Appendix F
Energy Worksheets

F-1 Project Assumptions

Paseo Norte Apartment Project

Construction Assumptions

Project Land Uses

Project Site Acreage	7.86 acres

Land Use[1]	CalEEMod Land Use	CalEEMod Landuse Type	Size	Metric	Building SF	Building Metrics	Lot Acreage	Notes
PACE Wellness Center	Commercial	Medical Office Building	5	SF	5,000	SF	0.110	Updated based on email from PM 8.3.2023
Parking	Parking	Parking Lot	98	spaces	0.88	acres	0.880	Updated based on email from PM 8.3.2023
Outdoor Area	Recreational	City Park	4.39	Acre	4.39	acres	4.390	Previously calculated
Senior Center	Recreational	Health Club	1.8	SF	1,800	SF	0.045	Updated based on email from PM 8.3.2023
Residential	Residential	Apartments Mid Rise	100	DU	75,700	SF	2.432	Updated based on email from PM 8.3.2023
							7.86	

Notes

1 *Land use acreage is an estimate of the total site acreage of 7.85 acres*

Construction Schedule[1]

Phase Name	CalEEMod Phase Type	Start Date	End Date	Total Days	Workers per day	Daily One-way Worker Trips	Trip Length[2]	Vendor Trips per day	Daily One-Way Vendor Trips	Trip Length[2]	Total Haul Trucks	Daily One-way Haul Trips	Trucks per day	Trip Length[2]
Site Preparation	Site Preparation	1/1/2024	1/31/2024	27	9	18	11.97	0	0	7.63	0	0	0	20
Grading	Grading	2/1/2024	2/29/2024	25	10	20	11.97	0	0	7.63	429	858	18	20
Building Construction	Building Construction	3/1/2024	11/30/2025	548	115	230	11.97	26	52	7.63	0	0	0	20
Paving	Paving	3/1/2025	11/30/2025	235	8	16	11.97	1	2	7.63	0	0	0	20
Architectural Coating	Architectural Coating	7/1/2025	11/30/2025	131	23	46	11.97	5	10	7.63	0	0	0	20

Note: Same as 2017 MND but pushed forward to Winter 2024

Assume 6 days/week per client

Note: Workers are the same as 2017 MND

Note: Defaults for building construction. Concrete vendor trips are in paving phase. Architectural coating trips are 20% of building construction trips.

Note: Haul trips based on excavation quantity.

Notes

1 *Based on data needs request and 2017 MND*

2 *Trip Lengths based on CalEEMod defaults*

CalEEMod Default Trips	Workers Trip/Day	Vendor Trip/Day	Haul Truck Trip/Day	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Notes
Site Preparation	18	0	0	11.97	7.63	20	*CalEEMod Defaults*
Grading	20	0	18	11.97	7.63	20	*CalEEMod Defaults*
Building Construction	230	52	0	11.97	7.63	20	*CalEEMod Defaults*
Paving	16	2	0	11.97	7.63	20	*CalEEMod Defaults*
Architectural Coating	46	10	0	11.97	7.63	20	*CalEEMod Defaults*

Paseo Norte Apartment Project

Construction Equipment

Phase Name	Equipment	Equipment Amount[1]	Hours per Day	Tier
Site Preparation	Rubber Tired Dozer	3	8	Tier 3
	Tractors/Loaders/Backhoes	4	8	Tier 3
Grading/Excavation	Graders	1	8	Tier 3
	Excavators	1	8	Tier 3
	Tractors/Loaders/Backhoes	3	8	Tier 3
	Rubber Tired Dozers	1	8	Tier 3
Building Construction	Forklifts	3	8	Tier 3
	Generator Sets	1	8	Tier 3
	Cranes	1	7	Tier 3
	Welders	1	8	Tier 3
	Tractors/Loaders/Backhoes	3	7	Tier 3
Paving	Pavers	2	8	Tier 3
	Paving Equipment	2	8	Tier 3
	Rollers	2	8	Tier 3
Architectural Coatings	Air Compressors	1	6	Tier 3

Notes:

1. CalEEMod Defaults. Equipment Mix-Using defaults as no further data is provided. Tier 3 is required by the County.

Paseo Norte Apartment Project

Excavation

Land Use Excavation/ Grading Quantities[1]	Export (CY)	Import (CY)
Excavation	500	5,500

Grading/Excavation	Export (CY)	Import (CY)
Entire Site Development	6,000	
Total Volume	**6,000**	

Grading/Excavation	Total	Notes
Haul Truck Capacity (CY)	14	*Assumption*
Total Haul Trucks	429	*Calculation*
Total One-way Haul Trips	858	*Calculation*
Duration (days)	25	*Haul Days*
Daily Haul Trucks	18	*Calculation*

Source: *Construction data needs*

Paseo Norte Apartment Project

concrete quantities to be estimated from site plan

Land Use	Concrete Volume (CY)	Concrete Truck Capacity (CY)	Total Trucks Needed (Vendor Trips)
Project	691	10	69

Land Use	Total Trucks
Project	69
Duration (days)	235
Maximum trucks per day	1.00
Maximum truck trips per day	2.00

Notes:

1 Assume 56,000 SF of surface parking at 4 in depth for a total of 18,667 CF or 691 CY

Paseo Norte Apartment Project
Operational GHG Analysis - Year 2025

Estimated Electricity demand from Electric Vehicle Supply Equipment (EVSE)

Land Use Type	Number of Parking Spaces	Number of Parking Spaces with EV Chargers	Average Charge (kWh/day) [a]	Days/Year	Electricity Demand (kWh/yr)	Electricity Demand (MWh/yr)
Total	**98**	**5**	**4.4**	**365**	8,030	8.03

Electricity Emission Factor (MT CO2/MWh)	Electricity Emission Factor (lbs CO2/MWh)	Total EV Charging GHG Emissions Per Year
0.20	438.02	1.60

(MT CH4/MWh)	(lbs CH4/MWh)
1.32E-05	0.029

(MT N2O/MWh)	(lbs N2O/MWh)
2.80E-06	0.00617

Notes:

a. Estimated based on reference sources listed below.

Sources:

US Department of Energy. Alternative Fuels Data Center, 2016. Hybrid and Plug-In Electric Vehicle Emissions Data Sources and Assumptions.
Available at: https://www.afdc.energy.gov/vehicles/electric_emissions_sources.html.

US Department of Energy. Smith, Margaret, 2016. Level 1 Electric Vehicle Charging Stations at the Workplace.
Available at: https://www.afdc.energy.gov/uploads/publication/WPCC_L1ChargingAtTheWorkplace_0716.pdf.

