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M E M O

Date: March 8, 2018

To: **Kristy Weis**, David J. Powers & Associates, Inc.
Amy Wang, David J. Powers & Associates, Inc.

From: **James A. Reyff**
Illingworth & Rodkin, Inc.
1 Willowbrook Court, Suite 120
Petaluma, CA 94954

RE: **Gateway Crossings, Coleman Brokaw** I&R Job#16-075

SUBJECT: **Updated Greenhouse Gas Emissions Modeling**

The purpose of this memo is to report the greenhouse gas (GHG) emissions. Illingworth & Rodkin, Inc. (I&R) completed an evaluation of the air quality impacts for the Gateway Crossings project in Santa Clara, California[1]. This assessment evaluated the air quality impacts in terms of emissions from construction and operation of the project and addressed health risks associated with the project.

Since completion of that analysis, the CalEEMod model that the project analysis was based upon has been updated to include the energy-related effects of the new California Title 24 Green Building Standards. In addition, you have requested us to model the GHG emissions associated with Option 1 of the project that is designed for up to 1,400 residential dwelling units. The scenario modeled in the reported analysis was Option 2 that would include 1,600 dwelling units. Both options include the same amount of non-residential uses.

GHG Policies and Programs

Santa Clara General Plan

The 2010-2035 General Plan includes goals to improve air quality in the region and reduce GHG emissions. To achieve these goals, the General Plan contains the following policies:

5.10.2-P1 Support alternative transportation modes and efficient parking mechanisms to improve air quality.
5.10.2-P2 Encourage development patterns that reduce vehicle miles traveled and air

[1] I&R. 2017. Gateway Crossings project in Santa Clara, California Draft Air Quality. September 19.

pollution.

5.10.2-P3 Encourage implementation of technological advances that minimize public health hazards and reduce the generation of air pollutants.

5.10.2-P4 Encourage measures to reduce greenhouse gas emissions to reach 30 percent below1990 levels by 2020.

5.10.2-P5 Promote regional air pollution prevention plans for local industry and businesses.

Santa Clara Climate Action Plan

The Santa Clara Climate Action Plan (CAP), adopted December 3, 2013. The CAP includes measures to reduce emissions by 23.4% below 2008 levels by 2020 and a series of measures to reduce emissions beyond. The following reduction strategies would apply to this project:

- Achieve City-adopted electricity efficiency targets to reduce community-wide electricity use by 5% through incentives, pilot projects, and rebate programs.
- Incentivize and facilitate the installation of 6 MW of customer-owned residential and nonresidential solar PV projects.
- Meet the water conservation goals presented in the 2010 Urban Water Management Plan to reduce per capita water use by 2020.
- Work with regional partners to increase solid waste diversion to 80% through increased recycling efforts, curbside food waste pickup, and construction and demolition waste programs.
- Support and facilitate a community-wide transition to electric outdoor lawn and garden equipment through outreach, coordination with BAAQMD, and outdoor electrical outlet requirements for new development.
- Require construction projects to comply with BAAQMD best management practices, including alternative-fueled vehicles and equipment.
- Require new development located in the city's transportation districts to implement a TDM program to reduce drive-alone trips.
- Revise parking standards for new multi-family residential and nonresidential development to allow that a minimum of one parking space, and a recommended level of 5% of all new parking spaces, be designated for electric vehicle charging.
- Create a tree-planting standard for new development and conduct a citywide tree inventory every five years to track progress of the requirements.
- Require new parking lots to be surfaced with low-albedo materials to reduce heat gain, provided it is consistent with the Building Code.

GHG Emissions Modeling

GHG emissions associated with development of the proposed project would occur over the short-term from construction activities, consisting primarily of emissions from equipment exhaust and worker and vendor trips. There would also be long-term operational emissions associated with vehicular traffic within the project vicinity, energy and water usage, and solid waste disposal. Emissions for the proposed project (under either option) are discussed below and were analyzed using the methodology recommended in the BAAQMD CEQA Air Quality Guidelines.

CalEEMod Modeling

CalEEMod was used to estimate GHG emissions from operation of the site assuming full build-out of the project. The project land use types and size and other project-specific information were input to the model, as described above. CalEEMod provides emissions for transportation, areas sources, electricity consumption, natural gas combustion, electricity usage associated with water usage and wastewater discharge, and solid waste land filling and transport.

One adjustment was made to CalEEMod for GHG modeling. Emissions rates associated with electricity consumption were adjusted to account for Silicon Valley Power utility's (SVP) projected 2020 CO_2 intensity rate. CalEEMod uses a default rate of 641.35 pounds of CO_2 per megawatt of electricity produced for PG&E. The projected 2020 SVP CO_2 intensity rate of 380 pounds of CO_2 per megawatt of electricity produced and was obtained from the City's Climate Action Plan and used in CalEEMod modeling.[2] Use of this rate is considered conservative, in that the 2026 rate will likely be lower than the projected 2020 rate.

Service Population Emissions

The project service population efficiency rate is based on the number of future residences. The number of future residences is estimated based on the latest US Census data of 2.73 average persons per household for the city of Santa Clara.[3] Commercial uses are expected to employ an average rate of 1 employee per 400 sf and Research & Development areas would employ one worker per 450 sf.

Construction Emissions

Based on construction emissions modeling conducted for the air quality analysis, GHG emissions associated with construction were computed to be 5,621 MT of CO_2e from all the construction phases for the total construction period. This is based on the maximum build-out scenario for Option 2. These are the emissions from on-site operation of construction equipment, vendor and hauling truck trips, and worker trips. Neither the City nor BAAQMD have an adopted threshold of significance for construction-related GHG emissions, though BAAQMD recommends quantifying emissions and disclosing that GHG emissions would occur during construction. BAAQMD also encourages the incorporation of best management practices to reduce GHG emissions during construction where feasible and applicable. Best management practices assumed to be incorporated into construction of the proposed project include, but are not limited to: using local building materials of at least 10 percent and recycling or reusing at least 50 percent of construction waste or demolition materials.

Operational Emissions

The CalEEMod model, along with the project vehicle trip generation rates for Options 1 and 2, was used to predict daily emissions associated with operation of each phase of the proposed project under either option. The first operational year for the entire project build-out would be 2026. GHG emissions were computed for 2026. GHG emissions from the existing land uses were modeled, to

2 City of Santa Clara, 2013. *City of Santa Clara Climate Action Plan*. December 3.
3 California Department of Finance - City/County Population and Housing Estimates, 1/1/2017. See http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-5/ . Accessed: July 29, 2016. .

compute net emissions resulting from the development of the proposed project. Table 1 summarizes the results of these GHG emission computations. Land uses entered into the model included the following:

Option 1: 1,400 dwelling units entered as "Apartment Mid-Rise," 250 rooms entered as "Hotel," 15,000 sf entered as "Strip Mall." 3,114 spaces entered as "Enclosed Parking Structure," and 21 spaces entered as "Parking Lot."

Option 2: 1,600 dwelling units entered as "Apartment Mid-Rise," 250 rooms entered as "Hotel," 15,000 sf entered as "Strip Mall." 3,114 spaces entered as "Enclosed Parking Structure," and 21 spaces entered as "Parking Lot."

Existing Uses: 272,840 sf entered as "Research & Development."

An additional CalEEMod run was produced to compute emissions from the land uses approved under the current General Plan, assuming 2026 conditions. The land uses entered into the model for the approved scenario are as follows:

General Plan Approved Uses: 1,278 dwelling units entered as "Apartment Mid-Rise," and 1,025,038 sf entered as "General Office."

