Appendix D

Energy

130 College

Draft EIR
Appendix D
Energy Analysis Spreadsheets

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130 College - All Electric

Summary of Energy Use During Construction

Electricty		
Water Consumption	3,657	kWh
Temporary Power (lighting, tools)	16,582	kWh
Total:	**20,239**	kWh
Gasoline		
On Road	52,271	Gallons
Off Road	0	Gallons
Total:	**52,271**	Gallons
Diesel		
On Road	144,424	Gallons
Off Road	42,906	Gallons
Total:	**187,330**	Gallons
Total Mobile	**239,601**	

Summary of Energy Use During Operations

	Project (Buildout) (No MXD/PDFs)	Project (Buildout)	MXD/PDFs Percent Reduction	Units
Electricity				
Electricity (building)	4,460,131	5,999,112		kWh/year
Solar System	-	(773,129)		kWh/year
Electricity (water)	288,870	288,870		kWh/year
EV Charging	240,604	240,604		kWh/year
Electricity Total	**4,989,605**	**5,755,458**	-15%	**kWh/year**
Natural Gas	**4,848,710**	**394,056**	92%	**cu ft/year**
Emergency Generators				
Diesel	3,100	3,100		Gallons/year
Mobile				
Gasoline	322,134	221,035		Gallons/year
Diesel	58,472	41,094		Gallons/year
Mobile Total Including Generators	**380,606**	**262,129**	31%	**Gallons/year**

130 College - Natural Gas

Summary of Energy Use During Construction

Electricty		
Water Consumption	3,657	kWh
Temporary Power (lighting, tools)	16,582	kWh
Total:	**20,239**	kWh
Gasoline		
On Road	52,271	Gallons
Off Road	0	Gallons
Total:	**52,271**	Gallons
Diesel		
On Road	144,424	Gallons
Off Road	42,906	Gallons
Total:	**187,330**	Gallons
Total Mobile	**239,601**	

Summary of Energy Use During Operations

	Project (Buildout) (No MXD/PDFs)	Project (Buildout)	MXD/PDFs Percent Reduction	Units
Electricity				
Electricity (building)	4,460,131	4,460,619		kWh/year
Solar System	-	(773,129)		kWh/year
Electricity (water)	288,870	288,870		kWh/year
EV Charging	240,604	240,604		kWh/year
Electricity Total	**4,989,605**	**4,216,965**	15%	**kWh/year**
Natural Gas	**4,848,710**	**4,850,064**	0%	**cu ft/year**
Emergency Generators				
Diesel	3,100	3,100		Gallons/year
Mobile				
Gasoline	322,134	221,035		Gallons/year
Diesel	58,472	41,094		Gallons/year
Mobile Total Including Generators	**380,606**	**262,129**	31%	**Gallons/year**

Construction Electricity Usage

Caterpillar 40-C4.4 Generator[a]	
Peak Power Rating - Prime (kW)	36
Typical Load	70%
Average Output (kW)	25.2
Hours per Day	2
Average Daily Output (kWh)	50.4
Building Construction Phase Duration (days)	329
Total Construction (kWh)	16,582
Total Construction (MWh)	16.6

[a]https://www.albancat.com/content/uploads/2014/06/40-C4.4-Spec-Sheet.pdf

Calculation of Diesel Usage During Cosnstruciton (Offroad Equipment):

