

Appendix F

Energy Calculations

Construction Worker Gasoline Demand

Phase	Trips	Vehicle CO ₂ (MT)	Kg/CO ₂ /Gallon	Gallons
Site Preparation	540	1.89	8.78	215.42
Grading	3,520	12.27	8.78	1,397.81
Architectural Coating	298,035	909.17	8.78	103,550.14
Building Construction	1,482,380	4520.05	8.78	514,812.44
Paving	2,115	7.14	8.78	812.81
Total				620,788.62

Construction Vendor Diesel Demand

Phase	Trips	Vehicle CO ₂ (MT)	Kg/CO ₂ /Gallon	Gallons
Site Preparation	0	0.00	10.21	0.00
Grading	0	0.00	10.21	0.00
Architectural Coating	0	0.00	10.21	0.00
Building Construction	370,180	4641.50	10.21	454,603.52
Paving	0	0.00	10.21	0.00
Total				454,603.52

Construction Haul Diesel Demand

Phase	Trips	Vehicle CO ₂ (MT)	Kg/CO ₂ /Gallon	Gallons
Site Preparation	0	0.00	10.21	0.00
Grading	0	0.00	10.21	0.00
Architectural Coating	0	0.00	10.21	0.00
Building Construction	0	0.00	10.21	0.00
Paving	0	0.00	10.21	0.00
Total				0.00

Construction Equipment Diesel Demand

Phase	Pieces of Equipment	Equipment CO ₂ (MT)	Kg/CO ₂ /Gallon	Gallons
Site Preparation	7	50.15	10.21	4,912.19
Grading	8	479.60	10.21	46,973.45
Architectural Coating	1	212.56	10.21	20,818.63
Building Construction	9	1924.42	10.21	188,484.11
Paving	6	141.19	10.21	13,829.00
Total				275,017.38

Construction Equipment Usage

Phase	Hours of Equipment Use
Site Preparation	1,680
Grading	11,264
Architectural Coating	9,990
Building Construction	112,880
Paving	6,768
Total	142,582

Mobile Source Gasoline Demand

Project Phase	Vehicle MT CO ₂	Kg/CO ₂ /Gallon	Gallons
Project	2,850.30	8.78	324,635.87
Net Total			324,635.87

Mobile Source Diesel Demand

Project Phase	MT CO ₂	Kg/CO ₂ /Gallon	Gallons
Project	597.78	10.21	58,548.42
Total			58,548.42

Electricity Intensity Factors - Water/Wastewater

Process	Units	Value
Supply	kwh/MG	9,727
Treat	kwh/MG	111
Distribute	kwh/MG	1,272
Wastewater Treatment	kwh/MG	1,911
Total	kwh/MG	13,021

* Electricity intensity factors from CalEEMod Appendix D for San Diego County

Electricity Demand - Water/Wastewater

	Units	Potable Water - Indoor	Potable Water - Outdoor	Total
Electricity Intensity Factor				
Supply	kwh/MG	9,727	9,727	N/A
Treat	kwh/MG	111	111	N/A
Distribute	kwh/MG	1,272	1,272	N/A
Wastewater Treatment	kwh/MG	1,911	-	N/A
Total	kwh/MG	13,021	11,110	N/A
Project Water Consumption	MG/yr	47	26	72
Electricity Usage	kwh/yr	610,827	284,130	894,957

Project Total Electricity Usage

Building electricity usage	kwh/yr	3,585,110
Water/Wastewater electricity usage	kwh/yr	894,957
Total Project Electricity Usage	kwh/yr	4,480,067