

Appendix C: Development of Efficiency Matrix

The District believes that each land use project would be responsible for its related GHG emissions. Since the District proposes numerical thresholds on the Bright-line (10,000 metric tons of CO₂ equivalent per year, as MT CO₂e/yr) and the “De Minimis” level (1,100 MT CO₂e/yr), the District would also consider establishing an efficiency matrix for the projects with GHG emissions between 10,000 and 1,100 MT CO₂e/yr. The proposed efficiency matrix contains a set of efficiency conditions based on the Placer County’s special condition (urban and rural area) as well as the type of land use development (residential and non-residential) and would require smaller projects (emissions between 10,000 and 1,100 MT CO₂e/yr) to meet one of conditions in the matrix. With the efficiency matrix establishment, the District’s proposed GHG thresholds have 3 tiers to represent Placer County’s actions to achieve the owned GHG emission reduction target and support the California climate reduction goals

The current GHG efficiency thresholds adopted by the other air districts or lead agencies are on per capita basis or on “service population” basis (the sum of the number of jobs and the number of residents provided by a mixed-use project). The methodology is to identify land-use related GHG emissions in state or a region divided by the projected statewide or regional population and employees at the target year. However, there is no available land-use related GHG emission estimation in Placer County and special employment information for Placer County to estimate how many jobs would be offered by the proposed land use projects when they are non-residential type projects (shopping center, office building, or industrial warehouse). District staff proposes the different methodology to establish the efficiency conditions for land use projects within Placer County.

District staff proposes to use the California Emission Estimator Model (CalEEMod)¹ as the tool to develop the efficiency conditions for projects within Placer County. CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and greenhouse gas (GHG) emissions from a variety of land use projects. The model quantifies land use related GHG emissions from mobile sources, energy use, solid waste disposal, vegetation planting and/or removal, and water use. In addition, the model is developed in collaboration with the air districts of California. Default data including emission factors, trip lengths, utility usage, meteorology, source inventory, and special land use setting (urban or rural) have been provided by the various California air districts and other agencies to account for local special requirements and conditions. The emission estimation from CalEEMod would be considered as representable information for projects within Placer County.

¹ California Emission Estimator Model <http://www.caleemod.com/>

On September 8, 2016, Governor Brown signed the Senate Bill No. 32 California Global Warming Solution Act of 2006 (SB 32) to establish an aggressive GHG reduction target of 40 percent below 1990 levels by 2030. Accordingly, state agencies are working on the statewide plan to develop and scope potential policies and regulations to achieve this 2030 target. In addition, on October 7, 2015 the Clean Energy and Pollution Reduction Act (SB 350) was signed into law, establishing new clean energy, clean air and GHG reduction goals for 2030 and beyond. Both legislation actions set 2030 as the mid-term target year to continue pursuing the long-term climate goal of California. Therefore, District staff selected 2030 as the scenario to develop the special efficiency conditions for land use projects within Placer County.

Under the 2030 scenario, District staff assumes that the utility provider would need to achieve the requirement from SB 350 to increase the renewable electricity procurement goal from 33 percent by 2020 to 50 percent by 2030. In addition, all new buildings would need to meet the latest Title 24 building energy efficiency standards established by California Energy Committee (CEC) with the project related mobile source emissions estimated by CalEEMod in 2030. The following is the summary of assumption for 2030 scenario.

Cabin Intensity for Utility Provider (PG&E):

The California Public Utility Committee (CPUC) reported the PG&E's renewable portfolio standards (RPS) achievement was 28% in 2014² with the PG&E reported carbon intensity of 412 lbs of CO₂e/MWh. Therefore, the projected carbon intensity for PG&E in 2030 could be:

$$(1-0.5)/(1-0.28) * 412 = 286.1 \text{ lbs/MWh}$$

The model input for the utility provider's carbon intensity will be modified as the above value to calculate the electricity related GHG emissions from the project.

Title 24 Building Energy Efficiency Standard:

Since 2010, the CEC has revised its building efficiency standards in 2013 and 2016. The CEC presumes that the 2013 standards will use 25% less energy than the 2008 standards and the 2016 standards will use about 28% less energy than the 2013 standards^{3,4}. The effective date of the 2016 standards is January 1, 2017: which means any building that is built out after that date will need to meet the 2016 standard. Based on these facts, District staff presumes that any building built in 2030 would at least meet the 2016 standards. According to the CalEEMod User guide,

² http://www.cpuc.ca.gov/RPS_Homepage/

³ http://www.energy.ca.gov/title24/2013standards/rulemaking/documents/2013_Building_Energy_Efficiency_Standards_FAQ.pdf

⁴ http://www.energy.ca.gov/title24/2016standards/rulemaking/documents/2016_Building_Energy_Efficiency_Standards_FAQ.pdf

the default setting for energy use in version 2013.2 is based on the 2008 standards requirement, the modeling input would need to be modified to reflect the 2016 standard compliance for the projects in 2030 scenario.

$$1-[1*(1-0.25)*(1-0.28)] = 0.46$$

District staff presumes that the 2016 standards will use 46% less than the 2008 standards. To reflect the results from the standard compliance, the “Exceed Title 24” option in energy mitigation under CalEEMod is selected and assumes 46% improvement.

Mobile Source Emissions:

The CalEEMod uses CARB’s EMFAC model to estimate the on-road mobile source emissions. Because the scenario is set up at the year of 2030, the operational year for the efficiency analysis is selected at 2030.

Summary of CalEEMod Setting for 2030 Scenario Analysis:

Table C-1 summarizes the modified variables for 2030 scenario:

Table C-1

Modified Variables for 2030 Scenario	
Project location	Placer County APCD
Operational Year	2030
Select Utility Company	Pacific Gas & Electric Company
Carbon intensity (lb/MWh)	286.1
Energy mitigation	Exceed Title 24 by 46%
Area mitigation	No fireplace

The other variables are the default settings for Placer County. There are no modifications made for household size (2.83 per residential dwelling unit), trip rate, trip length, or other emission factors for energy use, water usage, and vehicle emissions.

Project Location and Land Use Category:

Because Placer County includes urban and rural areas, it would be difficult to set up a unique efficiency threshold for projects located in different areas. Generally, commuters living in a rural area would have a longer traveling distance than people living in the urban area; thus longer trips result in more mobile source emissions. District staff suggests that the efficiency threshold should be established based on the project owned carbon footprint which is the total amount of GHG emissions from its associated activities. Therefore, considering the characteristics of a

project location (urban and rural) and the types of land use categories District staff derives the corresponding efficiency. All CalEEMod results are attached with Table C-2 and C-3 summarizing the emission and the results of the efficiency analysis for each setup.

Table C-2

Summary of CalEEMod results				
			GHG emissions (MT CO ₂ e/year)	
	size	future residents*	urban	rural
Single family dwelling unit	100 units	286	1,284.86	1,582.01
Condo/Townhouse unit	100 units	286	870.86	1,076.59
Apartment unit	100 units	286	822.49	1,028.22
General commercial	60,000 sf		1,587.89	1,637.33
General office building	60,000 sd		603.78	617.20
General industrial	60,000 sf		505.14	613.36

*CalEEMod default setting for household is 2.86 people per residential dwelling unit.