Phase Name	Off Road Equipment Type	Units	Hours	HP	Load Factor	Avg. Daily Factor	Number of Days	Diesel Fuel Usage	
Demolition	Air Compressors	1	8	37	0.48	0.6	27	115	
Demolition	Concrete/Industrial Saws	1	8	33	0.73	0.6	27	156	
Demolition	Other Construction Equipment	2	8	82	0.42	0.6	27	446	
Demolition	Excavators	1	8	158	0.38	0.6	27	389	
Demolition	Generator Sets	1	8	14	0.74	0.6	27	67	
Demolition	Rubber Tired Dozers	1	8	367	0.4	0.6	27	951	
Demolition	Rubber Tired Loaders	1	8	150	0.36	0.6	27	350	
Demolition	Skid Steer Loaders	1	8	71	0.37	0.6	27	170	
Demolition	Tractors/Loaders/Backhoes	2	8	84	0.37	0.6	27	403	
Demolition	Trenchers	1	8	40	0.5	0.6	27	130	
Grading	Bore/Drill Rigs	2	8	83	0.5	0.6	78	1,554	
Grading	Cranes	1	8	367	0.29	0.6	78	1,992	
Grading	Excavators	2	8	158	0.38	0.6	78	2,248	
Grading	Forklifts	1	8	82	0.2	0.6	78	307	
Grading	Other Construction Equipment	1	8	82	0.42	0.6	78	645	
Grading	Rubber Tired Loaders	1	8	150	0.36	0.6	78	1,011	
Grading	Tractors/Loaders/Backhoes	1	8	84	0.37	0.6	78	582	
Grading	Trenchers	1	8	40	0.5	0.6	78	374	
Grading	Welders	2	8	46	0.45	0.6	78	775	
Foundation	Bore/Drill Rigs	1	8	83	0.5	0.6	39	388	
Foundation	Cranes	1	8	367	0.29	0.6	39	996	
Foundation	Generator Sets	1	8	14	0.74	0.6	39	97	
Foundation	Other Construction Equipment	1	8	82	0.42	0.6	39	322	
Foundation	Pumps	3	8	11	0.74	0.6	39	229	
Foundation	Tractors/Loaders/Backhoes	1	8	84	0.37	0.6	39	291	
Foundation	Trenchers	1	8	40	0.5	0.6	39	187	
Foundation	Welders	1	8	46	0.45	0.6	39	194	
Basement up to Podium	Concrete/Industrial Saws	1	8	33	0.73	0.6	119	688	
Basement up to Podium	Cranes	1	8	367	0.29	0.6	119	3,040	
Basement up to Podium	Forklifts	2	8	82	0.2	0.6	119	937	
Basement up to Podium	Generator Sets	1	8	14	0.74	0.6	119	296	
Basement up to Podium	Pumps	2	8	11	0.74	0.6	119	465	
Basement up to Podium	Tractors/Loaders/Backhoes	1	8	84	0.37	0.6	119	888	
Basement up to Podium	Welders	1	8	46	0.45	0.6	119	591	
Building Super Structure	Air Compressors	1	8	37	0.48	0.6	104	443	
Building Super Structure	Aerial Lifts	2	8	46	0.31	0.6	104	712	
Building Super Structure	Concrete/Industrial Saws	2	8	33	0.73	0.6	104	1,203	
Building Super Structure	Cranes	1	8	367	0.29	0.6	104	2,656	
Building Super Structure	Forklifts	2	8	82	0.2	0.6	104	819	
Building Super Structure	Generator Sets	1	8	14	0.74	0.6	104	259	
Building Super Structure	Pumps	2	8	11	0.74	0.6	104	406	
Building Super Structure	Skid Steer Loaders	1	8	71	0.37	0.6	104	656	
Building Super Structure	Welders	1	8	46	0.45	0.6	104	517	
Architectural Facade	Air Compressors	1	8	37	0.48	0.6	132	563	
Architectural Facade	Aerial Lifts	1	8	46	0.31	0.6	132	452	
Architectural Facade	Cranes	1	8	367	0.29	0.6	132	3,372	
Architectural Facade	Forklifts	2	8	82	0.2	0.6	132	1,039	
Architectural Facade	Generator Sets	1	8	14	0.74	0.6	132	328	
Architectural Facade	Welders	1	8	46	0.45	0.6	132	656	
Building Interior Construction	Air Compressors	1	8	37	0.48	0.6	106	452	
Building Interior Construction	Cement and Mortar Mixers	1	8	10	0.56	0.6	106	142	
Building Interior Construction	Forklifts	2	8	82	0.2	0.6	106	834	
Building Interior Construction	Generator Sets	1	8	14	0.74	0.6	106	264	
Building Interior Construction	Paving Equipment	1	8	89	0.36	0.6	106	815	
Building Interior Construction	Plate Compactors	1	8	8	0.43	0.6	106	88	
Building Interior Construction	Tractors/Loaders/Backhoes	1	8	84	0.37	0.6	106	791	
Building Interior Construction	Welders	1	8	46	0.45	0.6	106	527	
Paving	Cement and Mortar Mixers	1	8	10	0.56	0.6	53	71	
Paving	Concrete/Industrial Saws	1	8	33	0.73	0.6	53	306	
Paving	Generator Sets	1	8	14	0.74	0.6	53	132	
Paving	Pavers	1	8	81	0.42	0.6	53	433	
Paving	Paving Equipment	1	8	89	0.36	0.6	53	408	
Paving	Plate Compactors	1	8	8	0.43	0.6	53	44	
Paving	Skid Steer Loaders	1	8	71	0.37	0.6	53	334	
Paving	Tractors/Loaders/Backhoes	1	8	84	0.37	0.6	53	395	
Paving	Trenchers	1	8	40	0.5	0.6	53	254	
Paving	Welders	1	8	46	0.45	0.6	53	263	
						Total Diesel Usage for Construction (Offr		**42,906.1**	**gallons of diesel fuel**

gallons of diesel fuel per horsepower-hour= 0.05

Notes: Equipment assumptions are provide in the CalEEMod output files and fuel usage estimate of 0.05 gallons of diesel fuel per horsepower-hour is from the SCAQMD CEQA Air Quality Handbook, Table A9-3E.

EMFAC2021 Emissions Inventory
Region Type: County
Region: Los Angeles
Calendar Year: 2027
Season: Annual
Vehicle Classification: EMFAC2011 Categories

Region	Veh_Class	Fuel	Speed (miles/hr)	Population (vehicles)	VMT (miles/day)	Trips (trips/day)	Fuel_Gas (1000 gallons/day)	Fuel_DSL (1000 gallons/day)	Miles per Gallon
South Coast	LDA	Gasoline	Aggregate	3,252,973	127,411,269	15,084,514	4,209	0	30.3
South Coast	LDT1	Gasoline	Aggregate	305,004	11,091,280	1,345,171	439	0	25.3
South Coast	LDT2	Gasoline	Aggregate	1,690,655	69,171,014	7,955,024	2,794	0	24.8
						Construction Worker Trip (Composite LDA/LDT1/LDT2):			**27.6**
South Coast	HHDT	Diesel	Aggregate	57,907	7,176,720	908,210	0	1137.1	**6.3**

Notes: Consistent with CalEEMod, a construction worker trip is assumed to be a composite of 50% LDA , 25% for LDT1, and 25% for LDT2. Used EMFAC 2011 Categories for construciton as EMFAC2011 has specific categories for vehicle class T7.

Calculation of Gasoline and Diesel Usage During Construction (Onroad Vehicles):

Phase Name	Daily Worker Trips	Daily Vendor Trips	Daily Haul Trips	Days	Total Worker Trips	Total Vendor Trips	Total Haul Trips	Trip Length (miles)			Total Length (miles)			Avg. Daily Factor	Gallons of Fuel	
								Worker	Vendor	Haul	Worker	Vendor	Haul	(worker and vendor)	Gasoline	Diesel
Demolition	10	10	40	27	270	270	530	18.5	10.2	65	4995	2754	34450	0.6	108.4	5,720.3
Grading	60	100	160	78	4680	7800	9700	18.5	10.2	66.2	86580	79560	642140	0.6	1,879.6	109,309.0
Foundation	120	140	0	39	4680	5460	0	18.5	10.3	20	86580	56238	0	0.6	1,879.6	5,346.5
Basement up to Podium	200	80	0	119	23800	9520	0	18.5	10.2	20	440300	97104	0	0.6	9,558.6	9,231.5
Building Super Structure	320	40	0	104	33280	4160	0	18.5	10.2	20	615680	42432	0	0.6	13,366.0	4,033.9
Architectural Facade	320	20	0	132	42240	2640	0	18.5	10.2	20	781440	26928	0	0.6	16,964.5	2,560.0
Building Interior Construction	200	80	0	106	21200	8480	0	18.5	10.2	20	392200	86496	0	0.6	8,514.4	8,223.0
Paving	120	40	0	53	6360	2120	0	18.5	10.2	20	117660	21624	0	0.6	2,554.3	2,055.8
														Total:	**52,271.0**	**144,424.2**

