

APPENDIX F

Construction Fuel Consumption

On-Site Diesel ¹	MTCO ₂ e	Gallons of Fuel ⁴	Construction Year 2026 County Fuel	Percent
Demolition	558	54,936		
Site Preparation/Grading	3,959	390,069		
Building Construction	7,755	764,010		
Paving	1,456	143,461		
Architectural Coating	104	10,276		
Total	13,832	1,362,752	281,636,095	0.4839%

Off-Site Diesel ¹	MTCO ₂ e	Gallons of Fuel ⁴	Construction Year 2026 County Fuel	Percent
Demolition	1,315	129,507		
Site Preparation/Grading	10,998	1,083,527		
Building Construction	4,008	394,877		
Paving	664	65,429		
Architectural Coating	0	0		
Total	16,984	1,673,340	281,636,095	0.5941%

Off-Site Gasoline ²	MTCO ₂ e	Gallons of Fuel ⁴	Construction Year 2026 County Fuel	Percent
Demolition	20	2,284		
Site Preparation/Grading	95	10,808		
Building Construction	3,017	342,427		
Paving	69	7,781		
Architectural Coating	573	65,069		
Total	3,774	428,369	833,255,821	0.0514%

Total Diesel Fuel		3,036,092	281,636,095	1.0780%
Total Gasoline Fuel		428,369	833,255,821	0.0514%
Total Construction Fuel	34,590	3,464,461		

Construction Phase ³	Demolition			Site Preparation			Grading		
	On-Site Diesel (Off-Road)	Off-Site Diesel (Hauling/Vendor)	Off-Site Gas (Worker)	On-Site Diesel (Off-Road)	Off-Site Diesel (Hauling/Vendor)	Off-Site Gas (Worker)	On-Site Diesel (Off-Road)	Off-Site Diesel (Hauling/Vendor)	Off-Site Gas (Worker)
Phase 1A - 2023	187	605	7	298	0	14	891	2140	17
Phase 1B - 2024	188	358	7	333	0	14	905	3687	17
Phase 2 - 2025	147	301	5	235	0	10	1215	5171	22
Commercial - 2026	36	51	1	0	0	0	82	0	2
Total	558	1,315	20	866	0	38	3,093	10,998	57

Construction Phase ³	Building Construction			Paving			Architectural Coating		
	On-Site Diesel (Off-Road)	Off-Site Diesel (Hauling/Vendor)	Off-Site Gas (Worker)	On-Site Diesel (Off-Road)	Off-Site Diesel (Hauling/Vendor)	Off-Site Gas (Worker)	On-Site Diesel (Off-Road)	Off-Site Diesel (Hauling/Vendor)	Off-Site Gas (Worker)
Phase 1A - 2023	3227	1872	1419	455	336	23	33	0	274
Phase 1B - 2024	2195	1217	943	482	183	22	33	0	182
Phase 2 - 2025	2170	815	550	499	146	22	34	0	111
Commercial - 2026	163	104	105	20	0	1	5	0	6
Total	7,755	4,008	3,017	1,456	664	69	104	0	573

Notes:

- 1 Fuel used for off-road, hauling, and vendor trips assumed to be diesel.
- 2 Fuel used for worker trips assumed to be gasoline.
- 3 MTCO₂e rates from CalEEMod (3.0 Construction Details).
- 4 For CO₂e emissions, see Chapter 13 (page 94); Conversion Ratios: Climate Registry, General Reporting Protocol, 2016.

Climate Registry Conversion Ratios:

- Gasoline: 10.15 kg CO₂ per gallon / 1,000 kg per metric ton

Phase 1A Construction Water Energy

Daily Soil Disturbance ¹	5	acres
Days of Soil Disturbance ²	172	days
Water Concentration ³	3,020	gallons/acre
Water Energy Intensity ⁴	11,110	kWh/MG
Total Construction Water	2.60	million gallons
Construction Water Energy	28,855	kWh
	0.0289	GWh

Phase 1B Construction Water Energy

Daily Soil Disturbance ¹	5	acres
Days of Soil Disturbance ²	174	days
Water Concentration ³	3,020	gallons/acre
Water Energy Intensity ⁴	11,110	kWh/MG
Total Construction Water	2.63	million gallons
Construction Water Energy	29,190	kWh
	0.0292	GWh

