

Appendix G

Greenhouse Gas Modeling Files



21611 South Perry Street

Construction Assumptions

Project Site Acreage 2.8

Project Summary

Land Use	CalEEMod Landuse Type	Unit Amount	Size Metrics	Lot Acreage	Square Feet	
Commercial	General Office Building	2.425	1000sqft	0.2	700	Postal Annex
Recreational	High Turnover (Sit Down Restaurant)	1.55	1000sqft	0.2	1,550	Café
Retail	Strip Mall	0.7	1000sqft	0.2	2,425	Self-Storage Office
Industrial	Unrefrigerated Warehouse-No Rail	109.039	1000sqft	0.5	109,039	Storage Area
Parking	Parking Lot	41	Space	0.2	16,400	Parking
Recreational	City Park	0.528	Acre	1.5	23,000	Landscape Area
				2.8	153114	

Notes

1 Land use acreage is an estimate of the total site acreage of 5 acres

Project Description

Location	CEC Forecasting Climate Zone	Start of Construction	Operational Year	Utility Company
Los Angeles County	11	1-Jan-23	2024	Southern California Edison Company

Construction Schedule

Phase Name	CalEEMod Phase Type	Start Date	End Date	Total Days	# of Workers per day	Total One-way Worker Trips per day	Trip Length	Vendor Trips per day	Total One-Way Vendor Trips per day	Trip Length	Total Haul Trucks	Total One-way Haul Trips	Trucks per day	Trip Length
Demo & Site Preparation		1/1/2023	2/1/2023	23	8	16	14.7		0	6.9	115	230	5	42
Grading/Excavation		2/1/2023	3/1/2023	21	10	20	14.7		0	6.9	315	630	15	20
Drainage/Utilities/Trenching		3/1/2023	5/1/2023	44	20	40	14.7		0	6.9	132	264	3	20
Foundations/Concrete Pour		5/1/2023	6/1/2023	24	30	60	14.7	9	18	6.9	48	96	2	20
Building Construction		6/1/2023	2/1/2024	176	75	150	14.7		0	6.9	0	0	0	20
Paving		1/1/2024	1/31/2024	23	10	20	14.7	4	8	6.9	115	230	5	20
Architectural Coatings		11/1/2023	2/1/2024	67	8	16	14.7		0	6.9	0	0	0	20
Other 1: Landscaping		11/1/2023	2/1/2024	67	8	16	14.7		0	6.9	67	134	1	20

Note: Foundation/Concrete Pour Vendor Truck assumes 10 cy/truck for concrete spread throughout the 24 days of the phase.

Building Construction Vendor Trucks taken from CalEEMod Defaults

21611 South Perry Street

Construction Annual GHG

Phase/Year	Metric Tons/Year			Total
	On-Road Mobile Sources	Construction Equipment	Water + Construction Office	
3.2 Demo & Site Preparation - 2023	20	33.9	0.0	53
3.3 Grading/Excavation - 2023	51	87.4	0.8	139
3.4 Drainage/Utilities/Trenching - 2023	29	81.8	0.0	111
3.5 Foundations/Concrete Pour - 2023	21	34.8	0.0	55
3.6 Building Construction - 2023	107	402.7	0.0	510
3.6 Building Construction - 2024	17	63.6	0.0	80
3.7 Architectural Coating - 2023	3	13.0	0.0	16
3.7 Architectural Coating - 2024	2	7.3	0.0	9
3.8 Landscaping - 2023	10	4.8	0.0	15
3.8 Landscaping - 2024	5	2.7	0.0	8
3.9 Paving - 2024	22	39.9	0.0	62
Total	286	772	1	1,059
Amortized - 30 years	10	26	0	35

21611 South Perry Street
 Construction GHG Analysis

Temporary Construction Trailer - Electricity							
Land Use	Square Feet	Energy Use per year (kWh)	Estimated Project Construction Duration (years)	Total Energy Use (kWh)	Construction Office GHG Emissions Total	Electricity Emission Factor (MT CO2e/MWh)	Electricity Emission Factor (lbs CO2e/MWh)
General Office	1,000	12,500		-	0.00		
Note: CalEEMod 2020.4.0 used to estimate energy use for temporary construction office						0.23	508.97

**21611 South Perry Street
Construction Energy**

Construction Water Energy Estimates

Source	Acreage/Day	Number of Days	Total Construction Water Use (Mgal)	Electricity Demand from Water Conveyance (MWh)	Annual Electricity Demand from Water Conveyance (MWh)
Grading/Excavation	4.0	21	0.252	3.3	3.5
Total			0.252	3.3	3.5

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)
	9727	111	1272	1911

Construction Water GHG	Electricity Emission (MT CO2e/MWh)	Electricity Emission (lbs CO2e/MWh)
0.76	0.23	508.97

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 Emissions Estimator Model (CalEEMod).

-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).