Worker Miles per gallon=	27.64	gasoline
Vedor/Haul miles per gallon=	6.31	diesel

Notes: Consistent with CalEEMod worker vehicles are assumed to be gasoline and 50% LDA, 25%LDT1, and 25% LDT2. Vendor and haul trips are assumed to be 100% diesel Heavy Duty Trucks (T7)

Water Usage for Control of Fugitive Dust during Construction:

Phase	Days	Average Daily Acreage Distrubed	Gallons Per Year	Electricity (kWhr)
Demolition	27	1.0	81,540	793
Grading	78	1.0	235,560	2,291
Foundation	39	0.5	58,890	573
Basement up to Podium	119	0	0	0
Building Super Structure	104	0	0	0
Architectural Facade	132	0	0	0
Building Interior Construction	106	0	0	0
Paving	53	0	0	0
		Total:	**375,990**	**3,657**

Water application rate=	3020	gal/acre/day
kWhr equivalent=	0.01	kWhr

Notes: 1) Gallons per year of water usage for dust control is calculated based on a minimum control efficiency of 66% (three times daily) with an application rate of 3,020 gal/acre/day (Air & Waste Management Association Air Pollution Engineering Manual (1992 Edition)) and average of 26 construction days per month.

2) CalEEMod Default: Each gallon of delivered potable water in Southern California is associated with 0.009727 kWhr of electricity).

130 College - Buildout Operations Without MXD - All Electric
Los Angeles-South Coast County, Annual

Land Use Details

Land Uses	*Size*	*Metric*	*Lot Acreage*	*Floor Surface Area*	*Population*
General Office Building	224.597	1000sqft	2.3	224597	0
High Turnover (Sit Down Restaurant)	5.894	1000sqft	0	5894	0
Strip Mall	4.11	1000sqft	0	4110	0
Enclosed Parking with Elevator	440	Space	3.95999983	176000	0

Trip Summary Information

Land Uses	*Average Daily Trip Rate*			*Annual VMT*
	Weekday	*Saturday*	*Sunday*	
Total	3,107	3,107	3,107	8,813,290

Gasoline and Diesel Usage

	Gasoline	*Diesel*
Miles/Gallon	25.8	9.0
% Fleet Mix	94.4%	5.6%
Total (Gallons):	**322,134**	**55,372**

Note: Fleet mix is 92.3% gasoline @ 30.6 miles/gallon and 7.7% diesel @ 12.1 miles/gallon.

Energy by Land Use - Natural Gas

Land Uses	*kBTU/yr*	cu ft/year
General Office Building	0	0
High Turnover (Sit Down Restaurant)	413,759	394,056
Strip Mall	0	0
Enclosed Parking with Elevator	0	0
Total	413,759	**394,056**

Energy by Land Use - Electricity

Land Uses	*kWH/yr*
General Office Building	4,988,064
High Turnover (Sit Down Restaurant)	58,828
Strip Mall	302,528
Enclosed Parking with Elevator	649,692
Total	**5,999,112**

Water Detail (Unmitigated)

Land Uses	*Indoor Use (Mgal)*	*Outdoor Use (Mgal)*	*Electricity Use (kWh/yr)*
General Office Building	39.918	0.299	273,310
High Turnover (Sit Down Restaurant)	1.789	0.000	12,178
Strip Mall	0.304	0.000	3,383
Enclosed Parking with Elevator	0.000	0.000	
Total	42.01	0.30	**288,870**

Notes: Indoor water results in 0.006807 kWhr of electricity usage per gallon from delivery, treatment, and distribution of water within Southern California (CalEEMod). Outdoor water results in 0.005306 kWhr of electricity usage per gallon from delivery and distribution of water within Southern California (CalEEMod).

130 College - Buildout Operations Without MXD - Natural Gas
Los Angeles-South Coast County, Annual

Land Use Details

Land Uses	*Size*	*Metric*	*Lot Acreage*	*Floor Surface Area*	*Population*
General Office Building	224.597	1000sqft	2.3	224597	0
High Turnover (Sit Down Restaurant)	5.894	1000sqft	0	5894	0
Strip Mall	4.11	1000sqft	0	4110	0
Enclosed Parking with Elevator	440	Space	3.95999983	176000	0

Trip Summary Information

Land Uses	*Average Daily Trip Rate*			*Annual VMT*
	Weekday	*Saturday*	*Sunday*	
Total	3,107	3,107	3,107	8,813,290

Gasoline and Diesel Usage

	Gasoline	*Diesel*
Miles/Gallon	25.8	9.0
% Fleet Mix	94.4%	5.6%
Total (Gallons):	**322,134**	**55,372**

Note: Fleet mix is 92.3% gasoline @ 30.6 miles/gallon and 7.7% diesel @ 12.1 miles/gallon.