Phase 2 Construction Water Energy

Daily Soil Disturbance ¹	5	acres
Days of Soil Disturbance ²	172	days
Water Concentration ³	3,020	gallons/acre
Water Energy Intensity ⁴	11,110	kWh/MG
Total Construction Water	2.60	million gallons
Construction Water Energy	28,855	kWh
	0.0289	GWh

Commercial Construction Water Energy

Daily Soil Disturbance ¹	5	acres
Days of Soil Disturbance ²	30	days
Water Concentration ³	3,020	gallons/acre
Water Energy Intensity ⁴	11,110	kWh/MG
Total Construction Water	0.45	million gallons
Construction Water Energy	5,033	kWh
	0.0050	GWh

Notes:

- 1 Total daily acres disturbed from offroad equipment per CalEEMod (3.0 Construction Detail) and maximum SCAQMD LST values for soil-disturbing equipment.
- 2 Number of days of construction (site prep and grading phases) with soil-disturbing equipment per CalEEMod (3.0 Construction Detail).
- 3 Water application rate per Air and Waste Management Association's Air Pollution Engineering Manual.
- 4 Water energy intensity factor for county subarea per CalEEMod User Guide, Appendix D, page D-343.

Project Buildout Operational Fuel

Vehicle Type	Annual VMT ¹	MPG ²	Annual Fuel (Gallons)	Fuel Type	San Bernardino County Gallons ³	San Bernardino County Percent	
Passenger Cars	78,355,517	21.6	3,627,570	Gas	822,283,208	0.4412%	5.8459%
Light/Medium Trucks and Vans	76,254,371	17.2	4,433,394	Diesel	281,227,313	1.5764%	
Heavy Trucks/Other	73,241,145	6.1	12,006,745	Diesel	281,227,313	4.2694%	
Total	227,851,033		16,440,139		1,103,510,521		

Phase 1A Operational Fuel

Vehicle Type	Annual VMT ¹	MPG ²	Annual Fuel (Gallons)	Fuel Type	San Bernardino County Gallons ³	San Bernardino County Percent	
Passenger Cars	29,518,574	21.6	1,366,601	Gas	822,283,208	0.1662%	2.9197%
Light/Medium Trucks and Vans	38,762,546	17.2	2,253,636	Diesel	281,227,313	0.8014%	
Heavy Trucks/Other	36,339,105	6.1	5,957,230	Diesel	281,227,313	2.1183%	
Total	104,620,225		9,577,467		1,103,510,521		

8,210,867

Phase 1B Operational Fuel

Vehicle Type	Annual VMT ¹	MPG ²	Annual Fuel (Gallons)	Fuel Type	San Bernardino County Gallons ³	San Bernardino County Percent	
Passenger Cars	23,740,625	21.6	1,099,103	Gas	822,283,208	0.1337%	2.1862%
Light/Medium Trucks and Vans	30,922,084	17.2	1,797,796	Diesel	281,227,313	0.6393%	
Heavy Trucks/Other	26,537,052	6.1	4,350,336	Diesel	281,227,313	1.5469%	
Total	81,199,761		7,247,235		1,103,510,521		

6,148,132

Phase 2 Operational Fuel

Vehicle Type	Annual VMT ¹	MPG ²	Annual Fuel (Gallons)	Fuel Type	San Bernardino County Gallons ³	San Bernardino County Percent	
Passenger Cars	7,785,257	21.6	360,429	Gas	822,283,208	0.0438%	0.7022%
Light/Medium Trucks and Vans	5,648,710	17.2	328,413	Diesel	281,227,313	0.1168%	
Heavy Trucks/Other	10,042,151	6.1	1,646,254	Diesel	281,227,313	0.5854%	
Total	23,476,118		2,335,096		1,103,510,521		

1,974,668

Commercial Operational Fuel

Vehicle Type	Percent ⁴	Annual VMT ¹	MPG ²	Annual Fuel (Gallons)	San Bernardino County Gallons ³	San Bernardino County Percent	Riverside Percent	
Passenger Cars	0.93	17,311,061	21.6	801,438	Gas	822,283,208	0.0975%	0.0379%
Light/Medium Trucks	0.05	921,031	17.2	53,548	Diesel	281,227,313	0.0190%	
Heavy Trucks/Other	0.02	322,838	6.1	52,924	Diesel	281,227,313	0.0188%	
Total	1.00	18,554,948		106,472		1,103,510,521		