UCLA Luskin Center for Innovation. Williams, Brett and JR deShazo, 2013. Pricing Workplace Charging: Financial Viability and Fueling Costs.
Available at: http://luskin.ucla.edu/sites/default/files/Luskin-WPC-TRB-13-11-15d.pdf.

2019 Calgreen Building Standards Code, Title 24 Part 11
Available: https://library.municode.com/ca/long_beach/codes/municipal_code?nodeId=TIT18LOBEBUSTCO_CH18.47GRBUSTCO_18.47.050AMCASE5.106.5.3.3TA5.106.5.3.WNOEVCHSPCHSTCA

F-2 CalEEMod Outputs

Paseo Norte Project Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Paseo Norte Project
Construction Start Date	1/1/2024
Operational Year	2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.20
Precipitation (days)	3.40
Location	1275 Main St, Ramona, CA 92065, USA
County	San Diego
City	Unincorporated
Air District	San Diego County APCD
Air Basin	San Diego
TAZ	6112
EDFZ	12
Electric Utility	San Diego Gas & Electric
Gas Utility	San Diego Gas & Electric
App Version	2022.1.1.18

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

Medical Office Building	5.00	1000sqft	0.11	5,000	0.00	0.00	—	—
Parking Lot	98.0	Space	0.88	0.00	0.00	0.00	—	—
City Park	4.39	Acre	4.39	0.00	4.39	4.39	—	—
Health Club	1.80	1000sqft	0.04	1,800	890	0.00	—	—
Apartments Mid Rise	100	Dwelling Unit	2.43	75,700	0.00	0.00	279	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction 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.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.75	21.5	25.9	0.04	0.96	0.00	0.96	0.88	0.00	0.88	—	4,043	4,043	0.16	0.03	0.00	4,057
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.75	24.0	28.3	0.05	0.96	7.67	8.61	0.88	3.94	4.78	—	5,296	5,296	0.21	0.04	0.00	5,314
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.98	15.2	18.4	0.03	0.67	0.76	1.23	0.61	0.38	0.81	—	2,902	2,902	0.12	0.02	0.00	2,912
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.36	2.78	3.36	0.01	0.12	0.14	0.22	0.11	0.07	0.15	—	480	480	0.02	< 0.005	0.00	482

2.2. Construction Emissions by Year, Unmitigated

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

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.44	11.8	14.3	0.02	0.50	0.00	0.50	0.46	0.00	0.46	—	2,398	2,398	0.10	0.02	0.00	2,406
2025	4.75	21.5	25.9	0.04	0.96	0.00	0.96	0.88	0.00	0.88	—	4,043	4,043	0.16	0.03	0.00	4,057
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.90	24.0	28.3	0.05	0.94	7.67	8.61	0.84	3.94	4.78	—	5,296	5,296	0.21	0.04	0.00	5,314
2025	4.75	21.5	25.9	0.04	0.96	0.00	0.96	0.88	0.00	0.88	—	4,043	4,043	0.16	0.03	0.00	4,057
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.42	11.2	13.6	0.02	0.47	0.76	1.23	0.43	0.38	0.81	—	2,317	2,317	0.09	0.02	0.00	2,325
2025	1.98	15.2	18.4	0.03	0.67	0.00	0.67	0.61	0.00	0.61	—	2,902	2,902	0.12	0.02	0.00	2,912
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.08	2.05	2.48	< 0.005	0.09	0.14	0.22	0.08	0.07	0.15	—	384	384	0.02	< 0.005	0.00	385
2025	0.36	2.78	3.36	0.01	0.12	0.00	0.12	0.11	0.00	0.11	—	480	480	0.02	< 0.005	0.00	482

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.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5.08	2.48	28.6	0.06	0.07	4.69	4.75	0.06	1.19	1.25	82.8	6,501	6,584	8.61	0.23	21.2	6,888

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.47	2.63	21.0	0.05	0.06	4.69	4.75	0.06	1.19	1.25	82.8	6,233	6,316	8.62	0.24	1.21	6,604
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.72	2.64	24.0	0.05	0.06	4.68	4.74	0.06	1.19	1.25	82.8	6,279	6,362	8.62	0.24	9.54	6,658
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.86	0.48	4.37	0.01	0.01	0.85	0.87	0.01	0.22	0.23	13.7	1,040	1,053	1.43	0.04	1.58	1,102

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.60	2.18	22.5	0.05	0.04	4.69	4.73	0.04	1.19	1.23	—	5,582	5,582	0.24	0.20	20.5	5,669
Area	2.47	0.06	5.96	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	16.4	16.4	< 0.005	< 0.005	—	16.4
Energy	0.01	0.24	0.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	868	868	0.07	0.01	—	871
Water	—	—	—	—	—	—	—	—	—	—	8.14	34.8	42.9	0.84	0.02	—	69.9
Waste	—	—	—	—	—	—	—	—	—	—	74.7	0.00	74.7	7.46	0.00	—	261
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.68	0.68
Total	5.08	2.48	28.6	0.06	0.07	4.69	4.75	0.06	1.19	1.25	82.8	6,501	6,584	8.61	0.23	21.2	6,888
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.55	2.39	20.8	0.05	0.04	4.69	4.73	0.04	1.19	1.23	—	5,331	5,331	0.25	0.21	0.53	5,402
Area	1.91	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Energy	0.01	0.24	0.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	868	868	0.07	0.01	—	871
Water	—	—	—	—	—	—	—	—	—	—	8.14	34.8	42.9	0.84	0.02	—	69.9
Waste	—	—	—	—	—	—	—	—	—	—	74.7	0.00	74.7	7.46	0.00	—	261
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.68	0.68
Total	4.47	2.63	21.0	0.05	0.06	4.69	4.75	0.06	1.19	1.25	82.8	6,233	6,316	8.62	0.24	1.21	6,604
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.52	2.37	20.9	0.05	0.04	4.68	4.72	0.04	1.19	1.23	—	5,369	5,369	0.25	0.21	8.86	5,447
Area	2.19	0.03	2.94	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.08	8.08	< 0.005	< 0.005	—	8.11
Energy	0.01	0.24	0.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	868	868	0.07	0.01	—	871
Water	—	—	—	—	—	—	—	—	—	—	8.14	34.8	42.9	0.84	0.02	—	69.9
Waste	—	—	—	—	—	—	—	—	—	—	74.7	0.00	74.7	7.46	0.00	—	261
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.68	0.68
Total	4.72	2.64	24.0	0.05	0.06	4.68	4.74	0.06	1.19	1.25	82.8	6,279	6,362	8.62	0.24	9.54	6,658
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.46	0.43	3.81	0.01	0.01	0.85	0.86	0.01	0.22	0.22	—	889	889	0.04	0.04	1.47	902
Area	0.40	0.01	0.54	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.34	1.34	< 0.005	< 0.005	—	1.34
Energy	< 0.005	0.04	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	144	144	0.01	< 0.005	—	144
Water	—	—	—	—	—	—	—	—	—	—	1.35	5.76	7.11	0.14	< 0.005	—	11.6
Waste	—	—	—	—	—	—	—	—	—	—	12.4	0.00	12.4	1.24	0.00	—	43.3
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.11	0.11
Total	0.86	0.48	4.37	0.01	0.01	0.85	0.87	0.01	0.22	0.23	13.7	1,040	1,053	1.43	0.04	1.58	1,102

