

Appendix R-3

Alternative 5 AQ/GHG/HRA/Energy Analysis

DATE: May 16, 2024
TO: Timothy Reeves, Lewis Management Corp.
FROM: Haseeb Qureshi, Shannon Wong, Michael Tirohn
JOB NO: 14064-20 Alt 5 AQ, HRA & GHG

WEST CAMPUS UPPER PLATEAU ALTERNATIVE 5 AIR QUALITY, HEALTH RISK ANALYSIS, GREENHOUSE GAS ASSESSMENT & ENERGY ANALYSIS

Timothy Reeves,

Urban Crossroads, Inc. is pleased to provide the following Air Quality, Health Risk Analysis, Greenhouse Gas Assessment & Energy Analysis for the West Campus Upper Plateau Alternative 5 (**Project**). The Project is located west of Cactus Avenue's current terminus, east and south of the Mission Grove neighborhood, and to the north of the Orangecrest neighborhood within the jurisdiction of the March Joint Powers Authority (**March JPA**). The purpose of this analysis is to evaluate potential changes in Air Quality, Greenhouse Gas emissions, and energy use for **Project Alternative 5**.

ALTERNATIVE 5

Specifically, Project Alternative 5 assumes the development of 374,398 square feet of commercial retail use (0.25 floor-to-area ratio or **FAR**) and 4,243,244 square feet of office park use (0.45 FAR). The Project also includes an 18.08-acre public park, 42.2-acre active park, and 445-acre Conservation Area. The public park, active park, and conservation area are consistent with the currently proposed Project. The land use plan for Project Alternative 5 is shown on Exhibit 1, where the red represents commercial retail uses and the blue identifies the office park uses. Access to the office park use will be accommodated via Cactus Avenue to the east, however, the commercial retail component will also accommodate access off of Barton Street as it will include neighborhood serving uses.

EXHIBIT 1: ALTERNATIVE 5 LAND USE PLAN



AIR QUALITY EMISSIONS

PROPOSED PROJECT

The West Campus Upper Plateau Air Quality Impact Analysis (dated May 2024, referred to as **2024 Air Study**) evaluated 2,562,561 square feet of high-cube fulfillment center warehouse use, 500,000 square feet of high-cube cold storage warehouse use, 1,763,168 square feet of business park use, 160,921 square feet of commercial retail use, 18.08-acre public park, 42.2-acre active park, and 445-acre Conservation Area. The estimated operation-source emissions from the Proposed Project are summarized in Table 1 (with mitigation).

TABLE 1: PROPOSED PROJECT REGIONAL OPERATIONAL EMISSIONS – WITH MITIGATION

Source	Emissions (lbs/day)					
	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Summer						
Mobile Source	174.00	308.00	2,148.00	6.90	577.00	151.00
Area Source	122.00	0	0	0	0	0
Energy Source	0	0	0	0	0	0
Operational Equipment	0.25	1.28	18.30	0.02	0.05	0.05
Stationary Source	18.70	5.50	47.70	0.09	0.28	0.28
TRU Source	34.56	36.27	4.17	0.00	1.18	1.09
Total Maximum Daily Emissions	349.51	351.05	2,218.17	7.01	578.51	152.42
Winter						
Mobile Source	166.00	328.00	1,762.00	6.52	577.00	151.00
Area Source	122.00	0	0	0	0	0
Energy Source	0	0	0	0	0	0
Operational Equipment	0.25	1.28	18.30	0.02	0.05	0.05
Stationary Source	18.70	5.50	47.70	0.09	0.28	0.28
TRU Source	34.56	36.27	4.17	0.00	1.18	1.09
Total Maximum Daily Emissions	341.51	371.05	1,832.17	6.63	578.51	152.42

PROJECT ALTERNATIVE 5

Project Alternative 5 assumes the development of 374,398 square feet of commercial retail use and 4,243,244 square feet of office park use in place of 2,562,561 square feet of high-cube fulfillment center warehouse use, 500,000 square feet of high-cube cold storage warehouse use, 1,763,168 square feet of business park use, and 160,921 square feet of commercial retail use. The estimated operation-source emissions from Project Alternative 5 are summarized in Table 2. Detailed operation model outputs are presented in Attachment A.