Project Buildout Operational Water Energy

Mitigated Indoor	1,215.4	million gallons
Indoor Energy Intensity Factor ¹	13,021	kWh/MG
Mitigated Outdoor	12	million gallons
Outdoor Energy Intensity Factor ²	11,110	kWh/MG
Operational Water Energy	15,959,043	kWh

Land Use ³	Unmitigated (MG)		Mitigated (MG)	
	Indoor	Outdoor	Indoor	Outdoor
Office	21	13	17	12
Drop Lots	0	0	0	0
Parking	0	0	0	0
Refrigerated Warehouse	116	0	92	0
Unrefrigerated Warehouse	1383	0	1107	0
Strip Mall	19	12	15	11
Total Operational Water	1540	13	1215	12

Phase 1A Operational Water Energy

Mitigated Indoor	580.0	million gallons
Indoor Energy Intensity Factor ¹	13,021	kWh/MG
Mitigated Outdoor	5	million gallons
Outdoor Energy Intensity Factor ²	11,110	kWh/MG
Operational Water Energy	7,607,730	kWh

Land Use ³	Unmitigated (MG)		Mitigated (MG)	
	Indoor	Outdoor	Indoor	Outdoor
Office	9	5	7	5
Drop Lots	0	0	0	0
Parking	0	0	0	0
Refrigerated Warehouse	29	0	23	0
Unrefrigerated Warehouse	688	0	550	0
Total Operational Water	725	5	580	5

Phase 1B Operational Water Energy

Mitigated Indoor	349.6	million gallons
Indoor Energy Intensity Factor ¹	13,021	kWh/MG
Mitigated Outdoor	4	million gallons
Outdoor Energy Intensity Factor ²	11,110	kWh/MG
Operational Water Energy	4,596,582	kWh

Land Use ³	Unmitigated (MG)		Mitigated (MG)	
	Indoor	Outdoor	Indoor	Outdoor
Office	7	4	6	4
Drop Lots	0	0	0	0
Parking	0	0	0	0
Refrigerated Warehouse	29	0	23	0
Unrefrigerated Warehouse	401	0	321	0
Total Operational Water	437	4	350	4

Phase 2 Operational Water Energy

Mitigated Indoor	285.8	million gallons
Indoor Energy Intensity Factor ¹	13,021	kWh/MG
Mitigated Outdoor	3	million gallons
Outdoor Energy Intensity Factor ²	11,110	kWh/MG
Operational Water Energy	3,754,732	kWh

Land Use ³	Unmitigated (MG)		Mitigated (MG)	
	Indoor	Outdoor	Indoor	Outdoor
Office	5	3	4	3
Drop Lots	0	0	0	0
Parking	0	0	0	0
Refrigerated Warehouse	58	0	46	0
Unrefrigerated Warehouse	295	0	236	0
Total Operational Water	358	3	286	3

Commercial Operational Water Energy

Mitigated Indoor	15.4	million gallons
Indoor Energy Intensity Factor ¹	13,021	kWh/MG
Mitigated Outdoor	63	million gallons
Outdoor Energy Intensity Factor ²	11,110	kWh/MG
Operational Water Energy	901,564	kWh

Land Use ³	Unmitigated (MG)		Mitigated (MG)	
	Indoor	Outdoor	Indoor	Outdoor
Parking	0	0	0	52
Strip Mall	19	12	15	11
Total Operational Water	19	12	15	63

Notes:

¹ Indoor water energy intensity factor for county subarea per CalEEMod User Guide, Appendix D, page D-343. Factor includes supply, treatment, distribution, and wastewater.

² Outdoor water energy intensity factor for county subarea per CalEEMod User Guide, Appendix D, page D-343. Factor includes supply, treatment, and distribution.

³ Operational water use values per CalEEMod (7.2 Water by Land Use).