3. Construction Emissions Details

3.1. Site Preparation (2024) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.90	24.0	28.3	0.05	0.94	—	0.94	0.84	—	0.84	—	5,296	5,296	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	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	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	1.78	2.09	< 0.005	0.07	—	0.07	0.06	—	0.06	—	392	392	0.02	< 0.005	—	393
Dust From Material Movement	—	—	—	—	—	0.57	0.57	—	0.29	0.29	—	—	—	—	—	—	—
Onsite truck	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	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.32	0.38	< 0.005	0.01	—	0.01	0.01	—	0.01	—	64.9	64.9	< 0.005	< 0.005	—	65.1
Dust From Material Movement	—	—	—	—	—	0.10	0.10	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	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	0.00	—

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	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	0.00	—
Vendor	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	0.00	—
Hauling	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	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	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	0.00	—
Vendor	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	0.00	—
Hauling	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	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	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	0.00	—
Vendor	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	0.00	—
Hauling	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	0.00	—

3.3. Grading (2024) - Unmitigated

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

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

Off-Road Equipment	0.53	14.1	17.8	0.03	0.60	—	0.60	0.54	—	0.54	—	2,958	2,958	0.12	0.02	—	2,969
Dust From Material Movement	—	—	—	—	—	2.77	2.77	—	1.34	1.34	—	—	—	—	—	—	—
Onsite truck	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	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.97	1.22	< 0.005	0.04	—	0.04	0.04	—	0.04	—	203	203	0.01	< 0.005	—	203
Dust From Material Movement	—	—	—	—	—	0.19	0.19	—	0.09	0.09	—	—	—	—	—	—	—
Onsite truck	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	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.18	0.22	< 0.005	0.01	—	0.01	0.01	—	0.01	—	33.5	33.5	< 0.005	< 0.005	—	33.7
Dust From Material Movement	—	—	—	—	—	0.03	0.03	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	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	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	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	0.00	—

Vendor	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	0.00	—
Hauling	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	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	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	0.00	—
Vendor	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	0.00	—
Hauling	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	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	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	0.00	—
Vendor	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	0.00	—
Hauling	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	0.00	—

3.5. Building Construction (2024) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.44	11.8	14.3	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	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	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.44	11.8	14.3	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	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	0.00	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.31	8.49	10.3	0.02	0.36	—	0.36	0.33	—	0.33	—	1,723	1,723	0.07	0.01	—	1,729
Onsite truck	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	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	1.55	1.88	< 0.005	0.07	—	0.07	0.06	—	0.06	—	285	285	0.01	< 0.005	—	286
Onsite truck	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	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	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	0.00	—
Vendor	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	0.00	—
Hauling	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	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	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	0.00	—
Vendor	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	0.00	—
Hauling	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	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	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	0.00	—
Vendor	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	0.00	—
Hauling	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	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	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	0.00	—

Vendor	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	0.00	—
Hauling	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	0.00	—

3.7. Building Construction (2025) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.44	11.8	14.3	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	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	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.44	11.8	14.3	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	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	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.34	9.27	11.2	0.02	0.40	—	0.40	0.36	—	0.36	—	1,881	1,881	0.08	0.02	—	1,887
Onsite truck	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	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	1.69	2.05	< 0.005	0.07	—	0.07	0.07	—	0.07	—	311	311	0.01	< 0.005	—	312
Onsite truck	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	0.00	—

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	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	0.00	—
Vendor	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	0.00	—
Hauling	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	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	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	0.00	—
Vendor	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	0.00	—
Hauling	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	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	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	0.00	—
Vendor	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	0.00	—
Hauling	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	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	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	0.00	—
Vendor	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	0.00	—
Hauling	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	0.00	—

3.9. Paving (2025) - Unmitigated

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

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

Off-Road Equipment	0.32	8.62	10.6	0.01	0.39	—	0.39	0.36	—	0.36	—	1,511	1,511	0.06	0.01	—	1,517
Paving	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	8.62	10.6	0.01	0.39	—	0.39	0.36	—	0.36	—	1,511	1,511	0.06	0.01	—	1,517
Paving	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.20	5.55	6.82	0.01	0.25	—	0.25	0.23	—	0.23	—	973	973	0.04	0.01	—	976
Paving	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	1.01	1.25	< 0.005	0.05	—	0.05	0.04	—	0.04	—	161	161	0.01	< 0.005	—	162
Paving	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	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	0.00	—
Vendor	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	0.00	—

Hauling	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	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	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	0.00	—
Vendor	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	0.00	—
Hauling	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	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	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	0.00	—
Vendor	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	0.00	—
Hauling	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	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	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	0.00	—
Vendor	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	0.00	—
Hauling	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	0.00	—

3.11. Architectural Coating (2025) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	1.09	0.96	< 0.005	0.07	—	0.07	0.06	—	0.06	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	3.94	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	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	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	1.09	0.96	< 0.005	0.07	—	0.07	0.06	—	0.06	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	3.94	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.39	0.35	< 0.005	0.02	—	0.02	0.02	—	0.02	—	47.9	47.9	< 0.005	< 0.005	—	48.1
Architectural Coatings	1.41	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.07	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.93	7.93	< 0.005	< 0.005	—	7.96
Architectural Coatings	0.26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	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	0.00	—

Vendor	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	0.00	—
Hauling	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	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	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	0.00	—
Vendor	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	0.00	—
Hauling	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	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	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	0.00	—
Vendor	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	0.00	—
Hauling	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	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	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	0.00	—
Vendor	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	0.00	—
Hauling	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	0.00	—

