Table 1. Summary of Energy Use During Construction

Fuel Type	Quantity
Diesel	
On-Site Construction Equipment	9,403 Gallons
Off-Site Motor Vehicles	8,872 Gallons
Total	18,275 Gallons
Gasoline	
On-Site Construction Equipment	0 Gallons
Off-Site Motor Vehicles	1,454 Gallons
Total	1,454 Gallons
Electricity	8,635.1 kWh

Table 2. Summary of Annual Energy Use During Operation

Source	Units	Buildout	Existing
Electricity	kWh/yr		
Elementary School	kWh/yr	237,567	
Parking Lot	kWh/yr	4,421	
Parking Lot	kWh/yr	0	12,250
Unrefrigerated Warehous	kWh/yr		42,480
Total Electricty	kWh/yr	241,988	54,730
Natural Gas			
Elementary School	kBTU/yr	417,348	
Parking Lot	kBTU/yr	0	
Parking Lot	kBTU/yr		-
Unrefrigerated Warehous	kBTU/yr		36,540
Total	kBTU/yr	417,348	36,540
Transportation/On-Site Sources			
Diesel	gallons	12	-
Gasoline	gallons	66	-
Total	gallons	78	

Table 3. Water by Land Use "Regulatory Compliance"

		Project			Existing		
Land Use	**Units**	**Indoor/Outdoor Use**	**Indoor Use**	**Outdoor Use**	**Indoor/Outdoor Use**	**Indoor Use**	**Outdoor Use**
Buildout	Mgal	1.16364/2.9922	1.16364	2.9922	4.1625/0	4.1625	0

Water and Wastewater Electricity Intensity (kWh/gallon)

Supply Water	0.009727
Treat Water	0.000111
Distribute Water	0.001272
Wastewater Treatment	0.001911

Source: CalEEMod User's Guide, Appendix D, Table 9.2 Los Angeles County - Los Angeles-South Coast

Indoor Water Factor	0.013021	kWh/gallon (supply, treat, distribute, wastewater treatment)
Outdoor Water Factor	0.01111	kWh/gallon (supply, treat, and distribute)

Notes:

Electricity and Natural Gas for the Proposed Project is total operational usage. Electricity, natural gas, and mobile usage was calculated from CalEEMod in ***Appendix F*** *of the EIR. Indoor water factor used for entire Project Site for conservative analysis.*

Table 4. Off-Road Equipment Fuel Usage During Construction

Phase Name	Off-road Equipment Type	Amount	Hours per Day	Horsepower	Load Factor	Number of Days	Diesel Fuel Usage (Gallons per Project)
Project Site							
Demolition	Concrete/Industrial Saws	1	8	81	0.73	15	355
Demolition	Tractors/Loaders/Backhoes	2	6	97	0.37	15	323
Demolition	Rubber Tired Dozers	1	8	247	0.4	15	593
Site Preparation	Graders	1	8	187	0.41	10	307
Site Preparation	Tractors/Loaders/Backhoes	1	8	97	0.37	10	144
Grading	Concrete/Industrial Saws	1	8	81	0.73	15	355
Grading	Rubber Tired Dozers	1	1	247	0.4	15	74
Grading	Tractors/Loaders/Backhoes	2	6	97	0.37	15	323
Building Construction	Cranes	1	4	231	0.29	120	1,608
Building Construction	Forklifts	2	6	89	0.2	120	1,282
Building Construction	Tractors/Loaders/Backhoes	2	8	97	0.37	120	3,445
Paving	Cement and Mortar Mixers	4	6	9	0.56	10	60
Paving	Pavers	1	7	130	0.42	10	191
Paving	Rollers	1	7	80	0.38	10	106
Paving	Tractors/Loaders/Backhoes	1	7	97	0.37	10	126
Architectural Coating	Air Compressors	1	6	78	0.48	10	112
Sub-Total							*9,403*

Notes:

Equipment assumptions from CalEEMod.

Fuel usage estimate of 0.05 gallons per horsepower-hour is from the SCAQMD CEQA Air Quality Handbook, Table A9-3 E.

Table 5. On-Road Vehicle Fuel Usage During Construction

		Daily Trips		Total			Trip Length (Miles)			Total Length (Miles)			Fuel Consumption (Gallons)	
Long Beach River Park	**Days**	**Worker**	**Vendor**	**Worker Trips**	**Vendor Trips**	**Haul Trips**	**Worker**	**Vendor**	**Hauling**	**Worker**	**Vendor**	**Hauling**	**Gasoline**	**Diesel**
Demolition	15	10	0	150	0	2,183	14.7	6.9	20	2,205	0	43,660	84	6,957
Site Preparation	10	5	0	50	0	0	14.7	6.9	20	735	0	0	28	20
Grading	15	10	0	150	0	0	14.7	6.9	20	2,205	0	0	84	61
Building Construction	120	17	7	2,040	840	0	14.7	6.9	20	29,988	5,796	0	1,141	1,747
Paving	10	18	0	180	0	0	14.7	6.9	20	2,646	0	0	101	73
Architectural Coating	10	3	0	30	0	0	14.7	6.9	20	441	0	0	17	12
Total	**180**	**63**	**7**	**2,600**	**840**	**2,183**	**n/a**	**n/a**	**n/a**	**38,220**	**5,796**	**43,660**	**1,454**	**8,872**