TABLE 2: PROJECT ALTERNATIVE 5 REGIONAL OPERATIONAL EMISSIONS

Source	Emissions (lbs/day)					
	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Summer						
Mobile Source	304.02	361.95	3,596.77	10.07	927	240
Area Source	137.68	1.69	200.84	0.01	0.27	0.36
Energy Source	1.76	32.04	26.91	0.19	2.43	2.43
Total Maximum Daily Emissions	443.46	395.68	3,824.52	10.27	929.7	242.79
Winter						
Mobile Source	287.37	388.32	2,946.19	9.45	927	240
Area Source	104.69	0	0	0	0	0
Energy Source	1.76	32.04	26.91	0.19	2.43	2.43
Total Maximum Daily Emissions	393.82	420.36	2,973.10	9.64	929.43	242.43

AIR QUALITY EMISSIONS COMPARISON

As shown in Table 3, Project Alternative 5 is anticipated to generate slightly more emissions per day for pollutants of VOC, NO_x, CO, SO_x, PM₁₀, and PM_{2.5} as compared to emissions generated by the Proposed Project.

TABLE 3: PROJECT NET NEW REGIONAL OPERATIONAL EMISSIONS

Source	Emissions (lbs/day)					
	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Summer						
Project Alternative 5	443.46	395.68	3,824.52	10.27	929.70	242.79
Proposed Project	349.51	351.05	2,218.17	7.01	578.51	152.42
Net Emissions (Alternative 5 – Proposed)	93.95	44.63	1,606.35	3.26	351.19	90.37
Winter						
Project Alternative 5	393.82	420.36	2,973.10	9.64	929.43	242.43
Proposed Project	341.51	371.05	1832.17	6.63	578.51	152.42
Net Emissions (Alternative 5 – Proposed)	52.31	49.31	1,140.93	3.01	350.92	90.01

HEALTH RISK ASSESSMENT

PROPOSED PROJECT

The West Campus Upper Plateau Mobile Source Health Risk Assessment (dated May 2024, referred to as **2024 HRA**) evaluated 2,562,561 square feet of high-cube fulfillment center warehouse use, 500,000 square feet of high-cube cold storage warehouse use, 1,763,168 square feet of business park use, 160,921 square feet of commercial retail use, 18.08-acre public park, 42.2-acre active park, and 445-acre Conservation Area. Based on the West Campus Upper Plateau Traffic Analysis, the proposed Project would be expected to generate 33,260 two-way passenger vehicle trips and 2,054 two-way truck trips per day (in actual vehicles). The 2024 HRA evaluated the potential health and cancer risk associated with emissions of diesel particulate matter (DPM) emitted during construction of the proposed Project as well as by trucks traveling to and from the Project site. The results of the 2024 HRA indicated that the proposed Project would not result in any significant cancer or non-cancer health risks to nearby residents, workers, and school children as a result of DPM emissions generated during construction or operation of the proposed Project.

PROJECT ALTERNATIVE 5

Project Alternative 5 assumes the development of 374,398 square feet of commercial retail use and 4,243,244 square feet of office park use in place of 2,562,561 square feet of high-cube fulfillment center warehouse use, 500,000 square feet of high-cube cold storage warehouse use, 1,763,168 square feet of business park use, and 160,921 square feet of commercial retail use. Based on the West Campus Upper Plateau Alternative 5 Trip Generation Assessment, Alternative 5 would be expected to generate 65,482 two-way passenger vehicle trips and 34 two-way truck trips per day (in actual vehicles).

HEALTH RISK COMPARISON

As noted above, the Project would generate DPM emissions through the use of construction equipment and haul trucks during construction activities as well as trucks traveling to and from the Project site. Because the size and scope of the Project is similar under the Proposed Project and Project Alternative 5 scenarios, it is expected that construction activities would not differ significantly under either scenario and each scenario would be expected to generate a similar quantity of DPM emissions during construction activities. Therefore, cancer and non-cancer health risks to nearby residents, workers, and schoolchildren is expected to be identical under both scenarios.