Energy by Land Use - Natural Gas

Land Uses	*kBTU/yr*	cu ft/year
General Office Building	4,512,571	4,297,687
High Turnover (Sit Down Restaurant)	558,336	531,749
Strip Mall	20,238	19,274
Enclosed Parking with Elevator	0	0
Total	5,091,146	**4,848,710**

Energy by Land Use - Electricity

Land Uses	*kWH/yr*
General Office Building	3,577,549
High Turnover (Sit Down Restaurant)	191,968
Strip Mall	40,921
Enclosed Parking with Elevator	649,692
Total	**4,460,131**

Water Detail (Unmitigated)

Land Uses	*Indoor Use (Mgal)*	*Outdoor Use (Mgal)*	*Electricity Use (kWh/yr)*
General Office Building	39.918	0.299	273,310
High Turnover (Sit Down Restaurant)	1.789	0.000	12,178
Strip Mall	0.304	0.000	3,383
Enclosed Parking with Elevator	0.000	0.000	
Total	42.01	0.30	**288,870**

Notes: Indoor water results in 0.006807 kWhr of electricity usage per gallon from delivery, treatment, and distribution of water within Southern California (CalEEMod). Outdoor water results in 0.005306 kWhr of electricity usage per gallon from delivery and distribution of water within Southern California (CalEEMod).

130 College - Buildout Operations - All Electric
Los Angeles-South Coast County, Annual

Land Use Details

Land Uses	*Size*	*Metric*	*Lot Acreage*	*Floor Surface Area*	*Population*
General Office Building	224.597	1000sqft	2.3	224597	0
High Turnover (Sit Down Restaurant)	5.894	1000sqft	0	5894	0
Strip Mall	4.11	1000sqft	0	4110	0
Enclosed Parking with Elevator	440	Space	3.95999983	176000	

Trip Summary Information

Land Uses	*Average Daily Trip Rate*			*Mitigated*
	Weekday	*Saturday*	*Sunday*	
Total	2,094	2,094	2,094	6,047,320

Mitigated Gasoline and Diesel Usage

	Gasoline	*Diesel*
Miles/Gallon	25.8	9.0
% Fleet Mix	94.4%	5.6%
Total (Gallons):	**221,035**	**37,994**

Note: Fleet mix is 92.3% gasoline @ 30.6 miles/gallon and 7.7% diesel @ 12.1 miles/gallon.

Energy by Land Use - Natural Gas (Mitigated)

Land Uses	*kBTU/yr*	cu ft/year
General Office Building	0	0
High Turnover (Sit Down Restaurant)	413,759	394,056
Strip Mall	0	0
Enclosed Parking with Elevator	0	0
Total	413,759	**394,056**

Energy by Land Use - Electricity (Mitigated)

Land Uses	*kWH/yr*
General Office Building	4,988,064
High Turnover (Sit Down Restaurant)	302,528
Strip Mall	58,828
Enclosed Parking with Elevator	649,692
Total	**5,999,112**

Water Detail (Unmitigated)

Land Uses	*Indoor Use (Mgal)*	*Outdoor Use (Mgal)*	*Electricity Use (kWh/yr)*
General Office Building	39.918	0.299	273,310
High Turnover (Sit Down Restaurant)	1.789	0.000	12,178
Strip Mall	0.304	0.000	3,383
Enclosed Parking with Elevator	0.000	0.000	0
Total	42.01	0.30	**288,870**

Notes: Indoor water results in 0.00687 kWhr of electricity usage per gallon from delivery, treatment, and distribution of water within Southern California (CalEEMod). Outdoor water results in 0.005306 kWhr ofelectricity usage per gallon from delivery and distribution of water within Southern California (CalEEMod). The City of Los Angeles Green Building Code (Chapter IX, Article 9, of the LAMC) requires newly constructed non-residential and high-rise residential buildings to reduce indoor water use by at least 20 percent by: (1) using water saving fixtures or flow restrictions; and/or (2) demonstrating a 20 percent reduction in baseline water use. No reduction was applied to Elysian apartments.

130 College - Buildout Operations - Natural Gas
Los Angeles-South Coast County, Annual

Land Use Details

Land Uses	*Size*	*Metric*	*Lot Acreage*	*Floor Surface Area*	*Population*
General Office Building	224.597	1000sqft	2.3	224597	0
High Turnover (Sit Down Restaurant)	5.894	1000sqft	0	5894	0
Strip Mall	4.11	1000sqft	0	4110	0
Enclosed Parking with Elevator	440	Space	3.95999983	176000	

Trip Summary Information

Land Uses	*Average Daily Trip Rate*			*Mitigated*
	Weekday	*Saturday*	*Sunday*	
Total	2,094	2,094	2,094	6,047,320

Mitigated Gasoline and Diesel Usage

	Gasoline	*Diesel*
Miles/Gallon	25.8	9.0
% Fleet Mix	94.4%	5.6%
Total (Gallons):	**221,035**	**37,994**

Note: Fleet mix is 92.3% gasoline @ 30.6 miles/gallon and 7.7% diesel @ 12.1 miles/gallon.

Energy by Land Use - Natural Gas (Mitigated)

Land Uses	*kBTU/yr*	cu ft/year
General Office Building	4,512,571	4,297,687
High Turnover (Sit Down Restaurant)	20,238	19,274
Strip Mall	559,757	533,102
Enclosed Parking with Elevator	0	0
Total	5,092,567	**4,850,064**

Energy by Land Use - Electricity (Mitigated)

Land Uses	*kWH/yr*
General Office Building	3,577,549
High Turnover (Sit Down Restaurant)	40,921
Strip Mall	192,457
Enclosed Parking with Elevator	649,692
Total	**4,460,619**

Water Detail (Unmitigated)

Land Uses	*Indoor Use (Mgal)*	*Outdoor Use (Mgal)*	*Electricity Use (kWh/yr)*
General Office Building	39.918	0.299	273,310
High Turnover (Sit Down Restaurant)	1.789	0.000	12,178
Strip Mall	0.304	0.000	3,383
Enclosed Parking with Elevator	0.000	0.000	0
Total	42.01	0.30	**288,870**

Notes: Indoor water results in 0.00687 kWhr of electricity usage per gallon from delivery, treatment, and distribution of water within Southern California (CalEEMod). Outdoor water results in 0.005306 kWhr ofelectricity usage per gallon from delivery and distribution of water within Southern California (CalEEMod). The City of Los Angeles Green Building Code (Chapter IX, Article 9, of the LAMC) requires newly constructed non-residential and high-rise residential buildings to reduce indoor water use by at least 20 percent by: (1) using water saving fixtures or flow restrictions; and/or (2) demonstrating a 20 percent reduction in baseline water use. No reduction was applied to Elysian apartments.