Table C-3

Summary of efficiency results		
	urban	rural
Residential (MT CO ₂ e/capita*)		
Single family dwelling unit	4.5	5.5
Condo/Townhouse unit	3.1	3.8
Apartment unit	2.9	3.6
Non-residential (MT CO ₂ e/1,000 square feet)		
General commercial	26.5	27.3
General office building	10.1	11.2
General industrial	8.4	10.2

*CalEEMod default setting for household is 2.86 people per residential dwelling unit.

District staff proposes the efficiency matrix by selecting the results from a single family dwelling unit and general commercial usage for residential and non-residential projects with urban and rural location characteristics. The lead agency will decide which project location settings (urban or rural) and which type of land use would be appropriate for the proposed project. For a mixing-use type project, District staff suggests the lead agency discretionarily decide which land use types (residential or non-residential) would be more suitable for the proposed mixing-use designs. District staff presumes the proposed efficiency matrix would assist to promote projects which consider higher density and mixing-use designs, since townhouses or apartments would have better efficiency results than single-family units. Table C-4 shows the District proposed efficiency matrix for projects equal to or less than 10,000 MT CO₂e/year:

Table C-4

Efficiency Matrix			
Residential (MT CO ₂ e/capita*)		Non-residential (MT CO ₂ e/1,000 square feet)	
Urban	Rural	Urban	Rural
4.5	5.5	26.5	27.3

* based on CalEEMod default household size (2.83)

To calculate the efficiency of an individual project for comparison to one of efficiency conditions in the matrix, the project component can use CalEEMod to estimate annual CO₂e emissions (MT CO₂e/yr.) from the new project builtout; this value is then divided by the project's future population or the entire floor area from new buildings.

CalEEMod Results

**100 single family units
Placer County APCD Air District, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	100.00	Dwelling Unit	32.47	180,000.00	286

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	74
Climate Zone	2			Operational Year	2030
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	286.1	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Assuming 50% RPS achievement at 2030

Land Use - residential units

Construction Phase - No construction

Area Coating - low VOC paint

Area Mitigation - no hearth, low VOC paint

Energy Mitigation - assuming compliance with 2016 Energy Efficiency Standard (46% beyond 2008 standard)

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr										MT/yr						
Area	7.2813	0.0937	8.4702	3.0600e-003		1.0901	1.0901		1.0901	1.0901							152.3742
Energy	0.0173	0.1482	0.0630	9.5000e-004		0.0120	0.0120		0.0120	0.0120							269.9671
Mobile	0.3955	0.9001	4.2168	0.0154	1.0089	0.0202	1.0291		0.0186	0.2892							1,021.3915
Waste						0.0000	0.0000		0.0000	0.0000							46.8381
Water						0.0000	0.0000		0.0000	0.0000							14.5758
Total	7.6942	1.1419	12.7500	0.0194	1.0089	1.1223	2.1311		1.1207	1.3912							1,505.1468

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr										MT/yr						
Area	0.8378	8.5400e-003	0.7406	4.0000e-005		4.1200e-003	4.1200e-003		4.1200e-003	4.1200e-003							1.2372
Energy	0.0108	0.0926	0.0394	5.9000e-004		7.4900e-003	7.4900e-003		7.4900e-003	7.4900e-003							200.8241
Mobile	0.3955	0.9001	4.2168	0.0154	1.0089	0.0202	1.0291		0.0186	0.2892							1,021.3915
Waste						0.0000	0.0000		0.0000	0.0000							46.8381
Water						0.0000	0.0000		0.0000	0.0000							14.5725
Total	1.2441	1.0012	4.9967	0.0160	1.0089	0.0318	1.0407		0.0303	0.3008							1,284.8634

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	83.83	12.32	60.81	17.46	0.00	97.16	51.17	0.00	97.30	78.38	0.00	0.00	0.00	0.00	0.00	14.64

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2017	12/30/2016	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Excavators	3	8.00	162	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	2	8.00	255	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr										MT/yr						
Mitigated	0.3955	0.9001	4.2168	0.0154	1.0089	0.0202	1.0291		0.0186	0.2892							1,021.3915
Unmitigated	0.3955	0.9001	4.2168	0.0154	1.0089	0.0202	1.0291		0.0186	0.2892							1,021.3915

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	957.00	1,008.00	877.00	2,729,500	2,729,500
Total	957.00	1,008.00	877.00	2,729,500	2,729,500

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	10.80	7.30	7.50	42.60	21.00	36.40	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.439203	0.064081	0.188749	0.166886	0.062449	0.008706	0.013631	0.040993	0.001713	0.001066	0.008352	0.000470	0.003701

5.0 Energy Detail

5.1 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Land Use	kBTU/yr	tons/yr										MT/yr						
Single Family Housing	2.00915e+006	0.0108	0.0926	0.0394	5.9000e-004		7.4900e-003	7.4900e-003		7.4900e-003	7.4900e-003							107.8683
Total		0.0108	0.0926	0.0394	5.9000e-004		7.4900e-003	7.4900e-003		7.4900e-003	7.4900e-003							107.8683

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	743730				97.3488
Total					97.3488

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	710167				92.9557
Total					92.9557

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

No Hearths Installed

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1126					0.0000	0.0000		0.0000	0.0000						0.0000
Consumer Products	0.7030					0.0000	0.0000		0.0000	0.0000						0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						0.0000
Landscaping	0.0222	8.5400e-003	0.7406	4.0000e-005		4.1200e-003	4.1200e-003		4.1200e-003	4.1200e-003						1.2372
Total	0.8378	8.5400e-003	0.7406	4.0000e-005		4.1200e-003	4.1200e-003		4.1200e-003	4.1200e-003						1.2372

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Unmitigated				14.5758
Mitigated				14.5725

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	6.5154 / 4.10754				14.5758
Total					14.5758

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	6.5154 / 4.10754				14.5725
Total					14.5725

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated				46.8381
Unmitigated				46.8381

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	102.96				46.8381
Total					46.8381

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	102.96				46.8381
Total					46.8381

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Vegetation

100 single family units
Placer County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	100.00	Dwelling Unit	32.47	180,000.00	286

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	74
Climate Zone	2			Operational Year	2030
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	286.1	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Assuming 50% RPS achievement at 2030

Land Use - residential units

Construction Phase - No construction

Area Coating - low VOC paint

Area Mitigation - no hearth, low VOC paint

Energy Mitigation - assuming compliance with 2016 Energy Efficiency Standard (46% beyond 2008 standard)

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr										MT/yr						
Area	7.2813	0.0937	8.4702	3.0600e-003		1.0901	1.0901		1.0901	1.0901							152.3742
Energy	0.0173	0.1482	0.0630	9.5000e-004		0.0120	0.0120		0.0120	0.0120							269.9671
Mobile	0.4362	1.1140	5.0018	0.0198	1.3115	0.0257	1.3372		0.0237	0.3754							1,318.5407
Waste						0.0000	0.0000		0.0000	0.0000							46.8381
Water						0.0000	0.0000		0.0000	0.0000							14.5758
Total	7.7349	1.3558	13.5351	0.0238	1.3115	1.1278	2.4392		1.1258	1.4774							1,802.2960