During the operation of the Project, Project Alternative 5 would result in significantly fewer truck trips compared to the Proposed Project scenario. As a result, Project Alternative 5 would result in lower DPM emissions and therefore lower cancer and non-cancer health risks for nearby residents, workers, and schoolchildren. As such, Project Alternative 5 would not cause a significant health or cancer risk to nearby residents, workers, or schoolchildren.

GREENHOUSE GAS EMISSIONS

PROPOSED PROJECT

The West Campus Upper Plateau Greenhouse Gas Analysis (dated May 2024, referred to as **2024 GHG Study**) evaluated 2,562,561 square feet of high-cube fulfillment center warehouse use, 500,000 square feet of high-cube cold storage warehouse use, 1,763,168 square feet of business park use, 160,921 square feet of commercial retail use, 18.08-acre public park, 42.2-acre active park, and 445-acre Conservation Area.

The estimated operation-source emissions from the Proposed Project are summarized on Table 4.

TABLE 4: PROPOSED PROJECT GHG EMISSIONS TOTAL

Total CO ₂ e
92,591.99

PROJECT ALTERNATIVE 5

Project Alternative 5 assumes the development of 374,398 square feet of commercial retail use and 4,243,244 square feet of office park use in place of 2,562,561 square feet of high-cube fulfillment center warehouse use, 500,000 square feet of high-cube cold storage warehouse use, 1,763,168 square feet of business park use, and 160,921 square feet of commercial retail use. The estimated operation-source emissions from Project Alternative 5 are summarized in Table 5. Detailed operation model outputs are presented in Attachment A.

TABLE 5: PROJECT ALTERNATIVE 5 GHG EMISSIONS TOTAL

Total CO ₂ e
140,661.92

GREENHOUSE GAS EMISSIONS COMPARISON

As shown in Table 6, Project Alternative 5 is anticipated to generate more annual GHG emissions as compared to emissions generated by the Proposed Project.

TABLE 6: PROJECT NET NEW GHG EMISSIONS

Emission Source	Total CO ₂ e
Project Alternative 5	140,661.92
Proposed Project	92,591.99
Net Emissions (Alternative 5 - Proposed)	48,069.93

ENERGY ANALYSIS

PROPOSED PROJECT

The West Campus Upper Plateau Energy Analysis (dated May 2024, referred to as **2024 Energy Study**) evaluated 2,562,561 square feet of high-cube fulfillment center warehouse use, 500,000 square feet of high-cube cold storage warehouse use, 1,763,168 square feet of business park use, 160,921 square feet of commercial retail use, 18.08-acre public park, 42.2-acre active park, and 445-acre Conservation Area. The estimated operational energy use for the Proposed Project is summarized in Table 7.

TABLE 7: PROPOSED PROJECT ANNUAL FUEL CONSUMPTION

Source	Estimated Annual Fuel Consumption (gallons)
Project-Generated Traffic (All Vehicles)	8,550,693
Operational Cargo Handling Equipment	44,150
Emergency Generator	11,246
Total Annual Fuel Usage	8,606,089

TABLE 8: PROPOSED PROJECT ANNUAL ENERGY DEMAND

Estimated Electricity Demand (kWh/year)
45,862,987

PROJECT ALTERNATIVE 5

Project Alternative 5 assumes the development of 374,398 square feet of commercial retail use and 4,243,244 square feet of office park use in place of 2,562,561 square feet of high-cube fulfillment center warehouse use, 500,000 square feet of high-cube cold storage warehouse use, 1,763,168 square feet of business park use, and 160,921 square feet of commercial retail use. The estimated operation-source energy use from Project Alternative 5 are summarized in Tables 9 and 10. Detailed operation model outputs are presented in Attachment A.