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

Medical Office Building	0.78	0.54	5.44	0.01	0.01	1.06	1.07	0.01	0.27	0.28	—	1,273	1,273	0.06	0.05	4.64	1,294
Parking Lot	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	0.00	0.00
City Park	0.01	0.01	0.10	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	23.2	23.2	< 0.005	< 0.005	0.08	23.6
Health Club	0.22	0.15	1.50	< 0.005	< 0.005	0.29	0.30	< 0.005	0.07	0.08	—	351	351	0.02	0.01	1.28	357
Apartments Mid Rise	1.59	1.49	15.5	0.04	0.03	3.32	3.35	0.03	0.84	0.87	—	3,935	3,935	0.16	0.14	14.5	3,994
Total	2.60	2.18	22.5	0.05	0.04	4.69	4.73	0.04	1.19	1.23	—	5,582	5,582	0.24	0.20	20.5	5,669
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	0.76	0.59	5.16	0.01	0.01	1.06	1.07	0.01	0.27	0.28	—	1,216	1,216	0.07	0.05	0.12	1,234
Parking Lot	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	0.00	0.00
City Park	0.01	0.01	0.09	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	22.2	22.2	< 0.005	< 0.005	< 0.005	22.5
Health Club	0.21	0.16	1.43	< 0.005	< 0.005	0.29	0.30	< 0.005	0.07	0.08	—	336	336	0.02	0.01	0.03	340
Apartments Mid Rise	1.56	1.63	14.2	0.04	0.03	3.32	3.35	0.03	0.84	0.87	—	3,757	3,757	0.16	0.15	0.38	3,805
Total	2.55	2.39	20.8	0.05	0.04	4.69	4.73	0.04	1.19	1.23	—	5,331	5,331	0.25	0.21	0.53	5,402
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	0.14	0.11	0.94	< 0.005	< 0.005	0.19	0.19	< 0.005	0.05	0.05	—	203	203	0.01	0.01	0.33	206
Parking Lot	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	0.00	0.00
City Park	< 0.005	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.69	3.69	< 0.005	< 0.005	0.01	3.75

Health Club	0.04	0.03	0.26	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	56.0	56.0	< 0.005	< 0.005	0.09	56.8
Apartments Mid Rise	0.28	0.29	2.60	0.01	0.01	0.60	0.61	0.01	0.15	0.16	—	626	626	0.03	0.02	1.04	635
Total	0.46	0.43	3.81	0.01	0.01	0.85	0.86	0.01	0.22	0.22	—	889	889	0.04	0.04	1.47	902

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	99.6	99.6	0.01	< 0.005	—	100
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	40.3	40.3	< 0.005	< 0.005	—	40.5
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Health Club	—	—	—	—	—	—	—	—	—	—	—	19.4	19.4	< 0.005	< 0.005	—	19.5
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	407	407	0.03	< 0.005	—	409
Total	—	—	—	—	—	—	—	—	—	—	—	566	566	0.04	0.01	—	569
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	99.6	99.6	0.01	< 0.005	—	100

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	40.3	40.3	< 0.005	< 0.005	—	40.5
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Health Club	—	—	—	—	—	—	—	—	—	—	—	19.4	19.4	< 0.005	< 0.005	—	19.5
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	407	407	0.03	< 0.005	—	409
Total	—	—	—	—	—	—	—	—	—	—	—	566	566	0.04	0.01	—	569
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	16.5	16.5	< 0.005	< 0.005	—	16.6
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	6.67	6.67	< 0.005	< 0.005	—	6.70
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Health Club	—	—	—	—	—	—	—	—	—	—	—	3.21	3.21	< 0.005	< 0.005	—	3.22
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	67.4	67.4	0.01	< 0.005	—	67.7
Total	—	—	—	—	—	—	—	—	—	—	—	93.7	93.7	0.01	< 0.005	—	94.2

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	< 0.005	0.04	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	51.3	51.3	< 0.005	< 0.005	—	51.5

Parking Lot	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
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
Health Club	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	23.3	23.3	< 0.005	< 0.005	—	23.3
Apartments Mid Rise	0.01	0.18	0.08	< 0.005	0.01	—	0.01	0.01	—	0.01	—	227	227	0.02	< 0.005	—	227
Total	0.01	0.24	0.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	301	301	0.03	< 0.005	—	302
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	< 0.005	0.04	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	51.3	51.3	< 0.005	< 0.005	—	51.5
Parking Lot	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
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
Health Club	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	23.3	23.3	< 0.005	< 0.005	—	23.3
Apartments Mid Rise	0.01	0.18	0.08	< 0.005	0.01	—	0.01	0.01	—	0.01	—	227	227	0.02	< 0.005	—	227
Total	0.01	0.24	0.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	301	301	0.03	< 0.005	—	302
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.50	8.50	< 0.005	< 0.005	—	8.52
Parking Lot	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
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
Health Club	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.86	3.86	< 0.005	< 0.005	—	3.87

Apartment Mid Rise	< 0.005	0.03	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	37.6	37.6	< 0.005	< 0.005	—	37.7
Total	< 0.005	0.04	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	49.9	49.9	< 0.005	< 0.005	—	50.0

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

Source	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	1.77	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.56	0.06	5.96	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	16.4	16.4	< 0.005	< 0.005	—	16.4
Total	2.47	0.06	5.96	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	16.4	16.4	< 0.005	< 0.005	—	16.4
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	1.77	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	1.91	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.32	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.05	0.01	0.54	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.34	1.34	< 0.005	< 0.005	—	1.34
Total	0.40	0.01	0.54	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.34	1.34	< 0.005	< 0.005	—	1.34

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	—	—	—	—	—	—	—	—	—	—	1.20	5.13	6.33	0.12	< 0.005	—	10.3
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
City Park	—	—	—	—	—	—	—	—	—	—	0.00	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005
Health Club	—	—	—	—	—	—	—	—	—	—	0.20	0.95	1.16	0.02	< 0.005	—	1.83
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	6.73	28.7	35.4	0.69	0.02	—	57.7
Total	—	—	—	—	—	—	—	—	—	—	8.14	34.8	42.9	0.84	0.02	—	69.9