EMFAC2021 Emissions Inventory
Region Type: County
Region: Los Angeles
Calendar Year: 2028
Season: Annual
Vehicle Classification: EMFAC2007 Categories

Region	CalYr	Season	Veh_Class	Fuel	MdYr	Speed (miles/hr)	Population (vehicles)	VMT (miles/day)	Trips (trips/day)	Fuel_Gas (1000 gallons/day)	Fuel_DSL (1000 gallons/day)		
Los Angeles	2028	Annual	HHDT	Diesel	Aggregated	Aggregated	58,802	7,268,319	923,761	0.00	1,133.53		
Los Angeles	2028	Annual	HHDT	Gasoline	Aggregated	Aggregated	26	2,301	511	0.52	0.00		
Los Angeles	2028	Annual	LDA	Diesel	Aggregated	Aggregated	5,944	181,299	24,998	0.00	4.26		
Los Angeles	2028	Annual	LDA	Gasoline	Aggregated	Aggregated	3,213,384	125,421,546	14,894,855	4,082.09	0.00		
Los Angeles	2028	Annual	LDT1	Diesel	Aggregated	Aggregated	29	585	82	0.00	0.02		
Los Angeles	2028	Annual	LDT1	Gasoline	Aggregated	Aggregated	301,279	10,938,459	1,329,539	426.63	0.00		
Los Angeles	2028	Annual	LDT2	Diesel	Aggregated	Aggregated	5,918	247,792	28,317	0.00	7.56		
Los Angeles	2028	Annual	LDT2	Gasoline	Aggregated	Aggregated	1,722,542	70,095,593	8,098,768	2,789.33	0.00		
Los Angeles	2028	Annual	LHDT1	Diesel	Aggregated	Aggregated	68,342	2,929,501	859,660	0.00	140.41		
Los Angeles	2028	Annual	LHDT1	Gasoline	Aggregated	Aggregated	125,767	4,998,300	1,873,734	341.69	0.00		
Los Angeles	2028	Annual	LHDT2	Diesel	Aggregated	Aggregated	31,735	1,322,864	399,180	0.00	74.65		
Los Angeles	2028	Annual	LHDT2	Gasoline	Aggregated	Aggregated	18,808	698,178	280,210	54.90	0.00		
Los Angeles	2028	Annual	MCY	Gasoline	Aggregated	Aggregated	163,868	1,054,761	327,735	25.31	0.00		
Los Angeles	2028	Annual	MDV	Diesel	Aggregated	Aggregated	11,719	445,451	54,804	0.00	18.07		
Los Angeles	2028	Annual	MDV	Gasoline	Aggregated	Aggregated	1,006,930	38,280,930	4,681,153	1,866.61	0.00		
Los Angeles	2028	Annual	MH	Diesel	Aggregated	Aggregated	6,245	65,723	624	0.00	6.60		
Los Angeles	2028	Annual	MH	Gasoline	Aggregated	Aggregated	14,378	149,468	1,438	30.86	0.00		
Los Angeles	2028	Annual	MHDT	Diesel	Aggregated	Aggregated	64,376	2,619,668	793,116	0.00	288.66		
Los Angeles	2028	Annual	MHDT	Gasoline	Aggregated	Aggregated	13,448	731,487	269,064	136.02	0.00		
Los Angeles	2028	Annual	OBUS	Diesel	Aggregated	Aggregated	2,339	171,148	30,982	0.00	23.86		
Los Angeles	2028	Annual	OBUS	Gasoline	Aggregated	Aggregated	3,293	120,645	65,877	23.06	0.00		
Los Angeles	2028	Annual	SBUS	Diesel	Aggregated	Aggregated	1,692	34,406	24,496	0.00	4.60		
Los Angeles	2028	Annual	SBUS	Gasoline	Aggregated	Aggregated	1,543	70,332	6,172	7.69	0.00		
Los Angeles	2028	Annual	UBUS	Diesel	Aggregated	Aggregated	8	1,453	33	0.00	0.26		
Los Angeles	2028	Annual	UBUS	Gasoline	Aggregated	Aggregated	432	30,444	1,727	6.55	0.00		
Los Angeles	2028	Annual	LDA	Plug-in Hybrid	Aggregated	Aggregated	114,381	2,303,255	472,964	83.91	0.00		
Los Angeles	2028	Annual	LDT1	Plug-in Hybrid	Aggregated	Aggregated	1,428	28,830	5,904	1.05	0.00		
Los Angeles	2028	Annual	LDT2	Plug-in Hybrid	Aggregated	Aggregated	24,232	483,151	100,200	17.76	0.00		
Los Angeles	2028	Annual	MDV	Plug-in Hybrid	Aggregated	Aggregated	14,853	276,882	61,417	10.33	0.00		
												MPG	Gallons Per Mile
							Totals	270,972,774.38		9,904.31	1,702.46	**23.3**	0.04
							Total (GAS)	255,684,563.42	0.94			**25.8**	0.04
							Total (DSL)	15,288,210.96	0.06			**9.0**	0.11

Baseline Year
Calendar Year: 2023
Season: Annual
Vehicle Classification: EMFAC2007 Categories