TABLE 9: PROPOSED PROJECT ANNUAL FUEL CONSUMPTION

Source	Estimated Annual Fuel Consumption (gallons)
Project-Generated Traffic (All Vehicles)	13,222,383
Total Annual Fuel Usage	13,222,383

TABLE 10: PROPOSED PROJECT ANNUAL ENERGY DEMAND

Estimated Electricity Demand (kWh/year)
77,672,577

ENERGY USE COMPARISON

As shown in Table 11, Project Alternative 5 is anticipated to result in more annual fuel usage as well as more electricity demand as compared to the Proposed Project.

TABLE 11: PROJECT NET ENERGY USE

Source	Annual Fuel Consumption (gallons)	Annual Electricity Demand (kWh/year)
Project Alternative 5	13,222,383	45,862,987
Proposed Project	8,606,089	77,672,577
Net Emissions (Alternative 5 - Proposed)	4,616,294	31,809,590

AIR QUALITY, GREENHOUSE GAS, HEALTH RISK ASSESSMENT, AND ENERGY CONCLUSION

Results of the assessment indicate that the Project is not anticipated to result in a significant impact during construction or operational activities associated with air quality, health or cancer risk, greenhouse gas emissions or energy usage and no mitigation is required.

ATTACHMENT A
CALEEMOD ALTERNATIVE 5 EMISSIONS MODEL OUTPUTS

14064 - West Campus Upper Plateau Alt 5 Detailed Report

Table of Contents

- 1. Basic Project Information
 - 1.1. Basic Project Information
 - 1.2. Land Use Types
 - 1.3. User-Selected Emission Reduction Measures by Emissions Sector
- 2. Emissions Summary
 - 2.4. Operations Emissions Compared Against Thresholds
 - 2.5. Operations Emissions by Sector, Unmitigated
- 4. Operations Emissions Details
 - 4.1. Mobile Emissions by Land Use
 - 4.1.1. Unmitigated
 - 4.2. Energy
 - 4.2.1. Electricity Emissions By Land Use - Unmitigated
 - 4.2.3. Natural Gas Emissions By Land Use - Unmitigated
 - 4.3. Area Emissions by Source

4.3.2. Unmitigated

4.4. Water Emissions by Land Use

4.4.2. Unmitigated

4.5. Waste Emissions by Land Use

4.5.2. Unmitigated

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

5.10.3. Landscape Equipment

5.11. Operational Energy Consumption

5.11.1. Unmitigated

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

5.13. Operational Waste Generation

5.13.1. Unmitigated

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

5.16.2. Process Boilers

5.17. User Defined

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	14064 - West Campus Upper Plateau Alt 5
Operational Year	2028
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	10.0
Location	33.907257, -117.307907
County	Riverside-South Coast
City	Unincorporated
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5480
EDFZ	11
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.12

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Office Park	4,243	1000sqft	97.4	4,243,440	0.00	—	—	—

Regional Shopping Center	374	1000sqft	8.59	374,398	0.00	—	—	—
City Park	42.2	Acre	42.2	0.00	0.00	0.00	—	—
City Park	18.1	Acre	18.1	0.00	0.00	0.00	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	380	443	396	3,825	10.3	9.53	361	370	9.21	63.9	73.1	3,840	1,148,056	1,151,896	432	46.3	2,984	1,179,475
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	328	394	420	2,973	9.64	9.27	361	370	8.85	63.9	72.8	3,840	1,084,208	1,088,048	432	47.6	80.4	1,113,131
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	263	338	320	2,381	7.10	7.56	261	268	7.32	46.2	53.5	3,840	823,503	827,343	423	36.1	934	849,606
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	48.1	61.6	58.5	435	1.30	1.38	47.6	49.0	1.34	8.43	9.77	636	136,340	136,976	70.0	5.97	155	140,662