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	—	—	—	—	—	—	—	—	—	—	1.20	5.13	6.33	0.12	< 0.005	—	10.3
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
City Park	—	—	—	—	—	—	—	—	—	—	0.00	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005
Health Club	—	—	—	—	—	—	—	—	—	—	0.20	0.95	1.16	0.02	< 0.005	—	1.83
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	6.73	28.7	35.4	0.69	0.02	—	57.7
Total	—	—	—	—	—	—	—	—	—	—	8.14	34.8	42.9	0.84	0.02	—	69.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	—	—	—	—	—	—	—	—	—	—	0.20	0.85	1.05	0.02	< 0.005	—	1.71
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
City Park	—	—	—	—	—	—	—	—	—	—	0.00	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005
Health Club	—	—	—	—	—	—	—	—	—	—	0.03	0.16	0.19	< 0.005	< 0.005	—	0.30
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	1.11	4.75	5.87	0.11	< 0.005	—	9.55
Total	—	—	—	—	—	—	—	—	—	—	1.35	5.76	7.11	0.14	< 0.005	—	11.6

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	—	—	—	—	—	—	—	—	—	—	29.1	0.00	29.1	2.91	0.00	—	102
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
City Park	—	—	—	—	—	—	—	—	—	—	0.20	0.00	0.20	0.02	0.00	—	0.71
Health Club	—	—	—	—	—	—	—	—	—	—	5.53	0.00	5.53	0.55	0.00	—	19.3
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	39.9	0.00	39.9	3.98	0.00	—	139
Total	—	—	—	—	—	—	—	—	—	—	74.7	0.00	74.7	7.46	0.00	—	261
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	—	—	—	—	—	—	—	—	—	—	29.1	0.00	29.1	2.91	0.00	—	102
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
City Park	—	—	—	—	—	—	—	—	—	—	0.20	0.00	0.20	0.02	0.00	—	0.71
Health Club	—	—	—	—	—	—	—	—	—	—	5.53	0.00	5.53	0.55	0.00	—	19.3
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	39.9	0.00	39.9	3.98	0.00	—	139
Total	—	—	—	—	—	—	—	—	—	—	74.7	0.00	74.7	7.46	0.00	—	261
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Medical Office Building	—	—	—	—	—	—	—	—	—	—	4.82	0.00	4.82	0.48	0.00	—	16.9
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
City Park	—	—	—	—	—	—	—	—	—	—	0.03	0.00	0.03	< 0.005	0.00	—	0.12
Health Club	—	—	—	—	—	—	—	—	—	—	0.92	0.00	0.92	0.09	0.00	—	3.20
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	6.60	0.00	6.60	0.66	0.00	—	23.1
Total	—	—	—	—	—	—	—	—	—	—	12.4	0.00	12.4	1.24	0.00	—	43.3

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13	0.13
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Health Club	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.54	0.54
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.68	0.68

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13	0.13
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Health Club	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.54	0.54
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.68	0.68
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Health Club	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.09	0.09
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.11	0.11

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	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	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	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	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	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	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

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	1/1/2024	1/31/2024	6.00	27.0	—
Grading	Grading	2/1/2024	2/29/2024	6.00	25.0	—
Building Construction	Building Construction	3/1/2024	11/30/2025	6.00	548	—

Paving	Paving	3/1/2025	11/30/2025	6.00	235	—
Architectural Coating	Architectural Coating	7/1/2025	11/30/2025	6.00	131	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Tier 3	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Tier 3	4.00	8.00	84.0	0.37
Grading	Graders	Diesel	Tier 3	1.00	8.00	148	0.41
Grading	Excavators	Diesel	Tier 3	1.00	8.00	36.0	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Tier 3	3.00	8.00	84.0	0.37
Grading	Rubber Tired Dozers	Diesel	Tier 3	1.00	8.00	367	0.40
Building Construction	Forklifts	Diesel	Tier 3	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Tier 3	1.00	8.00	14.0	0.74
Building Construction	Cranes	Diesel	Tier 3	1.00	7.00	367	0.29
Building Construction	Welders	Diesel	Tier 3	1.00	8.00	46.0	0.45
Building Construction	Tractors/Loaders/Backhoes	Diesel	Tier 3	3.00	7.00	84.0	0.37
Paving	Pavers	Diesel	Tier 3	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Tier 3	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Tier 3	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Tier 3	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	0.00	12.0	LDA,LDT1,LDT2
Site Preparation	Vendor	—	7.63	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	0.00	12.0	LDA,LDT1,LDT2
Grading	Vendor	—	7.63	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	0.00	12.0	LDA,LDT1,LDT2
Building Construction	Vendor	0.00	7.63	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	0.00	12.0	LDA,LDT1,LDT2
Paving	Vendor	—	7.63	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	0.00	12.0	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	7.63	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	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)
Architectural Coating	153,293	51,098	10,200	3,400	2,300

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Ton of Debris)	Material Exported (Ton of Debris)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	0.00	0.00	20.3	0.00	—
Grading	500	5,500	12.5	0.00	—
Paving	0.00	0.00	0.00	0.00	0.88

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Medical Office Building	0.00	0%
Parking Lot	0.88	100%

City Park	0.00	0%
Health Club	0.00	0%
Apartments Mid Rise	—	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	460	0.03	< 0.005
2025	0.00	438	0.03	< 0.005

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
Medical Office Building	188	188	188	68,620	1,502	1,502	1,502	548,072
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
City Park	3.42	3.42	3.42	1,250	27.3	27.3	27.3	9,982
Health Club	51.9	51.9	51.9	18,935	414	414	414	151,233
Apartments Mid Rise	324	324	324	118,260	4,695	4,695	4,695	1,713,622

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)
153292.5	51,098	10,200	3,400	2,300

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

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)
Medical Office Building	82,973	438	0.0330	0.0040	160,115
Parking Lot	33,580	438	0.0330	0.0040	0.00
City Park	0.00	438	0.0330	0.0040	0.00
Health Club	16,152	438	0.0330	0.0040	72,656
Apartments Mid Rise	339,087	438	0.0330	0.0040	707,844

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Medical Office Building	627,403	0.00
Parking Lot	0.00	0.00
City Park	0.00	146

Health Club	106,458	13,300
Apartments Mid Rise	3,513,307	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Medical Office Building	54.0	—
Parking Lot	0.00	—
City Park	0.38	—
Health Club	10.3	—
Apartments Mid Rise	73.9	—

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
Medical Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.45	0.60	0.00	1.00
Medical Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
City Park	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
City Park	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Health Club	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

Health Club	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	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	23.0	annual days of extreme heat
Extreme Precipitation	6.25	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	20.1	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	N/A	N/A	N/A	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	0	0	0	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	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	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	1	1	1	2

Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	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 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	70.5
AQ-PM	8.95
AQ-DPM	15.0
Drinking Water	9.19
Lead Risk Housing	43.6
Pesticides	30.9
Toxic Releases	7.66
Traffic	18.6
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	0.00
Haz Waste Facilities/Generators	74.7