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr										MT/yr						
Area	0.8378	8.5400e-003	0.7406	4.0000e-005		4.1200e-003	4.1200e-003		4.1200e-003	4.1200e-003							1.2372
Energy	0.0108	0.0926	0.0394	5.9000e-004		7.4900e-003	7.4900e-003		7.4900e-003	7.4900e-003							200.8241
Mobile	0.4362	1.1140	5.0018	0.0198	1.3115	0.0257	1.3372		0.0237	0.3754							1,318.5407
Waste						0.0000	0.0000		0.0000	0.0000							46.8381
Water						0.0000	0.0000		0.0000	0.0000							14.5725
Total	1.2848	1.2151	5.7818	0.0205	1.3115	0.0373	1.3488		0.0353	0.3870							1,582.0126

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	83.39	10.38	57.28	14.18	0.00	96.69	44.71	0.00	96.86	73.81	0.00	0.00	0.00	0.00	0.00	12.22

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2017	2/10/2016	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Excavators	3	8.00	162	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	2	8.00	255	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr										MT/yr						
Mitigated	0.4362	1.1140	5.0018	0.0198	1.3115	0.0257	1.3372		0.0237	0.3754							1,318,540 7
Unmitigated	0.4362	1.1140	5.0018	0.0198	1.3115	0.0257	1.3372		0.0237	0.3754							1,318,540 7

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	957.00	1,008.00	877.00	3,548,179	3,548,179
Total	957.00	1,008.00	877.00	3,548,179	3,548,179

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	16.80	7.10	7.90	42.60	21.00	36.40	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.439203	0.064081	0.188749	0.166886	0.062449	0.008706	0.013631	0.040993	0.001713	0.001066	0.008352	0.000470	0.003701

5.0 Energy Detail

2.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Land Use	kBTU/yr	tons/yr										MT/yr						
Single Family Housing	2.00915e+006	0.0108	0.0926	0.0394	5.9000e-004		7.4900e-003	7.4900e-003		7.4900e-003	7.4900e-003							107.8683
Total		0.0108	0.0926	0.0394	5.9000e-004		7.4900e-003	7.4900e-003		7.4900e-003	7.4900e-003							107.8683

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	743730				97.3488
Total					97.3488

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	710167				92.9557
Total					92.9557

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

No Hearths Installed

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1126					0.0000	0.0000		0.0000	0.0000						0.0000
Consumer Products	0.7030					0.0000	0.0000		0.0000	0.0000						0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						0.0000
Landscaping	0.0222	8.5400e-003	0.7406	4.0000e-005		4.1200e-003	4.1200e-003		4.1200e-003	4.1200e-003						1.2372
Total	0.8378	8.5400e-003	0.7406	4.0000e-005		4.1200e-003	4.1200e-003		4.1200e-003	4.1200e-003						1.2372

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Unmitigated				14.5758
Mitigated				14.5725

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	6.5154 / 4.10754				14.5758
Total					14.5758

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	6.5154 / 4.10754				14.5725
Total					14.5725

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated				46.8381
Unmitigated				46.8381

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	102.96				46.8381
Total					46.8381

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	102.96				46.8381
Total					46.8381

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Vegetation

100 Condo units
Placer County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Condo/Townhouse	100.00	Dwelling Unit	6.25	100,000.00	286

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	74
Climate Zone	2			Operational Year	2030
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	286.1	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Assuming 50% RPS achievement at 2030

Land Use - residential units

Construction Phase - No construction

Area Coating - low VOC paint

Area Mitigation - no hearth, low VOC paint

Energy Mitigation - assuming compliance with 2016 Energy Efficiency Standard (46% beyond 2008 standard)

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr										MT/yr						
Area	6.8438	0.0937	8.4702	3.0600e-003		1.0901	1.0901		1.0901	1.0901							152.3742
Energy	0.0118	0.1010	0.0430	6.4000e-004		8.1600e-003	8.1600e-003		8.1600e-003	8.1600e-003							175.6019
Mobile	0.2738	0.6232	2.9195	0.0106	0.6985	0.0140	0.7125		0.0129	0.2002							707.1643
Waste						0.0000	0.0000		0.0000	0.0000							20.9261
Water						0.0000	0.0000		0.0000	0.0000							14.5758
Total	7.1294	0.8178	11.4327	0.0143	0.6985	1.1122	1.8107		1.1111	1.2984							1,070.6424

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr										MT/yr						
Area	0.4753	8.5400e-003	0.7406	4.0000e-005		4.1200e-003	4.1200e-003		4.1200e-003	4.1200e-003							1.2372
Energy	7.1100e-003	0.0608	0.0259	3.9000e-004		4.9100e-003	4.9100e-003		4.9100e-003	4.9100e-003							126.9617
Mobile	0.2738	0.6232	2.9195	0.0106	0.6985	0.0140	0.7125		0.0129	0.2002							707.1643
Waste						0.0000	0.0000		0.0000	0.0000							20.9261
Water						0.0000	0.0000		0.0000	0.0000							14.5725
Total	0.7562	0.6925	3.6859	0.0111	0.6985	0.0230	0.7215		0.0219	0.2092							870.8618

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	89.39	15.32	67.76	22.82	0.00	97.93	60.15	0.00	98.03	83.89	0.00	0.00	0.00	0.00	0.00	18.66

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2017	12/30/2016	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Excavators	3	8.00	162	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	2	8.00	255	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2738	0.6232	2.9195	0.0106	0.6985	0.0140	0.7125		0.0129	0.2002						707.1643
Unmitigated	0.2738	0.6232	2.9195	0.0106	0.6985	0.0140	0.7125		0.0129	0.2002						707.1643

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	659.00	716.00	607.00	1,889,780	1,889,780
Total	659.00	716.00	607.00	1,889,780	1,889,780

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse	10.80	7.30	7.50	42.60	21.00	36.40	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.439203	0.064081	0.188749	0.166886	0.062449	0.008706	0.013631	0.040993	0.001713	0.001066	0.008352	0.000470	0.003701

5.0 Energy Detail

5.1 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Land Use	kBTU/yr	tons/yr										MT/yr						
Condo/Townhouse	1.31898e+006	7.1100e-003	0.0608	0.0259	3.9000e-004		4.9100e-003	4.9100e-003		4.9100e-003	4.9100e-003							70.8143
Total		7.1100e-003	0.0608	0.0259	3.9000e-004		4.9100e-003	4.9100e-003		4.9100e-003	4.9100e-003							70.8143

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	442810				57.9606
Total					57.9606

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	428957				56.1474
Total					56.1474

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

No Hearths Installed

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0626					0.0000	0.0000		0.0000	0.0000						0.0000
Consumer Products	0.3906					0.0000	0.0000		0.0000	0.0000						0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						0.0000
Landscaping	0.0222	8.5400e-003	0.7406	4.0000e-005		4.1200e-003	4.1200e-003		4.1200e-003	4.1200e-003						1.2372
Total	0.4753	8.5400e-003	0.7406	4.0000e-005		4.1200e-003	4.1200e-003		4.1200e-003	4.1200e-003						1.2372

