	14
Cap, veh/h	94	77	1944	865	95	2257
Arrive On Green	0.06	0.06	0.55	0.55	0.06	0.70
Sat Flow, veh/h	1485	1221	3563	1585	1697	3300
Grp Volume(v), veh/h	13	14	1260	66	57	1063
Grp Sat Flow(s),veh/h/ln	1485	1221	1781	1585	1697	1608
Q Serve(g_s), s	0.4	0.5	11.4	0.9	1.5	6.8
Cycle Q Clear(g_c), s	0.4	0.5	11.4	0.9	1.5	6.8
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	94	77	1944	865	95	2257
V/C Ratio(X)	0.14	0.18	0.65	0.08	0.60	0.47
Avail Cap(c_a), veh/h	723	594	5528	2459	457	6066
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.4	20.4	7.3	5.0	21.2	3.1
Incr Delay (d2), s/veh	0.7	1.1	0.4	0.0	2.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.2	2.1	0.1	0.5	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	21.0	21.5	7.7	5.0	23.4	3.2
LnGrp LOS	C	C	A	A	C	A
Approach Vol, veh/h	27		1326			1120
Approach Delay, s/veh	21.3		7.6			4.2
Approach LOS	C		A			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	7.2	31.3			38.5	7.5
Change Period (Y+Rc), s	4.6	* 6.2			6.2	4.6
Max Green Setting (Gmax), s	12.4	* 71			86.8	22.4
Max Q Clear Time (g_c+I1), s	3.5	13.4			8.8	2.5
Green Ext Time (p_c), s	0.0	11.7			8.8	0.0

Intersection Summary

HCM 6th Ctrl Delay	6.2
HCM 6th LOS	A

Notes

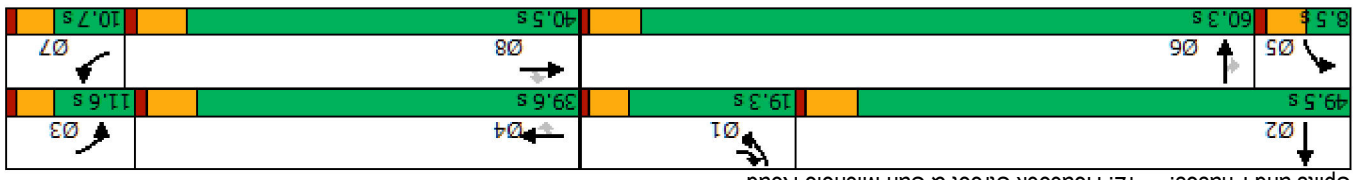
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
Traffic Volume (vph)	31	4	39	341	319	1	579	97	541	52	52
Future Volume (vph)	31	4	39	341	319	1	579	97	541	52	52
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8	1	5	2	1	6	6	6
Permitted Phases	4	4	4	8	8	8	8	8	6	6	6
Detector Phase	7	4	4	8	8	8	8	8	6	6	6
Switch Phase	4.0	5.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0	5.0	5.0
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0	5.0	5.0
Minimum Split (s)	9.5	30.5	30.5	8.5	30.5	8.5	8.5	8.5	34.5	34.5	34.5
Total Split (s)	10.7	39.6	39.6	11.6	40.5	19.3	8.5	49.5	19.3	60.3	60.3
Total Split (%)	8.9%	33.0%	33.0%	9.7%	33.8%	16.1%	7.1%	41.3%	16.1%	50.3%	50.3%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	3.5	4.5	3.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	4.5	5.5	4.5	5.5	5.5
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effort Green (s)	5.7	16.1	16.1	13.6	24.0	40.9	4.1	45.1	11.2	59.5	59.5
Actuated g/C Ratio	0.06	0.16	0.16	0.13	0.24	0.40	0.04	0.44	0.11	0.58	0.58
v/c Ratio	0.32	0.30	0.01	0.18	0.83	0.42	0.01	0.41	0.53	0.56	0.05
Control Delay	60.2	45.2	0.0	42.7	54.2	12.5	55.0	23.3	56.1	19.2	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.2	45.2	0.0	42.7	54.2	12.5	55.0	23.3	56.1	19.2	0.4
LOS	E	D	A	D	D	B	D	C	E	B	A
Approach Delay	47.8	34.5	23.3	22.9	23.3	23.3	23.3	23.3	22.9	22.9	22.9
Approach LOS	D	C	C	C	C	C	C	C	C	C	C

Intersection Summary  
 Cycle Length: 120  
 Actuated Cycle Length: 102  
 Natural Cycle: 85  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.83  
 Intersection Signal Delay: 28.3  
 Intersection LOS: C  
 Intersection Capacity Utilization 69.8%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 12: Heacock Street & San Michele Road





























HCM 6th Signalized Intersection Summary  
 12: Heacock Street & San Michele Road

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	82	4	39	341	319	1	579	10	97	541	52
Future Volume (veh/h)	31	82	4	39	341	319	1	579	10	97	541	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1856	1366	1796	1900	1856	1900	1856	1856	1811	1826	1856
Adj Flow Rate, veh/h	34	89	4	42	371	130	1	629	11	105	588	57
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	3	36	7	0	3	0	3	3	6	5	3
Cap, veh/h	44	130	81	301	421	505	2	1570	27	172	1007	867
Arrive On Green	0.02	0.07	0.07	0.18	0.22	0.22	0.00	0.44	0.44	0.10	0.55	0.55
Sat Flow, veh/h	1810	1856	1158	1711	1900	1572	1810	3545	62	1725	1826	1572
Grp Volume(v), veh/h	34	89	4	42	371	130	1	313	327	105	588	57
Grp Sat Flow(s),veh/h/ln	1810	1856	1158	1711	1900	1572	1810	1763	1844	1725	1826	1572
Q Serve(g_s), s	1.9	4.7	0.3	2.1	18.8	0.0	0.1	11.9	11.9	5.8	21.2	1.2
Cycle Q Clear(g_c), s	1.9	4.7	0.3	2.1	18.8	0.0	0.1	11.9	11.9	5.8	21.2	1.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.03	1.00		1.00
Lane Grp Cap(c), veh/h	44	130	81	301	421	505	2	781	817	172	1007	867
V/C Ratio(X)	0.77	0.69	0.05	0.14	0.88	0.26	0.50	0.40	0.40	0.61	0.58	0.07
Avail Cap(c_a), veh/h	113	637	397	301	669	711	73	781	817	257	1007	867
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.2	45.1	34.2	34.6	37.4	24.9	49.6	18.8	18.8	42.9	14.7	5.4
Incr Delay (d2), s/veh	9.8	2.4	0.1	0.1	5.2	0.1	58.7	1.5	1.5	1.3	2.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	2.2	0.1	0.8	8.9	2.2	0.1	4.7	4.9	2.4	8.1	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.0	47.5	34.3	34.6	42.6	25.0	108.3	20.3	20.2	44.2	17.2	5.5
LnGrp LOS	E	D	C	C	D	C	F	C	C	D	B	A
Approach Vol, veh/h		127			543			641			750	
Approach Delay, s/veh		49.9			37.8			20.4			20.1	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.4	49.5	22.0	12.5	4.6	60.3	6.9	27.5				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	14.8	* 44	7.1	34.1	4.0	54.8	6.2	35.0				
Max Q Clear Time (g_c+I1), s	7.8	13.9	4.1	6.7	2.1	23.2	3.9	20.8				
Green Ext Time (p_c), s	0.1	2.1	0.0	0.3	0.0	2.2	0.0	1.3				

Intersection Summary

HCM 6th Ctrl Delay	26.7
HCM 6th LOS	C

Notes













\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



HCM Unsignalized Intersection Capacity Analysis  
 13: Webster Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

