

APPENDIX B: ENERGY CONSUMPTION WORKSHEETS

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5600 Franklin Ave

Total Diesel Usage From Construction Equipment

Phase	Off-Road Equipment Type	Units	Hours	HP	Load Factor	Ave. Daily Factor	Number of Days	Diesel Usage (gallons)
Demolition	Concrete/Industrial Saws	1	8	33	0.73	0.6	22	127
Demolition	Tractor/Loader/Backhoe	2	6	84	0.37	0.6	22	246
Demolition	Rubber Tired Dozer	1	1	367	0.40	0.6	22	97
Grading	Excavator	1	8	36	0.38	0.6	66	217
Grading	Tractor/Loader/Backhoe	2	7	84	0.37	0.6	66	862
Grading	Rubber Tired Dozer	1	6	367	0.40	0.6	66	1,744
Grading	Grader	1	6	148	0.41	0.6	66	721
Building Construction	Forklifts	2	6	82	0.20	0.6	259	1,529
Building Construction	Tractor/Loader/Backhoe	2	8	84	0.37	0.6	259	3,864
Building Construction	Generator Sets	1	8	14	0.74	0.6	259	644
Building Construction	Cement and Mortar Mixers	1	8	10	0.56	0.6	259	348
Building Construction	Pavers	1	8	81	0.42	0.6	259	2,115
Building Construction	Rollers	1	8	36	0.38	0.6	259	850
Architectural Coating	Air Compressors	4	6	37	0.48	0.6	88	1,125
Architectural Coating	Aerial Lifts	2	8	46	0.31	0.6	88	602
							TOTAL	15,091

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) Table A9-3E.

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

Phase	Duration of Phase (days)	Watering Days	Ave. Daily Acreage Disturbed	Water Use (gallons)	Electricity (kWhr)
Demolition	22	22	0.44	29,234	284.36
Grading	66	66	0.44	87,701	853.07
Building Construction	259		0	-	-
Architectural Coating	88		0	-	-
	435				TOTAL 1,137.42

Notes:

1. Water Application Rate= 3,020 gal/acre/day per Air & Waste Management Association Air Pollution Engineering Manual (1992 Edition). Water application during the building demolition phase excludes surface parking lot, which would be removed during the grading phase.
2. kWhr equivalent = 0.01 kWhr
3. Electricity consumption per water useage = 0.009727 kWhr/gallon.

Construction Worker, Vendor, and Hauling Gasoline and Diesel Consumption

Phase	Daily Trips		Days	Total Trips			Trip Length			Ave. Daily Factor	Gasoline Usage (gallons)	Diesel Usage (gallons)
	Worker	Vendor		Worker	Vendor	Haul	Worker	Vendor	Haul			
Demolition	10	-	22	220	-	70	18.5	10.2	20	0.6	170	165
Grading	13	-	66	825	-	1,214	18.5	10.2	30	0.6	636	4,295
Building Construction	37	7	259	9,454	1,813	-	18.5	10.2	20	0.6	7,284	2,181
Architectural Coatings	7	-	88	642	-	-	18.5	10.2	20	0.6	494	-
TOTAL	66	7	435	11,140	1,813	1,284					8,584	6,641

Notes: Assumes an average fuel efficiency of 24.01 miles per gallon (mpg) for gasoline and 8.48 mpg for diesel per 2021 EMFAC Emissions Inventory (see attachment in this Appendix).

**5600 Franklin Existing Conditions (to be demolished)
Operational Fuel Calculations**

Land Use	Units	Average Daily Trip Rate			Annual VMT
		Weekday	Sat	Sunday	
Auto Center	2,200 sf	29.3	32.6	25.1	92,998.0
Multi-family Residential	4 du	52.2	52.2	26.1	101,656.0
	TOTAL	81.5	84.8	51.2	194,654.0

Fleet Mix
LDA
LDT1
LDT2
LHD1
LHD2
MCY
MH
Motor Coach
OBUS
PTO
SBUS
T6
T7
T7IS
UBUS

	Fleet Factor	VMT	Fuel (gallons)
Diesel	0.03	5,839.62	688.63
Gas	0.93	181,028.22	7,539.70
		186,867.84	

Notes:

1. Assumes an average fuel efficiency of 24.01 miles per gallon (mpg) for gasoline and 8.48 mpg for diesel per 2021 EMFAC Emissions Inventory (see attachment in this Appendix).
2. Trips/VMT for the existing uses based on CalEEMod default calculations.
3. Fleet Mix provided by EMFAC 2021 Inventory, Los Angeles County, 2023.