Equipment Type	Acres/8hr-day
Crawler Tractors	0.5
Graders	0.5
Rubber Tired Dozers	0.5
Scrapers	1

21611 Perry Street
Total On-Road Emissions

260 Max construction days per year

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)
Demo & Site Preparation 2023					
Total Haul Trips	230				
Hauling	10	23	8	42	15
Vendor	0	23	8	6.9	15
Worker	16	23	8	14.7	0
					Total:
Grading/Excavation 2023					
Total Haul Trips	630				
Hauling	30	21	8	42	15
Vendor	0	21	8	6.9	15
Worker	20	21	8	14.7	0
					Total:
Drainage/Utilities/Trenching 2023					
Total Haul Trips	264				
Hauling	6	44	8	42	15
Vendor	0	44	8	6.9	15
Worker	40	44	8	14.7	0
					Total:
Foundations/Concrete Pour 2023					
Total Haul Trips	96				
Hauling	4	24	8	42	15
Vendor	18	24	8	6.9	15
Worker	60	24	8	14.7	0
					Total:
Building Construction 2023					
Total Haul Trips	0				
Hauling	0	152	8	42	15
Vendor	0	152	8	6.9	15
Worker	150	152	8	14.7	0
					Total:
Building Construction 2024					
Total Haul Trips	0				
Hauling	0	24	8	42	15
Vendor	0	24	8	6.9	15
Worker	150	24	8	14.7	0
					Total:
Architectural Coatings 2023					
Total Haul Trips	0				
Hauling	0	43	8	42	15
Vendor	0	43	8	6.9	15
Worker	16	43	8	14.7	0
					Total:
Architectural Coatings 2024					
Total Haul Trips	0				
Hauling	0	24	8	42	15
Vendor	0	24	8	6.9	15
Worker	16	24	8	14.7	0
					Total:
Landscaping 2023					
Total Haul Trips	86				
Hauling	2	43	8	42	15
Vendor	0	43	8	6.9	15
Worker	16	43	8	14.7	0
					Total:

21611 Perry Street
Total On-Road Emissions

260 Max construction days per year

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)
Landscaping	2024				
Total Haul Trips	48				
Hauling	2	24	8	42	15
Vendor	0	24	8	6.9	15
Worker	16	24	8	14.7	0
					Total:
Paving	2024				
Total Haul Trips	230				
Hauling	10	23	8	42	15
Vendor	8	23	8	6.9	15
Worker	20	23	8	14.7	0
					Total:

21611 Perry Street
Total On-Road Emissions

Construction Phase	Regional Emissions (pounds/day)										(MT/yr) Total CO2e	
	ROG	NOX	CO	SO2	PM10 Dust	PM10 Exh	Total PM10	PM2.5 Dust	PM2.5 Exh	Total PM2.5		
Demo & Site Preparation												
Total Haul Trips												
Hauling	0.02	2.53	1.51	0.01	0.17	0.02	0.20	0.04	0.02	0.07	17.83	
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Worker	0.01	0.05	0.62	0.00	0.04	0.00	0.04	0.01	0.00	0.01	1.73	
	0.03	2.58	2.14	0.02	0.22	0.02	0.24	0.05	0.02	0.08	19.56	
Grading/Excavation												
Total Haul Trips												
Hauling	0.05	7.58	4.54	0.04	0.52	0.07	0.59	0.13	0.06	0.20	48.83	
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Worker	0.01	0.06	0.78	0.00	0.05	0.00	0.06	0.01	0.00	0.01	1.97	
	0.06	7.65	5.33	0.05	0.58	0.07	0.64	0.14	0.06	0.21	50.80	
Drainage/Utilities/Trenching												
Total Haul Trips												
Hauling	0.01	1.52	0.91	0.01	0.10	0.01	0.12	0.03	0.01	0.04	20.46	
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Worker	0.03	0.12	1.56	0.00	0.11	0.00	0.11	0.02	0.00	0.02	8.27	
	0.04	1.64	2.47	0.01	0.21	0.02	0.23	0.05	0.01	0.06	28.73	
Foundations/Concrete Pour												
Total Haul Trips												
Hauling	0.01	1.01	0.61	0.01	0.07	0.01	0.08	0.02	0.01	0.03	7.44	
Vendor	0.01	1.25	1.17	0.01	0.04	0.01	0.05	0.01	0.01	0.02	6.33	
Worker	0.04	0.18	2.34	0.01	0.16	0.00	0.17	0.03	0.00	0.03	6.77	
	0.06	2.45	4.12	0.02	0.28	0.02	0.29	0.06	0.02	0.08	20.53	
Building Construction												
Total Haul Trips												
Hauling	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	
Worker	0.11	0.46	5.86	0.02	0.41	0.01	0.42	0.07	0.01	0.08	107.13	
	0.11	0.46	5.86	0.02	0.41	0.01	0.42	0.07	0.01	0.08	107.13	
Building Construction												
Total Haul Trips												
Hauling	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	
Worker	0.10	0.41	5.40	0.01	0.41	0.01	0.42	0.07	0.01	0.08	16.50	
	0.10	0.41	5.40	0.01	0.41	0.01	0.42	0.07	0.01	0.08	16.50	
Architectural Coatings												
Total Haul Trips												
Hauling	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	
Worker	0.01	0.05	0.62	0.00	0.04	0.00	0.04	0.01	0.00	0.01	3.23	
	0.01	0.05	0.62	0.00	0.04	0.00	0.04	0.01	0.00	0.01	3.23	
Architectural Coatings												
Total Haul Trips												
Hauling	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	
Worker	0.01	0.04	0.58	0.00	0.04	0.00	0.04	0.01	0.00	0.01	1.76	
	0.01	0.04	0.58	0.00	0.04	0.00	0.04	0.01	0.00	0.01	1.76	
Landscaping												
Total Haul Trips												
Hauling	0.00	0.51	0.30	0.00	0.03	0.00	0.04	0.01	0.00	0.01	6.67	
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Worker	0.01	0.05	0.62	0.00	0.04	0.00	0.04	0.01	0.00	0.01	3.23	
	0.01	0.55	0.93	0.00	0.08	0.01	0.08	0.02	0.01	0.02	9.90	