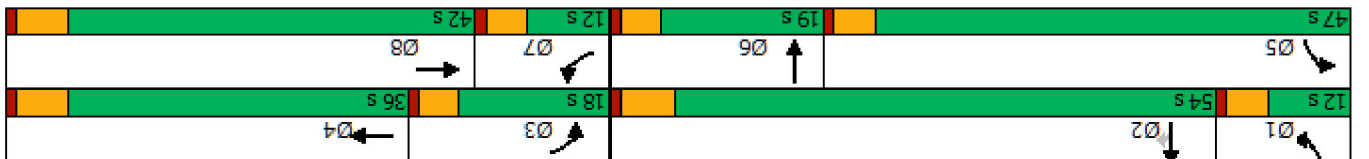
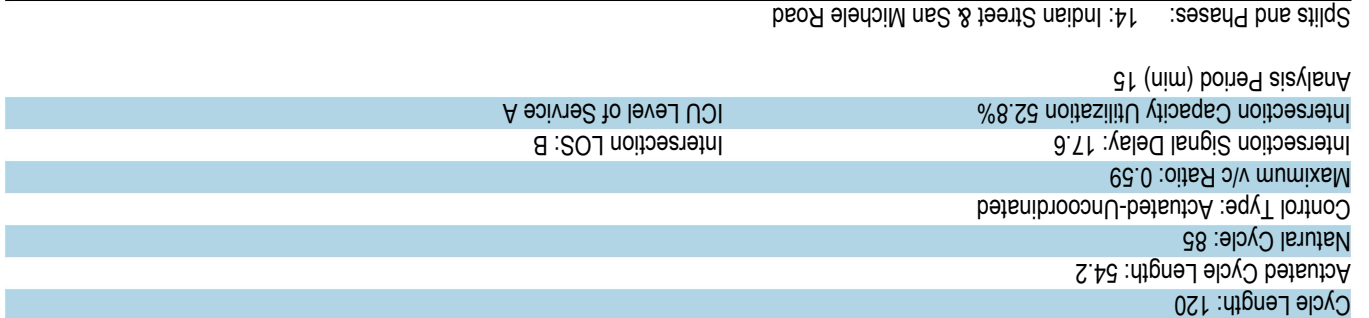
11/13/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Right Turn Channelized			MOYes			MOYes			MOYes			MOYes
Traffic Volume (veh/h)	164	764	474	112	1043	158	143	447	110	94	272	441
Future Volume (veh/h)	164	764	474	112	1043	158	143	447	110	94	272	441
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	178	830	515	122	1134	172	155	486	120	102	296	479
Approach Volume (veh/h)		1008			1256			641				398
Crossing Volume (veh/h)		520			819			1110				1411#
High Capacity (veh/h)		919			722			569				443
High v/c (veh/h)		1.10			1.74			1.13				0.90
Low Capacity (veh/h)		741			568			437				331
Low v/c (veh/h)		1.36			2.21			1.47				1.20
<b>Intersection Summary</b>												
Maximum v/c High			1.74									
Maximum v/c Low			2.21									
Intersection Capacity Utilization			72.6%		ICU Level of Service							C
# Crossing flow exceeds 1200, method is not applicable												



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↘	↘↘	↘↘	↘↘	↘↘	↘↘	↘	↘	↘↘
Traffic Volume (vph)	6	29	120	109	584	28	106	5	21
Future Volume (vph)	6	29	120	109	584	28	106	5	21
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6	
Permitted Phases						2			
Detector Phase	7	4	3	8	5	2	2	1	6
Switch Phase	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	8.8
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	8.8
Minimum Split (s)	9.6	31.8	9.6	31.8	9.6	32.8	32.8	9.6	14.6
Total Split (s)	12.0	36.0	18.0	42.0	47.0	54.0	54.0	12.0	19.0
Total Split (%)	10.0%	30.0%	15.0%	35.0%	39.2%	45.0%	45.0%	10.0%	15.8%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	4.8	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	5.8	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	5.8	13.3	7.3	21.1	15.9	17.4	17.4	5.7	10.1
Actuated g/C Ratio	0.11	0.25	0.13	0.39	0.29	0.32	0.32	0.11	0.19
v/c Ratio	0.05	0.22	0.27	0.09	0.59	0.05	0.18	0.03	0.04
Control Delay	33.0	7.0	28.4	13.8	21.6	16.2	2.8	33.0	25.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.0	7.0	28.4	13.8	21.6	16.2	2.8	33.0	25.0
LOS	C	A	C	B	C	B	A	C	C
Approach Delay	7.8	21.2	18.7	26.2					
Approach LOS	A	C	B	C					

Intersection Summary									
Cycle Length:	120								
Actuated Cycle Length:	54.2								
Natural Cycle:	85								
Control Type:	Actuated-Uncoordinated								
Maximum v/c Ratio:	0.59								
Intersection Signal Delay:	17.6								
Intersection LOS:	B								
ICU Level of Service:	A								
Intersection Capacity Utilization:	52.8%								
Analysis Period (min):	15								



HCM 6th Signalized Intersection Summary  
 14: Indian Street & San Michele Road

Gateway Aviation TA (JN:13445)

11/10/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	29	154	120	109	6	584	28	106	5	21	5
Future Volume (veh/h)	6	29	154	120	109	6	584	28	106	5	21	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.94
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1218	1470	1470	1826	1826	1826	1856	1752	1767	1900	1707	1707
Adj Flow Rate, veh/h	7	32	107	130	118	0	635	30	33	5	23	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	46	29	29	5	5	5	3	10	9	0	13	13
Cap, veh/h	11	294	249	271	981	0	799	596	503	12	373	32
Arrive On Green	0.01	0.20	0.20	0.08	0.27	0.00	0.23	0.34	0.34	0.01	0.12	0.12
Sat Flow, veh/h	1160	1470	1246	3478	3652	0	3534	1752	1477	1810	3086	263
Grp Volume(v), veh/h	7	32	107	130	118	0	635	30	33	5	13	12
Grp Sat Flow(s),veh/h/ln	1160	1470	1246	1739	1826	0	1767	1752	1477	1810	1707	1641
Q Serve(g_s), s	0.3	1.0	4.2	2.0	1.4	0.0	9.4	0.6	0.8	0.2	0.4	0.4
Cycle Q Clear(g_c), s	0.3	1.0	4.2	2.0	1.4	0.0	9.4	0.6	0.8	0.2	0.4	0.4
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		0.16
Lane Grp Cap(c), veh/h	11	294	249	271	981	0	799	596	503	12	206	198
V/C Ratio(X)	0.65	0.11	0.43	0.48	0.12	0.00	0.79	0.05	0.07	0.41	0.06	0.06
Avail Cap(c_a), veh/h	155	801	678	840	2384	0	2702	1522	1284	241	443	426
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.4	18.1	19.4	24.5	15.3	0.0	20.2	12.3	12.3	27.4	21.6	21.6
Incr Delay (d2), s/veh	22.4	0.1	0.4	0.5	0.0	0.0	0.7	0.0	0.0	8.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.3	1.1	0.7	0.5	0.0	3.2	0.2	0.2	0.1	0.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.8	18.2	19.9	25.0	15.3	0.0	20.9	12.3	12.4	35.6	21.6	21.6
LnGrp LOS	D	B	B	C	B	A	C	B	B	D	C	C
Approach Vol, veh/h		146			248			698				30
Approach Delay, s/veh		20.9			20.4			20.2				24.0
Approach LOS		C			C			C				C
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.0	24.7	8.9	16.9	17.1	12.5	5.1	20.7				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	* 5.8	4.6	5.8				
Max Green Setting (Gmax), s	7.4	48.2	13.4	30.2	42.4	* 14	7.4	36.2				
Max Q Clear Time (g_c+I1), s	2.2	2.8	4.0	6.2	11.4	2.4	2.3	3.4				
Green Ext Time (p_c), s	0.0	0.1	0.1	0.4	1.1	0.0	0.0	0.4				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				20.4								
HCM 6th LOS				C								
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings  
16: Indian Av. & Harley Knox Bl.