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Unmitigated				14.5758
Mitigated				14.5725

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	6.5154 / 4.10754				14.5758
Total					14.5758

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	6.5154 / 4.10754				14.5725
Total					14.5725

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated				20.9261
Unmitigated				20.9261

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	46				20.9261
Total					20.9261

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	46				20.9261
Total					20.9261

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Vegetation

100 Condo units
Placer County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Condo/Townhouse	100.00	Dwelling Unit	6.25	100,000.00	286

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	74
Climate Zone	2			Operational Year	2030
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	286.1	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Assuming 50% RPS achievement at 2030

Land Use - residential units

Construction Phase - No construction

Area Coating - low VOC paint

Area Mitigation - no hearth, low VOC paint

Energy Mitigation - assuming compliance with 2016 Energy Efficiency Standard (46% beyond 2008 standard)

2.2 Overall Operational**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr										MT/yr						
Area	6.8438	0.0937	8.4702	3.0600e-003		1.0901	1.0901		1.0901	1.0901							152.3742
Energy	0.0118	0.1010	0.0430	6.4000e-004		8.1600e-003	8.1600e-003		8.1600e-003	8.1600e-003							175.6019
Mobile	0.3020	0.7713	3.4630	0.0137	0.9080	0.0178	0.9258		0.0164	0.2599							912.8967
Waste						0.0000	0.0000		0.0000	0.0000							20.9261
Water						0.0000	0.0000		0.0000	0.0000							14.5758
Total	7.1576	0.9659	11.9762	0.0174	0.9080	1.1161	2.0240		1.1146	1.3581							1,276.3748

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr										MT/yr						
Area	0.4753	8.5400e-003	0.7406	4.0000e-005		4.1200e-003	4.1200e-003		4.1200e-003	4.1200e-003							1.2372
Energy	7.1100e-003	0.0608	0.0259	3.9000e-004		4.9100e-003	4.9100e-003		4.9100e-003	4.9100e-003							126.9617
Mobile	0.3020	0.7713	3.4630	0.0137	0.9080	0.0178	0.9258		0.0164	0.2599							912.8967
Waste						0.0000	0.0000		0.0000	0.0000							20.9261
Water						0.0000	0.0000		0.0000	0.0000							14.5725
Total	0.7844	0.8406	4.2294	0.0142	0.9080	0.0268	0.9348		0.0255	0.2689							1,076.5942

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	89.04	12.97	64.68	18.77	0.00	97.60	53.81	0.00	97.72	80.20	0.00	0.00	0.00	0.00	0.00	15.65

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2017	12/30/2016	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Excavators	3	8.00	162	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	2	8.00	255	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr										MT/yr						
Mitigated	0.3020	0.7713	3.4630	0.0137	0.9080	0.0178	0.9258		0.0164	0.2599							912.8967
Unmitigated	0.3020	0.7713	3.4630	0.0137	0.9080	0.0178	0.9258		0.0164	0.2599							912.8967

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	659.00	716.00	607.00	2,456,595	2,456,595
Total	659.00	716.00	607.00	2,456,595	2,456,595

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse	16.80	7.10	7.90	42.60	21.00	36.40	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.439203	0.064081	0.188749	0.166886	0.062449	0.008706	0.013631	0.040993	0.001713	0.001066	0.008352	0.000470	0.003701

5.0 Energy Detail

5.1 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Land Use	kBTU/yr	tons/yr										MT/yr						
Condo/Townhouse	1.31898e+006	7.1100e-003	0.0608	0.0259	3.9000e-004		4.9100e-003	4.9100e-003		4.9100e-003	4.9100e-003							70.8143
Total		7.1100e-003	0.0608	0.0259	3.9000e-004		4.9100e-003	4.9100e-003		4.9100e-003	4.9100e-003							70.8143

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	442810				57.9606
Total					57.9606

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	428957				56.1474
Total					56.1474

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

No Hearths Installed

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0626					0.0000	0.0000		0.0000	0.0000						0.0000
Consumer Products	0.3906					0.0000	0.0000		0.0000	0.0000						0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						0.0000
Landscaping	0.0222	8.5400e-003	0.7406	4.0000e-005		4.1200e-003	4.1200e-003		4.1200e-003	4.1200e-003						1.2372
Total	0.4753	8.5400e-003	0.7406	4.0000e-005		4.1200e-003	4.1200e-003		4.1200e-003	4.1200e-003						1.2372

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Unmitigated				14.5758
Mitigated				14.5725

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	6.5154 / 4.10754				14.5758
Total					14.5758

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	6.5154 / 4.10754				14.5725
Total					14.5725

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated				20.9261
Unmitigated				20.9261

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	46				20.9261
Total					20.9261

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	46				20.9261
Total					20.9261

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Vegetation

100 apartment units
Placer County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments High Rise	100.00	Dwelling Unit	1.61	100,000.00	286

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	74
Climate Zone	2			Operational Year	2030
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	286.1	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Assuming 50% RPS achievement at 2030

Land Use - residential units

Construction Phase - No construction

Area Coating - low VOC paint

Area Mitigation - no hearth, low VOC paint

Energy Mitigation - assuming compliance with 2016 Energy Efficiency Standard (46% beyond 2008 standard)

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr										MT/yr						
Area	0.4753	8.5400e-003	0.7406	4.0000e-005		4.1200e-003	4.1200e-003		4.1200e-003	4.1200e-003							1.2372
Energy	3.3300e-003	0.0285	0.0121	1.8000e-004		2.3000e-003	2.3000e-003		2.3000e-003	2.3000e-003							78.5854
Mobile	0.2738	0.6232	2.9195	0.0106	0.6985	0.0140	0.7125		0.0129	0.2002							707.1643
Waste						0.0000	0.0000		0.0000	0.0000							20.9261
Water						0.0000	0.0000		0.0000	0.0000							14.5725
Total	0.7524	0.6602	3.6722	0.0109	0.6985	0.0204	0.7189		0.0193	0.2066							822.4855

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	89.44	13.46	67.81	22.39	0.00	98.16	60.20	0.00	98.25	84.03	0.00	0.00	0.00	0.00	0.00	17.42

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2017	1/27/2016	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	255	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2738	0.6232	2.9195	0.0106	0.6985	0.0140	0.7125		0.0129	0.2002						707.1643
Unmitigated	0.2738	0.6232	2.9195	0.0106	0.6985	0.0140	0.7125		0.0129	0.2002						707.1643

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments High Rise	659.00	716.00	607.00	1,889,780	1,889,780
Total	659.00	716.00	607.00	1,889,780	1,889,780

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments High Rise	10.80	7.30	7.50	42.60	21.00	36.40	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.439203	0.064081	0.188749	0.166886	0.062449	0.008706	0.013631	0.040993	0.001713	0.001066	0.008352	0.000470	0.003701

5.0 Energy Detail

5.1 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Land Use	kBTU/yr	tons/yr										MT/yr						
Apartments High Rise	617730	3.3300e-003	0.0285	0.0121	1.8000e-004		2.3000e-003	2.3000e-003		2.3000e-003	2.3000e-003							33.1650
Total		3.3300e-003	0.0285	0.0121	1.8000e-004		2.3000e-003	2.3000e-003		2.3000e-003	2.3000e-003							33.1650

