

## Olympic and Hill Project Operational Fuel Calculations

Land Use			Units		Annual VMT					
				Weekday	Sat	Sunday				
Apartments (High Rise)			700 DU	2852.00	2870.00	2107.00	10,577,827			
Enclosed Parking (with Elevator)		Elevator)	1,075 spaces	0.00	0.00	0.00	-			
Quality Restau	urant		8K	453.00	475.28	363.44	1,468,519			
Retail (strip mall)		7K	87.00	82.46	40.11	274,750				
		TOTAL		3,392	3,428	2510.55	12,321,095			

Fleet Mix									
LDA	0.549559								
LDT1	0.042893								
LDT2	0.201564								
MDV	0.118533								
LHD1	0.015569								
LHD2	0.005846								
MHD	0.021394								
HHD	0.034255								
OBUS	0.002099								
UBUS	0.001828								
MCY	0.004855								
SBUS	0.000709								
MH	0.000896								

	Fleet	VMT	Fuel (gallons)
	Factor		,
Diesel	0.06	739,265.70	117,905.22
Gas	0.94	11,581,829.30	408,530.13
		12,321,095.00	·

Notes: Assumes an average fuel efficiency of 28.35 miles per gallon (mpg) for gasoline and 6.27 mpg for diesel per Table 7, Statewide Vehicle Fuel Economy Miles Per Gallon, 2007 California Motor Vehicle Stock Travel and Fuel Forecast (May 2008).

**Total Diesel Usage From Construction Equipment** 

	Total Diese	Osage III	ili Colisti u	Lion Equip	ment			
					Load	Ave. Daily		Diesel Usage
Phase	Off-Road Equipment Type	Units	Hours	HP	Factor	Factor	of Days	(gallons)
Site Preparation	Concrete/Industrial Saws	1	8	81	0.73	0.6	5	71
Site Preparation	Tractor/Loader/Backhoe	1	8	97	0.37	0.6	5	43
Grading	Bore/Drill Rig	1	8	221	0.5	0.6	146	3872
Grading	Excavator	1	8	158	0.38	0.6	146	2104
Grading	Grader	1	6	187	0.41	0.6	146	2015
Grading	Rubber Tired Dozer	1	8	247	0.4	0.6	146	3462
Grading	Tractor/Loader/Backhoe	1	7	97	0.37	0.6	146	1100
Building Construction	Aerial Lifts	1	8	63	0.31	0.6	400	1875
Building Construction	Cement and Mortar Mixers	1	8	9	0.56	0.6	400	484
Building Construction	Cranes	1	6	231	0.29	0.6	400	4823
Building Construction	Forklifts	2	6	89	0.2	0.6	400	1282
Building Construction	Generator Sets	2	8	84	0.74	0.6	400	5967
Building Construction	Pumps	1	8	84	0.74	0.6	400	5967
Building Construction	Tractor/Loader/Backhoe	1	6	97	0.37	0.6	400	2584
Building Construction	Welders	3	8	46	0.45	0.6	400	1987
Architectural Coating	Aerial Lifts	1	8	63	0.31	0.6	96	450
Architectural Coating	Air Compressors	5	6	78	0.48	0.6	96	647
Architectural Coating	Forklifts	1	8	89	0.2	0.6	96	410
Paving	Cement and Mortar Mixers	1	6	9	0.56	0.6	21	19
Paving	Pavers	1	6	130	0.42	0.6	21	206
Paving	Paving Equipment	1	8	132	0.36	0.6	21	240
Paving	Rollers	1	7	80	0.38	0.6	21	134
Paving	Tractor/Loader/Backhoe	1	8	97	0.37	0.6	21	181
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							TOTAL	39,924

Sources: Equipment usage (hours and total days), horsepower (HP) and load factors are per the CalEEMod Worksheets; Fuel rate calculation is per the SCAQMD Air Quality Handbook (1993).

Electricty Usage from Watering During Construction (AQMD Rule 403: Fugitive Dust)

Phase	Watering Days	Ave. Daily Acreage Disturbed	Water Use (gallons)		Electricty (kWhr)
Site Preparation	5	1.16	17,516		170.38
Grading	146	1.16	511,467		4,975.04
Building Construction	400	0	-		-
Architectural Coating	96	0	-		-
Paving	21	0	-		-
				TOTAL	5,145.42

## Notes:

- 1. Water Application Rate= 3,020 gal/acre/day per Air & Waste Management Association Air Pollution Engineering Manual (1992 Edition).
- 2. kWhr equivalent = 0.01 kWhr
- 3. Electricity consumption per water useage = 0.009727 kWhr/gallon.

**Construction Worker and Vendor Gasoline Consumption** 

Construction Worker and Vendor Casonine Consumption										
						Gasoline				
								Ave. Daily	Usage	Diesel Usage
Phase	Daily Trips			Total	Trips	Trip L	ength	Factor	(gallons)	(gallons)
	Worker	Vendor	Days	Worker	Vendor	Worker	Vendor			
Site Preparation	5	10	5	25	50	14.7	6.9	0.6	8	48
Grading	13	0	146	1898	0	14.7	6.9	0.6	16,740	-
Building Construction	250	100	400	100000	40000	14.7	6.9	0.6	887,841	382,653
Architectural Coatings	138	50	96	13248	4800	14.7	6.9	0.6	117,548	22,959
Paving	13	25	21	273	525	14.7	6.9	0.6	2,485	1,256
	419	185	668	115444	45375				1,024,622	406,916

Notes: Assumes an average fuel efficiency of 28.35 miles per gallon (mpg) for gasoline and 6.27 mpg for diesel per Table 7, Statewide Vehicle Fuel Economy Miles Per Gallon, 2007 California Motor Vehicle Stock Travel and Fuel Forecast (May 2008).

Haul Truck Diesel Consumption

Hadi Track Dieser consumption									
				Trip	Diesel Usage				
Phase	Haul Trips	Days	<b>Haul Trips</b>	Length	(Gallons)				
Site Preparation	28	5	142	24	543				
Grading	202	146	29433	24	112,644				
	230	151	29575		113.188				

Notes: Assumes an average fuel efficiency of 28.35 miles per gallon (mpg) for gasoline and 6.27 mpg for diesel per Table 7, Statewide Vehicle Fuel Economy Miles Per Gallon, 2007 California Motor Vehicle Stock Travel and Fuel Forecast (May 2008).