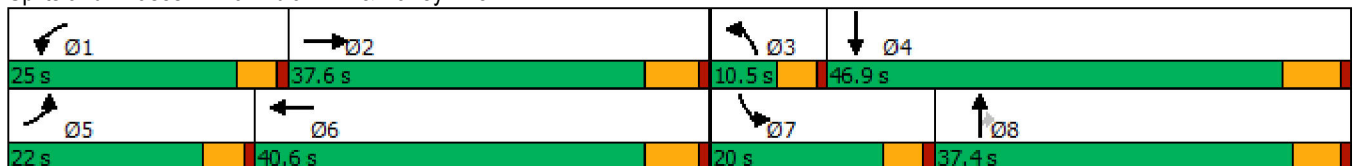


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↔↔	↕↕↔	↔	↕↕↔	↔↔	↕↕	↕	↔	↕↔
Traffic Volume (vph)	121	641	157	1066	148	298	82	102	191
Future Volume (vph)	121	641	157	1066	148	298	82	102	191
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	5	2	1	6	3	8		7	4
Permitted Phases							8		
Detector Phase	5	2	1	6	3	8	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2
Total Split (s)	22.0	37.6	25.0	40.6	10.5	37.4	37.4	20.0	46.9
Total Split (%)	18.3%	31.3%	20.8%	33.8%	8.8%	31.2%	31.2%	16.7%	39.1%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.4	4.4	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.4	5.4	4.6	6.2
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	10.2	32.8	13.2	35.8	6.0	16.3	16.3	10.1	19.6
Actuated g/C Ratio	0.11	0.35	0.14	0.38	0.06	0.17	0.17	0.11	0.21
v/c Ratio	0.55	0.48	0.68	0.78	0.79	0.55	0.23	0.57	0.56
Control Delay	50.7	26.4	54.1	29.6	72.7	39.1	1.7	53.9	18.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.7	26.4	54.1	29.6	72.7	39.1	1.7	53.9	18.1
LOS	D	C	D	C	E	D	A	D	B
Approach Delay		29.8		32.1		42.7			25.6
Approach LOS		C		C		D			C

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 93.3  
 Natural Cycle: 100  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.79  
 Intersection Signal Delay: 32.2  
 Intersection LOS: C  
 Intersection Capacity Utilization 65.0%  
 ICU Level of Service C  
 Analysis Period (min) 15































Splits and Phases: 16: Indian Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 16: Indian Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  			  		 	 			 	
Traffic Volume (veh/h)	121	641	108	157	1066	302	148	298	82	102	191	197
Future Volume (veh/h)	121	641	108	157	1066	302	148	298	82	102	191	197
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1011	1811	1811	1870	1856	1856	1737	1781	1796	1885	1811	1811
Adj Flow Rate, veh/h	132	697	108	171	1159	308	161	324	82	111	208	165
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	60	6	6	2	3	3	11	8	7	1	6	6
Cap, veh/h	171	1543	237	212	1531	407	235	540	243	143	310	234
Arrive On Green	0.09	0.36	0.36	0.12	0.38	0.38	0.07	0.16	0.16	0.08	0.17	0.17
Sat Flow, veh/h	1868	4325	663	1781	3983	1059	3209	3385	1522	1795	1868	1409
Grp Volume(v), veh/h	132	530	275	171	983	484	161	324	82	111	191	182
Grp Sat Flow(s),veh/h/ln	934	1648	1692	1781	1689	1665	1605	1692	1522	1795	1721	1557
Q Serve(g_s), s	5.1	9.2	9.3	7.0	18.8	18.8	3.6	6.6	3.6	4.5	7.7	8.2
Cycle Q Clear(g_c), s	5.1	9.2	9.3	7.0	18.8	18.8	3.6	6.6	3.6	4.5	7.7	8.2
Prop In Lane	1.00		0.39	1.00		0.64	1.00		1.00	1.00		0.91
Lane Grp Cap(c), veh/h	171	1176	604	212	1298	640	235	540	243	143	286	258
V/C Ratio(X)	0.77	0.45	0.46	0.81	0.76	0.76	0.69	0.60	0.34	0.78	0.67	0.71
Avail Cap(c_a), veh/h	437	1409	723	488	1580	779	255	1456	655	372	941	852
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.0	18.3	18.4	31.9	19.9	19.9	33.6	29.1	27.8	33.6	29.1	29.3
Incr Delay (d2), s/veh	2.8	0.3	0.5	2.8	1.7	3.5	5.2	1.1	0.8	3.4	2.7	3.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	3.0	3.2	2.9	6.7	6.9	1.5	2.6	1.3	2.0	3.1	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.8	18.6	18.9	34.7	21.6	23.4	38.9	30.1	28.6	37.0	31.8	32.8
LnGrp LOS	D	B	B	C	C	C	D	C	C	D	C	C
Approach Vol, veh/h		937			1638			567			484	
Approach Delay, s/veh		21.1			23.5			32.4			33.4	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.5	32.4	10.0	18.5	11.4	34.4	10.5	18.1				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	20.4	31.8	5.9	40.7	17.4	34.8	15.4	* 32				
Max Q Clear Time (g_c+I1), s	9.0	11.3	5.6	10.2	7.1	20.8	6.5	8.6				
Green Ext Time (p_c), s	0.2	4.6	0.0	2.1	0.1	7.8	0.1	2.1				

Intersection Summary

HCM 6th Ctrl Delay	25.6
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

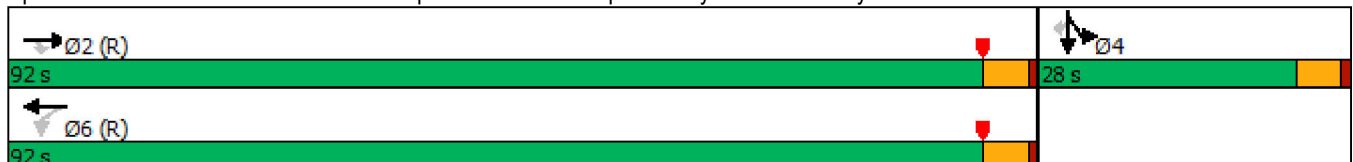


Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations	↑↑	↑	↑↑	↑	↑	↑	↑
Traffic Volume (vph)	875	153	644	400	544	0	255
Future Volume (vph)	875	153	644	400	544	0	255
Turn Type	NA	Perm	Perm	NA	Split	NA	Perm
Protected Phases	2			6	4	4	
Permitted Phases		2	6				4
Detector Phase	2	2	6	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	25.0	25.0	10.0	10.0	10.0
Total Split (s)	92.0	92.0	92.0	92.0	28.0	28.0	28.0
Total Split (%)	76.7%	76.7%	76.7%	76.7%	23.3%	23.3%	23.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None	None
Act Effct Green (s)	87.0	87.0	87.0	87.0	23.0	23.0	23.0
Actuated g/C Ratio	0.72	0.72	0.72	0.72	0.19	0.19	0.19
v/c Ratio	0.38	0.14	1.00	0.33	1.05	1.06	0.55
Control Delay	6.8	1.0	62.4	3.1	115.5	116.4	9.3
Queue Delay	0.3	0.0	0.0	0.5	13.9	14.1	0.0
Total Delay	7.1	1.0	62.4	3.7	129.4	130.5	9.3
LOS	A	A	E	A	F	F	A
Approach Delay	6.2			39.9		91.4	
Approach LOS	A			D		F	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow, Master Intersection  
 Natural Cycle: 100  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.06  
 Intersection Signal Delay: 42.2  
 Intersection LOS: D  
 Intersection Capacity Utilization 96.0%  
 ICU Level of Service F  
 Analysis Period (min) 15

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.



HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Bl./Harley Knox. Bl.

11/10/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑↑	↑					↑	↑	↑
Traffic Volume (veh/h)	0	875	153	644	400	0	0	0	0	544	0	255
Future Volume (veh/h)	0	875	153	644	400	0	0	0	0	544	0	255
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1826	1885	1841	1826	0				1648	1900	1767
Adj Flow Rate, veh/h	0	951	166	700	435	0				591	0	217
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	5	1	4	5	0				17	0	9
Cap, veh/h	0	2515	1158	718	1324	0				602	0	287
Arrive On Green	0.00	0.73	0.73	1.00	1.00	0.00				0.19	0.00	0.19
Sat Flow, veh/h	0	3561	1597	963	1826	0				3139	0	1497
Grp Volume(v), veh/h	0	951	166	700	435	0				591	0	217
Grp Sat Flow(s),veh/h/ln	0	1735	1597	481	1826	0				1570	0	1497
Q Serve(g_s), s	0.0	12.5	3.8	74.5	0.0	0.0				22.5	0.0	16.4
Cycle Q Clear(g_c), s	0.0	12.5	3.8	87.0	0.0	0.0				22.5	0.0	16.4
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2515	1158	718	1324	0				602	0	287
V/C Ratio(X)	0.00	0.38	0.14	0.97	0.33	0.00				0.98	0.00	0.76
Avail Cap(c_a), veh/h	0	2515	1158	718	1324	0				602	0	287
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.58	0.58	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	6.3	5.1	11.7	0.0	0.0				48.3	0.0	45.8
Incr Delay (d2), s/veh	0.0	0.4	0.3	20.2	0.4	0.0				32.1	0.0	10.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.8	1.1	2.0	0.1	0.0				11.2	0.0	6.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	6.7	5.3	31.9	0.4	0.0				80.4	0.0	56.8
LnGrp LOS	A	A	A	C	A	A				F	A	E
Approach Vol, veh/h		1117			1135						808	
Approach Delay, s/veh		6.5			19.8						74.0	
Approach LOS		A			B						E	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		92.0		28.0		92.0						
Change Period (Y+Rc), s		5.0		5.0		5.0						
Max Green Setting (Gmax), s		87.0		23.0		87.0						
Max Q Clear Time (g_c+I1), s		14.5		24.5		89.0						
Green Ext Time (p_c), s		4.7		0.0		0.0						

Intersection Summary

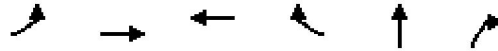
HCM 6th Ctrl Delay	29.3
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Timings

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.

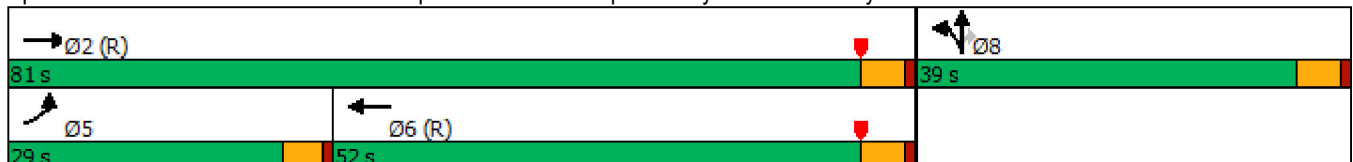


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations	↔↔	↑↑	↑↑	↔	↔	↔
Traffic Volume (vph)	479	940	984	1149	8	344
Future Volume (vph)	479	940	984	1149	8	344
Turn Type	Prot	NA	NA	Free	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				Free		8
Detector Phase	5	2	6		8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	9.5	26.0	24.0		10.0	10.0
Total Split (s)	29.0	81.0	52.0		39.0	39.0
Total Split (%)	24.2%	67.5%	43.3%		32.5%	32.5%
Yellow Time (s)	3.5	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0		5.0	5.0
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	C-Max	C-Max		Max	Max
Act Effct Green (s)	21.9	76.0	49.6	120.0	34.0	34.0
Actuated g/C Ratio	0.18	0.63	0.41	1.00	0.28	0.28
v/c Ratio	0.85	0.50	0.75	0.85	0.15	0.77
Control Delay	54.0	26.6	34.3	6.7	33.3	37.1
Queue Delay	0.1	2.8	0.0	0.0	0.0	0.0
Total Delay	54.1	29.4	34.3	6.7	33.3	37.1
LOS	D	C	C	A	C	D
Approach Delay		37.7	19.4		36.4	
Approach LOS		D	B		D	

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay: 27.7	Intersection LOS: C
Intersection Capacity Utilization 96.0%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Bl./Harley Knox Bl.





HCM 6th Signalized Intersection Summary

Gateway Aviation TA (JN:13445)

2: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox Bl./Harley Knox Bl.

11/10/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑			↑↑	↗		↖	↗			
Traffic Volume (veh/h)	479	940	0	0	984	1149	59	8	344	0	0	0
Future Volume (veh/h)	479	940	0	0	984	1149	59	8	344	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1841	1722	0	0	1841	1752	1663	1900	1663			
Adj Flow Rate, veh/h	521	1022	0	0	1070	0	64	9	309			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	4	12	0	0	4	10	16	0	16			
Cap, veh/h	571	2072	0	0	1497		452	64	399			
Arrive On Green	0.34	1.00	0.00	0.00	0.43	0.00	0.28	0.28	0.28			
Sat Flow, veh/h	3401	3358	0	0	3589	1485	1596	224	1409			
Grp Volume(v), veh/h	521	1022	0	0	1070	0	73	0	309			
Grp Sat Flow(s),veh/h/ln	1700	1636	0	0	1749	1485	1820	0	1409			
Q Serve(g_s), s	17.6	0.0	0.0	0.0	30.3	0.0	3.6	0.0	24.2			
Cycle Q Clear(g_c), s	17.6	0.0	0.0	0.0	30.3	0.0	3.6	0.0	24.2			
Prop In Lane	1.00		0.00	0.00		1.00	0.88		1.00			
Lane Grp Cap(c), veh/h	571	2072	0	0	1497		516	0	399			
V/C Ratio(X)	0.91	0.49	0.00	0.00	0.71		0.14	0.00	0.77			
Avail Cap(c_a), veh/h	694	2072	0	0	1497		516	0	399			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.82	0.82	0.00	0.00	0.61	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	39.0	0.0	0.0	0.0	28.3	0.0	32.1	0.0	39.5			
Incr Delay (d2), s/veh	11.3	0.7	0.0	0.0	1.8	0.0	0.6	0.0	13.6			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	6.6	0.2	0.0	0.0	12.3	0.0	1.6	0.0	9.6			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.4	0.7	0.0	0.0	30.1	0.0	32.7	0.0	53.1			
LnGrp LOS	D	A	A	A	C		C	A	D			
Approach Vol, veh/h		1543			1070	A		382				
Approach Delay, s/veh		17.5			30.1			49.2				
Approach LOS		B			C			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		81.0			24.6	56.4		39.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		76.0			24.5	47.0		34.0				
Max Q Clear Time (g_c+I1), s		2.0			19.6	32.3		26.2				
Green Ext Time (p_c), s		5.0			0.5	4.2		0.9				

Intersection Summary

HCM 6th Ctrl Delay	26.0
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Timings  
5: Heacock Street & Cactus Avenue