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	361839				47.3621
Total					47.3621

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	347005				45.4204
Total					45.4204

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

No Hearths Installed

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0626					0.0000	0.0000		0.0000	0.0000						0.0000
Consumer Products	0.3906					0.0000	0.0000		0.0000	0.0000						0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						0.0000
Landscaping	0.0222	8.5400e-003	0.7406	4.0000e-005		4.1200e-003	4.1200e-003		4.1200e-003	4.1200e-003						1.2372
Total	0.4753	8.5400e-003	0.7406	4.0000e-005		4.1200e-003	4.1200e-003		4.1200e-003	4.1200e-003						1.2372

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Unmitigated				14.5758
Mitigated				14.5725

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	6.5154 / 4.10754				14.5758
Total					14.5758

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	6.5154 / 4.10754				14.5725
Total					14.5725

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated				20.9261
Unmitigated				20.9261

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments High Rise	46				20.9261
Total					20.9261

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments High Rise	46				20.9261
Total					20.9261

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Vegetation

100 apartment units
Placer County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments High Rise	100.00	Dwelling Unit	1.61	100,000.00	286

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	74
Climate Zone	2			Operational Year	2030
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	286.1	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Assuming 50% RPS achievement at 2030

Land Use - residential units

Construction Phase - No construction

Area Coating - low VOC paint

Area Mitigation - no hearth, low VOC paint

Energy Mitigation - assuming compliance with 2016 Energy Efficiency Standard (46% beyond 2008 standard)

2.2 Overall Operational**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr										MT/yr						
Area	6.8438	0.0937	8.4702	3.0600e-003		1.0901	1.0901		1.0901	1.0901							152.3742
Energy	5.3800e-003	0.0460	0.0196	2.9000e-004		3.7200e-003	3.7200e-003		3.7200e-003	3.7200e-003							100.9297
Mobile	0.3020	0.7713	3.4630	0.0137	0.9080	0.0178	0.9258		0.0164	0.2599							912.8967
Waste						0.0000	0.0000		0.0000	0.0000							20.9261
Water						0.0000	0.0000		0.0000	0.0000							14.5758
Total	7.1512	0.9109	11.9528	0.0171	0.9080	1.1116	2.0196		1.1102	1.3537							1,201.7026

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr										MT/yr						
Area	0.4753	8.5400e-003	0.7406	4.0000e-005		4.1200e-003	4.1200e-003		4.1200e-003	4.1200e-003							1.2372
Energy	3.3300e-003	0.0285	0.0121	1.8000e-004		2.3000e-003	2.3000e-003		2.3000e-003	2.3000e-003							78.5854
Mobile	0.3020	0.7713	3.4630	0.0137	0.9080	0.0178	0.9258		0.0164	0.2599							912.8967
Waste						0.0000	0.0000		0.0000	0.0000							20.9261
Water						0.0000	0.0000		0.0000	0.0000							14.5725
Total	0.7806	0.8083	4.2157	0.0139	0.9080	0.0242	0.9322		0.0228	0.2663							1,028.2179

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	89.08	11.27	64.73	18.34	0.00	97.82	53.84	0.00	97.94	80.33	0.00	0.00	0.00	0.00	0.00	14.44

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2017	12/30/2016	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	255	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3020	0.7713	3.4630	0.0137	0.9080	0.0178	0.9258		0.0164	0.2599						912.8967
Unmitigated	0.3020	0.7713	3.4630	0.0137	0.9080	0.0178	0.9258		0.0164	0.2599						912.8967

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments High Rise	659.00	716.00	607.00	2,456,595	2,456,595
Total	659.00	716.00	607.00	2,456,595	2,456,595

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments High Rise	16.80	7.10	7.90	42.60	21.00	36.40	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.439203	0.064081	0.188749	0.166886	0.062449	0.008706	0.013631	0.040993	0.001713	0.001066	0.008352	0.000470	0.003701

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Land Use	kBTU/yr	tons/yr										MT/yr						
Apartments High Rise	617730	3.3300e-003	0.0285	0.0121	1.8000e-004		2.3000e-003	2.3000e-003		2.3000e-003	2.3000e-003							33.1650
Total		3.3300e-003	0.0285	0.0121	1.8000e-004		2.3000e-003	2.3000e-003		2.3000e-003	2.3000e-003							33.1650

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	361839				47.3621
Total					47.3621

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	347005				45.4204
Total					45.4204

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

No Hearths Installed

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0626					0.0000	0.0000		0.0000	0.0000						0.0000
Consumer Products	0.3906					0.0000	0.0000		0.0000	0.0000						0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						0.0000
Landscaping	0.0222	8.5400e-003	0.7406	4.0000e-005		4.1200e-003	4.1200e-003		4.1200e-003	4.1200e-003						1.2372
Total	0.4753	8.5400e-003	0.7406	4.0000e-005		4.1200e-003	4.1200e-003		4.1200e-003	4.1200e-003						1.2372

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Unmitigated				14.5758
Mitigated				14.5725

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	6.5154 / 4.10754				14.5758
Total					14.5758

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	6.5154 / 4.10754				14.5725
Total					14.5725

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated				20.9261
Unmitigated				20.9261

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments High Rise	46				20.9261
Total					20.9261

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments High Rise	46				20.9261
Total					20.9261

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Vegetation

60,000 sf commercial shopping center
Placer County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Strip Mall	60.00	1000sqft	1.38	60,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	74
Climate Zone	2			Operational Year	2030
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	286.1	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Assuming 50% RPS achievement at 2030

Land Use - commercial shopping center

Construction Phase - No construction

Area Coating - low VOC paint

Area Mitigation - no hearth, low VOC paint

Energy Mitigation - assuming compliance with 2016 Energy Efficiency Standard (46% beyond 2008 standard)

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr										MT/yr						
Area	0.3039	0.0000	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000							1.1300e-003
Energy	3.9800e-003	0.0362	0.0304	2.2000e-004		2.7500e-003	2.7500e-003		2.7500e-003	2.7500e-003							144.7492
Mobile	0.8501	1.4573	7.6828	0.0217	1.3860	0.0299	1.4159		0.0276	0.3993							1,439.4532
Waste						0.0000	0.0000		0.0000	0.0000							28.6597
Water						0.0000	0.0000		0.0000	0.0000							9.9069
Total	1.1580	1.4935	7.7137	0.0219	1.3860	0.0327	1.4187		0.0304	0.4020							1,622.7701

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr										MT/yr						
Area	0.2622	0.0000	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000							1.1300e-003
Energy	2.2000e-003	0.0200	0.0168	1.2000e-004		1.5200e-003	1.5200e-003		1.5200e-003	1.5200e-003							109.8751
Mobile	0.8501	1.4573	7.6828	0.0217	1.3860	0.0299	1.4159		0.0276	0.3993							1,439.4532
Waste						0.0000	0.0000		0.0000	0.0000							28.6597
Water						0.0000	0.0000		0.0000	0.0000							9.9047
Total	1.1145	1.4774	7.7001	0.0218	1.3860	0.0315	1.4174		0.0291	0.4008							1,587.8938