Region	CalYr	Season	Veh_Class	Fuel	MdYr	Speed (miles/hr)	Population (vehicles)	VMT (miles/day)	Trips (trips/day)	Fuel_Gas (1000 gallons/day)	Fuel_DSL (1000 gallons/day)		
Los Angeles	2023	Annual	HHDT	Diesel	Aggregated	Aggregated	51,746	6,735,516	804,221	0.00	1,127.80		
Los Angeles	2023	Annual	HHDT	Gasoline	Aggregated	Aggregated	52	3,245	1,050	0.82	0.00		
Los Angeles	2023	Annual	LDA	Diesel	Aggregated	Aggregated	9,775	293,631	40,275	0.00	7.39		
Los Angeles	2023	Annual	LDA	Gasoline	Aggregated	Aggregated	3,441,157	137,073,184	16,009,115	4,845.08	0.00		
Los Angeles	2023	Annual	LDT1	Diesel	Aggregated	Aggregated	135	2,742	393	0.00	0.12		
Los Angeles	2023	Annual	LDT1	Gasoline	Aggregated	Aggregated	323,318	11,785,010	1,422,834	497.89	0.00		
Los Angeles	2023	Annual	LDT2	Diesel	Aggregated	Aggregated	4,736	207,450	22,903	0.00	6.82		
Los Angeles	2023	Annual	LDT2	Gasoline	Aggregated	Aggregated	1,558,893	64,432,894	7,331,380	2,816.72	0.00		
Los Angeles	2023	Annual	LHDT1	Diesel	Aggregated	Aggregated	54,739	2,400,706	688,551	0.00	118.37		
Los Angeles	2023	Annual	LHDT1	Gasoline	Aggregated	Aggregated	126,299	4,975,896	1,881,670	379.01	0.00		
Los Angeles	2023	Annual	LHDT2	Diesel	Aggregated	Aggregated	24,419	1,058,012	307,155	0.00	62.09		
Los Angeles	2023	Annual	LHDT2	Gasoline	Aggregated	Aggregated	19,347	720,926	288,247	62.66	0.00		
Los Angeles	2023	Annual	MCY	Gasoline	Aggregated	Aggregated	147,384	966,253	294,767	23.59	0.00		
Los Angeles	2023	Annual	MDV	Diesel	Aggregated	Aggregated	10,935	433,865	51,746	0.00	18.92		
Los Angeles	2023	Annual	MDV	Gasoline	Aggregated	Aggregated	951,501	36,274,737	4,402,600	1,944.85	0.00		
Los Angeles	2023	Annual	MH	Diesel	Aggregated	Aggregated	5,471	56,805	547	0.00	5.69		
Los Angeles	2023	Annual	MH	Gasoline	Aggregated	Aggregated	16,465	159,232	1,647	32.88	0.00		
Los Angeles	2023	Annual	MHDT	Diesel	Aggregated	Aggregated	60,070	2,566,786	735,674	0.00	288.96		
Los Angeles	2023	Annual	MHDT	Gasoline	Aggregated	Aggregated	15,250	833,770	305,130	163.55	0.00		
Los Angeles	2023	Annual	OBUS	Diesel	Aggregated	Aggregated	2,107	170,067	27,221	0.00	24.73		
Los Angeles	2023	Annual	OBUS	Gasoline	Aggregated	Aggregated	3,862	157,361	77,280	31.50	0.00		
Los Angeles	2023	Annual	SBUS	Diesel	Aggregated	Aggregated	2,010	41,462	29,104	0.00	5.64		
Los Angeles	2023	Annual	SBUS	Gasoline	Aggregated	Aggregated	1,386	64,114	5,545	7.17	0.00		
Los Angeles	2023	Annual	UBUS	Diesel	Aggregated	Aggregated	45	7,197	180	0.00	1.18		
Los Angeles	2023	Annual	UBUS	Gasoline	Aggregated	Aggregated	439	31,153	1,755	6.81	0.00		
Los Angeles	2023	Annual	LDA	Plug-in Hybrid	Aggregated	Aggregated	86,566	2,058,404	357,950	75.01	0.00		
Los Angeles	2023	Annual	LDT1	Plug-in Hybrid	Aggregated	Aggregated	309	7,382	1,279	0.27	0.00		
Los Angeles	2023	Annual	LDT2	Plug-in Hybrid	Aggregated	Aggregated	11,316	271,382	46,790	9.96	0.00		
Los Angeles	2023	Annual	MDV	Plug-in Hybrid	Aggregated	Aggregated	6,330	141,006	26,173	5.25	0.00		
												MPG	Gallons Per Mile
							Totals	273,930,189.78		10,903.00	1,667.71	**21.8**	0.05
							Total (GAS)	259,955,950.25	0.95			**23.8**	0.04
							Total (DSL)	13,974,239.53	0.05			**8.4**	0.12

130 College

All Electric Calculation

CAPCOA Consumption Rat[a]

	Natural Gas (Therm/yr/KSF)							Electricity (kWh/yr/KSF)						
Building Type	**Water Heater**	**Primary Heat**	**Cooking**	**Dryer**	**Cooling**	**Misc**	**Refrig.**	**Water Heater**	**Primary Heat**	**Cooking**	**Dryer**	**Cooling**	**Misc**	**Refrig.**
General Office	20	119	1		18	43	1	46	396	9		3103	2714	11
Strip Mall	1	4	1		7	34	3	24	28	27		1249	2867	162
High Turnover (Sit Down Restaurant)	90	37	702		48	67	4	35	268	1279		3254	8965	6236

Project Energy Demand

		Natural Gas (Therm/yr/KSF)								Electricity (kWh/yr/KSF)									
Project Uses	**Amount (DU/KSF)**	**Water Heater**	**Primary Heat**	**Cooking**	**Dryer**	**Cooling**	**Misc**	**Refrig.**	**Total**	**Water Heater**	**Primary Heat**	**Cooking**	**Dryer**	**Cooling**	**Misc**	**Refrig.**	**Title 24 Total**	**Non-Title 24 Total**	**Total**
General Office	224.597	4,492	26,727	225	0	4,043	9,658	225	**45,369**	10,331	88,940	2,021	0	696,924	609,556	2,471	796,196	614,048	**1,410,245**
Strip Mall	4.11	4	16	4	0	29	140	12	**206**	99	115	111	0	5,133	11,783	666	5,347	12,560	**17,907**
High Turnover (Sit Down Restaurant)	5.894	530	218	4,138	0	283	395	24	**5,588**	206	1,580	0	0	19,179	52,840	36,755	20,965	89,595	**110,560**
Total		535	235	4,142	0	312	535	36	**5,793**	10,636	90,635	2,132	0	721,237	674,179	39,891	822,508	716,203	1,538,711