21611 Perry Street
Total On-Road Emissions

Construction Phase	Regional Emissions (pounds/day)										(MT/yr) Total CO2e	
	ROG	NOX	CO	SO2	PM10 Dust	PM10 Exh	Total PM10	PM2.5 Dust	PM2.5 Exh	Total PM2.5		
Landscaping												
Total Haul Trips												
Hauling	0.00	0.49	0.30	0.00	0.03	0.00	0.04	0.01	0.00	0.01	3.66	
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Worker	0.01	0.04	0.58	0.00	0.04	0.00	0.04	0.01	0.00	0.01	1.76	
	0.01	0.53	0.87	0.00	0.08	0.01	0.08	0.02	0.01	0.02	5.42	
Paving												
Total Haul Trips												
Hauling	0.01	2.44	1.49	0.01	0.17	0.02	0.20	0.04	0.02	0.07	17.53	
Vendor	0.01	0.54	0.51	0.00	0.02	0.00	0.02	0.00	0.00	0.01	2.65	
Worker	0.01	0.05	0.72	0.00	0.05	0.00	0.06	0.01	0.00	0.01	2.11	
	0.03	3.03	2.72	0.02	0.25	0.03	0.27	0.06	0.02	0.08	22.30	

21611 Perry Street
Total On-Road Emissions

260 Max construction days per year

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)
<u>Demo & Site Preparation</u> 2023					
Total Haul Trips	230				
Hauling	10	23	8	42	15
Vendor	0	23	8	6.9	15
Worker	16	23	8	14.7	0
<u>Grading/Excavation</u> 2023					
Total Haul Trips	630				
Hauling	30	21	8	42	15
Vendor	0	21	8	6.9	15
Worker	20	21	8	14.7	0
<u>Drainage/Utilities/Trenching</u> 2023					
Total Haul Trips	264				
Hauling	6	44	8	42	15
Vendor	0	44	8	6.9	15
Worker	40	44	8	14.7	0
<u>Foundations/Concrete Pour</u> 2023					
Total Haul Trips	96				
Hauling	4	24	8	42	15
Vendor	18	24	8	6.9	15
Worker	60	24	8	14.7	0
<u>Building Construction</u> 2023					
Total Haul Trips	0				
Hauling	0	152	8	42	15
Vendor	0	152	8	6.9	15
Worker	150	152	8	14.7	0
<u>Building Construction</u> 2024					
Total Haul Trips	0				
Hauling	0	24	8	42	15
Vendor	0	24	8	6.9	15
Worker	150	24	8	14.7	0
<u>Architectural Coatings</u> 2023					
Total Haul Trips	0				
Hauling	0	43	8	42	15
Vendor	0	43	8	6.9	15
Worker	16	43	8	14.7	0
<u>Architectural Coatings</u> 2024					
Total Haul Trips	0				
Hauling	0	24	8	42	15
Vendor	0	24	8	6.9	15
Worker	16	24	8	14.7	0

21611 Perry Street
Total On-Road Emissions

260 Max construction days per year

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)
<u>Landscaping</u>	2023				
Total Haul Trips	86				
Hauling	2	43	8	42	15
Vendor	0	43	8	6.9	15
Worker	16	43	8	14.7	0
<u>Landscaping</u>	2024				
Total Haul Trips	48				
Hauling	2	24	8	42	15
Vendor	0	24	8	6.9	15
Worker	16	24	8	14.7	0
<u>Paving</u>	2024				
Total Haul Trips	230				
Hauling	10	23	8	42	15
Vendor	8	23	8	6.9	15
Worker	20	23	8	14.7	0

21611 Perry Street
Running Emissions

	Running Emissions Factor (grams/mile)					Running Emissions Factor (grams/mile)				
	ROG	NOX	CO	SO2	PM10	PM2.5	CO2	CH4	N2O	
	2023Hauling Hauling	0.01583726	1.846349092	0.53216798	0.01440181	0.02335548	0.02234022	1582.16594	0.07485845	0.25204854
2023Vendor Vendor	0.02517402	1.413009631	0.53163708	0.01304101	0.01704589	0.01630115	1404.04014	0.0416683	0.1941139	
2023Worker Worker	0.02253027	0.09409696	1.20532597	0.00313687	0.00190111	0.00175	317.32672	0.00530072	0.00752789	
2024Hauling Hauling	0.01500166	1.757966945	0.5097505	0.01416696	0.02319781	0.02218961	1557.21286	0.07114403	0.24811684	
2024Vendor Vendor	0.02221033	1.324663487	0.47751009	0.01284951	0.01640294	0.01568629	1384.23319	0.03949423	0.19181212	
2024Worker Worker	0.01996092	0.084125691	1.11121797	0.00306134	0.00178709	0.00164482	309.685005	0.0047538	0.0069466	
2025Hauling Hauling	0.01431182	1.682904108	0.49345533	0.01390961	0.02282737	0.02183543	1529.97223	0.06799383	0.24382581	
2025Vendor Vendor	0.01962764	1.243630697	0.43346534	0.01262634	0.01566747	0.01498289	1361.14553	0.03768321	0.189104	
2025Worker Worker	0.01787186	0.075802473	1.03210504	0.00299115	0.00169862	0.00156324	302.584557	0.00430196	0.00645241	
2026Hauling Hauling	0.01368221	1.614053992	0.47684787	0.01364538	0.0226378	0.02165426	1501.9816	0.06476403	0.23941148	
2026Vendor Vendor	0.01750743	1.169214075	0.39765668	0.0123973	0.01509905	0.01443925	1337.37545	0.03590634	0.1862605	
2026Worker Worker	0.01606854	0.068748951	0.96388598	0.00292729	0.0016094	0.00148096	296.123967	0.00390838	0.00603404	
GWP	N/A	N/A	N/A	N/A	N/A	N/A	1	25	290	