Impaired Water Bodies	0.00
Solid Waste	83.3
Sensitive Population	—
Asthma	17.3
Cardio-vascular	48.5
Low Birth Weights	89.8
Socioeconomic Factor Indicators	—
Education	51.0
Housing	39.7
Linguistic	31.3
Poverty	44.9
Unemployment	25.2

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	42.28153471
Employed	45.27139741
Median HI	36.03233671
Education	—
Bachelor's or higher	29.0645451
High school enrollment	4.658026434
Preschool enrollment	29.56499423
Transportation	—
Auto Access	27.46054151
Active commuting	51.64891569

Social	—
2-parent households	53.18875914
Voting	65.85397151
Neighborhood	—
Alcohol availability	34.18452457
Park access	18.46528936
Retail density	35.95534454
Supermarket access	64.51944052
Tree canopy	6.210701912
Housing	—
Homeownership	43.80854613
Housing habitability	40.54921083
Low-inc homeowner severe housing cost burden	61.01629668
Low-inc renter severe housing cost burden	46.47760811
Uncrowded housing	25.1764404
Health Outcomes	—
Insured adults	41.04965995
Arthritis	0.0
Asthma ER Admissions	83.2
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	33.4
Cognitively Disabled	64.4

Physically Disabled	26.6
Heart Attack ER Admissions	59.9
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	43.7
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	8.3
SLR Inundation Area	0.0
Children	14.1
Elderly	61.9
English Speaking	52.0
Foreign-born	29.7
Outdoor Workers	20.3
Climate Change Adaptive Capacity	—
Impervious Surface Cover	86.1
Traffic Density	8.4
Traffic Access	23.0
Other Indices	—
Hardship	67.8
Other Decision Support	—

2016 Voting	68.4

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	27.0
Healthy Places Index Score for Project Location (b)	32.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
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
Land Use	Construction Data Updates please see Project Assumptions updated 9.5.2023
Construction: Construction Phases	Project Assumptions 8.30.2023
Construction: Dust From Material Movement	Project Assumptions 8.30.2023
Construction: Trips and VMT	Mobile Emissions calculated outside of caleemod
Operations: Vehicle Data	Trip Generation 9.1.2023
Operations: Hearths	no woodstoves or fireplaces

Characteristics: Utility Information	SDG&E CO2 intensity factor
Construction: Off-Road Equipment	Project Assumption 8.30.2023
Construction: Electricity	CO2 Intensity Factors updated

F-3 Construction Mobile Energy

Paseo Norte Project

Total On-Road Fuel Consumption

		gal/mile
2021Hauling	Hauling	0.17163556
2021Vendor	Vendor	0.14228491
2021Worker	Worker	0.04006185
2022Hauling	Hauling	0.17591158
2022Vendor	Vendor	0.14780042
2022Worker	Worker	0.04114232
2023Hauling	Hauling	0.17333356
2023Vendor	Vendor	0.14608795
2023Worker	Worker	0.04038967
2024Hauling	Hauling	0.17083642
2024Vendor	Vendor	0.14460093
2024Worker	Worker	0.03960362
2025Hauling	Hauling	0.16800737
2025Vendor	Vendor	0.14287634
2025Worker	Worker	0.03878523

Paseo Norte Project

Total On-Road Fuel Consumption

Source	Fuel Type	Total Fuel Use (gal)
Hauling	Diesel	2,990
Vendor	Diesel	33,185
Worker	Gasoline	64,125

Fuel Type	Total Fuel Use	Annual Fuel Use
Diesel	36,174	18,889
Gasoline	64,125	33,485

Duration of Construction	
Start	1/1/2024
End	11/30/2025
1.9	years

Construction Phase	Daily One-Way Trips	Haul Days per Phase (days)	Work Hours per Day (hours/day)	One-Way Trip Distance per Day (miles)	Idling per Day (minutes)	Regional Emissions (gallons) gal/mile	gal/min	gal/day	Total Gallons/yr
Site Preparation	2022								
Total Haul Trips	0								
Hauling	0	27	8	20	15	0.18	0.00E+00	0	0
Vendor	0	27	8	7.63	6.9	0.15	0.00E+00	0	0
Worker	18	27	8	11.97	0	0.04	0.00E+00	9	239
Grading	2024								
Total Haul Trips	858								
Hauling	35	25	8	20	15	0.17	0.00E+00	120	2,990
Vendor	0	25	8	7.63	6.9	0.14	0.00E+00	0	0
Worker	20	25	8	11.97	0	0.04	0.00E+00	9	237
Building Construction	2024								
Total Haul Trips	0								
Hauling	0	262	8	20	15	0.17	0.00E+00	0	0
Vendor	52	262	8	7.63	6.9	0.14	0.00E+00	57	15,031
Worker	230	262	8	11.97	0	0.04	0.00E+00	109	28,567
Building Construction	2025								
Total Haul Trips	0								
Hauling	0	286	8	20	15	0.17	0.00E+00	0	0
Vendor	52	286	8	7.63	6.9	0.14	0.00E+00	57	16,213
Worker	230	286	8	11.97	0	0.04	0.00E+00	107	30,539
Paving	2025								
Total Haul Trips	0								
Hauling	0	235	8	20	15	0.17	0.00E+00	0	0
Vendor	2	235	8	7.63	6.9	0.14	0.00E+00	2	512
Worker	16	235	8	11.97	0	0.04	0.00E+00	7	1,746
Architectural Coating	2025								
Total Haul Trips	0								
Hauling	0	131	8	20	15	0.17	0.00E+00	0	0
Vendor	10	131	8	7.63	6.9	0.14	0.00E+00	11	1,428
Worker	46	131	8	11.97	0	0.04	0.00E+00	21	2,798

F-4 Energy Consumption Construction Summary

Paseo Norte Project
Construction Energy Analysis

Project Fuel Summary

	Heavy-Duty Construction Equipment
89,629	Total Project Consumption
47,173	Annual Consumption
	Haul Trucks
2,990	Total Project Consumption
1,573	Annual Consumption
	Vendor Trucks
33,185	Total Project Consumption
17,466	Annual Consumption
	Workers
64,125	Total Project Consumption
33,750	Annual Consumption
125,803	Total Gallons Diesel
64,125	Total Gallons Gasoline

1/1/2024	Construction Modeling Start (CalEEMod output)
11/30/2025	Construction Modeling Start (CalEEMod output)
1.9	Estimated Project Construction Duration (years)