CalEEMod Adjustments

Default Values

	Total Electricity	Total Natural Gas	T24 Electricity	T24 Natural Gas	NT24 Electricity	NT24 Natural Gas
General Office	3,577,819	4,512,571	2,607,967	3,524,609	969,852	987,962
Strip Mall	40,921	20,238	26,401	4,759	14,520	15,479
High Turnover (Sit Down Restaurant)	191,968	558,336	91,901	102,598	100,067	455,739
Enclosed Parking with Elevator	649,692	0	616,252	0	33,440	0

Adjusted Values

	Total Electricity	Total Natural Gas	T24 Electricity	T24 Natural Gas	NT24 Electricity	NT24 Natural Gas
General Office	4,988,064	0	3,404,163	0	1,583,900	0
Strip Mall	58,828	0	31,748	0	27,080	0
High Turnover (Sit Down Restaurant)	302,528	413,759	112,866	0	189,662	413,759
Enclosed Parking with Elevator	649,692	0	616,252	0	33,440	0

Peak Electricity Demand Calculations

Electrical Load Factor Equation

$$f_{Load} = \frac{\text{Average load}}{\text{Maximum load in given time period}}$$

Load Factor (%)[1] **52%**

Project Electricity Demand (Operational)

Annual Demand	Project
Building (MWh)	6,240
Water (MWh)	289
Total (MWh)	6,529
Average Daily Demand	
Building (kWh)	17,095
Water (kWh)	791
Total (kWh)	17,887
Average Load	
Building (kW)	712
Water (kW)	33
Total (kW)	745

Peak Load Calculation

Peak Load (kW)	1,403
Systemwide Peak Load (MW)	5,832
Percent of Peak	0.024%

[1]2017 Report: System Efficiency of California's Electric Grid. Californ
Utilities Commission. 2017. Page 11, Figure 6. Visual estimate.

EMFAC Emission inventories for County

EMFAC2021 (v1.0.1) Emissions Inventory
Region Type: County
Region: Los Angeles
Calendar Year: 2027 (Construction Start Year)
Season: Annual
Vehicle Classification: EMFAC2011 Categories

Region	CalYr	VehClass	MdlYr	Speed	Fuel	Fuel_Gasoline (1000 gallons/day)	Fuel_DSL (1000 gallons/day)
Los Angeles	2027	HHDT	Aggregate	Aggregate	Diesel	0.00	1137.13
Los Angeles	2027	HHDT	Aggregate	Aggregate	Gasoline	0.56	0.00
Los Angeles	2027	LDA	Aggregate	Aggregate	Diesel	0.00	4.83
Los Angeles	2027	LDA	Aggregate	Aggregate	Gasoline	4209.31	0.00
Los Angeles	2027	LDT1	Aggregate	Aggregate	Diesel	0.00	0.04
Los Angeles	2027	LDT1	Aggregate	Aggregate	Gasoline	439.06	0.00
Los Angeles	2027	LDT2	Aggregate	Aggregate	Diesel	0.00	7.47
Los Angeles	2027	LDT2	Aggregate	Aggregate	Gasoline	2794.50	0.00
Los Angeles	2027	LHDT1	Aggregate	Aggregate	Diesel	0.00	138.13
Los Angeles	2027	LHDT1	Aggregate	Aggregate	Gasoline	349.87	0.00
Los Angeles	2027	LHDT2	Aggregate	Aggregate	Diesel	0.00	73.25
Los Angeles	2027	LHDT2	Aggregate	Aggregate	Gasoline	56.57	0.00
Los Angeles	2027	MCY	Aggregate	Aggregate	Gasoline	25.06	0.00
Los Angeles	2027	MDV	Aggregate	Aggregate	Diesel	0.00	18.31
Los Angeles	2027	MDV	Aggregate	Aggregate	Gasoline	1880.52	0.00
Los Angeles	2027	MH	Aggregate	Aggregate	Diesel	0.00	6.45
Los Angeles	2027	MH	Aggregate	Aggregate	Gasoline	31.20	0.00
Los Angeles	2027	MHDT	Aggregate	Aggregate	Diesel	0.00	291.06
Los Angeles	2027	MHDT	Aggregate	Aggregate	Gasoline	141.80	0.00
Los Angeles	2027	OBUS	Aggregate	Aggregate	Diesel	0.00	24.06
Los Angeles	2027	OBUS	Aggregate	Aggregate	Gasoline	24.57	0.00
Los Angeles	2027	SBUS	Aggregate	Aggregate	Diesel	0.00	4.83
Los Angeles	2027	SBUS	Aggregate	Aggregate	Gasoline	7.62	0.00
Los Angeles	2027	UBUS	Aggregate	Aggregate	Diesel	0.00	0.41
Los Angeles	2027	UBUS	Aggregate	Aggregate	Gasoline	6.57	0.00
Los Angeles	2027	LDA	Aggregate	Aggregate	Plug-in Hybrid	83.16	0.00
Los Angeles	2027	LDT1	Aggregate	Aggregate	Plug-in Hybrid	0.87	0.00
Los Angeles	2027	LDT2	Aggregate	Aggregate	Plug-in Hybrid	16.26	0.00
Los Angeles	2027	MDV	Aggregate	Aggregate	Plug-in Hybrid	9.42	0.00
						3,678,080,579	622,683,521
					Fuel Usage for Project Construction	52,271	187,330
					Percentage of County for Construction	0.0014%	0.030%

EMFAC Emission inventories for County

EMFAC2021 (v1.0.1) Emissions Inventory

Region Type: County

Region: Los Angeles

Calendar Year: **2028** (Operational Start Year)