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	3.76	1.08	0.18	0.46	0.00	3.76	0.09	0.00	4.05	0.31	0.00	0.00	0.00	0.00	0.00	2.15

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2017	1/27/2016	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.8501	1.4573	7.6828	0.0217	1.3860	0.0299	1.4159		0.0276	0.3993						1,439,453 ₂
Unmitigated	0.8501	1.4573	7.6828	0.0217	1.3860	0.0299	1.4159		0.0276	0.3993						1,439,453 ₂

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Strip Mall	2,659.20	2,522.40	1225.80	3,749,804	3,749,804
Total	2,659.20	2,522.40	1,225.80	3,749,804	3,749,804

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.439203	0.064081	0.188749	0.166886	0.062449	0.008706	0.013631	0.040993	0.001713	0.001066	0.008352	0.000470	0.003701

5.0 Energy Detail

5.1 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Land Use	kBTU/yr	tons/yr										MT/yr						
Strip Mall	408132	2.2000e-003	0.0200	0.0168	1.2000e-004		1.5200e-003	1.5200e-003		1.5200e-003	1.5200e-003							21.9120
Total		2.2000e-003	0.0200	0.0168	1.2000e-004		1.5200e-003	1.5200e-003		1.5200e-003	1.5200e-003							21.9120

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Strip Mall	803400				105.1592
Total					105.1592

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Strip Mall	672024				87.9630
Total					87.9630

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr										MT/yr						
Mitigated	0.2622	0.0000	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000							1.1300e-003
Unmitigated	0.3039	0.0000	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000							1.1300e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
SubCategory	tons/yr										MT/yr						
Architectural Coating	0.0695					0.0000	0.0000		0.0000	0.0000							0.0000
Consumer Products	0.2343					0.0000	0.0000		0.0000	0.0000							0.0000
Landscaping	5.0000e-005	0.0000	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000							1.1300e-003
Total	0.3039	0.0000	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000							1.1300e-003

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0278					0.0000	0.0000		0.0000	0.0000						0.0000
Consumer Products	0.2343					0.0000	0.0000		0.0000	0.0000						0.0000
Landscaping	5.0000e-005	0.0000	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						1.1300e-003
Total	0.2622	0.0000	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						1.1300e-003

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Unmitigated				9.9069
Mitigated				9.9047

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Strip Mall	4.44435 / 2.72396				9.9069
Total					9.9069

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Strip Mall	4.44435 / 2.72396				9.9047
Total					9.9047

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated				28.6597
Unmitigated				28.6597

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Strip Mall	63				28.6597
Total					28.6597

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Strip Mall	63				28.6597
Total					28.6597

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Vegetation

60,000 sf commercial shopping center
Placer County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Strip Mall	60.00	1000sqft	1.38	60,000.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	74
Climate Zone	2			Operational Year	2030
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	286.1	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Assuming 50% RPS achievement at 2030

Land Use - commercial shopping center

Construction Phase - No construction

Area Coating - low VOC paint

Area Mitigation - no hearth, low VOC paint

Energy Mitigation - assuming compliance with 2016 Energy Efficiency Standard (46% beyond 2008 standard)

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr										MT/yr						
Area	0.3039	0.0000	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000							1.1300e-003
Energy	3.9800e-003	0.0362	0.0304	2.2000e-004		2.7500e-003	2.7500e-003		2.7500e-003	2.7500e-003							144.7492
Mobile	0.8569	1.4929	7.8134	0.0224	1.4363	0.0309	1.4672		0.0285	0.4136							1,488.8877
Waste						0.0000	0.0000		0.0000	0.0000							28.6597
Water						0.0000	0.0000		0.0000	0.0000							9.9069
Total	1.1648	1.5291	7.8443	0.0226	1.4363	0.0336	1.4699		0.0312	0.4164							1,672.2046

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2622	0.0000	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						1.1300e-003
Energy	2.2000e-003	0.0200	0.0168	1.2000e-004		1.5200e-003	1.5200e-003		1.5200e-003	1.5200e-003						109.8751
Mobile	0.8569	1.4929	7.8134	0.0224	1.4363	0.0309	1.4672		0.0285	0.4136						1,488.8877
Waste						0.0000	0.0000		0.0000	0.0000						28.6597
Water						0.0000	0.0000		0.0000	0.0000						9.9047
Total	1.1213	1.5129	7.8307	0.0225	1.4363	0.0324	1.4687		0.0300	0.4152						1,637.3282

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	3.73	1.06	0.17	0.44	0.00	3.66	0.08	0.00	3.94	0.30	0.00	0.00	0.00	0.00	0.00	2.09

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2017	12/30/2016	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr										MT/yr						
Mitigated	0.8569	1.4929	7.8134	0.0224	1.4363	0.0309	1.4672		0.0285	0.4136							1,488,887.7
Unmitigated	0.8569	1.4929	7.8134	0.0224	1.4363	0.0309	1.4672		0.0285	0.4136							1,488,887.7

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Strip Mall	2,659.20	2,522.40	1225.80	3,886,002	3,886,002
Total	2,659.20	2,522.40	1,225.80	3,886,002	3,886,002

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Strip Mall	14.70	6.60	6.60	16.60	64.40	19.00	45	40	15

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.439203	0.064081	0.188749	0.166886	0.062449	0.008706	0.013631	0.040993	0.001713	0.001066	0.008352	0.000470	0.003701

5.0 Energy Detail

5.1 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Land Use	kBTU/yr	tons/yr										MT/yr						
Strip Mall	408132	2.2000e-003	0.0200	0.0168	1.2000e-004		1.5200e-003	1.5200e-003		1.5200e-003	1.5200e-003							21.9120
Total		2.2000e-003	0.0200	0.0168	1.2000e-004		1.5200e-003	1.5200e-003		1.5200e-003	1.5200e-003							21.9120

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Strip Mall	803400				105.1592
Total					105.1592

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Strip Mall	672024				87.9630
Total					87.9630

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2622	0.0000	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						1.1300e-003
Unmitigated	0.3039	0.0000	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						1.1300e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0695					0.0000	0.0000		0.0000	0.0000						0.0000
Consumer Products	0.2343					0.0000	0.0000		0.0000	0.0000						0.0000
Landscaping	5.0000e-005	0.0000	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						1.1300e-003
Total	0.3039	0.0000	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						1.1300e-003

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0278					0.0000	0.0000		0.0000	0.0000						0.0000
Consumer Products	0.2343					0.0000	0.0000		0.0000	0.0000						0.0000
Landscaping	5.0000e-005	0.0000	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						1.1300e-003
Total	0.2622	0.0000	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						1.1300e-003

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Unmitigated				9.9069
Mitigated				9.9047

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Strip Mall	4.44435 / 2.72396				9.9069
Total					9.9069

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Strip Mall	4.44435 / 2.72396				9.9047
Total					9.9047

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated				28.6597
Unmitigated				28.6597

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Strip Mall	63				28.6597
Total					28.6597

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Strip Mall	63				28.6597
Total					28.6597