66,212	**Annual Average Gallons Diesel**
33,750	**Annual Average Gallons Gasoline**

San Diego County (2021)			**Percent of Annual Project Compared to San Diego County**
Source	**Fuel Type**	**Gallons**	
Workers	Gasoline	1,165,000,000	0.00290%
Off-Road/Vendor/Haul Trucks	Diesel	247,900,000	0.027%

Notes:

1 Gasoline and diesel amounts from CEC, 2022. Available: https://www.energy.ca.gov/data-reports/energy-almanac/transportation-energy/california-retail-fuel-outlet-annual-reporting

Annual Average Electricity Summary (over Construction Duration)		
Temporary Construction Trailer - Electricity and Off-Road Equipment	17,170	kWh/year
Water Conveyance for Dust Control	337	kWh/year
Total	**17,507**	**kWh/year**
Total SCE[2], 2025	18,212,000,000	kWh/year
Project percentage of Utility	0.00000010%	

Notes:

2 Appendix A, SDG&E Integrated Resource Plan 2020

Paseo Norte Project
Construction Energy Analysis

Temporary Construction Trailer - Electricity						
Land Use	**Square Feet**	**Electricity Demand Factor (kWh/sf)**	**Energy Use per year (kWh)**	**Total Energy Use (kWh)**	**Total GHG Emissions (MTCO2e)**	**Annual GHG Emissions (MTCO2e)**
General Office	1,000	17.17	17,170	32,623	3.0	5.8

Note: CalEEMod 2020.4.0 factors used to estimate energy use for temporary construction office. Energy demand factor is conservatively based on the maximum non-historical demand factor for all climate zones.

Paseo Norte Project
Construction Energy
Construction Water Energy Estimates

Park Zone	Source	Acreage/Day	Number of Days	Total Construction Water Use (Mgal)	Total Electricity Demand from Water Conveyance (MWh)	Annual Average Electricity Demand from Water Conveyance (MWh)
Paseo Norte	Site Preparation	1.5	27	0.122	0.4	0.2
Paseo Norte	Grading	1	25	0.075	0.2	0.1
Paseo Norte	Building Construction	0	548	0.000	0.0	0.0
Paseo Norte	Paving	0.0	235	0.000	0.0	0.0
Total				**0.197**	**0.6**	**0.3**

CalEEMod Water Electricity Factors	Electricity Intensity Factor To Supply (kWh/Mgal)	Electricity Intensity Factor To Treat (kWh/Mgal)	Electricity Intensity Factor To Distribute (kWh/Mgal)	Electricity Intensity Factor For Wastewater Treatment (kWh/Mgal)
	827	748	166	1519

Sources and Assumptions:

CalEEMod Appendix A, Pg. 8, based on given piece of equipment can pass over in an 8-hour workday

-Electricity Intensity Factors - California Air Resources Board, CalEEMod, Version 2022.1.1.3. Table G-32 Water Energy Intensity Factors Hydrologic Region and Process (KWh per million gallon)

-Estimated construction water use assumed to be generally equivalent to landscape irrigation, based on a factor of 20.94 gallons per year per square foot of landscaped area within the Los Angeles area (Mediterranean climate), which assumes high water demand landscaping materials and an irrigation system efficiency of 85%. Factor is therefore (20.94 GAL/SF/year) x (43,560 SF/acre) / (365 days/year) / (0.85) = 2,940 gallons/acre/day, rounded up to 3,000 gallons/acre/day. (U.S. Department of Energy, Energy Efficiency & Renewable Energy, Federal Energy Management Program. "Guidelines for Estimating Unmetered Landscaping Water Use." July 2010. Page 12, Table 4 - Annual Irrigation Factor – Landscaped Areas with High Water Requirements).

Paseo Norte Project
Construction Energy Analysis
Off-Road Equipment

Equipment ≤ 100 hp

pounds diesel fuel/hp-hr (lb/hp-hr):[1]	0.408	lb/hp-hr
diesel density (lb/gal):[1]	7.11	lb/gal
diesel gallons/hp-hr:	0.0574	gal/hp-hr
Total horsepower-hours:	1,071,547	hp-hr
Total diesel gallons:	61,499	gal

Equipment > 100 hp

pounds diesel fuel/hp-hr (lb/hp-hr):[1]	0.367	lb/hp-hr
diesel density (lb/gal):[1]	7.11	lb/gal
diesel gallons/hp-hr:	0.0516	gal/hp-hr
Total horsepower-hours:	544,888	hp-hr
Total diesel gallons:	28,130	gal

Total diesel gallons (off-road equipment): 89,629 gal

CARB, https://www.arb.ca.gov/msei/ordiesel/ordas_ef_fcf_2017.pdf
1. OFFROAD2017 Emission Factor Documentation

Project	Construction Phase	Equipment	Number	Hours/Day	HP	Load	Days	Total hp-hr	Electric Equipment	Electric Conversion (kW/HP)	Electric Demand (kWh)
Paseo Norte	Site Preparation	Rubber Tired Dozers	3	8	367	0.40	27	95,126		-	-
Paseo Norte	Site Preparation	Tractors/Loaders/Backhoes	4	8	84	0.37	27	26,853		-	-
Paseo Norte	Grading	Graders	1	8	148	0.41	25	12,136		-	-
Paseo Norte	Grading	Excavators	1	8	36	0.38	25	2,736		-	-
Paseo Norte	Grading	Tractors/Loaders/Backhoes	3	8	84	0.37	25	18,648		-	-
Paseo Norte	Grading	Rubber Tired Dozers	1	8	367	0.40	25	29,360		-	-
Paseo Norte	Building Construction	Forklifts	3	8	82	0.20	548	215,693		-	-
Paseo Norte	Building Construction	Generator Sets	1	8.0	14	0.74	548	45,418		-	-
Paseo Norte	Building Construction	Cranes	1	7	367	0.29	548	408,265		-	-
Paseo Norte	Building Construction	Welders	1	8	46	0.45	548	90,749		-	-
Paseo Norte	Building Construction	Tractors/Loaders/Backhoes	3	7	84	0.37	548	357,669		-	-
Paseo Norte	Paving	Pavers	2	8	81	0.42	235	127,915		-	-
Paseo Norte	Paving	Paving Equipment	2	8	89	0.36	235	120,470		-	-
Paseo Norte	Paving	Rollers	2	8.0	36	0.38	235	51,437		-	-
Paseo Norte	Architectural Coating	Air Compressors	1	6	37	0.48	131	13,959		-	-
							Total - >100 hp	**544,888**		**Total Electricity**	**-**
							Total - <100 hp	**1,071,547**		**Average per Year**	**-**

F-5 Energy Consumption Operational Summary

Paseo Norte Project
Project Operational Energy Demand

Electricity	kWh/yr	Electrified NG kWh/yr	Electricity from Water (kWh/yr)	MWh/yr
Medical Office Building	82,973	42,779	4,271	130.02
Parking Lot	33,580	0.00	0.00	33.58
City Park	0.00	0.00	0.99	0.00
Health Club	16,152	6,588	815	23.56
Apartments Mid Rise	339,087	56,312	23,915	419.31
EV Charging	5,720			5.72
Total Building Energy	**471,792**	**105,680**	**0.00**	**577.47**
Total	**477,512**	**105,680**	**29,002**	**612.19**
Total (including water, see below)	**506,514**	**105,680**	**29,002**	**612.19**

Source:
California Air Resources Board, CalEEMod, Version 2020.4.0.