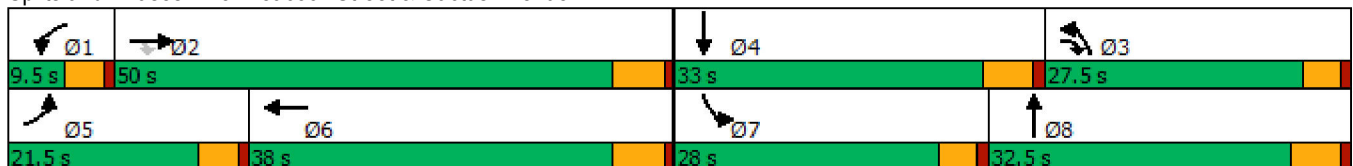


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↶	↶↶↶	↶	↶	↶↶↶	↶↶	↶↶	↶	↶↶
Traffic Volume (vph)	244	2146	1379	28	956	831	675	184	746
Future Volume (vph)	244	2146	1379	28	956	831	675	184	746
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	3	1	6	3	8	7	4
Permitted Phases			2						
Detector Phase	5	2	3	1	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.5	30.5	9.5	9.5	30.5	9.5	30.5	9.5	30.5
Total Split (s)	21.5	50.0	27.5	9.5	38.0	27.5	32.5	28.0	33.0
Total Split (%)	17.9%	41.7%	22.9%	7.9%	31.7%	22.9%	27.1%	23.3%	27.5%
Yellow Time (s)	3.5	4.5	3.5	3.5	4.5	3.5	4.5	3.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-2.0	0.0	0.0	-2.0	-2.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.5	3.5	4.5	4.5	3.5	2.5	4.5	3.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None
Act Effct Green (s)	17.5	47.2	69.3	5.0	31.8	25.0	35.0	17.1	28.1
Actuated g/C Ratio	0.15	0.41	0.60	0.04	0.27	0.21	0.30	0.15	0.24
v/c Ratio	0.89	0.98	1.32	0.38	0.73	1.12	0.69	0.69	0.94
Control Delay	80.8	48.6	170.9	69.6	40.7	114.5	40.9	60.1	62.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.8	48.6	170.9	69.6	40.7	114.5	40.9	60.1	62.1
LOS	F	D	F	E	D	F	D	E	E
Approach Delay		95.4			41.5		79.6		61.8
Approach LOS		F			D		E		E

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 116.4  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.32  
 Intersection Signal Delay: 79.5  
 Intersection LOS: E  
 Intersection Capacity Utilization 123.7%  
 ICU Level of Service H  
 Analysis Period (min) 15





























Splits and Phases: 5: Heacock Street & Cactus Avenue



HCM 6th Signalized Intersection Summary  
5: Heacock Street & Cactus Avenue

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 			 	
Traffic Volume (veh/h)	244	2146	1379	28	956	132	831	675	72	184	746	61
Future Volume (veh/h)	244	2146	1379	28	956	132	831	675	72	184	746	61
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1811	1826	1885	1885	1811	1870	1870	1900	1856	1856
Adj Flow Rate, veh/h	254	2235	733	29	996	76	866	703	39	192	777	17
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	1	6	5	1	1	6	2	2	0	3	3
Cap, veh/h	275	2217	872	45	1425	109	727	1113	62	235	855	19
Arrive On Green	0.23	0.59	0.38	0.03	0.41	0.26	0.32	0.48	0.31	0.13	0.24	0.23
Sat Flow, veh/h	1810	5656	1531	1739	5189	395	3450	3507	194	1810	3617	79
Grp Volume(v), veh/h	254	2235	733	29	723	349	866	375	367	192	399	395
Grp Sat Flow(s),veh/h/ln	1810	1885	1531	1739	1885	1814	1725	1870	1831	1810	1856	1841
Q Serve(g_s), s	16.3	46.5	13.7	2.0	18.8	19.3	25.0	17.8	18.1	12.3	24.8	24.8
Cycle Q Clear(g_c), s	16.3	46.5	13.7	2.0	18.8	19.3	25.0	17.8	18.1	12.3	24.8	24.8
Prop In Lane	1.00		1.00	1.00		0.22	1.00		0.11	1.00		0.04
Lane Grp Cap(c), veh/h	275	2217	872	45	1035	498	727	594	581	235	439	435
V/C Ratio(X)	0.93	1.01	0.84	0.64	0.70	0.70	1.19	0.63	0.63	0.82	0.91	0.91
Avail Cap(c_a), veh/h	275	2217	872	73	1097	528	727	594	581	374	446	442
HCM Platoon Ratio	1.50	1.50	1.00	1.00	1.50	1.00	1.50	1.50	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.2	24.4	9.9	57.2	30.8	32.7	40.6	25.9	26.8	50.3	44.0	44.1
Incr Delay (d2), s/veh	34.5	21.1	7.0	5.6	1.5	3.1	99.4	1.7	1.7	3.5	21.5	21.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.0	18.5	9.4	0.9	7.3	7.8	19.2	6.7	6.8	5.6	13.6	13.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	79.6	45.6	16.9	62.8	32.3	35.9	140.0	27.5	28.5	53.7	65.5	65.7
LnGrp LOS	E	F	B	E	C	D	F	C	C	D	E	E
Approach Vol, veh/h		3222			1101			1608			986	
Approach Delay, s/veh		41.7			34.2			88.3			63.3	
Approach LOS		D			C			F			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.6	50.0	28.5	32.5	21.5	36.1	18.9	42.2				
Change Period (Y+Rc), s	4.5	5.5	5.5	* 5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	5.0	44.5	23.0	* 28	17.0	32.5	23.5	27.0				
Max Q Clear Time (g_c+I1), s	4.0	48.5	27.0	26.8	18.3	21.3	14.3	20.1				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.3	0.0	3.4	0.2	1.6				

Intersection Summary

HCM 6th Ctrl Delay	54.4
HCM 6th LOS	D

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

11/10/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	35	218	386	47	99	135	1072	137	362	1209	24	
Future Volume (vph)	35	218	386	47	99	135	1072	137	362	1209	24	
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	7	4		3	8	5	2		1	6		
Permitted Phases			4					2			6	
Detector Phase	7	4	4	3	8	5	2	2	1	6	6	
Switch Phase												
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	
Minimum Split (s)	8.5	23.5	23.5	8.5	31.5	8.5	29.5	29.5	8.5	23.5	23.5	
Total Split (s)	8.5	29.3	29.3	10.7	31.5	9.0	30.0	30.0	10.0	31.0	31.0	
Total Split (%)	10.6%	36.6%	36.6%	13.4%	39.4%	11.3%	37.5%	37.5%	12.5%	38.8%	38.8%	
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5	4.5	4.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	5.5	4.5	5.5	5.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max	
Act Effct Green (s)	4.1	13.6	13.6	5.7	14.8	4.6	25.2	25.2	5.6	26.2	26.2	
Actuated g/C Ratio	0.06	0.21	0.21	0.09	0.22	0.07	0.38	0.38	0.08	0.40	0.40	
v/c Ratio	0.32	0.61	0.72	0.31	0.32	1.11	0.85	0.18	1.30	0.93	0.03	
Control Delay	41.7	31.3	18.3	37.4	8.4	149.0	29.9	3.4	187.8	36.6	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	41.7	31.3	18.3	37.4	8.4	149.0	29.9	3.4	187.8	36.6	0.1	
LOS	D	C	B	D	A	F	C	A	F	D	A	
Approach Delay		24.0			12.4		39.2			70.3		
Approach LOS		C			B		D			E		

Intersection Summary

Cycle Length: 80

Actuated Cycle Length: 66.1

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.30

Intersection Signal Delay: 47.0

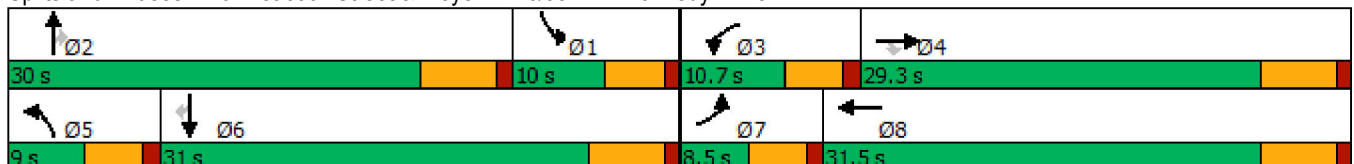
Intersection LOS: D

Intersection Capacity Utilization 73.6%

ICU Level of Service D

Analysis Period (min) 15
























Splits and Phases: 6: Heacock Street & Meyer Drive/John F. Kennedy Drive



HCM 6th Signalized Intersection Summary  
 6: Heacock Street & Meyer Drive/John F. Kennedy Drive