Fuel Efficiency	Gas	DSL
Workers	26.28	36.05
Vendor/Haul Trucks	0	6.33

Total	1,454	8,872

Notes:

Fuel efficiency calculated in ***Table 10: EMFAC2017 Results - Construction.***

Table 6. Water Usage for Control of Fugitive Dust During Construction

Phase Name	Square Feet	Acres	Gallons for Project	Electricity (kWh)
Project	53,353	1.2	**887,747**	**8,635.1**

Notes:

Total disturbed acreage for demolition Project Site area. Total disturbed acreage for site preparation through
architectural coating per CalEEMod for proposed Project.

Construction Schedule

5 days per week
20 days per month
240 days per year

Water Usage

3,020 gallons per acre per day

Source: Air & Waste Management Association, Air Pollution Engineering Manual, 1992 Edition

Supply Water Electricity Intensity

0.009727 kWh/gallons (CalEEMod default for South Coast Air Basin)
43,560.00 sf to acres

Table 10. EMFAC2017 Results - Construction

Vehicle Class	Fuel	VMT (miles per day)	Fuel (1,000 gal per day)	Fuel Efficiency (miles per gallon)	Fuel	VMT (miles per day)	Fuel (1,000 gal per day)	Fuel Efficiency (miles per gallon)
LDA	GAS	155,194,410	5,389.41	28.80	DSL	1,254,452	27.91	44.95
LDT1	GAS	16,649,906	669.90	24.85	DSL	7,980	0.37	21.40
LDT2	GAS	52,129,905	2,298.92	22.68	DSL	323,322	9.82	32.92
			Average (LDA, LDT1, LDT2)	**26.28**				**36.05**
T7 Tractor Construction	DSL	242,486	38.30	6.33				

Construction Worker Fleet Mix

LDA	50%
LDT1	25%
LDT2	25%

Vendor and Delivery/Haul Truck Fleet Mix

HHDT	100%

EMFAC2014 (v1.0.7) Emissions Inventory
Region Type: Air District
Region: Antelope Valley AQMD
Calendar Year: 2021
Season: Annual
Vehicle Classification: EMFAC2011 Categories
Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	CalYr	VehClass	MdlYr	Speed	Fuel	Population	VMT	Trips	Fuel_Consumption
Los Angeles	2020	LDA	Aggregate	Aggregate	Gasoline	3953775.191	155194409.6	18642464.13	5389.412229
Los Angeles	2020	LDA	Aggregate	Aggregate	Diesel	31076.31513	1254451.721	146424.4239	27.90889277
Los Angeles	2020	LDA	Aggregate	Aggregate	Electricity	57356.66823	2261366.873	287682.1126	0
Los Angeles	2020	LDT1	Aggregate	Aggregate	Gasoline	437139.5609	16649906.4	2009946.714	669.9003362
Los Angeles	2020	LDT1	Aggregate	Aggregate	Diesel	318.883827	7980.175189	1138.715481	0.372877955
Los Angeles	2020	LDT1	Aggregate	Aggregate	Electricity	1699.39713	63017.51025	8323.15927	0
Los Angeles	2020	LDT2	Aggregate	Aggregate	Gasoline	1346078.916	52129905.23	6303493.957	2298.924448
Los Angeles	2020	LDT2	Aggregate	Aggregate	Diesel	7213.217576	323321.6928	35805.94594	9.82252833
Los Angeles	2020	LDT2	Aggregate	Aggregate	Electricity	8126.151697	276685.8029	41262.61742	0
Los Angeles	2020	T7 tractor constr	Aggregate	Aggregate	Diesel	3450.515128	242486.3532	15599.64474	38.30167827
									8434.642991
									8434642.991

Gas	8358.237013	8358237.013	3050756510
Diesel	38.10429905	38104.29905	13908069.15
Electricity	0	0	0

3,078,644,691.59

Table 7. On road Vehicles - Operational

Scenario	Annual VMT	Fuel Consumption (gal)		
		Gasoline	Diesel	Total
Existing	0	0	0	0
Unmitigated	2,015	66	12	78
Mitigated	2,015	66	12	78

Table 8. Fuel Consumption Summary

Fuel	Fuel Efficiency (MPG)	%Fleet	%Existing
Gasoline	28.6	93.0%	26.0%
Diesel	11.3	6.8%	70.00%
Natural Gas	3.4	0.2%	0.04%

Notes:

Percent fleet based on VMT from EMFAC2017 as shown in ***Table 9: EMFAC2017 Emissions Inventory-Operations***

Annual VMT obtained from the CalEEMod Output files in **Appendix F**.