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	341	304	362	3,597	10.1	6.83	361	367	6.42	63.9	70.3	—	1,030,284	1,030,284	33.0	41.7	2,981	1,046,512
Area	35.7	138	1.69	201	0.01	0.27	—	0.27	0.36	—	0.36	—	826	826	0.03	0.01	—	829
Energy	3.52	1.76	32.0	26.9	0.19	2.43	—	2.43	2.43	—	2.43	—	111,898	111,898	10.4	0.92	—	112,434
Water	—	—	—	—	—	—	—	—	—	—	—	1,498	5,049	6,547	154	3.71	—	11,505
Waste	—	—	—	—	—	—	—	—	—	—	—	2,342	0.00	2,342	234	0.00	—	8,192
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.11	3.11
Total	380	443	396	3,825	10.3	9.53	361	370	9.21	63.9	73.1	3,840	1,148,056	1,151,896	432	46.3	2,984	1,179,475
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	324	287	388	2,946	9.45	6.83	361	367	6.42	63.9	70.3	—	967,261	967,261	33.7	43.0	77.3	980,996
Area	—	105	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	3.52	1.76	32.0	26.9	0.19	2.43	—	2.43	2.43	—	2.43	—	111,898	111,898	10.4	0.92	—	112,434
Water	—	—	—	—	—	—	—	—	—	—	—	1,498	5,049	6,547	154	3.71	—	11,505
Waste	—	—	—	—	—	—	—	—	—	—	—	2,342	0.00	2,342	234	0.00	—	8,192
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.11	3.11
Total	328	394	420	2,973	9.64	9.27	361	370	8.85	63.9	72.8	3,840	1,084,208	1,088,048	432	47.6	80.4	1,113,131
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	235	209	287	2,217	6.90	4.94	261	266	4.64	46.2	50.9	—	705,991	705,991	24.5	31.4	930	716,904
Area	24.5	127	1.16	138	0.01	0.18	—	0.18	0.24	—	0.24	—	566	566	0.02	< 0.005	—	568

Energy	3.52	1.76	32.0	26.9	0.19	2.43	—	2.43	2.43	—	2.43	—	111,898	111,898	10.4	0.92	—	112,434
Water	—	—	—	—	—	—	—	—	—	—	—	1,498	5,049	6,547	154	3.71	—	11,505
Waste	—	—	—	—	—	—	—	—	—	—	—	2,342	0.00	2,342	234	0.00	—	8,192
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.11	3.11
Total	263	338	320	2,381	7.10	7.56	261	268	7.32	46.2	53.5	3,840	823,503	827,343	423	36.1	934	849,606
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	43.0	38.1	52.4	405	1.26	0.90	47.6	48.5	0.85	8.43	9.28	—	116,885	116,885	4.06	5.21	154	118,692
Area	4.47	23.2	0.21	25.1	< 0.005	0.03	—	0.03	0.04	—	0.04	—	93.7	93.7	< 0.005	< 0.005	—	94.0
Energy	0.64	0.32	5.85	4.91	0.04	0.44	—	0.44	0.44	—	0.44	—	18,526	18,526	1.72	0.15	—	18,615
Water	—	—	—	—	—	—	—	—	—	—	—	248	836	1,084	25.5	0.61	—	1,905
Waste	—	—	—	—	—	—	—	—	—	—	—	388	0.00	388	38.7	0.00	—	1,356
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.51	0.51
Total	48.1	61.6	58.5	435	1.30	1.38	47.6	49.0	1.34	8.43	9.77	636	136,340	136,976	70.0	5.97	155	140,662

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	261	231	290	2,899	8.19	5.54	294	299	5.20	52.0	57.2	—	837,585	837,585	26.2	33.6	2,426	850,665
Regional Shopping Center	50.0	46.2	37.8	358	0.93	0.64	32.7	33.4	0.61	5.81	6.41	—	94,692	94,692	3.77	4.21	271	96,310