Project Buildout Electricity/Natural Gas Energy

	Mitigated Project Annual Energy	San Bernardino County Annual Energy ³	Percentage Increase
Electricity (kWh/yr)	34,548,107	15,968,515,536	0.2164%
Natural Gas (kBtu/yr)	33,849,258	52,723,642,800	0.0642%
Natural Gas (therms/yr)	338,493	527,236,428	0.0642%

Land Use	Electricity ¹ (kWh/yr)		Natural Gas ² (kBtu/yr)	
	Unmitigated	Mitigated	Unmitigated	Mitigated
Office	1,102,800	834,000	411,600	267,540
Drop Lots	0	0	0	0
Parking	2,078,335	1,350,917	0	0
Refrigerated Warehouse	19,650,000	19,339,000	25,865,000	25,301,560
Unrefrigerated Warehouse	13,879,430	10,738,600	12,024,840	7,878,970
Strip Mall	3,172,910	2,285,590	574,992	401,188
Total Energy	39,883,475	34,548,107	38,876,432	33,849,258

Phase 1A Electricity/Natural Gas Energy

	Mitigated Project Annual Energy	San Bernardino County Annual Energy ³	Percentage Increase
Electricity (kWh/yr)	11,121,278	15,968,515,536	0.0696%
Natural Gas (kBtu/yr)	10,352,785	52,723,642,800	0.0196%
Natural Gas (therms/yr)	103,528	527,236,428	0.0196%

Land Use	Electricity ¹ (kWh/yr)		Natural Gas ² (kBtu/yr)	
	Unmitigated	Mitigated	Unmitigated	Mitigated
Office	459,500	347,500	171,500	111,475
Drop Lots	0	0	0	0
Parking	925,890	601,828	0	0
Refrigerated Warehouse	4,980,000	4,834,750	6,466,250	6,325,380
Unrefrigerated Warehouse	6,898,220	5,337,200	5,976,470	3,915,930
Total Energy	13,263,610	11,121,278	12,614,220	10,352,785

Phase 1B Electricity/Natural Gas Energy

	Mitigated Project Annual Energy	San Bernardino County Annual Energy ³	Percentage Increase
Electricity (kWh/yr)	8,588,925	15,968,515,536	0.0538%
Natural Gas (kBtu/yr)	8,699,950	52,723,642,800	0.0165%
Natural Gas (therms/yr)	87,000	527,236,428	0.0165%

Land Use	Electricity ¹ (kWh/yr)		Natural Gas ² (kBtu/yr)	
	Unmitigated	Mitigated	Unmitigated	Mitigated
Office	367,600	278,000	137,200	89,180
Drop Lots	0	0	0	0
Parking	555,869	361,315	0	0
Refrigerated Warehouse	4,980,000	4,834,750	6,466,250	6,325,380
Unrefrigerated Warehouse	4,025,900	3,114,860	3,487,950	2,285,390
Total Energy	9,929,369	8,588,925	10,091,400	8,699,950

Phase 2 Electricity/Natural Gas Energy

	Mitigated Project Annual Energy	San Bernardino County Annual Energy ³	Percentage Increase
Electricity (kWh/yr)	12,492,855	15,968,515,536	0.0782%
Natural Gas (kBtu/yr)	14,395,335	52,723,642,800	0.0273%
Natural Gas (therms/yr)	143,953	527,236,428	0.0273%

Land Use	Electricity ¹ (kWh/yr)		Natural Gas ² (kBtu/yr)	
	Unmitigated	Mitigated	Unmitigated	Mitigated
Office	275,700	208,500	102,900	66,885
Drop Lots	0	0	0	0
Parking	505,100	328,315	0	0
Refrigerated Warehouse	9,690,000	9,669,500	12,932,500	12,650,800
Unrefrigerated Warehouse	2,955,310	2,286,540	2,560,420	1,677,650
Total Energy	13,426,110	12,492,855	15,595,820	14,395,335

Commercial Electricity/Natural Gas Energy

	Mitigated Project Annual Energy	San Bernardino County Annual Energy ³	Percentage Increase
Electricity (kWh/yr)	2,345,049	15,968,515,536	0.0147%
Natural Gas (kBtu/yr)	401,188	52,723,642,800	0.0008%
Natural Gas (therms/yr)	4,012	527,236,428	0.0008%

Land Use	Electricity ¹ (kWh/yr)		Natural Gas ² (kBtu/yr)	
	Unmitigated	Mitigated	Unmitigated	Mitigated
Parking	91,476	59,459	0	0
Strip Mall	3,172,910	2,285,590	574,992	401,188
Total Energy	3,264,386	2,345,049	574,992	401,188

Notes:

¹ Electricity use per CalEEMod (5.3 Energy by Land Use).

² Natural Gas use per CalEEMod (5.2 Natural Gas by Land Use).

³ County total energy values from California Energy Commission energy reports available through ecdms.energy.ca.gov.