**5600 Franklin Avenue Project
Operational Fuel Calculations**

Land Use	Units	Average Daily Trip Rate			Annual VMT
		Weekday	Sat	Sunday	
Apartments (Mid Rise)	41	118.0	106.0	88.4	356,619.0
	TOTAL	118.0	106.0	88.4	356,619.0

Fleet Mix
LDA
LDT1
LDT2
LHD1
LHD2
MCY
MH
Motor Coach
OBUS
PTO
SBUS
T6
T7
T7IS
UBUS

	Fleet Factor	VMT	Fuel (gallons)
Diesel	0.03	10,698.57	1,261.62
Gas	0.93	331,655.67	13,813.23
		342,354.24	

Notes:

1. Assumes an average fuel efficiency of 24.01 miles per gallon (mpg) for gasoline and 8.48 mpg for diesel per 2021 EMFAC Emissions Inventory (see attachment in this Appendix).
2. Trips/VMT for the proposed uses based on CalEEMod default calculations.
3. Fleet Mix provided by EMFAC 2021 Inventory, Los Angeles County, 2023.

Source: EMFAC2021 (v1.0.2) Emissions Inventory

Region Type: County

Region: Los Angeles

Calendar Year: 2023

Season: Annual

Vehicle Classification: EMFAC2007 Categories

Units: miles/year for CVMT and EVMT, trips/year for Trips, kWh/year for Energy Consumption, tons/year for Emissions, 1000 gallons/year for Fuel Consumption