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	218	386	47	99	194	135	1072	137	362	1209	24
Future Volume (veh/h)	35	218	386	47	99	194	135	1072	137	362	1209	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1900	1900	1885	1885	1900	1811	1900	1841	1796	1900
Adj Flow Rate, veh/h	38	237	257	51	108	151	147	1165	122	393	1314	13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	1	0	0	1	1	0	6	0	4	7	0
Cap, veh/h	55	373	319	66	385	327	122	1332	592	281	1428	640
Arrive On Green	0.03	0.20	0.20	0.04	0.20	0.20	0.07	0.37	0.37	0.08	0.40	0.40
Sat Flow, veh/h	1810	1885	1610	1810	1885	1598	1810	3622	1610	3401	3593	1610
Grp Volume(v), veh/h	38	237	257	51	108	151	147	1165	122	393	1314	13
Grp Sat Flow(s),veh/h/ln	1810	1885	1610	1810	1885	1598	1810	1811	1610	1700	1796	1610
Q Serve(g_s), s	1.4	7.7	10.2	1.9	3.2	5.5	4.5	20.0	2.4	5.5	23.2	0.3
Cycle Q Clear(g_c), s	1.4	7.7	10.2	1.9	3.2	5.5	4.5	20.0	2.4	5.5	23.2	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	55	373	319	66	385	327	122	1332	592	281	1428	640
V/C Ratio(X)	0.69	0.63	0.81	0.77	0.28	0.46	1.20	0.87	0.21	1.40	0.92	0.02
Avail Cap(c_a), veh/h	109	673	575	168	735	623	122	1332	592	281	1428	640
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.0	24.5	25.5	31.8	22.4	23.3	31.1	19.6	7.2	30.6	19.1	12.2
Incr Delay (d2), s/veh	5.7	0.7	1.8	6.8	0.1	0.4	146.0	8.2	0.8	200.3	11.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	3.2	3.6	0.9	1.3	1.9	6.7	8.3	1.2	9.8	9.8	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.7	25.2	27.3	38.6	22.5	23.7	177.1	27.9	7.9	230.9	30.1	12.2
LnGrp LOS	D	C	C	D	C	C	F	C	A	F	C	B
Approach Vol, veh/h		532			310			1434			1720	
Approach Delay, s/veh		27.1			25.7			41.5			75.9	
Approach LOS		C			C			D			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.0	30.0	6.9	18.7	9.0	32.0	6.5	19.1				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	5.5	* 25	6.2	23.8	4.5	25.5	4.0	26.0				
Max Q Clear Time (g_c+I1), s	7.5	22.0	3.9	12.2	6.5	25.2	3.4	7.5				
Green Ext Time (p_c), s	0.0	1.4	0.0	1.1	0.0	0.2	0.0	0.8				













Intersection Summary

HCM 6th Ctrl Delay	53.1
HCM 6th LOS	D

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
11: Heacock Street & Cardinal Avenue

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	61	57	1086	20	18	1615
Future Volume (vph)	61	57	1086	20	18	1615
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	26.6	26.6	21.6	21.6	9.6	16.2
Total Split (s)	27.0	27.0	82.0	82.0	11.0	93.0
Total Split (%)	22.5%	22.5%	68.3%	68.3%	9.2%	77.5%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	6.2
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	None	Min
Act Effct Green (s)	12.6	12.6	53.1	53.1	6.0	55.4
Actuated g/C Ratio	0.17	0.17	0.73	0.73	0.08	0.76
v/c Ratio	0.22	0.18	0.46	0.02	0.14	0.70
Control Delay	33.2	10.7	7.7	3.1	42.0	8.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.2	10.7	7.7	3.1	42.0	8.9
LOS	C	B	A	A	D	A
Approach Delay	22.3		7.6			9.3
Approach LOS	C		A			A

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 72.7	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.70	
Intersection Signal Delay: 9.2	Intersection LOS: A
Intersection Capacity Utilization 62.0%	ICU Level of Service B
Analysis Period (min) 15	













Splits and Phases: 11: Heacock Street & Cardinal Avenue



HCM 6th Signalized Intersection Summary  
 11: Heacock Street & Cardinal Avenue

Gateway Aviation TA (JN:13445)

11/10/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	61	57	1086	20	18	1615
Future Volume (veh/h)	61	57	1086	20	18	1615
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1752	1781	1693	1781	1752
Adj Flow Rate, veh/h	66	62	1180	22	20	1755
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	10	8	14	8	10
Cap, veh/h	246	205	2147	864	40	2318
Arrive On Green	0.14	0.14	0.60	0.60	0.02	0.70
Sat Flow, veh/h	1781	1485	3563	1434	1697	3416
Grp Volume(v), veh/h	66	62	1180	22	20	1755
Grp Sat Flow(s),veh/h/ln	1781	1485	1781	1434	1697	1664
Q Serve(g_s), s	2.2	2.5	12.8	0.4	0.8	22.1
Cycle Q Clear(g_c), s	2.2	2.5	12.8	0.4	0.8	22.1
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	246	205	2147	864	40	2318
V/C Ratio(X)	0.27	0.30	0.55	0.03	0.51	0.76
Avail Cap(c_a), veh/h	611	509	4224	1701	166	4425
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.2	25.3	7.7	5.2	31.5	6.4
Incr Delay (d2), s/veh	0.6	0.8	0.2	0.0	3.7	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.9	3.1	0.1	0.3	3.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	25.8	26.1	7.9	5.2	35.2	6.9
LnGrp LOS	C	C	A	A	D	A
Approach Vol, veh/h	128		1202			1775
Approach Delay, s/veh	25.9		7.9			7.2
Approach LOS	C		A			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	6.1	45.5			51.7	13.6
Change Period (Y+Rc), s	4.6	* 6.2			6.2	4.6
Max Green Setting (Gmax), s	6.4	* 77			86.8	22.4
Max Q Clear Time (g_c+11), s	2.8	14.8			24.1	4.5
Green Ext Time (p_c), s	0.0	10.3			21.4	0.3

Intersection Summary

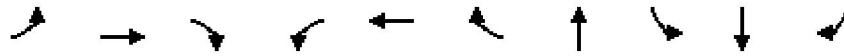
HCM 6th Ctrl Delay	8.2
HCM 6th LOS	A

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Timings  
12: Heacock Street & San Michele Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBL	SBT	SBR	Ø5
Lane Configurations	↖	↗	↘	↖	↗	↘	↕	↖	↗	↘	
Traffic Volume (vph)	58	348	6	22	102	574	536	327	904	36	
Future Volume (vph)	58	348	6	22	102	574	536	327	904	36	
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	NA	Prot	NA	Perm	
Protected Phases	7	4		3	8	1	2	1	6		5
Permitted Phases			4			8				6	
Detector Phase	7	4	4	3	8	1	2	1	6	6	
Switch Phase											
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0
Minimum Split (s)	9.5	30.5	30.5	8.5	30.5	8.5	34.5	8.5	34.5	34.5	8.5
Total Split (s)	9.5	31.5	31.5	8.5	30.5	38.9	41.1	38.9	71.5	71.5	8.5
Total Split (%)	7.9%	26.3%	26.3%	7.1%	25.4%	32.4%	34.3%	32.4%	59.6%	59.6%	7%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	4.5	3.5	4.5	4.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5	5.5	
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	None	Max	Max	None
Act Effct Green (s)	12.0	24.3	24.3	4.0	12.5	48.8	35.9	30.7	71.2	71.2	
Actuated g/C Ratio	0.11	0.22	0.22	0.04	0.11	0.44	0.32	0.28	0.64	0.64	
v/c Ratio	0.31	0.91	0.01	0.35	0.52	0.71	0.57	0.68	0.85	0.03	
Control Delay	53.7	70.9	0.0	70.2	55.5	25.5	34.9	44.4	26.0	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	53.7	70.9	0.0	70.2	55.5	25.5	34.9	44.4	26.0	0.1	
LOS	D	E	A	E	E	C	C	D	C	A	
Approach Delay		67.4			31.3		34.9		30.0		
Approach LOS		E			C		C		C		