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Vegetation

60,000 sf office building
Placer County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	60.00	1000sqft	1.38	60,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	74
Climate Zone	2			Operational Year	2030
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	286.1	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Assuming 50% RPS achievement at 2030

Land Use - general office building

Construction Phase - No construction

Area Coating - low VOC paint

Area Mitigation - no hearth, low VOC paint

Energy Mitigation - assuming compliance with 2016 Energy Efficiency Standard (46% beyond 2008 standard)

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2622	0.0000	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						1.1300e-003
Energy	3.0900e-003	0.0281	0.0236	1.7000e-004		2.1400e-003	2.1400e-003		2.1400e-003	2.1400e-003						104.3166
Mobile	0.1959	0.4107	1.9873	6.7700e-003	0.4421	9.0200e-003	0.4512		8.3200e-003	0.1269						450.3114
Waste						0.0000	0.0000		0.0000	0.0000						25.3843
Water						0.0000	0.0000		0.0000	0.0000						23.7658
Total	0.4612	0.4389	2.0115	6.9400e-003	0.4421	0.0112	0.4533		0.0105	0.1290						603.7792

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	8.75	4.93	0.94	1.98	0.00	13.42	0.38	0.00	14.19	1.32	0.00	0.00	0.00	0.00	0.00	6.09

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2017	1/27/2016	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1959	0.4107	1.9873	6.7700e-003	0.4421	9.0200e-003	0.4512		8.3200e-003	0.1269						450.3114
Unmitigated	0.1959	0.4107	1.9873	6.7700e-003	0.4421	9.0200e-003	0.4512		8.3200e-003	0.1269						450.3114

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	660.60	142.20	58.80	1,196,242	1,196,242
Total	660.60	142.20	58.80	1,196,242	1,196,242

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.439203	0.064081	0.188749	0.166886	0.062449	0.008706	0.013631	0.040993	0.001713	0.001066	0.008352	0.000470	0.003701

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Land Use	kBTU/yr	tons/yr										MT/yr						
General Office Building	573492	3.0900e-003	0.0281	0.0236	1.7000e-004		2.1400e-003	2.1400e-003		2.1400e-003	2.1400e-003							30.7900
Total		3.0900e-003	0.0281	0.0236	1.7000e-004		2.1400e-003	2.1400e-003		2.1400e-003	2.1400e-003							30.7900

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	670200				87.7243
Total					87.7243

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	561732				73.5266
Total					73.5266

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2622	0.0000	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						1.1300e-003
Unmitigated	0.3039	0.0000	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						1.1300e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0695					0.0000	0.0000		0.0000	0.0000						0.0000
Consumer Products	0.2343					0.0000	0.0000		0.0000	0.0000						0.0000
Landscaping	5.0000e-005	0.0000	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						1.1300e-003
Total	0.3039	0.0000	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						1.1300e-003

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0278					0.0000	0.0000		0.0000	0.0000						0.0000
Consumer Products	0.2343					0.0000	0.0000		0.0000	0.0000						0.0000
Landscaping	5.0000e-005	0.0000	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						1.1300e-003
Total	0.2622	0.0000	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						1.1300e-003

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Unmitigated				23.7712
Mitigated				23.7658

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	10.664 / 6.53602				23.7712
Total					23.7712

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	10.664 / 6.53602				23.7658
Total					23.7658

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated				25.3843
Unmitigated				25.3843

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	55.8				25.3843
Total					25.3843

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	55.8				25.3843
Total					25.3843

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Vegetation

60,000 sf office building
Placer County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	60.00	1000sqft	1.38	60,000.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	74
Climate Zone	2			Operational Year	2030
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	286.1	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Assuming 50% RPS achievement at 2030

Land Use - general office building

Construction Phase - No construction

Area Coating - low VOC paint

Area Mitigation - no hearth, low VOC paint

Energy Mitigation - assuming compliance with 2016 Energy Efficiency Standard (46% beyond 2008 standard)

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2622	0.0000	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						1.1300e-003
Energy	3.0900e-003	0.0281	0.0236	1.7000e-004		2.1400e-003	2.1400e-003		2.1400e-003	2.1400e-003						104.3166
Mobile	0.2052	0.4593	2.1654	7.7800e-003	0.5108	0.0103	0.5211		9.4700e-003	0.1465						517.7304
Waste						0.0000	0.0000		0.0000	0.0000						25.3843
Water						0.0000	0.0000		0.0000	0.0000						23.7658
Total	0.4705	0.4874	2.1896	7.9500e-003	0.5108	0.0124	0.5232		0.0116	0.1486						671.1982

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	8.59	4.46	0.87	1.73	0.00	12.23	0.33	0.00	12.97	1.15	0.00	0.00	0.00	0.00	0.00	5.51

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2017	12/30/2016	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr										MT/yr						
Mitigated	0.2052	0.4593	2.1654	7.7800e-003	0.5108	0.0103	0.5211		9.4700e-003	0.1465							517.7304
Unmitigated	0.2052	0.4593	2.1654	7.7800e-003	0.5108	0.0103	0.5211		9.4700e-003	0.1465							517.7304

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	660.60	142.20	58.80	1,381,989	1,381,989
Total	660.60	142.20	58.80	1,381,989	1,381,989

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	14.70	6.60	6.60	33.00	48.00	19.00	77	19	4

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.439203	0.064081	0.188749	0.166886	0.062449	0.008706	0.013631	0.040993	0.001713	0.001066	0.008352	0.000470	0.003701

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Land Use	kBTU/yr	tons/yr										MT/yr						
General Office Building	573492	3.0900e-003	0.0281	0.0236	1.7000e-004		2.1400e-003	2.1400e-003		2.1400e-003	2.1400e-003							30.7900
Total		3.0900e-003	0.0281	0.0236	1.7000e-004		2.1400e-003	2.1400e-003		2.1400e-003	2.1400e-003							30.7900

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	670200				87.7243
Total					87.7243

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	561732				73.5266
Total					73.5266

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr										MT/yr						
Mitigated	0.2622	0.0000	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000							1.1300e-003
Unmitigated	0.3039	0.0000	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000							1.1300e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
SubCategory	tons/yr										MT/yr						
Architectural Coating	0.0695					0.0000	0.0000		0.0000	0.0000							0.0000
Consumer Products	0.2343					0.0000	0.0000		0.0000	0.0000							0.0000
Landscaping	5.0000e-005	0.0000	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000							1.1300e-003
Total	0.3039	0.0000	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000							1.1300e-003

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0278					0.0000	0.0000		0.0000	0.0000						0.0000
Consumer Products	0.2343					0.0000	0.0000		0.0000	0.0000						0.0000
Landscaping	5.0000e-005	0.0000	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						1.1300e-003
Total	0.2622	0.0000	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						1.1300e-003

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Unmitigated				23.7712
Mitigated				23.7658

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	10.664 / 6.53602				23.7712
Total					23.7712

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	10.664 / 6.53602				23.7658
Total					23.7658

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated				25.3843
Unmitigated				25.3843

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	55.8				25.3843
Total					25.3843

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	55.8				25.3843
Total					25.3843

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Vegetation

60,000 sf industrial development
Placer County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	60.00	1000sqft	1.38	60,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	74
Climate Zone	2			Operational Year	2030
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	286.1	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Assuming 50% RPS achievement at 2030