Water	Mgal/yr	MWh/yr
Medical Office Building	0.63	4.27
Parking Lot	0.00	0.00
City Park	0.00	0.00
Health Club	0.12	0.82
Apartments Mid Rise	3.51	23.92
Total	**4.26**	**29.00**

Electricity Intensity Factors	kWh/Mgal
Electricity Factor - Supply	3,044
Electricity Factor - Treat	725
Electricity Factor - Distribute	1,537
Electricity Factor - Wastewater Treatment	1,501

Electricity from Water Demand	kWh/yr	MWh/yr
Total	**29,002**	**29.00**

Source:
California Air Resources Board, CalEEMod User's Guide Appendix G, Table G-32
Water Demand based on Project Water supply Assessment
Sewage Facilities Charge, Sewage Generation Factor for Residential and Commercial Categories, 2012.

Electricity	MWh/yr
SDG&E Total - 2025	18,212,000
Project Annual	612
Existing Annual	-
Net Project Annual	**612.2**
Percent of SDG&E	**0.003%**

Source:
California Air Resources Board, CalEEMod, Version 2020.4.0
Appendix A, SDG&E Integrated Resource Plan 2020

Natural Gas	kBtu/yr	cubic foot (cf)	Electrification
Medical Office Building	160,115	154,700	42,779
Parking Lot	-	-	-
City Park	-	-	-
Health Club	72,656	70,199	6,588
Apartments Mid Rise	707,844	683,907	56,312
Mobile Sources	135	130	
Total	**940,615**	**908,807**	**105,680**

Source:
California Air Resources Board, CalEEMod, Version 2020.4.0.
Conversion factor of 1,035 Btu per cubic foot based on United States Energy Information Administration data
(see: USEIA, Natural Gas, Heat Content of Natural Gas Consumed, February 28, 2018,
https://www.eia.gov/dnav/ng/ng_cons_heat_a_EPG0_VGTH_btucf_a.htm. Accessed March 2020.)
Natural gas to electricity conversion uses an efficiency factor derived from EIA's Commercial Building Energy Consumption Survey, https://www.eia.gov/consumption/commercial/data/2018/

Natural Gas	million cubic foot (cf)
SDG&E Total - 2025	76,782
Project Annual	0.91
Existing Annual	-
Net Project Annual	**0.9**
Percent Net Project of SoCalGas	**0.001%**

Source:
Appendix A, SDG&E Integrated Resource Plan 2020

Paseo Norte Project

Mobile Sources - Fuel Usage from VMT

Annual VMT (CalEEMod default)[4]: 2,422,909 miles/year

Fuel Type:[1]	Gasoline	Diesel	Electricity	Natural Gas
Percent:	88.8%	4.9%	4.0%	0.2%
Miles per Gallon Fuel:	23.83	8.98	-	5.33
Annual VMT by Fuel Type (miles):	2,152,229	118,844	96,937	4,981
Annual Fuel Usage (gallons):	90,298	13,230	-	135

	San Diego County Fuel Consumption [3]	
	Gasoline	Diesel
San Diego County:	1,165,000,000	247,881,356
Total	90,298	13,230
Project Total	**90,298**	**13,230**
Percent Net Project of San Diego County:	**0.008%**	**0.005%**

Notes:

1. California Air Resources Board, EMFAC2021 (SD County; Annual; 2024', Aggregate Fleet).
2. Assumes electric vehicles would replace traditional gasoline-fueled vehicles.
3. California Energy Commission, California Retail Fuel Outlet Annual Reporting (CEC-A15) Results, 2020. Available at: https://ww2.energy.ca.gov/almanac/transportation_data/gasoline/piira_retail_survey.html. Accessed May 2021. Diesel is adjusted to account for retail (48%) and non-retail (52%) diesel sales.
4. California Air Resources Board, CalEEMod, Version 2020.4.0, Operational Mobile Sources from Trip Generation provided by client.

Paseo Norte Project
Operational GHG Analysis
Estimated Electricity demand from Electric Vehicle Supply Equipment (EVSE)

Land Use Type		Number of Parking Spaces	Number of Parking Spaces with EV Chargers [b]	Average Charge (kWh/day) [a]	Days/Year	Electricity Demand (kWh/yr)	Electricity Demand (MWh/yr)
	Paseo Norte Project	98	5	4.4	260	5,720	5.72

Notes:

a. Estimated based on reference sources listed below.

b. Per 2019 CalGreen, 6% of non-residential parking spaces and 10% of residential parking spaces are required to be EV capable.

Sources:

US Department of Energy. Alternative Fuels Data Center, 2016. Hybrid and Plug-In Electric Vehicle Emissions Data Sources and Assumptions.
Available at: https://www.afdc.energy.gov/vehicles/electric_emissions_sources.html.

US Department of Energy. Smith, Margaret, 2016. Level 1 Electric Vehicle Charging Stations at the Workplace.
Available at: https://www.afdc.energy.gov/uploads/publication/WPCC_L1ChargingAtTheWorkplace_0716.pdf.

UCLA Luskin Center for Innovation. Williams, Brett and JR deShazo, 2013. Pricing Workplace Charging: Financial Viability and Fueling Costs.
Available at: http://luskin.ucla.edu/sites/default/files/Luskin-WPC-TRB-13-11-15d.pdf.

2019 Calgreen Building Standards Code, Title 24 Part 11
Available: https://library.municode.com/ca/long_beach/codes/municipal_code?nodeId=TIT18LOBEBUSTCO_CH18.47GRBUSTCO_18.47.050AMCASE5.106.5.3.3TA5.106.5.3.WNOEVCHSPCHST(