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 111.4	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.91	
Intersection Signal Delay: 36.5	Intersection LOS: D
Intersection Capacity Utilization 82.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 12: Heacock Street & San Michele Road





























HCM 6th Signalized Intersection Summary  
 12: Heacock Street & San Michele Road

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	348	6	22	102	574	0	536	40	327	904	36
Future Volume (veh/h)	58	348	6	22	102	574	0	536	40	327	904	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1870	1900	1826	1826	1885	1826	1900
Adj Flow Rate, veh/h	63	378	7	24	111	461	0	583	43	355	983	39
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	2	0	5	5	1	5	0
Cap, veh/h	271	414	342	35	167	508	2	1092	80	418	1128	995
Arrive On Green	0.15	0.22	0.22	0.02	0.09	0.09	0.00	0.33	0.33	0.23	0.62	0.62
Sat Flow, veh/h	1810	1900	1569	1810	1900	1585	1810	3276	241	1795	1826	1610
Grp Volume(v), veh/h	63	378	7	24	111	461	0	308	318	355	983	39
Grp Sat Flow(s),veh/h/ln	1810	1900	1569	1810	1900	1585	1810	1735	1782	1795	1826	1610
Q Serve(g_s), s	3.3	20.7	0.3	1.4	6.0	4.9	0.0	15.4	15.5	20.2	47.6	0.4
Cycle Q Clear(g_c), s	3.3	20.7	0.3	1.4	6.0	4.9	0.0	15.4	15.5	20.2	47.6	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	271	414	342	35	167	508	2	578	594	418	1128	995
V/C Ratio(X)	0.23	0.91	0.02	0.70	0.67	0.91	0.00	0.53	0.53	0.85	0.87	0.04
Avail Cap(c_a), veh/h	271	462	382	68	445	740	68	578	594	578	1128	995
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.0	40.8	28.6	52.1	47.2	34.8	0.0	28.9	28.9	39.2	16.9	1.1
Incr Delay (d2), s/veh	0.2	19.9	0.0	9.0	1.7	8.7	0.0	3.5	3.4	6.4	9.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	12.0	0.1	0.7	2.8	12.0	0.0	6.6	6.8	9.1	19.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.2	60.7	28.6	61.1	48.9	43.5	0.0	32.4	32.3	45.6	26.2	1.1
LnGrp LOS	D	E	C	E	D	D	A	C	C	D	C	A
Approach Vol, veh/h		448			596			626			1377	
Approach Delay, s/veh		57.3			45.2			32.4			30.5	
Approach LOS		E			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	30.4	41.1	6.5	28.8	0.0	71.5	20.5	14.9				
Change Period (Y+Rc), s	5.5	* 5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	34.4	* 36	4.0	26.0	4.0	66.0	5.0	25.0				
Max Q Clear Time (g_c+I1), s	22.2	17.5	3.4	22.7	0.0	49.6	5.3	8.0				
Green Ext Time (p_c), s	0.4	1.9	0.0	0.5	0.0	4.1	0.0	1.1				

Intersection Summary

HCM 6th Ctrl Delay	37.7
HCM 6th LOS	D













Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM Unsignalized Intersection Capacity Analysis  
 13: Webster Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/13/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Right Turn Channelized			MOYes			MOYes			MOYes			MOYes
Traffic Volume (veh/h)	139	464	521	152	1049	121	311	391	138	181	615	506
Future Volume (veh/h)	139	464	521	152	1049	121	311	391	138	181	615	506
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.93	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	151	504	566	165	1140	132	334	425	150	197	668	550
Approach Volume (veh/h)		655			1305			759			865	
Crossing Volume (veh/h)		1030			910			852			1639#	
High Capacity (veh/h)		607			670			703			365	
High v/c (veh/h)		1.08			1.95			1.08			2.37	
Low Capacity (veh/h)		470			524			552			267	
Low v/c (veh/h)		1.39			2.49			1.38			3.24	
<b>Intersection Summary</b>												
Maximum v/c High			2.37									
Maximum v/c Low			3.24									
Intersection Capacity Utilization			81.9%		ICU Level of Service						D	
# Crossing flow exceeds 1200, method is not applicable												

Timings  
14: Indian Street & San Michele Road

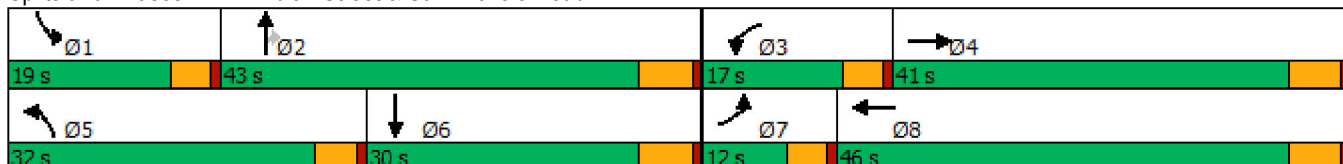


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↙	↕	↙	↕	↙	↕	↗	↙	↕
Traffic Volume (vph)	28	171	165	225	447	122	121	88	194
Future Volume (vph)	28	171	165	225	447	122	121	88	194
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8	5	2		1	6
Permitted Phases							2		
Detector Phase	7	4	3	8	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	31.8	9.6	31.8	9.6	32.8	32.8	9.6	24.8
Total Split (s)	12.0	41.0	17.0	46.0	32.0	43.0	43.0	19.0	30.0
Total Split (%)	10.0%	34.2%	14.2%	38.3%	26.7%	35.8%	35.8%	15.8%	25.0%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	6.0	14.8	8.5	24.3	14.7	20.6	20.6	8.6	11.9
Actuated g/C Ratio	0.08	0.21	0.12	0.34	0.21	0.29	0.29	0.12	0.17
v/c Ratio	0.20	0.76	0.42	0.26	0.67	0.26	0.21	0.43	0.41
Control Delay	39.7	15.7	35.4	17.8	32.4	25.5	4.6	39.0	29.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.7	15.7	35.4	17.8	32.4	25.5	4.6	39.0	29.9
LOS	D	B	D	B	C	C	A	D	C
Approach Delay		16.6		24.1		26.3			32.5
Approach LOS		B		C		C			C

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 71.6  
 Natural Cycle: 85  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.76  
 Intersection Signal Delay: 23.5  
 Intersection LOS: C  
 Intersection Capacity Utilization 73.4%  
 ICU Level of Service D  
 Analysis Period (min) 15