City Park	30.5	27.0	34.0	339	0.96	0.65	34.3	35.0	0.61	6.09	6.70	—	98,006	98,006	3.06	3.93	284	99,537
Total	341	304	362	3,597	10.1	6.83	361	367	6.42	63.9	70.3	—	1,030,284	1,030,284	33.0	41.7	2,981	1,046,512
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	248	218	311	2,365	7.68	5.54	294	299	5.20	52.0	57.2	—	786,275	786,275	26.6	34.6	62.9	797,320
Regional Shopping Center	47.1	43.3	40.5	304	0.87	0.65	32.7	33.4	0.61	5.81	6.41	—	88,983	88,983	3.93	4.34	7.02	90,382
City Park	29.0	25.6	36.4	277	0.90	0.65	34.3	35.0	0.61	6.09	6.70	—	92,002	92,002	3.12	4.05	7.36	93,295
Total	324	287	388	2,946	9.45	6.83	361	367	6.42	63.9	70.3	—	967,261	967,261	33.7	43.0	77.3	980,996
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	33.6	29.5	43.2	334	1.05	0.75	39.9	40.7	0.71	7.08	7.78	—	97,926	97,926	3.29	4.31	129	99,422
Regional Shopping Center	6.63	6.12	5.61	42.8	0.12	0.09	4.37	4.45	0.08	0.77	0.86	—	10,885	10,885	0.50	0.54	14.1	11,072
City Park	2.77	2.43	3.56	27.6	0.09	0.06	3.29	3.35	0.06	0.58	0.64	—	8,074	8,074	0.27	0.36	10.7	8,198
Total	43.0	38.1	52.4	405	1.26	0.90	47.6	48.5	0.85	8.43	9.28	—	116,885	116,885	4.06	5.21	154	118,692

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Office Park	—	—	—	—	—	—	—	—	—	—	—	—	70,206	70,206	6.69	0.81	—	70,615
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	3,465	3,465	0.33	0.04	—	3,485
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	73,671	73,671	7.02	0.85	—	74,100
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	—	—	—	—	—	—	—	—	—	—	—	—	70,206	70,206	6.69	0.81	—	70,615
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	3,465	3,465	0.33	0.04	—	3,485
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	73,671	73,671	7.02	0.85	—	74,100
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	—	—	—	—	—	—	—	—	—	—	—	—	11,623	11,623	1.11	0.13	—	11,691
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	574	574	0.05	0.01	—	577
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	12,197	12,197	1.16	0.14	—	12,268

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
----------	-----	-----	-----	----	-----	-------	-------	-------	--------	--------	--------	------	-------	------	-----	-----	---	------

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	3.46	1.73	31.4	26.4	0.19	2.39	—	2.39	2.39	—	2.39	—	37,517	37,517	3.32	0.07	—	37,621
Regional Shopping Center	0.07	0.03	0.60	0.50	< 0.005	0.05	—	0.05	0.05	—	0.05	—	711	711	0.06	< 0.005	—	713
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	3.52	1.76	32.0	26.9	0.19	2.43	—	2.43	2.43	—	2.43	—	38,227	38,227	3.38	0.07	—	38,333
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	3.46	1.73	31.4	26.4	0.19	2.39	—	2.39	2.39	—	2.39	—	37,517	37,517	3.32	0.07	—	37,621
Regional Shopping Center	0.07	0.03	0.60	0.50	< 0.005	0.05	—	0.05	0.05	—	0.05	—	711	711	0.06	< 0.005	—	713
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	3.52	1.76	32.0	26.9	0.19	2.43	—	2.43	2.43	—	2.43	—	38,227	38,227	3.38	0.07	—	38,333
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	0.63	0.32	5.74	4.82	0.03	0.44	—	0.44	0.44	—	0.44	—	6,211	6,211	0.55	0.01	—	6,229
Regional Shopping Center	0.01	0.01	0.11	0.09	< 0.005	0.01	—	0.01	0.01	—	0.01	—	118	118	0.01	< 0.005	—	118
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.64	0.32	5.85	4.91	0.04	0.44	—	0.44	0.44	—	0.44	—	6,329	6,329	0.56	0.01	—	6,347

4.3. Area Emissions by Source

4.3.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	98.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	5.87	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	35.7	33.0	1.69	201	0.01	0.27	—	0.27	0.36	—	0.36	—	826	826	0.03	0.01	—	829
Total	35.7	138	1.69	201	0.01	0.27	—	0.27	0.36	—	0.36	—	826	826	0.03	0.01	—	829
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	98.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	5.87	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	105	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	18.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	1.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Landscape Equipme	4.47	4.12	0.21	25.1	< 0.005	0.03	—	0.03	0.04	—	0.04	—	93.7	93.7	< 0.005	< 0.005	—	94.0
Total	4.47	23.2	0.21	25.1	< 0.005	0.03	—	0.03	0.04	—	0.04	—	93.7	93.7	< 0.005	< 0.005	—	94.0