Table 1 provides the GHG per capita emissions. These are the total emissions for each scenario divided by the service population. The CalEEMod model also estimated the annual VMT for the full buildout scenario of the proposed project and that resulting from the approved uses under the General Plan. These projections are also reported in Table 1. The proposed project (under either option) resulted in an annual VMT that is less than that for the General Plan approved uses.

Mitigation

Mitigation measures are included in this assessment to reduce GHG emissions. The features modeled to further reduce GHG emissions include the effectiveness of a Transportation Demand Management (TDM) Plan and features to reduce energy and water usage. These features were addressed as follows:

TDM Plan: The project will develop a plan that would reduce VMT/vehicle trips by 20 percent, of which would include a Transportation Demand Management (TDM) that would be designed to reduce VMT/vehicle trips by at least 10 percent. This plan is required per the City's Climate Action Plan. The CalEEMod output was adjusted to reduce mobile source emissions by 10 percent to account for the TDM Plan reductions. No other adjustments were made to the mobile source emissions. This results in a reduction of 757 MT/year for Option 1 and 845 MT/year for Option 2.

Energy Efficiency: The current CalEEMod model used for this update (version 2016.3.2) accounts for California most recent Title 24 updates for energy efficiency that were adopted in January 2017. In addition, the project was run in CalEEMod to predict the effectiveness of including energy-efficient appliance with the project.

Water Usage: The project was modeled in CalEEMod to predict the effectiveness of including low-flow water fixtures and including water efficient outdoor irrigation systems.

Table 2 reports the GHG emissions for the Proposed Project Options 1 and 2 with these mitigation measures incorporated.

Table 1 Per Capita GHG Emissions and VMT Projections

Year	Condition	Annual GHG Emissions	Per Capita Emissions	Annual VMT
2026	Project – Option 1	12,969 MT	3.14 MT	23,247,521
	Project – Option 2	13,684 MT	2.79 MT	25,954,380
	Existing	2,469 MT	4.07 MT	4,255,218
	Net (Option 2 – highest)	11,215 MT	--	21,699,162
	General Plan Approved Uses	18,565 MT	3.07 MT	35,785,561
	Existing	2,469 MT	4.07 MT	4,255,218
	Net	16,096 MT	--	31,530,343

The above calculations are based on the following assumptions:
2.73 average persons per household
One employee per 400 office square feet
One employee per 450 R&D square feet
(Sources: California Department of Finance. "E-5 City/County Population and Housing Estimates." May 2017. Accessed: August 18, 2017. Available at: http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-5/; City of Santa Clara. *City of Santa Clara 2010-2035 General Plan.* Adopted December, 2010, amended December 2013 and December 2014. Page 8.6-12.).
Service population:
Proposed Project Option 1 = (1,400 units *2.73) + (125,000 sf office *one employee/400 office sf) = 4,134,
Proposed Project Option 2 = (1,600 units *2.73) + (125,000 sf office *one employee/400 office sf) = 4,906,
Existing/Previous Development = (272,840 sf R&D *one employee/450 R&D sf) = 607,
General Plan allowed Development = (1,278 sf units *2.73) + (1,025,838 sf office *one employee/400 Commercial sf) = 6,054

Table 2 Mitigated Operational GHG Emissions

Condition	Annual GHG Emissions	Per Capita Emissions
Mitigated – Option 1	12,150 MT	2.94 MT
Existing	2,469 MT	
Net	9,681	
Mitigated – Option 2	12,772 MT	2.60 MT
Existing	2,469 MT	
Net	10,303 MT	--

Attachments: CalEEMod Model Output for:

Project Option 1 Operational
Project Option 2 Operational
Existing R&D Uses Operational
General Plan Approved Uses Operational

Coleman Browkaw Gateway Crossings Full Build Out Option 1

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking Structure	3,114.00	Space	0.00	1,245,600.00	0
Parking Lot	21.00	Space	0.00	8,400.00	0
Hotel	250.00	Room	0.00	363,000.00	0
Apartments Mid Rise	1,400.00	Dwelling Unit	24.00	1,400,000.00	3822
Strip Mall	15.00	1000sqft	0.00	15,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2026
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	380	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Using future SVP Rate

Land Use - Summed up number of parking spaces

Construction Phase - Operation Run Only

Off-road Equipment -

Off-road Equipment -

Grading -

Vehicle Trips - Apts = 6.00/5.75/5.27, Hotel = 7.93/7.95/5.77, Retail = 32.07/30.42/14.71

Woodstoves - No wood -> 512 nat gas

Energy Use - Titlw 24, 2013 values

Water And Wastewater - Wastewater treatment - no spetic or lagoons

Energy Mitigation - energy-efficient appliances

Stationary Sources - Emergency Generators and Fire Pumps - operared for emergency purposes only

Water Mitigation - water-efficient fixtures

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Residential_Exterior	945000	1080000
tblAreaCoating	Area_Residential_Interior	2835000	3240000
tblEnergyUse	LightingElect	1.75	2.63
tblEnergyUse	LightingElect	2.35	2.41
tblEnergyUse	LightingElect	0.35	0.88
tblEnergyUse	LightingElect	5.25	5.38
tblEnergyUse	T24E	332.81	392.47
tblEnergyUse	T24E	2.05	2.15
tblEnergyUse	T24E	2.76	2.89
tblEnergyUse	T24NG	5,484.45	7,914.07
tblEnergyUse	T24NG	39.56	39.76

tblEnergyUse	T24NG	2.37	2.38
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	210.00	512.00
tblFireplaces	NumberNoFireplace	56.00	64.00
tblFireplaces	NumberWood	238.00	0.00
tblLandUse	LotAcreage	28.03	0.00
tblLandUse	LotAcreage	0.19	0.00
tblLandUse	LotAcreage	8.33	0.00
tblLandUse	LotAcreage	36.84	24.00
tblLandUse	LotAcreage	0.34	0.00
tblLandUse	Population	4,004.00	3,822.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	380
tblSolidWaste	SolidWasteGenerationRate	644.00	736.00
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	135.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	50.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblVehicleTrips	ST_TR	6.39	5.75
tblVehicleTrips	ST_TR	8.19	7.95
tblVehicleTrips	ST_TR	42.04	30.42
tblVehicleTrips	SU_TR	5.86	5.27
tblVehicleTrips	SU_TR	5.95	5.77
tblVehicleTrips	SU_TR	20.43	14.71
tblVehicleTrips	WD_TR	6.65	6.00
tblVehicleTrips	WD_TR	8.17	7.93
tblVehicleTrips	WD_TR	44.32	32.07
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	IndoorWaterUseRate	91,215,635.87	104,246,440.99
tblWater	OutdoorWaterUseRate	57,505,509.57	65,720,582.37
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	NumberCatalytic	28.00	32.00
tblWoodstoves	NumberNoncatalytic	28.00	32.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