Construction Phase	Daily One-Way Trips	Haul Days per Phase (days)	Work Hours per Day (hours/day)	One-Way Trip Distance per Day (miles)	Regional Emissions (pounds/day)						Regional Emissions (MT/year)			
					ROG	NOX	CO	SO2	PM10	PM2.5	CO2	CH4	N2O	CO2e
<u>Demo & Site Preparation</u> <u>2023</u>														
Total Haul Trips	230													
Hauling	10	23	8	42	0.01	1.71	0.49	0.01	0.02	0.02	15.28	0.02	0.71	16.01
Vendor	0	23	8	6.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	16	23	8	14.7	0.01	0.05	0.62	0.00	0.00	0.00	1.72	0.00	0.01	1.73
<u>Grading/Excavation</u> <u>2023</u>														
Total Haul Trips	630													
Hauling	30	21	8	42	0.04	5.13	1.48	0.04	0.06	0.06	41.86	0.05	1.93	43.85
Vendor	0	21	8	6.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	20	21	8	14.7	0.01	0.06	0.78	0.00	0.00	0.00	1.96	0.00	0.01	1.97
<u>Drainage/Utilities/Trenchi</u> <u>2023</u>														
Total Haul Trips	264													
Hauling	6	44	8	42	0.01	1.03	0.30	0.01	0.01	0.01	17.54	0.02	0.81	18.37
Vendor	0	44	8	6.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	40	44	8	14.7	0.03	0.12	1.56	0.00	0.00	0.00	8.21	0.00	0.06	8.27
<u>Foundations/Concrete Pou</u> <u>2023</u>														
Total Haul Trips	96													
Hauling	4	24	8	42	0.01	0.68	0.20	0.01	0.01	0.01	6.38	0.01	0.29	6.68
Vendor	18	24	8	6.9	0.01	0.39	0.15	0.00	0.00	0.00	4.19	0.00	0.17	4.36
Worker	60	24	8	14.7	0.04	0.18	2.34	0.01	0.00	0.00	6.72	0.00	0.05	6.77
<u>Building Construction</u> <u>2023</u>														
Total Haul Trips	0													
Hauling	0	152	8	42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0	152	8	6.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	150	152	8	14.7	0.11	0.46	5.86	0.02	0.01	0.01	106.36	0.04	0.73	107.13
<u>Building Construction</u> <u>2024</u>														
Total Haul Trips	0													
Hauling	0	24	8	42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0	24	8	6.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	150	24	8	14.7	0.10	0.41	5.40	0.01	0.01	0.01	16.39	0.01	0.11	16.50

21611 Perry Street
Running Emissions

	Running Emissions Factor (grams/mile)								Running Emissions Factor (grams/mile)			
	ROG	NOX	CO	SO2	PM10	PM2.5	CO2	CH4	N2O			
	2023Hauling Hauling	0.01583726	1.846349092	0.53216798	0.01440181	0.02335548	0.02234022	1582.16594	0.07485845	0.25204854		
2023Vendor Vendor	0.02517402	1.413009631	0.53163708	0.01304101	0.01704589	0.01630115	1404.04014	0.0416683	0.1941139			
2023Worker Worker	0.02253027	0.09409696	1.20532597	0.00313687	0.00190111	0.00175	317.32672	0.00530072	0.00752789			
2024Hauling Hauling	0.01500166	1.757966945	0.5097505	0.01416696	0.02319781	0.02218961	1557.21286	0.07114403	0.24811684			
2024Vendor Vendor	0.02221033	1.324663487	0.47751009	0.01284951	0.01640294	0.01568629	1384.23319	0.03949423	0.19181212			
2024Worker Worker	0.01996092	0.084125691	1.11121797	0.00306134	0.00178709	0.00164482	309.685005	0.0047538	0.0069466			
2025Hauling Hauling	0.01431182	1.682904108	0.49345533	0.01390961	0.02282737	0.02183543	1529.97223	0.06799383	0.24382581			
2025Vendor Vendor	0.01962764	1.243630697	0.43346534	0.01262634	0.01566747	0.01498289	1361.14553	0.03768321	0.189104			
2025Worker Worker	0.01787186	0.075802473	1.03210504	0.00299115	0.00169862	0.00156324	302.584557	0.00430196	0.00645241			
2026Hauling Hauling	0.01368221	1.614053992	0.47684787	0.01364538	0.0226378	0.02165426	1501.9816	0.06476403	0.23941148			
2026Vendor Vendor	0.01750743	1.169214075	0.39765668	0.0123973	0.01509905	0.01443925	1337.37545	0.03590634	0.1862605			
2026Worker Worker	0.01606854	0.068748951	0.96388598	0.00292729	0.0016094	0.00148096	296.123967	0.00390838	0.00603404			
GWP	N/A	N/A	N/A	N/A	N/A	N/A	1	25	290			