Splits and Phases: 14: Indian Street & San Michele Road



HCM 6th Signalized Intersection Summary  
 14: Indian Street & San Michele Road

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	171	515	165	225	70	447	122	121	88	194	27
Future Volume (veh/h)	28	171	515	165	225	70	447	122	121	88	194	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		1.00	1.00		0.68
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1856	1826	1826	1796	1796	1856	1870	1841	1841
Adj Flow Rate, veh/h	30	186	-92	179	245	59	486	133	67	96	211	19
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	5	5	3	5	5	7	7	3	2	4	4
Cap, veh/h	55	655	0	270	671	158	602	665	582	124	846	73
Arrive On Green	0.03	0.19	0.00	0.08	0.24	0.24	0.18	0.37	0.37	0.07	0.26	0.26
Sat Flow, veh/h	1739	3561	0	3428	2840	667	3421	1796	1571	1781	3200	277
Grp Volume(v), veh/h	30	94	0	179	155	149	486	133	67	96	118	112
Grp Sat Flow(s),veh/h/ln	1739	1735	0	1714	1826	1682	1711	1796	1571	1781	1841	1636
Q Serve(g_s), s	1.2	1.6	0.0	3.6	5.1	5.3	9.7	3.6	2.0	3.8	3.6	3.8
Cycle Q Clear(g_c), s	1.2	1.6	0.0	3.6	5.1	5.3	9.7	3.6	2.0	3.8	3.6	3.8
Prop In Lane	1.00		0.00	1.00		0.40	1.00		1.00	1.00		0.17
Lane Grp Cap(c), veh/h	55	655	0	270	431	397	602	665	582	124	486	432
V/C Ratio(X)	0.55	0.14	0.00	0.66	0.36	0.37	0.81	0.20	0.12	0.77	0.24	0.26
Avail Cap(c_a), veh/h	181	1716	0	597	1032	950	1318	939	821	361	626	557
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.0	24.1	0.0	31.9	22.7	22.8	28.2	15.2	14.7	32.5	20.6	20.7
Incr Delay (d2), s/veh	3.2	0.0	0.0	1.0	0.2	0.2	1.0	0.1	0.0	3.8	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.6	0.0	1.4	2.0	1.9	3.6	1.2	0.6	1.6	1.4	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.1	24.1	0.0	32.9	22.9	23.0	29.2	15.3	14.8	36.4	20.7	20.8
LnGrp LOS	D	C	A	C	C	C	C	B	B	D	C	C
Approach Vol, veh/h		124			483			686			326	
Approach Delay, s/veh		27.2			26.6			25.1			25.3	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.6	32.2	10.2	19.2	17.1	24.6	6.8	22.6				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	14.4	37.2	12.4	35.2	27.4	24.2	7.4	40.2				
Max Q Clear Time (g_c+I1), s	5.8	5.6	5.6	3.6	11.7	5.8	3.2	7.3				
Green Ext Time (p_c), s	0.1	0.5	0.2	0.3	0.8	0.6	0.0	1.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				25.8								
HCM 6th LOS				C								

Timings  
16: Indian Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/10/2020

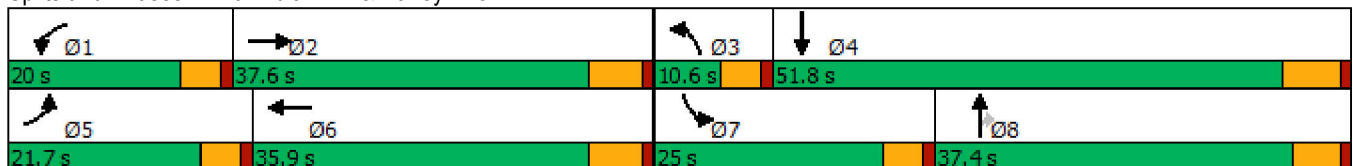


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↔↔	↕↕↔	↔	↕↕↔	↔↔	↕↕	↕	↔	↕↕
Traffic Volume (vph)	351	776	242	730	118	295	246	326	563
Future Volume (vph)	351	776	242	730	118	295	246	326	563
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	5	2	1	6	3	8		7	4
Permitted Phases							8		
Detector Phase	5	2	1	6	3	8	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2
Total Split (s)	21.7	37.6	20.0	35.9	10.6	37.4	37.4	25.0	51.8
Total Split (%)	18.1%	31.3%	16.7%	29.9%	8.8%	31.2%	31.2%	20.8%	43.2%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.4	4.4	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.4	5.4	4.6	6.2
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	17.0	29.9	15.4	28.3	6.0	32.0	32.0	20.4	45.6
Actuated g/C Ratio	0.14	0.25	0.13	0.24	0.05	0.27	0.27	0.17	0.39
v/c Ratio	0.93	0.77	1.13	0.83	0.82	0.38	0.43	1.14	0.98
Control Delay	81.1	44.9	145.1	47.6	92.0	36.9	6.4	138.0	47.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	81.1	44.9	145.1	47.6	92.0	36.9	6.4	138.0	47.8
LOS	F	D	F	D	F	D	A	F	D
Approach Delay		55.2		68.3		35.4			66.5
Approach LOS		E		E		D			E

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 118.1	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.14	
Intersection Signal Delay: 59.5	Intersection LOS: E
Intersection Capacity Utilization 90.1%	ICU Level of Service E
Analysis Period (min) 15	
































Splits and Phases: 16: Indian Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 16: Indian Av. & Harley Knox Bl.

Gateway Aviation TA (JN:13445)

11/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  			  		 	 			 	 
Traffic Volume (veh/h)	351	776	108	242	730	169	118	295	246	326	563	682
Future Volume (veh/h)	351	776	108	242	730	169	118	295	246	326	563	682
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1559	1841	1841	1885	1811	1811	1707	1678	1870	1900	1856	1856
Adj Flow Rate, veh/h	382	843	90	263	793	157	128	321	158	354	612	469
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	23	4	4	1	6	6	13	15	2	0	3	3
Cap, veh/h	430	1115	119	255	972	191	174	743	365	340	695	532
Arrive On Green	0.15	0.24	0.24	0.14	0.23	0.23	0.06	0.23	0.23	0.19	0.37	0.37
Sat Flow, veh/h	2881	4612	490	1795	4146	814	3155	3188	1565	1810	1902	1455
Grp Volume(v), veh/h	382	611	322	263	629	321	128	321	158	354	567	514
Grp Sat Flow(s),veh/h/ln	1440	1675	1752	1795	1648	1664	1577	1594	1565	1810	1763	1594
Q Serve(g_s), s	14.1	18.4	18.5	15.4	19.6	19.8	4.3	9.3	9.4	20.4	32.7	32.7
Cycle Q Clear(g_c), s	14.1	18.4	18.5	15.4	19.6	19.8	4.3	9.3	9.4	20.4	32.7	32.7
Prop In Lane	1.00		0.28	1.00		0.49	1.00		1.00	1.00		0.91
Lane Grp Cap(c), veh/h	430	810	424	255	772	390	174	743	365	340	645	583
V/C Ratio(X)	0.89	0.75	0.76	1.03	0.81	0.82	0.73	0.43	0.43	1.04	0.88	0.88
Avail Cap(c_a), veh/h	454	982	513	255	914	462	174	940	461	340	741	670
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.3	38.2	38.2	46.6	39.3	39.4	50.5	35.5	35.5	44.1	32.2	32.2
Incr Delay (d2), s/veh	17.4	2.7	5.3	65.0	4.9	9.9	13.1	0.4	0.8	59.8	10.8	11.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.9	7.4	8.1	11.2	8.1	8.8	2.0	3.5	3.5	14.4	14.9	13.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.7	40.9	43.5	111.6	44.3	49.3	63.6	35.9	36.3	103.9	43.0	44.1
LnGrp LOS	E	D	D	F	D	D	E	D	D	F	D	D
Approach Vol, veh/h		1315			1213			607			1435	
Approach Delay, s/veh		47.9			60.2			41.8			58.4	
Approach LOS		D			E			D			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.0	32.0	10.6	45.9	20.8	31.2	25.0	31.5				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	15.4	31.8	6.0	45.6	17.1	30.1	20.4	* 32				
Max Q Clear Time (g_c+I1), s	17.4	20.5	6.3	34.7	16.1	21.8	22.4	11.4				
Green Ext Time (p_c), s	0.0	4.1	0.0	4.9	0.1	3.6	0.0	2.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				53.7								
HCM 6th LOS				D								
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												