2.0 Emissions Summary

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	8.6958	0.1751	10.4400	9.0000e-004		0.0622	0.0622		0.0622	0.0622	0.0000	80.9588	80.9588	0.0176	1.1700e-003	81.7491
Energy	0.1709	1.5078	0.9706	9.3200e-003		0.1181	0.1181		0.1181	0.1181	0.0000	4,624.3273	4,624.3273	0.2563	0.0773	4,653.7746
Mobile	1.8656	7.4297	21.1732	0.0824	8.6434	0.0647	8.7080	2.3133	0.0601	2.3734	0.0000	7,564.5202	7,564.5202	0.2301	0.0000	7,570.2738
Stationary	5.5400e-003	0.0155	0.0201	3.0000e-005		8.1000e-004	8.1000e-004		8.1000e-004	8.1000e-004	0.0000	2.5704	2.5704	3.6000e-004	0.0000	2.5794
Waste						0.0000	0.0000		0.0000	0.0000	180.3839	0.0000	180.3839	10.6604	0.0000	446.8934
Water						0.0000	0.0000		0.0000	0.0000	39.5194	144.6619	184.1813	0.1471	0.0882	214.1491
Total	**10.7378**	**9.1281**	**32.6039**	**0.0926**	**8.6434**	**0.2457**	**8.8891**	**2.3133**	**0.2412**	**2.5545**	**219.9032**	**12,417.0387**	**12,636.9419**	**11.3119**	**0.1667**	**12,969.4194**

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	8.6958	0.1751	10.4400	9.0000e-004		0.0622	0.0622		0.0622	0.0622	0.0000	80.9588	80.9588	0.0176	1.1700e-003	81.7491
Energy	0.1709	1.5078	0.9706	9.3200e-003		0.1181	0.1181		0.1181	0.1181	0.0000	4,598.7102	4,598.7102	0.2543	0.0769	4,627.9881
Mobile	1.8656	7.4297	21.1732	0.0824	8.6434	0.0647	8.7080	2.3133	0.0601	2.3734	0.0000	7,564.5202	7,564.5202	0.2301	0.0000	7,570.2738
Stationary	5.5400e-003	0.0155	0.0201	3.0000e-005		8.1000e-004	8.1000e-004		8.1000e-004	8.1000e-004	0.0000	2.5704	2.5704	3.6000e-004	0.0000	2.5794
Waste						0.0000	0.0000		0.0000	0.0000	180.3839	0.0000	180.3839	10.6604	0.0000	446.8934
Water						0.0000	0.0000		0.0000	0.0000	31.6155	121.3568	152.9723	0.1181	0.0707	176.9837
Total	**10.7378**	**9.1281**	**32.6039**	**0.0926**	**8.6434**	**0.2457**	**8.8891**	**2.3133**	**0.2412**	**2.5545**	**211.9994**	**12,368.1164**	**12,580.1157**	**11.2809**	**0.1488**	**12,906.4675**

	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	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**3.59**	**0.39**	**0.45**	**0.27**	**10.78**	**0.49**

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	1.8656	7.4297	21.1732	0.0824	8.6434	0.0647	8.7080	2.3133	0.0601	2.3734	0.0000	7,564.5202	7,564.5202	0.2301	0.0000	7,570.2738
Unmitigated	1.8656	7.4297	21.1732	0.0824	8.6434	0.0647	8.7080	2.3133	0.0601	2.3734	0.0000	7,564.5202	7,564.5202	0.2301	0.0000	7,570.2738

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	8,400.00	8,050.00	7378.00	18,948,018	18,948,018
Enclosed Parking Structure	0.00	0.00	0.00		
Hotel	1,982.50	1,987.50	1442.50	3,621,404	3,621,404
Parking Lot	0.00	0.00	0.00		
Strip Mall	481.05	456.30	220.65	678,099	678,099
Total	10,863.55	10,493.80	9,041.15	23,247,521	23,247,521

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-...	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Enclosed Parking Structure	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	58	38	4
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.618126	0.034987	0.181060	0.102744	0.012808	0.005030	0.012887	0.022139	0.002195	0.001502	0.005204	0.000638	0.000681
Enclosed Parking Structure	0.618126	0.034987	0.181060	0.102744	0.012808	0.005030	0.012887	0.022139	0.002195	0.001502	0.005204	0.000638	0.000681
Hotel	0.618126	0.034987	0.181060	0.102744	0.012808	0.005030	0.012887	0.022139	0.002195	0.001502	0.005204	0.000638	0.000681
Parking Lot	0.618126	0.034987	0.181060	0.102744	0.012808	0.005030	0.012887	0.022139	0.002195	0.001502	0.005204	0.000638	0.000681
Strip Mall	0.618126	0.034987	0.181060	0.102744	0.012808	0.005030	0.012887	0.022139	0.002195	0.001502	0.005204	0.000638	0.000681

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install Energy Efficient Appliances

	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					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	2,907.6363	2,907.6363	0.2219	0.0459	2,926.8650
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	2,933.2534	2,933.2534	0.2239	0.0463	2,952.6515
NaturalGas Mitigated	0.1709	1.5078	0.9706	9.3200e-003		0.1181	0.1181		0.1181	0.1181	0.0000	1,691.0739	1,691.0739	0.0324	0.0310	1,701.1231
NaturalGas Unmitigated	0.1709	1.5078	0.9706	9.3200e-003		0.1181	0.1181		0.1181	0.1181	0.0000	1,691.0739	1,691.0739	0.0324	0.0310	1,701.1231

5.2 Energy by Land Use - NaturalGas

Unmitigated

	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 Mid Rise	1.54967e+007	0.0836	0.7141	0.3039	4.5600e-003		0.0577	0.0577		0.0577	0.0577	0.0000	826.9628	826.9628	0.0159	0.0152	831.8771
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hotel	1.61571e+007	0.0871	0.7920	0.6653	4.7500e-003		0.0602	0.0602		0.0602	0.0602	0.0000	862.2060	862.2060	0.0165	0.0158	867.3297
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	35700	1.9000e-004	1.7500e-003	1.4700e-003	1.0000e-005		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	1.9051	1.9051	4.0000e-005	3.0000e-005	1.9164
Total		**0.1709**	**1.5078**	**0.9706**	**9.3200e-003**		**0.1181**	**0.1181**		**0.1181**	**0.1181**	**0.0000**	**1,691.0739**	**1,691.0739**	**0.0324**	**0.0310**	**1,701.1231**

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 Mid Rise	1.54967e+007	0.0836	0.7141	0.3039	4.5600e-003		0.0577	0.0577		0.0577	0.0577	0.0000	826.9628	826.9628	0.0159	0.0152	831.8771
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hotel	1.61571e+007	0.0871	0.7920	0.6653	4.7500e-003		0.0602	0.0602		0.0602	0.0602	0.0000	862.2060	862.2060	0.0165	0.0158	867.3297
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	35700	1.9000e-004	1.7500e-003	1.4700e-003	1.0000e-005		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	1.9051	1.9051	4.0000e-005	3.0000e-005	1.9164
Total		**0.1709**	**1.5078**	**0.9706**	**9.3200e-003**		**0.1181**	**0.1181**		**0.1181**	**0.1181**	**0.0000**	**1,691.0739**	**1,691.0739**	**0.0324**	**0.0310**	**1,701.1231**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	5.86321e+006	1,010.6135	0.0771	0.0160	1,017.2968
Enclosed Parking Structure	8.15868e+006	1,406.2717	0.1073	0.0222	1,415.5716
Hotel	2.82414e+006	486.7832	0.0372	7.6900e-003	490.0024
Parking Lot	7392	1.2741	1.0000e-004	2.0000e-005	1.2826
Strip Mall	164250	28.3110	2.1600e-003	4.5000e-004	28.4982
Total		**2,933.2534**	**0.2239**	**0.0463**	**2,952.6515**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	5.71459e+006	984.9964	0.0752	0.0156	991.5103
Enclosed Parking Structure	8.15868e+006	1,406.2717	0.1073	0.0222	1,415.5716
Hotel	2.82414e+006	486.7832	0.0372	7.6900e-003	490.0024