Construction Phase	Daily One-Way Trips	Haul Days per Phase (days)	Work Hours per Day (hours/day)	One-Way Trip Distance per Day (miles)	Regional Emissions (pounds/day)						Regional Emissions (MT/year)			
					ROG	NOX	CO	SO2	PM10	PM2.5	CO2	CH4	N2O	CO2e
<u>Architectural Coatings</u> <u>2023</u>														
Total Haul Trips	0													
Hauling	0	43	8	42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0	43	8	6.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	16	43	8	14.7	0.01	0.05	0.62	0.00	0.00	0.00	3.21	0.00	0.02	3.23
<u>Architectural Coatings</u> <u>2024</u>														
Total Haul Trips	0													
Hauling	0	24	8	42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0	24	8	6.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	16	24	8	14.7	0.01	0.04	0.58	0.00	0.00	0.00	1.75	0.00	0.01	1.76
<u>Landscaping</u> <u>2023</u>														
Total Haul Trips	86													
Hauling	2	43	8	42	0.00	0.34	0.10	0.00	0.00	0.00	5.71	0.01	0.26	5.99
Vendor	0	43	8	6.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	16	43	8	14.7	0.01	0.05	0.62	0.00	0.00	0.00	3.21	0.00	0.02	3.23
<u>Landscaping</u> <u>2024</u>														
Total Haul Trips	48													
Hauling	2	24	8	42	0.00	0.33	0.09	0.00	0.00	0.00	3.14	0.00	0.15	3.29
Vendor	0	24	8	6.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	16	24	8	14.7	0.01	0.04	0.58	0.00	0.00	0.00	1.75	0.00	0.01	1.76
<u>Paving</u> <u>2024</u>														
Total Haul Trips	230													
Hauling	10	23	8	42	0.01	1.63	0.47	0.01	0.02	0.02	15.04	0.02	0.70	15.75
Vendor	8	23	8	6.9	0.00	0.16	0.06	0.00	0.00	0.00	1.76	0.00	0.07	1.83
Worker	20	23	8	14.7	0.01	0.05	0.72	0.00	0.00	0.00	2.09	0.00	0.01	2.11

**21611 Perry Street
Road Dust, Break Wear, and Tire wear Emissions**

	Emission Factors (grams/mile)					
	PM10			PM2.5		
	RD	BW	TW	RD	BW	TW
2023Hauling Hauling	6.72E-02	0.084714206	0.03543552	1.01E-02	0.02964997	0.00885888
2023Vendor Vendor	6.72E-02	0.064163683	0.02371776	1.01E-02	0.02245729	0.00592944
2023Worker Worker	6.72E-02	0.009477692	0.008	1.01E-02	0.00331719	0.002
2024Hauling Hauling	6.72E-02	0.08427948	0.03543928	1.01E-02	0.02949782	0.00885982
2024Vendor Vendor	6.72E-02	0.063890978	0.02371964	1.01E-02	0.02236184	0.00592991
2024Worker Worker	6.72E-02	0.009419633	0.008	1.01E-02	0.00329687	0.002
2025Hauling Hauling	6.72E-02	0.084162962	0.03544313	1.01E-02	0.02945704	0.00886078
2025Vendor Vendor	6.72E-02	0.063767774	0.02372157	1.01E-02	0.02231872	0.00593039
2025Worker Worker	6.72E-02	0.009385513	0.008	1.01E-02	0.00328493	0.002
2026Hauling Hauling	6.72E-02	0.084352575	0.03544711	1.01E-02	0.0295234	0.00886178
2026Vendor Vendor	6.72E-02	0.063787152	0.02372356	1.01E-02	0.0223255	0.00593089
2026Worker Worker	6.72E-02	0.009353635	0.008	1.01E-02	0.00327377	0.002

Construction Phase	Daily One-Way Trips	Haul Days per Phase (days)	Work Hours per Day (hours/day)	One-Way Trip Distance per Day (miles)	Regional Emissions (pounds/day)						
					RD	PM10 BW	TW	RD	PM2.5 BW	TW	
<u>Demo & Site Preparation</u>	2023										
Total Haul Trips	230										
Hauling	10	23	8	42	0.06	0.08	0.03	0.01	0.03	0.01	
Vendor	0	23	8	6.9	0.00	0.00	0.00	0.00	0.00	0.00	
Worker	16	23	8	14.7	0.03	0.00	0.00	0.01	0.00	0.00	
<u>Grading/Excavation</u>	2023										
Total Haul Trips	630										
Hauling	30	21	8	42	0.19	0.24	0.10	0.03	0.08	0.02	
Vendor	0	21	8	6.9	0.00	0.00	0.00	0.00	0.00	0.00	
Worker	20	21	8	14.7	0.04	0.01	0.01	0.01	0.00	0.00	
<u>Drainage/Utilities/Trenching</u>	2023										
Total Haul Trips	264										
Hauling	6	44	8	42	0.04	0.05	0.02	0.01	0.02	0.00	
Vendor	0	44	8	6.9	0.00	0.00	0.00	0.00	0.00	0.00	
Worker	40	44	8	14.7	0.09	0.01	0.01	0.01	0.00	0.00	
<u>Foundations/Concrete Pour</u>	2023										
Total Haul Trips	96										
Hauling	4	24	8	42	0.02	0.03	0.01	0.00	0.01	0.00	
Vendor	18	24	8	6.9	0.02	0.02	0.01	0.00	0.01	0.00	
Worker	60	24	8	14.7	0.13	0.02	0.02	0.02	0.01	0.00	
<u>Building Construction</u>	2023										
Total Haul Trips	0										
Hauling	0	152	8	42	0.00	0.00	0.00	0.00	0.00	0.00	
Vendor	0	152	8	6.9	0.00	0.00	0.00	0.00	0.00	0.00	
Worker	150	152	8	14.7	0.33	0.05	0.04	0.05	0.02	0.01	

**21611 Perry Street
Road Dust, Break Wear, and Tire wear Emissions**

	Emission Factors (grams/mile)					
	PM10			PM2.5		
	RD	BW	TW	RD	BW	TW
2023Hauling Hauling	6.72E-02	0.084714206	0.03543552	1.01E-02	0.02964997	0.00885888
2023Vendor Vendor	6.72E-02	0.064163683	0.02371776	1.01E-02	0.02245729	0.00592944
2023Worker Worker	6.72E-02	0.009477692	0.008	1.01E-02	0.00331719	0.002
2024Hauling Hauling	6.72E-02	0.08427948	0.03543928	1.01E-02	0.02949782	0.00885982
2024Vendor Vendor	6.72E-02	0.063890978	0.02371964	1.01E-02	0.02236184	0.00592991
2024Worker Worker	6.72E-02	0.009419633	0.008	1.01E-02	0.00329687	0.002
2025Hauling Hauling	6.72E-02	0.084162962	0.03544313	1.01E-02	0.02945704	0.00886078
2025Vendor Vendor	6.72E-02	0.063767774	0.02372157	1.01E-02	0.02231872	0.00593039
2025Worker Worker	6.72E-02	0.009385513	0.008	1.01E-02	0.00328493	0.002
2026Hauling Hauling	6.72E-02	0.084352575	0.03544711	1.01E-02	0.0295234	0.00886178
2026Vendor Vendor	6.72E-02	0.063787152	0.02372356	1.01E-02	0.0223255	0.00593089
2026Worker Worker	6.72E-02	0.009353635	0.008	1.01E-02	0.00327377	0.002

Construction Phase	Daily One-Way Trips	Haul Days per Phase (days)	Work Hours per Day (hours/day)	One-Way Trip Distance per Day (miles)	Regional Emissions (pounds/day)						
					RD	PM10 BW	TW	RD	PM2.5 BW	TW	
<u>Building Construction</u>	2024										
Total Haul Trips	0										
Hauling	0	24	8	42	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0	24	8	6.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	150	24	8	14.7	0.33	0.05	0.04	0.05	0.02	0.01	
<u>Architectural Coatings</u>	2023										
Total Haul Trips	0										
Hauling	0	43	8	42	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0	43	8	6.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	16	43	8	14.7	0.03	0.00	0.00	0.01	0.00	0.00	
<u>Architectural Coatings</u>	2024										
Total Haul Trips	0										
Hauling	0	24	8	42	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0	24	8	6.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	16	24	8	14.7	0.03	0.00	0.00	0.01	0.00	0.00	
<u>Landscaping</u>	2023										
Total Haul Trips	86										
Hauling	2	43	8	42	0.01	0.02	0.01	0.00	0.01	0.00	0.00
Vendor	0	43	8	6.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	16	43	8	14.7	0.03	0.00	0.00	0.01	0.00	0.00	
<u>Landscaping</u>	2024										
Total Haul Trips	48										
Hauling	2	24	8	42	0.01	0.02	0.01	0.00	0.01	0.00	0.00
Vendor	0	24	8	6.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	16	24	8	14.7	0.03	0.00	0.00	0.01	0.00	0.00	
<u>Paving</u>	2024										
Total Haul Trips	230										
Hauling	10	23	8	42	0.06	0.08	0.03	0.01	0.03	0.01	0.01
Vendor	8	23	8	6.9	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Worker	20	23	8	14.7	0.04	0.01	0.01	0.01	0.00	0.00	0.00

21611 Perry Street
Total On-Road Fuel Consumption

	gal/mile	gal/min
2023Hauling Hauling	0.16744049	2.63411E-07
2023Vendor Vendor	0.140008299	7.56451E-07
2023Worker Worker	0.039164184	9.57885E-07
2024Hauling Hauling	0.165344566	1.98496E-07
2024Vendor Vendor	0.138767125	6.53915E-07
2024Worker Worker	0.038437414	8.66366E-07
2025Hauling Hauling	0.163051712	1.95685E-07
2025Vendor Vendor	0.137362721	6.50149E-07
2025Worker Worker	0.037780897	8.51473E-07
2026Hauling Hauling	0.160756677	2.00057E-07
2026Vendor Vendor	0.135957296	6.52676E-07
2026Worker Worker	0.037118687	8.35632E-07

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)
<u>Demo & Site Preparation</u>	2023				
Total Haul Trips	230				
Hauling	10	23	8	42	15
Vendor	0	23	8	6.9	15
Worker	16	23	8	14.7	0
 <u>Grading/Excavation</u>	2023				
Total Haul Trips	630				
Hauling	30	21	8	42	15
Vendor	0	21	8	6.9	15
Worker	20	21	8	14.7	0
 <u>Drainage/Utilities/Trenching</u>	2023				
Total Haul Trips	264				
Hauling	6	44	8	42	15
Vendor	0	44	8	6.9	15
Worker	40	44	8	14.7	0
 <u>Foundations/Concrete Pour</u>	2023				
Total Haul Trips	96				
Hauling	4	24	8	42	15
Vendor	18	24	8	6.9	15
Worker	60	24	8	14.7	0
 <u>Building Construction</u>	2023				
Total Haul Trips	0				
Hauling	0	152	8	42	15
Vendor	0	152	8	6.9	15
Worker	150	152	8	14.7	0
 <u>Building Construction</u>	2024				
Total Haul Trips	0				
Hauling	0	24	8	42	15
Vendor	0	24	8	6.9	15
Worker	150	24	8	14.7	0

21611 Perry Street
Total On-Road Fuel Consumption

	gal/mile	gal/min
2023Hauling Hauling	0.16744049	2.63411E-07
2023Vendor Vendor	0.140008299	7.56451E-07
2023Worker Worker	0.039164184	9.57885E-07
2024Hauling Hauling	0.165344566	1.98496E-07
2024Vendor Vendor	0.138767125	6.53915E-07
2024Worker Worker	0.038437414	8.66366E-07
2025Hauling Hauling	0.163051712	1.95685E-07
2025Vendor Vendor	0.137362721	6.50149E-07
2025Worker Worker	0.037780897	8.51473E-07
2026Hauling Hauling	0.160756677	2.00057E-07
2026Vendor Vendor	0.135957296	6.52676E-07
2026Worker Worker	0.037118687	8.35632E-07

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)
<u>Architectural Coatings</u>	2023				
Total Haul Trips	0				
Hauling	0	43	8	42	15
Vendor	0	43	8	6.9	15
Worker	16	43	8	14.7	0
<u>Architectural Coatings</u>	2024				
Total Haul Trips	0				
Hauling	0	24	8	42	15
Vendor	0	24	8	6.9	15
Worker	16	24	8	14.7	0
<u>Landscaping</u>	2023				
Total Haul Trips	86				
Hauling	2	43	8	42	15
Vendor	0	43	8	6.9	15
Worker	16	43	8	14.7	0
<u>Landscaping</u>	2024				
Total Haul Trips	48				
Hauling	2	24	8	42	15
Vendor	0	24	8	6.9	15
Worker	16	24	8	14.7	0
<u>Paving</u>	2024				
Total Haul Trips	230				
Hauling	10	23	8	42	15
Vendor	8	23	8	6.9	15
Worker	20	23	8	14.7	0

21611 Perry Street Total On-Road Fuel Consumption

Source	Fuel Type	Total Fuel Use (gal)
Hauling	Diesel	11,115
Vendor	Diesel	594
Worker	Gasoline	18,942

Fuel Type	Total Fuel Use	Annual Fuel Use
Diesel	11,709	10,792
Gasoline	18,942	17,459

Duration of Construction
1.1 years

Construction Phase	Regional Emissions (gallons)			
	gal/mile	gal/min	gal/day	Total Gallons/yr

Demo & Site Preparation

Total Haul Trips

Hauling	0.17	2.63E-07	70	1,617
Vendor	0.14	7.56E-07	0	0
Worker	0.04	9.58E-07	9	212

Grading/Excavation

Total Haul Trips

Hauling	0.17	2.63E-07	211	4,430
Vendor	0.14	7.56E-07	0	0
Worker	0.04	9.58E-07	12	242

Drainage/Utilities/Trenching

Total Haul Trips

Hauling	0.17	2.63E-07	42	1,857
Vendor	0.14	7.56E-07	0	0
Worker	0.04	9.58E-07	23	1,013

Foundations/Concrete Pour

Total Haul Trips

Hauling	0.17	2.63E-07	28	675
Vendor	0.14	7.56E-07	17	417
Worker	0.04	9.58E-07	35	829

Building Construction

Total Haul Trips

Hauling	0.17	2.63E-07	0	0
Vendor	0.14	7.56E-07	0	0
Worker	0.04	9.58E-07	86	13,126

Building Construction

Total Haul Trips

Hauling	0.17	1.98E-07	0	0
Vendor	0.14	6.54E-07	0	0
Worker	0.04	8.66E-07	85	2,034

21611 Perry Street Total On-Road Fuel Consumption

Source	Fuel Type	Total Fuel Use (gal)
Hauling	Diesel	11,115
Vendor	Diesel	594
Worker	Gasoline	18,942

Fuel Type	Total Fuel Use	Annual Fuel Use
Diesel	11,709	10,792
Gasoline	18,942	17,459

Duration of Construction
1.1 years

Construction Phase	Regional Emissions (gallons)			
	gal/mile	gal/min	gal/day	Total Gallons/yr
<u>Architectural Coatings</u>				
Total Haul Trips				
Hauling	0.17	2.63E-07	0	0
Vendor	0.14	7.56E-07	0	0
Worker	0.04	9.58E-07	9	396
<u>Architectural Coatings</u>				
Total Haul Trips				
Hauling	0.17	1.98E-07	0	0
Vendor	0.14	6.54E-07	0	0
Worker	0.04	8.66E-07	9	217
<u>Landscaping</u>				
Total Haul Trips				
Hauling	0.17	2.63E-07	14	605
Vendor	0.14	7.56E-07	0	0
Worker	0.04	9.58E-07	9	396
<u>Landscaping</u>				
Total Haul Trips				
Hauling	0.17	1.98E-07	14	333
Vendor	0.14	6.54E-07	0	0
Worker	0.04	8.66E-07	9	217
<u>Paving</u>				
Total Haul Trips				
Hauling	0.17	1.98E-07	69	1,597
Vendor	0.14	6.54E-07	8	176
Worker	0.04	8.66E-07	11	260