4.4. Water Emissions by Land Use

4.4.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	—	—	—	—	—	—	—	—	—	—	—	1,445	4,870	6,315	149	3.58	—	11,097
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	53.1	179	232	5.47	0.13	—	408
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	1,498	5,049	6,547	154	3.71	—	11,505
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	—	—	—	—	—	—	—	—	—	—	—	1,445	4,870	6,315	149	3.58	—	11,097
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	53.1	179	232	5.47	0.13	—	408
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	1,498	5,049	6,547	154	3.71	—	11,505
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Office Park	—	—	—	—	—	—	—	—	—	—	—	239	806	1,045	24.6	0.59	—	1,837
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	8.80	29.6	38.4	0.90	0.02	—	67.6
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	248	836	1,084	25.5	0.61	—	1,905

4.5. Waste Emissions by Land Use

4.5.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	—	—	—	—	—	—	—	—	—	—	—	2,127	0.00	2,127	213	0.00	—	7,441
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	212	0.00	212	21.2	0.00	—	741
City Park	—	—	—	—	—	—	—	—	—	—	—	2.79	0.00	2.79	0.28	0.00	—	9.77
Total	—	—	—	—	—	—	—	—	—	—	—	2,342	0.00	2,342	234	0.00	—	8,192
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	—	—	—	—	—	—	—	—	—	—	—	2,127	0.00	2,127	213	0.00	—	7,441
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	212	0.00	212	21.2	0.00	—	741
City Park	—	—	—	—	—	—	—	—	—	—	—	2.79	0.00	2.79	0.28	0.00	—	9.77

Total	—	—	—	—	—	—	—	—	—	—	—	2,342	0.00	2,342	234	0.00	—	8,192
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	—	—	—	—	—	—	—	—	—	—	—	352	0.00	352	35.2	0.00	—	1,232
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	35.1	0.00	35.1	3.51	0.00	—	123
City Park	—	—	—	—	—	—	—	—	—	—	—	0.46	0.00	0.46	0.05	0.00	—	1.62
Total	—	—	—	—	—	—	—	—	—	—	—	388	0.00	388	38.7	0.00	—	1,356

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.77	2.77
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.34	0.34
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.11	3.11
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.77	2.77

Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.34	0.34
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.11	3.11
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Office Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.46	0.46
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.06	0.06
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.51	0.51

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Office Park	52,788	7,808	3,624	14,358,776	1,057,880	156,471	72,623	287,750,109
Regional Shopping Center	10,530	12,864	5,886	3,722,978	86,291	118,028	53,999	31,467,112
City Park	2,110	5,302	5,924	1,135,465	42,284	106,252	118,718	22,754,740
City Park	90.0	226	253	48,448	1,804	4,533	5,065	970,890

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	6,926,757	2,308,919	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Office Park	74,019,054	346	0.0330	0.0040	117,062,312
Regional Shopping Center	3,653,523	346	0.0330	0.0040	2,217,249
City Park	0.00	346	0.0330	0.0040	0.00
City Park	0.00	346	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Office Park	754,202,496	0.00
Regional Shopping Center	27,732,604	0.00
City Park	0.00	0.00
City Park	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Office Park	3,946	—
Regional Shopping Center	393	—
City Park	3.63	—
City Park	1.55	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Office Park	Household refrigerators and/or freezers	User Defined	150	0.02	0.60	0.00	1.00
Office Park	Other commercial A/C and heat pumps	User Defined	750	< 0.005	4.00	4.00	18.0
Regional Shopping Center	Other commercial A/C and heat pumps	User Defined	750	< 0.005	4.00	4.00	18.0
Regional Shopping Center	Stand-alone retail refrigerators and freezers	User Defined	150	0.04	1.00	0.00	1.00