Parking Lot	7392	1.2741	1.0000e-004	2.0000e-005	1.2826
Strip Mall	164250	28.3110	2.1600e-003	4.5000e-004	28.4982
Total		**2,907.6363**	**0.2219**	**0.0459**	**2,926.8650**

6.0 Area Detail

6.1 Mitigation Measures Area

	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	8.6958	0.1751	10.4400	9.0000e-004		0.0622	0.0622		0.0622	0.0622	0.0000	80.9588	80.9588	0.0176	1.1700e-003	81.7491
Unmitigated	8.6958	0.1751	10.4400	9.0000e-004		0.0622	0.0622		0.0622	0.0622	0.0000	80.9588	80.9588	0.0176	1.1700e-003	81.7491

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	1.3496					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	7.0250					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	6.4600e-003	0.0552	0.0235	3.5000e-004		4.4600e-003	4.4600e-003		4.4600e-003	4.4600e-003	0.0000	63.9177	63.9177	1.2300e-003	1.1700e-003	64.2976
Landscaping	0.3147	0.1199	10.4165	5.5000e-004		0.0577	0.0577		0.0577	0.0577	0.0000	17.0411	17.0411	0.0164	0.0000	17.4515
Total	**8.6957**	**0.1751**	**10.4400**	**9.0000e-004**		**0.0622**	**0.0622**		**0.0622**	**0.0622**	**0.0000**	**80.9588**	**80.9588**	**0.0177**	**1.1700e-003**	**81.7491**

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	1.3496					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	7.0250					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	6.4600e-003	0.0552	0.0235	3.5000e-004		4.4600e-003	4.4600e-003		4.4600e-003	4.4600e-003	0.0000	63.9177	63.9177	1.2300e-003	1.1700e-003	64.2976
Landscaping	0.3147	0.1199	10.4165	5.5000e-004		0.0577	0.0577		0.0577	0.0577	0.0000	17.0411	17.0411	0.0164	0.0000	17.4515
Total	**8.6957**	**0.1751**	**10.4400**	**9.0000e-004**		**0.0622**	**0.0622**		**0.0622**	**0.0622**	**0.0000**	**80.9588**	**80.9588**	**0.0177**	**1.1700e-003**	**81.7491**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	152.9723	0.1181	0.0707	176.9837
Unmitigated	184.1813	0.1471	0.0882	214.1491

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	104.246 / 65.7206	173.7576	0.1374	0.0824	201.7383
Enclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
Hotel	6.34169 / 0.704632	8.5835	8.2100e-003	4.9800e-003	10.2725
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	1.11109 / 0.680989	1.8402	1.4600e-003	8.8000e-004	2.1384
Total		**184.1813**	**0.1471**	**0.0882**	**214.1491**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	83.3972 / 61.7116	144.5171	0.1103	0.0660	166.9381
Enclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
Hotel	5.07335 / 0.66165	6.9259	6.5700e-003	3.9800e-003	8.2775
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.88887 / 0.639449	1.5293	1.1800e-003	7.0000e-004	1.7682
Total		**152.9723**	**0.1181**	**0.0707**	**176.9837**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	180.3839	10.6604	0.0000	446.8934
Unmitigated	180.3839	10.6604	0.0000	446.8934

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	736	149.4014	8.8294	0.0000	370.1355
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
Hotel	136.88	27.7854	1.6421	0.0000	68.8372
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	15.75	3.1971	0.1889	0.0000	7.9207
Total		**180.3839**	**10.6604**	**0.0000**	**446.8934**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	736	149.4014	8.8294	0.0000	370.1355
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
Hotel	136.88	27.7854	1.6421	0.0000	68.8372
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	15.75	3.1971	0.1889	0.0000	7.9207
Total		**180.3839**	**10.6604**	**0.0000**	**446.8934**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	0	50	135	0.73	Diesel

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/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
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (100 - 175 HP)	5.5400e-003	0.0155	0.0201	3.0000e-005		8.1000e-004	8.1000e-004		8.1000e-004	8.1000e-004	0.0000	2.5704	2.5704	3.6000e-004	0.0000	2.5794
Total	**5.5400e-003**	**0.0155**	**0.0201**	**3.0000e-005**		**8.1000e-004**	**8.1000e-004**		**8.1000e-004**	**8.1000e-004**	**0.0000**	**2.5704**	**2.5704**	**3.6000e-004**	**0.0000**	**2.5794**

11.0 Vegetation

Coleman Browkaw Gateway Crossings Full Build Out

Santa Clara County, Annual Option 2

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking Structure	3,114.00	Space	0.00	1,245,600.00	0
Parking Lot	21.00	Space	0.00	8,400.00	0
Hotel	250.00	Room	0.00	363,000.00	0
Apartments Mid Rise	1,600.00	Dwelling Unit	24.00	1,600,000.00	4576
Strip Mall	15.00	1000sqft	0.00	15,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2026
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	380	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Using future SVP Rate

Land Use - Summed up number of parking spaces

Construction Phase - Operation Run Only

Off-road Equipment -

Off-road Equipment -

Grading -

Vehicle Trips - Apts = 6.00/5.75/5.27, Hotel = 7.93/7.95/5.77, Retail = 32.07/30.42/14.71

Woodstoves - No wood -> 512 nat gas

Energy Use - Titlw 24, 2013 values

Water And Wastewater - wastewater treatment plant - no septic or lagoons

Energy Mitigation - energy efficient appliances

Stationary Sources - Emergency Generators and Fire Pumps - operared for emergency purposes only

Water Mitigation - low-flow water faucets, toilets

Table Name	Column Name	Default Value	New Value
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	240.00	512.00
tblFireplaces	NumberWood	272.00	0.00
tblLandUse	LotAcreage	28.03	0.00
tblLandUse	LotAcreage	0.19	0.00
tblLandUse	LotAcreage	8.33	0.00
tblLandUse	LotAcreage	42.11	24.00
tblLandUse	LotAcreage	0.34	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	380
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	135.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	50.00

tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblVehicleTrips	ST_TR	6.39	5.75
tblVehicleTrips	ST_TR	8.19	7.95
tblVehicleTrips	ST_TR	42.04	30.42
tblVehicleTrips	SU_TR	5.86	5.27
tblVehicleTrips	SU_TR	5.95	5.77
tblVehicleTrips	SU_TR	20.43	14.71
tblVehicleTrips	WD_TR	6.65	6.00
tblVehicleTrips	WD_TR	8.17	7.93
tblVehicleTrips	WD_TR	44.32	32.07
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

2.0 Emissions Summary

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	9.5214	0.1922	11.9236	9.8000e-004		0.0704	0.0704		0.0704	0.0704	0.0000	83.3845	83.3845	0.0200	1.1700e-003	84.2329
Energy	0.1615	1.4272	0.9348	8.8100e-003		0.1116	0.1116		0.1116	0.1116	0.0000	4,458.6719	4,458.6719	0.2490	0.0745	4,487.0862
Mobile	2.0762	8.2728	23.6092	0.0919	9.6498	0.0721	9.7219	2.5827	0.0671	2.6497	0.0000	8,442.1764	8,442.1764	0.2566	0.0000	8,448.5921
Stationary	5.5400e-003	0.0155	0.0201	3.0000e-005		8.1000e-004	8.1000e-004		8.1000e-004	8.1000e-004	0.0000	2.5704	2.5704	3.6000e-004	0.0000	2.5794
Waste						0.0000	0.0000		0.0000	0.0000	180.3839	0.0000	180.3839	10.6604	0.0000	446.8934
Water						0.0000	0.0000		0.0000	0.0000	39.5194	144.6619	184.1813	0.1471	0.0882	214.1491
Total	**11.7646**	**9.9077**	**36.4877**	**0.1018**	**9.6498**	**0.2549**	**9.9047**	**2.5827**	**0.2499**	**2.8325**	**219.9032**	**13,131.4651**	**13,351.3683**	**11.3334**	**0.1639**	**13,683.5331**