Season: Annual

Vehicle Classification: EMFAC2011 Categories

Region	CalYr	VehClass	MdlYr	Speed	Fuel	Fuel_Gasoline (1000 gallons/day)	Fuel_DSL (1000 gallons/day)
Los Angeles	2028	HHDT	Aggregate	Aggregate	Diesel	0.00	1133.53
Los Angeles	2028	HHDT	Aggregate	Aggregate	Gasoline	0.52	0.00
Los Angeles	2028	LDA	Aggregate	Aggregate	Diesel	0.00	4.26
Los Angeles	2028	LDA	Aggregate	Aggregate	Gasoline	4082.09	0.00
Los Angeles	2028	LDT1	Aggregate	Aggregate	Diesel	0.00	0.02
Los Angeles	2028	LDT1	Aggregate	Aggregate	Gasoline	426.63	0.00
Los Angeles	2028	LDT2	Aggregate	Aggregate	Diesel	0.00	7.56
Los Angeles	2028	LDT2	Aggregate	Aggregate	Gasoline	2789.33	0.00
Los Angeles	2028	LHDT1	Aggregate	Aggregate	Diesel	0.00	140.41
Los Angeles	2028	LHDT1	Aggregate	Aggregate	Gasoline	341.69	0.00
Los Angeles	2028	LHDT2	Aggregate	Aggregate	Diesel	0.00	74.65
Los Angeles	2028	LHDT2	Aggregate	Aggregate	Gasoline	54.90	0.00
Los Angeles	2028	MCY	Aggregate	Aggregate	Gasoline	25.31	0.00
Los Angeles	2028	MDV	Aggregate	Aggregate	Diesel	0.00	18.07
Los Angeles	2028	MDV	Aggregate	Aggregate	Gasoline	1866.61	0.00
Los Angeles	2028	MH	Aggregate	Aggregate	Diesel	0.00	6.60
Los Angeles	2028	MH	Aggregate	Aggregate	Gasoline	30.86	0.00
Los Angeles	2028	MHDT	Aggregate	Aggregate	Diesel	0.00	288.66
Los Angeles	2028	MHDT	Aggregate	Aggregate	Gasoline	136.02	0.00
Los Angeles	2028	OBUS	Aggregate	Aggregate	Diesel	0.00	23.86
Los Angeles	2028	OBUS	Aggregate	Aggregate	Gasoline	23.06	0.00
Los Angeles	2028	SBUS	Aggregate	Aggregate	Diesel	0.00	4.60
Los Angeles	2028	SBUS	Aggregate	Aggregate	Gasoline	7.69	0.00
Los Angeles	2028	UBUS	Aggregate	Aggregate	Diesel	0.00	0.26
Los Angeles	2028	UBUS	Aggregate	Aggregate	Gasoline	6.55	0.00
Los Angeles	2028	LDA	Aggregate	Aggregate	Plug-in Hybrid	83.91	0.00
Los Angeles	2028	LDT1	Aggregate	Aggregate	Plug-in Hybrid	1.05	0.00
Los Angeles	2028	LDT2	Aggregate	Aggregate	Plug-in Hybrid	17.76	0.00
Los Angeles	2028	MDV	Aggregate	Aggregate	Plug-in Hybrid	10.33	0.00

	Fuel_Gasoline	Fuel_DSL
	3,573,808,379	621,398,931
Fuel Usage for Project Operation	221,035	41,094
Percentage of County for Operation	0.0062%	0.0066%

Los Angeles Department of Water & Power

BUILDING A STRONGER L.A.

June 25, 2024

Mr. Louis Lin
Langan
515 South Flower Street
Los Angeles, CA 90071

Dear Mr. Lin:

Subject: Will Serve
130 West College Street - Commercial Building

This is in response to your letter dated on June 25, 2024 regarding electric service for the proposed project at the above address.

Electric service is available and will be provided in accordance with the Department of Water and Power Rules and Regulations. The estimated power requirement for this proposed project is part of the total load growth forecast for the City and has been taken into account in the planned growth of the power system.

If you have any questions regarding this matter, please call Ms. Amanda Caudillo, at (213) 367-8029.

Sincerely,

Jeff Bergman/MR

Jeffrey T. Bergman
District Engineer, Metro East Service Planning

c: Amanda Caudillo

111 N. Hope Street, Los Angeles, California 90012-2607 Mailing Address: PO Box 51111, Los Angeles, CA 90051-5700
Telephone (213) 367-4211 ladwp.com

9400 Oakdale Ave
Chatsworth, CA 91311

June 26, 2024

515 S Flower St, Ste 1060
Los Angeles, CA, 90071
Attn: Lewis Linn

Subject: Will Serve - 130 W College St, Los Angeles

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Thank you for inquiring about the availability of natural gas service for your project. We are pleased to inform you that Southern California Gas Company (SoCalGas) has facilities in the area where the above named project is being proposed. The service would be in accordance with SoCalGas' policies and extension rules on file with the California Public Utilities Commission (CPUC) at the time contractual arrangements are made.

This letter should not be considered a contractual commitment to serve the proposed project, and is only provided for informational purposes only. The availability of natural gas service is based upon natural gas supply conditions and is subject to changes in law or regulation. As a public utility, SoCalGas is under the jurisdiction of the Commission and certain federal regulatory agencies, and gas service will be provided in accordance with the rules and regulations in effect at the time service is provided. Natural gas service is also subject to environmental regulations, which could affect the construction of a main or service line extension (for example, if hazardous wastes were encountered in the process of installing the line). Applicable regulations will be determined once a contract with SoCalGas is executed.

If you need assistance choosing the appropriate gas equipment for your project, or would like to discuss the most effective applications of energy efficiency techniques, please contact our area Service Center at 800-427-2200.

Thank you again for choosing clean, reliable, and safe natural gas, your best energy value.

Sincerely,

Xavier Pulido

Xavier Pulido
Planning Associate
SoCalGas - Chatsworth HQ