City Park	Other commercial A/C and heat pumps	User Defined	750	< 0.005	4.00	4.00	18.0
City Park	Stand-alone retail refrigerators and freezers	User Defined	150	0.04	1.00	0.00	1.00
City Park	Other commercial A/C and heat pumps	User Defined	750	< 0.005	4.00	4.00	18.0
City Park	Stand-alone retail refrigerators and freezers	User Defined	150	0.04	1.00	0.00	1.00

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
----------------	-----------	-------------	----------------	---------------	------------	-------------

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
----------------	-----------	----------------	---------------	----------------	------------	-------------

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)
----------------	-----------	--------	--------------------------	------------------------------	------------------------------

5.17. User Defined

Equipment Type	Fuel Type
—	—

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres
--------------------------	----------------------	---------------	-------------

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres
--------------------	---------------	-------------

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
-----------	--------	------------------------------	------------------------------

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	26.2	annual days of extreme heat
Extreme Precipitation	2.05	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	5.74	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	3	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	3	1	1	3
Extreme Precipitation	N/A	N/A	N/A	N/A

Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	97.6
AQ-PM	59.8
AQ-DPM	40.3
Drinking Water	70.7
Lead Risk Housing	53.6
Pesticides	13.2
Toxic Releases	64.0
Traffic	82.0
Effect Indicators	—

CleanUp Sites	82.5
Groundwater	97.9
Haz Waste Facilities/Generators	87.9
Impaired Water Bodies	0.00
Solid Waste	84.9
Sensitive Population	—
Asthma	71.5
Cardio-vascular	86.8
Low Birth Weights	97.0
Socioeconomic Factor Indicators	—
Education	82.5
Housing	59.7
Linguistic	82.8
Poverty	89.3
Unemployment	81.0

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	8.353650712
Employed	6.480174516
Median HI	22.3662261
Education	—
Bachelor's or higher	30.14243552
High school enrollment	100
Preschool enrollment	10.97138458

Transportation	—
Auto Access	10.29128705
Active commuting	87.46310792
Social	—
2-parent households	6.223533941
Voting	6.13370974
Neighborhood	—
Alcohol availability	44.43731554
Park access	43.37225715
Retail density	18.60644168
Supermarket access	67.43231105
Tree canopy	3.977928911
Housing	—
Homeownership	8.353650712
Housing habitability	10.4452714
Low-inc homeowner severe housing cost burden	45.06608495
Low-inc renter severe housing cost burden	46.23379956
Uncrowded housing	21.62196843
Health Outcomes	—
Insured adults	12.4085718
Arthritis	51.7
Asthma ER Admissions	24.0
High Blood Pressure	30.0
Cancer (excluding skin)	80.0
Asthma	9.8
Coronary Heart Disease	57.7
Chronic Obstructive Pulmonary Disease	27.0

Diagnosed Diabetes	31.9
Life Expectancy at Birth	7.4
Cognitively Disabled	15.9
Physically Disabled	19.5
Heart Attack ER Admissions	20.1
Mental Health Not Good	14.9
Chronic Kidney Disease	35.4
Obesity	8.3
Pedestrian Injuries	77.2
Physical Health Not Good	20.0
Stroke	29.9
Health Risk Behaviors	—
Binge Drinking	63.5
Current Smoker	15.5
No Leisure Time for Physical Activity	16.7
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	18.1
Elderly	24.3
English Speaking	44.9
Foreign-born	53.3
Outdoor Workers	18.2
Climate Change Adaptive Capacity	—
Impervious Surface Cover	73.9
Traffic Density	76.9
Traffic Access	61.5

Other Indices	—
Hardship	89.9
Other Decision Support	—
2016 Voting	11.6

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	98.0
Healthy Places Index Score for Project Location (b)	5.00
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Operations: Vehicle Data	Trips adjusted per traffic study
Operations: Architectural Coatings	SCAQMD Rule 1113

Operations: Refrigerants

As of 1 January 2022, new commercial refrigeration equipment may not use refrigerants with a GWP of 150 or greater. As of 1 January 2025, all new air conditioning equipment may not use refrigerants with a GWP of 750 or greater.