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	9.5214	0.1922	11.9236	9.8000e-004		0.0704	0.0704		0.0704	0.0704	0.0000	83.3845	83.3845	0.0200	1.1700e-003	84.2329
Energy	0.1615	1.4272	0.9348	8.8100e-003		0.1116	0.1116		0.1116	0.1116	0.0000	4,429.3952	4,429.3952	0.2467	0.0740	4,457.6159
Mobile	2.0762	8.2728	23.6092	0.0919	9.6498	0.0721	9.7219	2.5827	0.0671	2.6497	0.0000	8,442.1764	8,442.1764	0.2566	0.0000	8,448.5921
Stationary	5.5400e-003	0.0155	0.0201	3.0000e-005		8.1000e-004	8.1000e-004		8.1000e-004	8.1000e-004	0.0000	2.5704	2.5704	3.6000e-004	0.0000	2.5794
Waste						0.0000	0.0000		0.0000	0.0000	180.3839	0.0000	180.3839	10.6604	0.0000	446.8934
Water						0.0000	0.0000		0.0000	0.0000	31.6155	121.3568	152.9723	0.1181	0.0707	176.9837
Total	**11.7646**	**9.9077**	**36.4877**	**0.1018**	**9.6498**	**0.2549**	**9.9047**	**2.5827**	**0.2499**	**2.8325**	**211.9994**	**13,078.8833**	**13,290.8826**	**11.3021**	**0.1458**	**13,616.8974**

	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	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**3.59**	**0.40**	**0.45**	**0.28**	**11.00**	**0.49**

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	2.0762	8.2728	23.6092	0.0919	9.6498	0.0721	9.7219	2.5827	0.0671	2.6497	0.0000	8,442.1764	8,442.1764	0.2566	0.0000	8,448.5921
Unmitigated	2.0762	8.2728	23.6092	0.0919	9.6498	0.0721	9.7219	2.5827	0.0671	2.6497	0.0000	8,442.1764	8,442.1764	0.2566	0.0000	8,448.5921

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	9,600.00	9,200.00	8432.00	21,654,878	21,654,878
Enclosed Parking Structure	0.00	0.00	0.00		
Hotel	1,982.50	1,987.50	1442.50	3,621,404	3,621,404
Parking Lot	0.00	0.00	0.00		
Strip Mall	481.05	456.30	220.65	678,099	678,099
Total	12,063.55	11,643.80	10,095.15	25,954,380	25,954,380

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	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 Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Enclosed Parking Structure	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	58	38	4
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH

Apartments Mid Rise	0.618126	0.034987	0.181060	0.102744	0.012808	0.005030	0.012887	0.022139	0.002195	0.001502	0.005204	0.000638	0.000681
Enclosed Parking Structure	0.618126	0.034987	0.181060	0.102744	0.012808	0.005030	0.012887	0.022139	0.002195	0.001502	0.005204	0.000638	0.000681
Hotel	0.618126	0.034987	0.181060	0.102744	0.012808	0.005030	0.012887	0.022139	0.002195	0.001502	0.005204	0.000638	0.000681
Parking Lot	0.618126	0.034987	0.181060	0.102744	0.012808	0.005030	0.012887	0.022139	0.002195	0.001502	0.005204	0.000638	0.000681
Strip Mall	0.618126	0.034987	0.181060	0.102744	0.012808	0.005030	0.012887	0.022139	0.002195	0.001502	0.005204	0.000638	0.000681

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install Energy Efficient Appliances

	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					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	2,831.5120	2,831.5120	0.2161	0.0447	2,850.2373
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	2,860.7887	2,860.7887	0.2183	0.0452	2,879.7076
NaturalGas Mitigated	0.1615	1.4272	0.9348	8.8100e-003		0.1116	0.1116		0.1116	0.1116	0.0000	1,597.8832	1,597.8832	0.0306	0.0293	1,607.3786
NaturalGas Unmitigated	0.1615	1.4272	0.9348	8.8100e-003		0.1116	0.1116		0.1116	0.1116	0.0000	1,597.8832	1,597.8832	0.0306	0.0293	1,607.3786

5.2 Energy by Land Use - NaturalGas

Unmitigated

	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 Mid Rise	1.38231e+007	0.0745	0.6370	0.2710	4.0700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	737.6543	737.6543	0.0141	0.0135	742.0378
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hotel	1.60845e+007	0.0867	0.7885	0.6623	4.7300e-003		0.0599	0.0599		0.0599	0.0599	0.0000	858.3318	858.3318	0.0165	0.0157	863.4324
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	35550	1.9000e-004	1.7400e-003	1.4600e-003	1.0000e-005		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	1.8971	1.8971	4.0000e-005	3.0000e-005	1.9084
Total		**0.1615**	**1.4272**	**0.9348**	**8.8100e-003**		**0.1116**	**0.1116**		**0.1116**	**0.1116**	**0.0000**	**1,597.8832**	**1,597.8832**	**0.0306**	**0.0293**	**1,607.3786**

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 Mid Rise	1.38231e+007	0.0745	0.6370	0.2710	4.0700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	737.6543	737.6543	0.0141	0.0135	742.0378
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hotel	1.60845e+007	0.0867	0.7885	0.6623	4.7300e-003		0.0599	0.0599		0.0599	0.0599	0.0000	858.3318	858.3318	0.0165	0.0157	863.4324

Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	35550	1.9000e-004	1.7400e-003	1.4600e-003	1.0000e-005		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	1.8971	1.8971	4.0000e-005	3.0000e-005	1.9084
Total		**0.1615**	**1.4272**	**0.9348**	**8.8100e-003**		**0.1116**	**0.1116**		**0.1116**	**0.1116**	**0.0000**	**1,597.8832**	**1,597.8832**	**0.0306**	**0.0293**	**1,607.3786**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	6.60536e+006	1,138.5335	0.0869	0.0180	1,146.0628
Enclosed Parking Structure	7.06255e+006	1,217.3375	0.0929	0.0192	1,225.3879
Hotel	2.76606e+006	476.7722	0.0364	7.5300e-003	479.9252
Parking Lot	2940	0.5068	4.0000e-005	1.0000e-005	0.5101
Strip Mall	160350	27.6387	2.1100e-003	4.4000e-004	27.8215
Total		**2,860.7887**	**0.2183**	**0.0452**	**2,879.7076**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	6.43551e+006	1,109.2569	0.0847	0.0175	1,116.5925
Enclosed Parking Structure	7.06255e+006	1,217.3375	0.0929	0.0192	1,225.3879
Hotel	2.76606e+006	476.7722	0.0364	7.5300e-003	479.9252
Parking Lot	2940	0.5068	4.0000e-005	1.0000e-005	0.5101
Strip Mall	160350	27.6387	2.1100e-003	4.4000e-004	27.8215
Total		**2,831.5120**	**0.2161**	**0.0447**	**2,850.2373**