Fuel efficiency based on calculations in ***Table 9: EMFAC2017 Emissions Inventory-Operations,*** *from EMFAC2017.*

Table 9. EMFAC2017 Emissions Inventory - Operations

Fuel	VMT (miles/day)	Fuel Consumption (1,000 gal/day)	Fuel Efficiency (miles per gallon)	Fuel Percentage
GAS	272,112,794	9,520	28.6	93.0
DSL	19,917,968	1,763	11.3	6.8
Natural Gas	579,210	169	3.4	0.2

Existing VMT	Fuel Consumption	Fuel Efficiency	Fuel Percentage

Note: Fuel percentage based on VMT.
Fuel efficiency calculated using fuel consumption and VMT from EMFAC2017.

Buildout

EMFAC2017 (v1.0.2) Emission Rates
Region Type: County
Region: Los Angeles
Calendar Year: 2025
Season: Annual
Vehicle Classification: EMFAC2011 Categories
Units: miles/day for VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HTSK and RUNLS, g/vehicle/day for IDLEX, RESTL and DIURN

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	VMT	Trips	Fuel_Consumption
Los Angeles	2025	All Other Buses	Aggregate	Aggregate	Diesel	2678.816498	159154.1479	22502.059	14.6327797
Los Angeles	2025	LDA	Aggregate	Aggregate	Diesel	41132.67749	1572343.418	195633.25	30.7876528
Los Angeles	2025	LDT1	Aggregate	Aggregate	Diesel	223.748267	5399.82604	792.71916	0.23744857
Los Angeles	2025	LDT2	Aggregate	Aggregate	Diesel	11454.94632	454896.6978	55966.206	12.0832482
Los Angeles	2025	LHD1	Aggregate	Aggregate	Diesel	80120.90945	3231295.375	1007820.2	141.997581
Los Angeles	2025	LHD2	Aggregate	Aggregate	Diesel	32519.39796	1260065.666	409053.12	61.5284537
Los Angeles	2025	MDV	Aggregate	Aggregate	Diesel	25052.84651	932960.3015	122006.56	32.03545
Los Angeles	2025	MH	Aggregate	Aggregate	Diesel	7015.87508	70923.28072	701.58751	6.4612399
Los Angeles	2025	Motor Coach	Aggregate	Aggregate	Diesel	738.5533149	97957.19978	10782.878	14.2125774
Los Angeles	2025	PTO	Aggregate	Aggregate	Diesel	0	81514.91277	0	15.4460141
Los Angeles	2025	SBUS	Aggregate	Aggregate	Diesel	3937.293402	124251.5631	45435.82	15.7960356
Los Angeles	2025	T6 Ag	Aggregate	Aggregate	Diesel	12.35616239	86.82205479	54.367115	0.01005191
Los Angeles	2025	T6 CAIRP heavy	Aggregate	Aggregate	Diesel	377.732361	70743.85631	5514.8925	5.62874154
Los Angeles	2025	T6 CAIRP small	Aggregate	Aggregate	Diesel	202.0980061	10022.84258	2950.6309	0.86339202
Los Angeles	2025	T6 instate construct	Aggregate	Aggregate	Diesel	2724.557203	173213.2788	12317.617	15.8834161
Los Angeles	2025	T6 instate construct	Aggregate	Aggregate	Diesel	8576.350451	459421.6808	38773.347	41.5274137
Los Angeles	2025	T6 instate heavy	Aggregate	Aggregate	Diesel	12119.05704	1581912.285	139852.24	133.106169
Los Angeles	2025	T6 instate small	Aggregate	Aggregate	Diesel	42208.91084	2127807.836	487084.98	190.786373
Los Angeles	2025	T6 OOS heavy	Aggregate	Aggregate	Diesel	218.9366946	41071.56881	3196.4757	3.26612994

