

APPENDIX B4
ENERGY CALCULATIONS

Construction Fuel

On-Site Diesel¹	MTCO ₂ e	Gallons of Fuel ⁴
Demolition	101	9,990
Site Preparation/Grading	368	36,286
Building Construction	728	71,724
Paving	58	5,695
Architectural Coating	1	120
Total	1,257	123,815
Off-Site Diesel¹		
Demolition	44	4,374
Site Preparation/Grading	16	1,616
Building Construction	1,249	123,054
Paving	0	0
Architectural Coating	0	0
Total	1,310	129,044
Off-Site Gasoline²		
Demolition	6	687
Site Preparation/Grading	15	1,745
Building Construction	1,684	191,146
Paving	8	872
Architectural Coating	10	1,115
Total	1,723	195,564
Total Diesel Fuel		252,859
Total Gasoline Fuel		195,564
Total Construction Fuel	4,289	448,423

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 I	70	44	4	24	0	1	230	16	10
Phase II	31	0	2	24	0	1	90	0	4
Total	101	44	6	48	0	2	320	16	13
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 I	402	896	946	44	0	6	0	0	0
Phase II	326	353	738	14	0	2	1	0	10
Total	728	1,249	1,684	58	0	8	1	0	10

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 Emission Details).

⁴ For CO₂e emissions, see Chapter 13 (page 94); Conversion Ratios: Climate Registry, General Reporting Protocol, 2016.

Operational Fuel

Vehicle Type	Percent ¹	Annual VMT ²	MGP ³	Annual Fuel	Fuel Type
Passenger Cars	0.795	34,330,921	21.6	1,589,395	Gas
Light/Medium Trucks	0.180	7,773,039	17.2	451,921	Diesel
Heavy Trucks/Other	0.025	1,079,589	6.1	176,982	Diesel
Total	1.000	43,183,549		628,903	

Notes:

- ¹ Percent of vehicle trip distribution based on fleet mix from CalEEMod (5.9 Fleet Mix).
- ² Total annual operational VMT based on mitigated annual VMT from CalEEMod (5.9 Trip Summary Information).
- ³ Average fuel economy derived from Department of Transportation.
- ⁴ Total annual county fuel per EMFAC 2021 model of projected operational fuel usage.