6.0 Area Detail

6.1 Mitigation Measures Area

	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	9.5214	0.1922	11.9236	9.8000e-004		0.0704	0.0704		0.0704	0.0704	0.0000	83.3845	83.3845	0.0200	1.1700e-003	84.2329
Unmitigated	9.5214	0.1922	11.9236	9.8000e-004		0.0704	0.0704		0.0704	0.0704	0.0000	83.3845	83.3845	0.0200	1.1700e-003	84.2329

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	1.3496					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	7.8061					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	6.4600e-003	0.0552	0.0235	3.5000e-004		4.4600e-003	4.4600e-003		4.4600e-003	4.4600e-003	0.0000	63.9177	63.9177	1.2300e-003	1.1700e-003	64.2976
Landscaping	0.3592	0.1370	11.9001	6.3000e-004		0.0660	0.0660		0.0660	0.0660	0.0000	19.4668	19.4668	0.0187	0.0000	19.9354
Total	**9.5214**	**0.1922**	**11.9236**	**9.8000e-004**		**0.0704**	**0.0704**		**0.0704**	**0.0704**	**0.0000**	**83.3845**	**83.3845**	**0.0200**	**1.1700e-003**	**84.2329**

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	1.3496					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	7.8061					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	6.4600e-003	0.0552	0.0235	3.5000e-004		4.4600e-003	4.4600e-003		4.4600e-003	4.4600e-003	0.0000	63.9177	63.9177	1.2300e-003	1.1700e-003	64.2976
Landscaping	0.3592	0.1370	11.9001	6.3000e-004		0.0660	0.0660		0.0660	0.0660	0.0000	19.4668	19.4668	0.0187	0.0000	19.9354
Total	**9.5214**	**0.1922**	**11.9236**	**9.8000e-004**		**0.0704**	**0.0704**		**0.0704**	**0.0704**	**0.0000**	**83.3845**	**83.3845**	**0.0200**	**1.1700e-003**	**84.2329**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	152.9723	0.1181	0.0707	176.9837
Unmitigated	184.1813	0.1471	0.0882	214.1491

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	104.246 / 65.7206	173.7576	0.1374	0.0824	201.7383
Enclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
Hotel	6.34169 / 0.704632	8.5835	8.2100e-003	4.9800e-003	10.2725
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	1.11109 / 0.680989	1.8402	1.4600e-003	8.8000e-004	2.1384
Total		**184.1813**	**0.1471**	**0.0882**	**214.1491**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	83.3972 / 61.7116	144.5171	0.1103	0.0660	166.9381
Enclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
Hotel	5.07335 / 0.66165	6.9259	6.5700e-003	3.9800e-003	8.2775
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.88887 / 0.639449	1.5293	1.1800e-003	7.0000e-004	1.7682
Total		**152.9723**	**0.1181**	**0.0707**	**176.9837**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	180.3839	10.6604	0.0000	446.8934
Unmitigated	180.3839	10.6604	0.0000	446.8934

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e

Land Use	tons	MT/yr			
Apartments Mid Rise	736	149.4014	8.8294	0.0000	370.1355
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
Hotel	136.88	27.7854	1.6421	0.0000	68.8372
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	15.75	3.1971	0.1889	0.0000	7.9207
Total		**180.3839**	**10.6604**	**0.0000**	**446.8934**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	736	149.4014	8.8294	0.0000	370.1355
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
Hotel	136.88	27.7854	1.6421	0.0000	68.8372
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	15.75	3.1971	0.1889	0.0000	7.9207
Total		**180.3839**	**10.6604**	**0.0000**	**446.8934**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	0	50	135	0.73	Diesel

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/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
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (100 - 175 HP)	5.5400e-003	0.0155	0.0201	3.0000e-005		8.1000e-004	8.1000e-004		8.1000e-004	8.1000e-004	0.0000	2.5704	2.5704	3.6000e-004	0.0000	2.5794
Total	**5.5400e-003**	**0.0155**	**0.0201**	**3.0000e-005**		**8.1000e-004**	**8.1000e-004**		**8.1000e-004**	**8.1000e-004**	**0.0000**	**2.5704**	**2.5704**	**3.6000e-004**	**0.0000**	**2.5794**

Ex. General Plan, Permitted Uses, Operational - Santa Clara County, Annual

Ex. General Plan, Permitted Uses, Operational

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	1,025.04	1000sqft	23.53	1,025,040.00	0
Apartments Mid Rise	1,278.00	Dwelling Unit	33.63	1,278,000.00	3655

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2026
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	380	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - SVP current CO2 emission factor

Land Use - Existing GP permitted uses - based on 9/12/17 email (Amy Wang, DJP)

Construction Phase - operational only run

Off-road Equipment - operational only

Vehicle Trips - Adjusted to traffic with internal and transit adjustments - 5.87,5.64 ,5.17 10.13, 2.26, 0.96

Woodstoves - No wood based fireplaces or stoves

Energy Use - Title 24, 2013 values used

Energy Mitigation - Title 24, 216 values came into effect on 1st january 2017

Water And Wastewater - WTP Treatment

Table Name	Column Name	Default Value	New Value
tblProjectCharacteristics	CO2IntensityFactor	641.35	380
tblVehicleTrips	ST_TR	6.39	5.64
tblVehicleTrips	ST_TR	2.46	2.26
tblVehicleTrips	SU_TR	5.86	5.17
tblVehicleTrips	SU_TR	1.05	0.96
tblVehicleTrips	WD_TR	6.65	5.87
tblVehicleTrips	WD_TR	11.03	10.13
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

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	13.6629	0.1772	13.5501	8.5800e-003		0.6332	0.6332		0.6332	0.6332	58.2636	39.4506	97.7143	0.1085	3.8200e-003	101.5662
Energy	0.1500	1.3313	0.9074	8.1800e-003		0.1037	0.1037		0.1037	0.1037	0.0000	5,544.2691	5,544.2691	0.3383	0.0913	5,579.9385
Mobile	2.7517	11.0411	32.0631	0.1262	13.3050	0.0986	13.4035	3.5610	0.0917	3.6526	0.0000	11,587.7193	11,587.7193	0.3487	0.0000	11,596.4361

Waste						0.0000	0.0000		0.0000	0.0000	312.8436	0.0000	312.8436	18.4885	0.0000	775.0567
Water						0.0000	0.0000		0.0000	0.0000	93.9170	346.6090	440.5260	0.3497	0.2097	511.7627
Total	**16.5646**	**12.5496**	**46.5207**	**0.1430**	**13.3050**	**0.8354**	**14.1403**	**3.5610**	**0.8285**	**4.3894**	**465.0242**	**17,518.0480**	**17,983.0722**	**19.6337**	**0.3049**	**18,564.7602**

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	13.6629	0.1772	13.5501	8.5800e-003		0.6332	0.6332		0.6332	0.6332	58.2636	39.4506	97.7143	0.1085	3.8200e-003	101.5662
Energy	0.1500	1.3313	0.9074	8.1800e-003		0.1037	0.1037		0.1037	0.1037	0.0000	5,544.2691	5,544.2691	0.3383	0.0913	5,579.9385
Mobile	2.7517	11.0411	32.0631	0.1262	13.3050	0.0986	13.4035	3.5610	0.0917	3.6526	0.0000	11,587.7193	11,587.7193	0.3487	0.0000	11,596.4361
Waste						0.0000	0.0000		0.0000	0.0000	312.8436	0.0000	312.8436	18.4885	0.0000	775.0567
Water						0.0000	0.0000		0.0000	0.0000	93.9170	346.6090	440.5260	0.3497	0.2097	511.7627
Total	**16.5646**	**12.5496**	**46.5207**	**0.1430**	**13.3050**	**0.8354**	**14.1403**	**3.5610**	**0.8285**	**4.3894**	**465.0242**	**17,518.0480**	**17,983.0722**	**19.6337**	**0.3049**	**18,564.7602**