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	Total VMT	Trips	Energy Consumption	Fuel Consumption	Fleet Mix	% of Total
Los Angeles	2023	HHDT	Aggregate	Aggregate	Gasoline	52.4653059	1061138.912	343260.3501	0	268.2675406	HHDT	0.80471018
Los Angeles	2023	HHDT	Aggregate	Aggregate	Diesel	51746.1044	2101481022	250916935	0	351873.0118	LDA	51.8431439
Los Angeles	2023	HHDT	Aggregate	Aggregate	Electricity	40.7704021	829825.7175	204136.9967	1473317.323	0	LDT1	4.5602679
Los Angeles	2023	HHDT	Aggregate	Aggregate	Natural Gas	5423.26572	109588096	10797756.22	0	19053.67767	LDT2	22.2367883
Los Angeles	2023	LDA	Aggregate	Aggregate	Gasoline	3441156.83	47564394973	5555162834	0	1673512.193	LHDT1	2.54413017
Los Angeles	2023	LDA	Aggregate	Aggregate	Diesel	9775.31904	101889869.6	13975474.14	0	2560.710331	LHDT2	0.61504126
Los Angeles	2023	LDA	Aggregate	Aggregate	Electricity	151623.242	2450472127	263814151.8	946084489.4	0	MCY	2.07117892
Los Angeles	2023	LDA	Aggregate	Aggregate	Plug-in Hybrid	86565.9777	1416410641	124208760.3	212068513.4	26068.68884	MDV	13.7260642
Los Angeles	2023	LDT1	Aggregate	Aggregate	Gasoline	323318.13	4089398334	493723563	0	172178.6121	MH	0.30827477
Los Angeles	2023	LDT1	Aggregate	Aggregate	Diesel	135.007332	951589.0639	136376.981	0	41.3313576	MHDT	1.07062962
Los Angeles	2023	LDT1	Aggregate	Aggregate	Electricity	742.994762	9465523.84	1189143.418	3654473.434	0	OBUS	0.08838778
Los Angeles	2023	LDT1	Aggregate	Aggregate	Plug-in Hybrid	309.29905	5567856.511	443796.1955	908028.6301	93.89651694	SBUS	0.06846082
Los Angeles	2023	LDT2	Aggregate	Aggregate	Gasoline	1558892.97	22358214203	2543988797	0	968081.9801	UBUS	0.06292217
Los Angeles	2023	LDT2	Aggregate	Aggregate	Diesel	4736.11341	71985192.78	7947394.731	0	2340.123416		
Los Angeles	2023	LDT2	Aggregate	Aggregate	Electricity	7409.40848	95612799.2	13203232.32	36914431.85	0		
Los Angeles	2023	LDT2	Aggregate	Aggregate	Plug-in Hybrid	11315.605	197120780.1	16236139.26	31094311.55	3461.706262		
Los Angeles	2023	LHDT1	Aggregate	Aggregate	Gasoline	126299.204	1627117891	615306073.6	0	123934.8271		
Los Angeles	2023	LHDT1	Aggregate	Aggregate	Diesel	54739.2956	785030755.5	225156333	0	38707.4254		
Los Angeles	2023	LHDT2	Aggregate	Aggregate	Gasoline	19347.3582	235742673	94256706.94	0	20488.55682		
Los Angeles	2023	LHDT2	Aggregate	Aggregate	Diesel	24418.5419	345969790.5	100439534	0	20303.48912		
Los Angeles	2023	MCY	Aggregate	Aggregate	Gasoline	147383.624	335289879.8	102284234.7	0	8185.583293		
Los Angeles	2023	MDV	Aggregate	Aggregate	Gasoline	951501.414	12587333789	1527702170	0	668938.3558		
Los Angeles	2023	MDV	Aggregate	Aggregate	Diesel	10934.5825	150551126.7	17955771.16	0	6515.308882		
Los Angeles	2023	MDV	Aggregate	Aggregate	Electricity	7971.42103	102939855.2	14207923.1	39743280.21	0		
Los Angeles	2023	MDV	Aggregate	Aggregate	Plug-in Hybrid	6329.58487	99491942.06	9081973.202	15271459.43	1823.377261		
Los Angeles	2023	MH	Aggregate	Aggregate	Gasoline	16465.3417	52069008.9	538632.0416	0	10753.17262		
Los Angeles	2023	MH	Aggregate	Aggregate	Diesel	5471.27251	18575351.26	178910.611	0	1861.869904		
Los Angeles	2023	MHDT	Aggregate	Aggregate	Gasoline	15250.3826	272642900.4	99777397.27	0	53479.96731		
Los Angeles	2023	MHDT	Aggregate	Aggregate	Diesel	60070.2982	800837265.3	229530172.9	0	90155.14254		
Los Angeles	2023	MHDT	Aggregate	Aggregate	Electricity	27.9728905	189139.5219	113067.5316	197687.7009	0		
Los Angeles	2023	MHDT	Aggregate	Aggregate	Natural Gas	836.591496	12716787.09	2257856.056	0	1569.551159		
Los Angeles	2023	OBUS	Aggregate	Aggregate	Gasoline	3862.4698	51457073.73	25270656.71	0	10299.88807		
Los Angeles	2023	OBUS	Aggregate	Aggregate	Diesel	2107.25321	49659649.82	7948501.765	0	7220.224914		
Los Angeles	2023	OBUS	Aggregate	Aggregate	Natural Gas	319.888518	5705979.653	831326.2809	0	663.0803601		
Los Angeles	2023	SBUS	Aggregate	Aggregate	Gasoline	1386.18207	20965177.06	1813126.145	0	2344.546177		
Los Angeles	2023	SBUS	Aggregate	Aggregate	Diesel	2009.95282	13558159.21	9517046.224	0	1845.486944		
Los Angeles	2023	SBUS	Aggregate	Aggregate	Electricity	1.88673012	7166.419629	8933.591632	8286.540637	0		
Los Angeles	2023	SBUS	Aggregate	Aggregate	Natural Gas	1473.60146	12032217.74	6977443.959	0	2891.667036		
Los Angeles	2023	UBUS	Aggregate	Aggregate	Gasoline	438.72576	10187165.99	573853.2936	0	2225.282143		
Los Angeles	2023	UBUS	Aggregate	Aggregate	Diesel	45.0702639	2353427.6	58951.9052	0	384.7411313		
Los Angeles	2023	UBUS	Aggregate	Aggregate	Electricity	85.8300327	1583022.17	112265.6828	3344341.242	0		
Los Angeles	2023	UBUS	Aggregate	Aggregate	Natural Gas	3907.8712	137830322.4	5111495.526	0	45263.93993		
					TOTAL	7115929.12	98306281489					
					GAS	0.92824914	89205874208			3714691.233		24.0143443
					DSL	0.03178627	4442843199			523808.8657		8.48180222