Land Use - general light industrial building

Construction Phase - No construction

Area Coating - low VOC paint

Area Mitigation - no hearth, low VOC paint

Energy Mitigation - assuming compliance with 2016 Energy Efficiency Standard (46% beyond 2008 standard)

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr										MT/yr						
Area	0.2622	0.0000	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000							1.1300e-003
Energy	3.4300e-003	0.0312	0.0262	1.9000e-004		2.3700e-003	2.3700e-003		2.3700e-003	2.3700e-003							99.3915
Mobile	0.1320	0.3029	1.4144	5.1800e-003	0.3408	6.8100e-003	0.3477		6.2900e-003	0.0977							344.8770
Waste						0.0000	0.0000		0.0000	0.0000							33.8457
Water						0.0000	0.0000		0.0000	0.0000							27.0258
Total	0.3976	0.3341	1.4412	5.3700e-003	0.3408	9.1800e-003	0.3500		8.6600e-003	0.1001							505.1413

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	10.09	7.34	1.52	2.89	0.00	17.96	0.57	0.00	18.84	1.97	0.00	0.00	0.00	0.00	0.00	6.70

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2017	12/30/2016	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr										MT/yr						
Mitigated	0.1320	0.3029	1.4144	5.1800e-003	0.3408	6.8100e-003	0.3477		6.2900e-003	0.0977							344.8770
Unmitigated	0.1320	0.3029	1.4144	5.1800e-003	0.3408	6.8100e-003	0.3477		6.2900e-003	0.0977							344.8770

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	418.20	79.20	40.80	922,148	922,148
Total	418.20	79.20	40.80	922,148	922,148

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.439203	0.064081	0.188749	0.166886	0.062449	0.008706	0.013631	0.040993	0.001713	0.001066	0.008352	0.000470	0.003701

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Land Use	kBTU/yr	tons/yr										MT/yr						
General Light Industry	637020	3.4300e-003	0.0312	0.0262	1.9000e-004		2.3700e-003	2.3700e-003		2.3700e-003	2.3700e-003							34.2007
Total		3.4300e-003	0.0312	0.0262	1.9000e-004		2.3700e-003	2.3700e-003		2.3700e-003	2.3700e-003							34.2007

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	553800				72.4884
Total					72.4884

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	498048				65.1909
Total					65.1909

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr										MT/yr						
Mitigated	0.2622	0.0000	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000							1.1300e-003
Unmitigated	0.3039	0.0000	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000							1.1300e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
SubCategory	tons/yr										MT/yr						
Architectural Coating	0.0695					0.0000	0.0000		0.0000	0.0000							0.0000
Consumer Products	0.2343					0.0000	0.0000		0.0000	0.0000							0.0000
Landscaping	5.0000e-005	0.0000	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000							1.1300e-003
Total	0.3039	0.0000	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000							1.1300e-003

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0278					0.0000	0.0000		0.0000	0.0000						0.0000
Consumer Products	0.2343					0.0000	0.0000		0.0000	0.0000						0.0000
Landscaping	5.0000e-005	0.0000	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						1.1300e-003
Total	0.2622	0.0000	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						1.1300e-003

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Unmitigated				27.0329
Mitigated				27.0258

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	13.875 / 0				27.0329
Total					27.0329

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	13.875 / 0				27.0258
Total					27.0258

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated				33.8457
Unmitigated				33.8457

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	74.4				33.8457
Total					33.8457

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	74.4				33.8457
Total					33.8457

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Vegetation

60,000 sf industrial development
Placer County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	60.00	1000sqft	1.38	60,000.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	74
Climate Zone	2			Operational Year	2030
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	286.1	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Assuming 50% RPS achievement at 2030

Land Use - general light industrial building

Construction Phase - No construction

Area Coating - low VOC paint

Area Mitigation - no hearth, low VOC paint

Energy Mitigation - assuming compliance with 2016 Energy Efficiency Standard (46% beyond 2008 standard)

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2622	0.0000	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						1.1300e-003
Energy	3.4300e-003	0.0312	0.0262	1.9000e-004		2.3700e-003	2.3700e-003		2.3700e-003	2.3700e-003						99.3915
Mobile	0.1468	0.3808	1.7004	6.8100e-003	0.4510	8.8200e-003	0.4599		8.1400e-003	0.1291						453.0958
Waste						0.0000	0.0000		0.0000	0.0000						33.8457
Water						0.0000	0.0000		0.0000	0.0000						27.0258
Total	0.4124	0.4120	1.7271	7.0000e-003	0.4510	0.0112	0.4622		0.0105	0.1315						613.3601

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	9.76	6.03	1.27	2.23	0.00	15.23	0.43	0.00	16.05	1.51	0.00	0.00	0.00	0.00	0.00	5.58

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2017	1/27/2016	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1468	0.3808	1.7004	6.8100e-003	0.4510	8.8200e-003	0.4599		8.1400e-003	0.1291						453.0958
Unmitigated	0.1468	0.3808	1.7004	6.8100e-003	0.4510	8.8200e-003	0.4599		8.1400e-003	0.1291						453.0958

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	418.20	79.20	40.80	1,220,303	1,220,303
Total	418.20	79.20	40.80	1,220,303	1,220,303

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	14.70	6.60	6.60	59.00	28.00	13.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.439203	0.064081	0.188749	0.166886	0.062449	0.008706	0.013631	0.040993	0.001713	0.001066	0.008352	0.000470	0.003701

5.0 Energy Detail

2.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Land Use	kBTU/yr	tons/yr										MT/yr						
General Light Industry	637020	3.4300e-003	0.0312	0.0262	1.9000e-004		2.3700e-003	2.3700e-003		2.3700e-003	2.3700e-003							34.2007
Total		3.4300e-003	0.0312	0.0262	1.9000e-004		2.3700e-003	2.3700e-003		2.3700e-003	2.3700e-003							34.2007

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	553800				72.4884
Total					72.4884

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	498048				65.1909
Total					65.1909

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr										MT/yr						
Mitigated	0.2622	0.0000	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000							1.1300e-003
Unmitigated	0.3039	0.0000	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000							1.1300e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
SubCategory	tons/yr										MT/yr						
Architectural Coating	0.0695					0.0000	0.0000		0.0000	0.0000							0.0000
Consumer Products	0.2343					0.0000	0.0000		0.0000	0.0000							0.0000
Landscaping	5.0000e-005	0.0000	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000							1.1300e-003
Total	0.3039	0.0000	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000							1.1300e-003

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0278					0.0000	0.0000		0.0000	0.0000						0.0000
Consumer Products	0.2343					0.0000	0.0000		0.0000	0.0000						0.0000
Landscaping	5.0000e-005	0.0000	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						1.1300e-003
Total	0.2622	0.0000	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						1.1300e-003

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Unmitigated				27.0329
Mitigated				27.0258

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	13.875 / 0				27.0329
Total					27.0329

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	13.875 / 0				27.0258
Total					27.0258

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated				33.8457
Unmitigated				33.8457

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	74.4				33.8457
Total					33.8457

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	74.4				33.8457
Total					33.8457

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Vegetation