	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	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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	2.7517	11.0411	32.0631	0.1262	13.3050	0.0986	13.4035	3.5610	0.0917	3.6526	0.0000	11,587.7193	11,587.7193	0.3487	0.0000	11,596.4361
Unmitigated	2.7517	11.0411	32.0631	0.1262	13.3050	0.0986	13.4035	3.5610	0.0917	3.6526	0.0000	11,587.7193	11,587.7193	0.3487	0.0000	11,596.4361

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	7,501.86	7,207.92	6607.26	16,934,199	16,934,199
General Office Building	10,383.66	2,316.59	984.04	18,851,362	18,851,362
Total	17,885.52	9,524.51	7,591.30	35,785,561	35,785,561

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	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 Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.618126	0.034987	0.181060	0.102744	0.012808	0.005030	0.012887	0.022139	0.002195	0.001502	0.005204	0.000638	0.000681
General Office Building	0.618126	0.034987	0.181060	0.102744	0.012808	0.005030	0.012887	0.022139	0.002195	0.001502	0.005204	0.000638	0.000681

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	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					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	4,059.6281	4,059.6281	0.3098	0.0641	4,086.4751
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	4,059.6281	4,059.6281	0.3098	0.0641	4,086.4751
NaturalGas Mitigated	0.1500	1.3313	0.9074	8.1800e-003		0.1037	0.1037		0.1037	0.1037	0.0000	1,484.6410	1,484.6410	0.0285	0.0272	1,493.4635
NaturalGas Unmitigated	0.1500	1.3313	0.9074	8.1800e-003		0.1037	0.1037		0.1037	0.1037	0.0000	1,484.6410	1,484.6410	0.0285	0.0272	1,493.4635

5.2 Energy by Land Use - NaturalGas

Unmitigated

	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 Mid Rise	1.10412e+007	0.0595	0.5088	0.2165	3.2500e-003		0.0411	0.0411		0.0411	0.0411	0.0000	589.2014	589.2014	0.0113	0.0108	592.7027
General Office Building	1.67799e+007	0.0905	0.8225	0.6909	4.9400e-003		0.0625	0.0625		0.0625	0.0625	0.0000	895.4396	895.4396	0.0172	0.0164	900.7608
Total		**0.1500**	**1.3313**	**0.9074**	**8.1900e-003**		**0.1036**	**0.1036**		**0.1036**	**0.1036**	**0.0000**	**1,484.6410**	**1,484.6410**	**0.0285**	**0.0272**	**1,493.4635**

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 Mid Rise	1.10412e+007	0.0595	0.5088	0.2165	3.2500e-003		0.0411	0.0411		0.0411	0.0411	0.0000	589.2014	589.2014	0.0113	0.0108	592.7027
General Office Building	1.67799e+007	0.0905	0.8225	0.6909	4.9400e-003		0.0625	0.0625		0.0625	0.0625	0.0000	895.4396	895.4396	0.0172	0.0164	900.7608
Total		**0.1500**	**1.3313**	**0.9074**	**8.1900e-003**		**0.1036**	**0.1036**		**0.1036**	**0.1036**	**0.0000**	**1,484.6410**	**1,484.6410**	**0.0285**	**0.0272**	**1,493.4635**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	5.27603e+006	909.4037	0.0694	0.0144	915.4177
General Office Building	1.82765e+007	3,150.2244	0.2404	0.0497	3,171.0574
Total		**4,059.6281**	**0.3098**	**0.0641**	**4,086.4751**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	5.27603e+006	909.4037	0.0694	0.0144	915.4177
General Office Building	1.82765e+007	3,150.2244	0.2404	0.0497	3,171.0574

Total		**4,059.6281**	**0.3098**	**0.0641**	**4,086.4751**

6.0 Area Detail

6.1 Mitigation Measures Area

	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	13.6629	0.1772	13.5501	8.5800e-003		0.6332	0.6332		0.6332	0.6332	58.2636	39.4506	97.7143	0.1085	3.8200e-003	101.5662
Unmitigated	13.6629	0.1772	13.5501	8.5800e-003		0.6332	0.6332		0.6332	0.6332	58.2636	39.4506	97.7143	0.1085	3.8200e-003	101.5662

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	1.4341					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	8.9945					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	2.9487	0.0679	4.0604	8.0800e-003		0.5805	0.5805		0.5805	0.5805	58.2636	23.9317	82.1953	0.0936	3.8200e-003	85.6750
Landscaping	0.2855	0.1093	9.4897	5.0000e-004		0.0526	0.0526		0.0526	0.0526	0.0000	15.5189	15.5189	0.0149	0.0000	15.8912

Total	**13.6629**	**0.1772**	**13.5501**	**8.5800e-003**		**0.6332**	**0.6332**		**0.6332**	**0.6332**	**58.2636**	**39.4506**	**97.7143**	**0.1085**	**3.8200e-003**	**101.5662**

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	1.4341					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	8.9945					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	2.9487	0.0679	4.0604	8.0800e-003		0.5805	0.5805		0.5805	0.5805	58.2636	23.9317	82.1953	0.0936	3.8200e-003	85.6750
Landscaping	0.2855	0.1093	9.4897	5.0000e-004		0.0526	0.0526		0.0526	0.0526	0.0000	15.5189	15.5189	0.0149	0.0000	15.8912
Total	**13.6629**	**0.1772**	**13.5501**	**8.5800e-003**		**0.6332**	**0.6332**		**0.6332**	**0.6332**	**58.2636**	**39.4506**	**97.7143**	**0.1085**	**3.8200e-003**	**101.5662**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	440.5260	0.3497	0.2097	511.7627
Unmitigated	440.5260	0.3497	0.2097	511.7627

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	83.2668 / 52.4943	138.7889	0.1097	0.0658	161.1384
General Office Building	182.184 / 111.661	301.7371	0.2400	0.1439	350.6242
Total		**440.5260**	**0.3497**	**0.2097**	**511.7627**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	83.2668 / 52.4943	138.7889	0.1097	0.0658	161.1384
General Office Building	182.184 / 111.661	301.7371	0.2400	0.1439	350.6242
Total		**440.5260**	**0.3497**	**0.2097**	**511.7627**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	312.8436	18.4885	0.0000	775.0567
Unmitigated	312.8436	18.4885	0.0000	775.0567

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	587.88	119.3343	7.0525	0.0000	295.6457
General Office Building	953.29	193.5093	11.4361	0.0000	479.4110
Total		**312.8436**	**18.4885**	**0.0000**	**775.0567**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	587.88	119.3343	7.0525	0.0000	295.6457

General Office Building	953.29	193.5093	11.4361	0.0000	479.4110
Total		**312.8436**	**18.4885**	**0.0000**	**775.0567**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Gateway Crossings - Existing Use

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Research & Development	272.84	1000sqft	24.00	272,840.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2026
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	380	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Use SVP