**21611 Perry Street
Road Dust**

Paved Road Dust Emission Factors (Assumes No Precipitation)

Formula: $EF_{Dust,P} = (k (sL)^{0.91} \times (W)^{1.02})$

Where:

- EF_{Dust,P} = Paved Road Dust Emission Factor (having the same units as k)
- k = particle size multiplier
- sL = road surface silt loading (g/m²)
- W = average fleet vehicle weight (tons) (CARB uses 2.4 tons as a fleet average vehicle weight factor)

	Emission Factor (grams per VMT)	
	PM10	PM2.5
k	1.0000	0.1500
sL	0.0200	0.0200
W	2.4	2.4
P	46	46
N	365	365
EF _{Dust,P}	0.0672	0.0101

weighted average silt loading factor used

Table 5 of CARB Miscellaneous Process Methodology 7.9 for Los Angeles County

← use in off-model calculation as EF

Silt Loading Factor

Source: CARB, 2021.

Table 3: California Default Statewide and Local Silt Loading Values (Los Angeles County)

Silt Loadings (g/m ²)			
Freeway	Major	Collector	Local
0.015	0.013	0.013	0.135

Table 2: Roadway Travel Fractions (Los Angeles County)

2008 HPMS Travel Fractions			
0.44	0.44	0.07	0.05

Unpaved Road Dust Emission Factors (Assumes No Precipitation)

Formula: $EF_{Dust,U} = (k (s / 12)^1 \times (Sp / 30)^{0.5} / (M / 0.5)^{0.2}) - C$

Where:

- EF_{Dust,U} = Unpaved Road Dust Emission Factor (having the same units as k)
- k = particle size multiplier
- s = surface material silt content (%)
- Sp = mean vehicle speed (mph)
- M = surface material moisture content (%)
- C = Emission Factor for 1980s vehicle fleet exhaust, brake wear, and tire wear

	Emission Factor (grams per VMT)	
	PM10	PM2.5
k	816.47	81.65
s	4.3%	4.3%
Sp	15	15
M	0.5%	0.5%
C	0.00047	0.00036
EF _{Dust,U}	5.20E+00	5.19E-01

Sources:

SCAQMD, CalEEMod, Version 2011.1.

CARB, *Entrained Dust from Paved Road Travel: Emission Estimation Methodology Background Document*, (1997).

USEPA, AP-42, Fifth Edition, Volume I, Chapter 13.2.1 - Paved Roads, (2011).

PCR Services Corporation, 2013.

**21611 Perry Street
Operational Air Quality Assessment**

Localized Operational Emissions

Maximum Unmitigated Localized Operational Emissions (pounds per day)

Source	NO_x	CO	PM₁₀	PM_{2.5}
Area (Consumer Products, Landscaping)	0.0	0.0	0.0	0.0
Energy (Natural Gas)	0.1	0.1	0.0	0.0
Total Project On-Site Emissions	0	0	0.0	0.0
SCAQMD Numeric Indicators	82	842	2.0	1.0
Exceeds Thresholds?	No	No	No	No

Localized significance thresholds from SCAQMD Look-Up tables, 5 acre site; SRA 4 (Carson) area; sensitive receptors 25 m away

21611 Perry Street

Greenhouse Gas Emissions Summary

Project Operations Summary (Full Buildout Year 2024)	
Category	MTCO ₂ e/yr
Mobile	640
<i>From CalEEMod:</i>	
Area	0
Energy	77
Waste	62
Water	69
<i>External spreadsheet calcs:</i>	
EV Charging	1
<i>Construction Emissions</i>	
	2023 685
	2024 120
	Construction Total 805
Construction Amortized (30 years)	27
Project Subtotal	876
Existing	-
Project Net Total GHG Emissions	876

MTCO₂e=Metric Tons Carbon Dioxide equivalents

21611 Perry Street
 Air Quality and GHG Assessment
 Operational Mobile Emissions

Year	Weekday Daily VMT	Criteria Pollutant Emission Factors (lb/mile)						GHG Emissions (metric tons/mile)				Criteria Pollutant Emissions (pounds/day)						GHG Emissions (metric tons/year)											
		ROG	NOx	CO	SOx	PM10 Road Dust	PM10	PM10 Total	PM2_5 Road Dust	PM2_5	PM2.5 Total	CO2	CH4	N2O	CO2e	ROG	NOx	CO	SOx	PM10 Road Dust	PM10	PM10 Total	PM2_5 Road Dust	PM2_5	PM2.5 Total	CO2	CH4	N2O	CO2e
2024	4,466	3.26E-04	4.55E-04	3.09E-03	8.24E-06	1.48E-04	5.67E-05	2.05E-04	2.22E-05	2.15E-05	4.37E-05	3.86E-04	2.00E-08	2.04E-08	3.93E-04	1.46	2.03	13.80	0.04	0.66	0.25	0.92	0.10	0.10	0.20	629.60	0.03	0.03	640.34

Source: Fehr and Peers MOU