Los Angeles	2025	T6 OOS small	Aggregate	Aggregate	Diesel	115.536635	5694.54442	1686.8349	0.49122409
Los Angeles	2025	T6 Public	Aggregate	Aggregate	Diesel	4644.127536	73206.82112	14087.187	8.47264737
Los Angeles	2025	T6 utility	Aggregate	Aggregate	Diesel	1054.221188	17551.94975	12123.544	1.70616589
Los Angeles	2025	T7 Ag	Aggregate	Aggregate	Diesel	6.430609971	58.31575143	28.294684	0.01084804
Los Angeles	2025	T7 CAIRP	Aggregate	Aggregate	Diesel	6502.423394	1193959.187	94935.382	160.155457
Los Angeles	2025	T7 CAIRP constructi	Aggregate	Aggregate	Diesel	681.0645163	124420.6028	3079.0662	15.8315117
Los Angeles	2025	T7 NNOOS	Aggregate	Aggregate	Diesel	7645.259291	1455446.362	111620.79	183.367221
Los Angeles	2025	T7 NOOS	Aggregate	Aggregate	Diesel	2590.332288	469125.1862	37818.851	64.6307165
Los Angeles	2025	T7 POLA	Aggregate	Aggregate	Diesel	8873.472206	1255112.588	67438.389	192.971128
Los Angeles	2025	T7 Public	Aggregate	Aggregate	Diesel	5684.536295	115166.8068	17243.093	18.8955202
Los Angeles	2025	T7 Single	Aggregate	Aggregate	Diesel	6200.38254	410525.3942	71551.555	58.091969
Los Angeles	2025	T7 single constructi	Aggregate	Aggregate	Diesel	4411.238233	308664.6309	19943.037	42.3909918
Los Angeles	2025	T7 SWCV	Aggregate	Aggregate	Diesel	1049.374979	42874.61643	4092.5624	21.1102538
Los Angeles	2025	T7 tractor	Aggregate	Aggregate	Diesel	13671.79752	1724004.223	173631.83	221.513749
Los Angeles	2025	T7 tractor construct	Aggregate	Aggregate	Diesel	3751.858331	254621.1454	16962.006	35.2481202
Los Angeles	2025	T7 utility	Aggregate	Aggregate	Diesel	418.2192399	8483.677314	4809.5213	1.31134217
Los Angeles	2025	UBUS	Aggregate	Aggregate	Diesel	27.0834	4008.967815	108.3336	0.59035316
Los Angeles	2025	LDA	Aggregate	Aggregate	Gasoli	4151576.504	152637425.7	19580204	4654.48913
Los Angeles	2025	LDT1	Aggregate	Aggregate	Gasoli	508456.9205	18300773.96	2357491	650.834891
Los Angeles	2025	LDT2	Aggregate	Aggregate	Gasoli	1472519.252	53873096.58	6921855	2001.79054
Los Angeles	2025	LHD1	Aggregate	Aggregate	Gasoli	107048.0666	3808594.243	1594856.7	351.350158
Los Angeles	2025	LHD2	Aggregate	Aggregate	Gasoli	18518.50113	636032.3185	275898.07	67.4032825
Los Angeles	2025	MCY	Aggregate	Aggregate	Gasoli	201100.6436	1358664.38	402201.29	38.2494769
Los Angeles	2025	MDV	Aggregate	Aggregate	Gasoli	970308.0893	33072241.65	4510960.3	1517.41872
Los Angeles	2025	MH	Aggregate	Aggregate	Gasoli	19648.99652	198231.2898	1965.6856	36.8468593
Los Angeles	2025	OBUS	Aggregate	Aggregate	Gasoli	4007.288261	157671.0443	80177.824	30.1736147
Los Angeles	2025	SBUS	Aggregate	Aggregate	Gasoli	1705.908661	67040.07029	6823.6346	7.05648763
Los Angeles	2025	T6TS	Aggregate	Aggregate	Gasoli	15094.17686	826708.7629	302004.29	156.132997
Los Angeles	2025	T7IS	Aggregate	Aggregate	Gasoli	51.85848379	6418.047994	1037.5845	1.4524407
Los Angeles	2025	UBUS	Aggregate	Aggregate	Gasoli	472.2997409	34175.77768	1889.199	7.09426089
Los Angeles	2025	LDA	Aggregate	Aggregate	Electri	125684.8284	5419551.819	624829.14	0
Los Angeles	2025	LDT1	Aggregate	Aggregate	Electri	7337.070983	324546.0734	36745.179	0
Los Angeles	2025	LDT2	Aggregate	Aggregate	Electri	27583.4031	845562.8281	138418.86	0
Los Angeles	2025	MDV	Aggregate	Aggregate	Electri	17327.76827	544841.9439	87685.876	0
Los Angeles	2025	UBUS	Aggregate	Aggregate	Electri	14	1217.553685	56	0
Los Angeles	2025	T7 SWCV	Aggregate	Aggregate	Natur	3130.988754	127531.2119	12210.856	54.2764743
Los Angeles	2025	UBUS	Aggregate	Aggregate	Natur	4262.322456	451679.2633	17049.29	114.892422

	VMT Sum	Fuel Sum	Fuel Sum/Year
Diesel	19917967.58	1763.079386	**643,523,976**
Gas	272112794	9520.292846	**3,474,906,889**
Natural Gas	579210.4752	169.1688965	**61,746,647**
			4,180,177,512