Land Use - Existing site

Construction Phase - Operational only

Off-road Equipment -

Vehicle Trips -

Energy Use - Existing conditions using historical data

Water And Wastewater -

Energy Mitigation -

Table Name	Column Name	Default Value	New Value

tblEnergyUse	LightingElect	3.80	3.08
tblEnergyUse	T24E	1.93	1.48
tblEnergyUse	T24NG	22.58	19.71
tblLandUse	LotAcreage	6.26	24.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	380

2.0 Emissions Summary

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	1.2081	2.0000e-005	2.5000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.8800e-003	4.8800e-003	1.0000e-005	0.0000	5.1900e-003
Energy	0.0388	0.3528	0.2963	2.1200e-003		0.0268	0.0268		0.0268	0.0268	0.0000	772.5777	772.5777	0.0370	0.0132	777.4293
Mobile	0.3140	1.2695	3.7545	0.0149	1.5821	0.0116	1.5937	0.4234	0.0108	0.4342	0.0000	1,371.6712	1,371.6712	0.0409	0.0000	1,372.6923
Waste						0.0000	0.0000		0.0000	0.0000	4.2080	0.0000	4.2080	0.2487	0.0000	10.4252
Water						0.0000	0.0000		0.0000	0.0000	42.5608	125.1209	167.6817	4.3810	0.1052	308.5532
Total	**1.5609**	**1.6223**	**4.0533**	**0.0171**	**1.5821**	**0.0384**	**1.6205**	**0.4234**	**0.0376**	**0.4611**	**46.7688**	**2,269.3746**	**2,316.1434**	**4.7075**	**0.1184**	**2,469.1052**

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	1.2081	2.0000e-005	2.5000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.8800e-003	4.8800e-003	1.0000e-005	0.0000	5.1900e-003
Energy	0.0388	0.3528	0.2963	2.1200e-003		0.0268	0.0268		0.0268	0.0268	0.0000	772.5777	772.5777	0.0370	0.0132	777.4293
Mobile	0.3140	1.2695	3.7545	0.0149	1.5821	0.0116	1.5937	0.4234	0.0108	0.4342	0.0000	1,371.6712	1,371.6712	0.0409	0.0000	1,372.6923
Waste						0.0000	0.0000		0.0000	0.0000	4.2080	0.0000	4.2080	0.2487	0.0000	10.4252
Water						0.0000	0.0000		0.0000	0.0000	42.5608	125.1209	167.6817	4.3810	0.1052	308.5532
Total	**1.5609**	**1.6223**	**4.0533**	**0.0171**	**1.5821**	**0.0384**	**1.6205**	**0.4234**	**0.0376**	**0.4611**	**46.7688**	**2,269.3746**	**2,316.1434**	**4.7075**	**0.1184**	**2,469.1052**

	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	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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	0.3140	1.2695	3.7545	0.0149	1.5821	0.0116	1.5937	0.4234	0.0108	0.4342	0.0000	1,371.6712	1,371.6712	0.0409	0.0000	1,372.6923
Unmitigated	0.3140	1.2695	3.7545	0.0149	1.5821	0.0116	1.5937	0.4234	0.0108	0.4342	0.0000	1,371.6712	1,371.6712	0.0409	0.0000	1,372.6923

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Research & Development	2,212.73	518.40	302.85	4,255,218	4,255,218
Total	2,212.73	518.40	302.85	4,255,218	4,255,218

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	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
Research & Development	9.50	7.30	7.30	33.00	48.00	19.00	82	15	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Research & Development	0.618126	0.034987	0.181060	0.102744	0.012808	0.005030	0.012887	0.022139	0.002195	0.001502	0.005204	0.000638	0.000681

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	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					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	388.5246	388.5246	0.0297	6.1300e-003	391.0940
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	388.5246	388.5246	0.0297	6.1300e-003	391.0940
NaturalGas Mitigated	0.0388	0.3528	0.2963	2.1200e-003		0.0268	0.0268		0.0268	0.0268	0.0000	384.0531	384.0531	7.3600e-003	7.0400e-003	386.3353
NaturalGas Unmitigated	0.0388	0.3528	0.2963	2.1200e-003		0.0268	0.0268		0.0268	0.0268	0.0000	384.0531	384.0531	7.3600e-003	7.0400e-003	386.3353

5.2 Energy by Land Use - NaturalGas

Unmitigated

	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					
Research & Development	7.19688e+006	0.0388	0.3528	0.2963	2.1200e-003		0.0268	0.0268		0.0268	0.0268	0.0000	384.0531	384.0531	7.3600e-003	7.0400e-003	386.3353
Total		**0.0388**	**0.3528**	**0.2963**	**2.1200e-003**		**0.0268**	**0.0268**		**0.0268**	**0.0268**	**0.0000**	**384.0531**	**384.0531**	**7.3600e-003**	**7.0400e-003**	**386.3353**

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					
Research & Development	7.19688e+006	0.0388	0.3528	0.2963	2.1200e-003		0.0268	0.0268		0.0268	0.0268	0.0000	384.0531	384.0531	7.3600e-003	7.0400e-003	386.3353
Total		**0.0388**	**0.3528**	**0.2963**	**2.1200e-003**		**0.0268**	**0.0268**		**0.0268**	**0.0268**	**0.0000**	**384.0531**	**384.0531**	**7.3600e-003**	**7.0400e-003**	**386.3353**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e

Land Use	kWh/yr	MT/yr			
Research & Development	2.25408e+006	388.5246	0.0297	6.1300e-003	391.0940
Total		**388.5246**	**0.0297**	**6.1300e-003**	**391.0940**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Research & Development	2.25408e+006	388.5246	0.0297	6.1300e-003	391.0940
Total		**388.5246**	**0.0297**	**6.1300e-003**	**391.0940**

6.0 Area Detail

6.1 Mitigation Measures Area

	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	1.2081	2.0000e-005	2.5000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.8800e-003	4.8800e-003	1.0000e-005	0.0000	5.1900e-003

Unmitigated	1.2081	2.0000e-005	2.5000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.8800e-003	4.8800e-003	1.0000e-005	0.0000	5.1900e-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	0.1423					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.0656					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.3000e-004	2.0000e-005	2.5000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.8800e-003	4.8800e-003	1.0000e-005	0.0000	5.1900e-003
Total	**1.2081**	**2.0000e-005**	**2.5000e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**4.8800e-003**	**4.8800e-003**	**1.0000e-005**	**0.0000**	**5.1900e-003**

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	0.1423					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.0656					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.3000e-004	2.0000e-005	2.5000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.8800e-003	4.8800e-003	1.0000e-005	0.0000	5.1900e-003
Total	**1.2081**	**2.0000e-005**	**2.5000e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**4.8800e-003**	**4.8800e-003**	**1.0000e-005**	**0.0000**	**5.1900e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	167.6817	4.3810	0.1052	308.5532
Unmitigated	167.6817	4.3810	0.1052	308.5532

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Research & Development	134.154 / 0	167.6817	4.3810	0.1052	308.5532
Total		**167.6817**	**4.3810**	**0.1052**	**308.5532**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Research & Development	134.154 / 0	167.6817	4.3810	0.1052	308.5532
Total		**167.6817**	**4.3810**	**0.1052**	**308.5532**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	4.2080	0.2487	0.0000	10.4252
Unmitigated	4.2080	0.2487	0.0000	10.4252

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			

Research & Development	20.73	4.2080	0.2487	0.0000	10.4252
Total		**4.2080**	**0.2487**	**0.0000**	**10.4252**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Research & Development	20.73	4.2080	0.2487	0.0000	10.4252
Total		**4.2080**	**0.2487**	**0.0000**	**10.4252**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation