GATEWAY CROSSINGS PROJECT AIR QUALITY ASSESSMENT

Santa Clara, California

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Prepared for:

Kristy Weis
David J. Powers & Associates
1871 The Alameda, Suite 200
San Jose, California 95126

Prepared by: James Reyff

ILLINGWORTH & RODKIN, INC.
Acoustics • Air Quality
1 Willowbrook Court, Suite 120
Petaluma, CA 94954
(707) 794-0400

Project: 16-075

Introduction

The purpose of this report is to address air quality impacts associated with the proposed mixed-use residential development project. The approximately 24-acre Gateway Crossings project site is currently undeveloped and located at the southwest corner of Coleman Avenue and Brokaw Road in the City of Santa Clara. The project proposes to develop four, four- to eight-story podium residential buildings with semi-subterranean parking and one to two levels of above-ground parking, and up to 215,000 square feet (sf) of commercial uses, including a nine-story hotel building above a podium and parking. The proposed residential and hotel buildings would be situated around a publicly accessible, approximately 0.9-acre park. A total of approximately three acres of common open space would be provided in the residential buildings on top of the podium structures and may include rooftop outdoor amenity space.

Air pollutant emissions associated with construction and operation of the project were modeled. In addition, the potential construction health risk impacts to nearby sensitive receptors were evaluated along with the community risk impacts of existing toxic air contaminant (TAC) sources upon future project residences. This analysis addresses those issues following the guidance provided by the Bay Area Air Quality Management District (BAAQMD).

Setting

The project is located in the Santa Clara County, which is in the San Francisco Bay Area Air Basin. Ambient air quality standards have been established at both the State and federal level. The Bay Area meets all ambient air quality standards with the exception of ground-level ozone, respirable particulate matter (PM_{10}), and fine particulate matter ($PM_{2.5}$).

Air Pollutants of Concern

High ozone levels are caused by the cumulative emissions of reactive organic gases (ROG) and nitrogen oxides (NO_X). These precursor pollutants react under certain meteorological conditions to form high ozone levels. Controlling the emissions of these precursor pollutants is the focus of the Bay Area's attempts to reduce ozone levels. The highest ozone levels in the Bay Area occur in the eastern and southern inland valleys that are downwind of air pollutant sources. High ozone levels aggravate respiratory and cardiovascular diseases, reduced lung function, and increase coughing and chest discomfort.

Particulate matter is another problematic air pollutant of the Bay Area. Particulate matter is assessed and measured in terms of respirable particulate matter or particles that have a diameter of 10 micrometers or less (PM_{10}) and fine particulate matter where particles have a diameter of 2.5 micrometers or less ($PM_{2.5}$). Elevated concentrations of PM_{10} and $PM_{2.5}$ are the result of both region-wide (or cumulative) emissions and localized emissions. High particulate matter levels aggravate respiratory and cardiovascular diseases, reduce lung function, increase mortality (e.g., lung cancer), and result in reduced lung function growth in children.

Toxic Air Contaminants

TACs are a broad class of compounds known to cause morbidity or mortality (usually because they cause cancer) and include, but are not limited to, the criteria air pollutants. TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, fuel combustion, and commercial operations (e.g., dry cleaners). TACs are typically found in low concentrations, even near their source (e.g., diesel particulate matter [DPM] near a freeway). Because chronic exposure can result in adverse health effects, TACs are regulated at the regional, State, and federal level.

Diesel exhaust is the predominant TAC in urban air and is estimated to represent about three-quarters of the cancer risk from TACs (based on the Bay Area average). According to the California Air Resources Board (CARB), diesel exhaust is a complex mixture of gases, vapors, and fine particles. This complexity makes the evaluation of health effects of diesel exhaust a complex scientific issue. Some of the chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the CARB, and are listed as carcinogens either under the State's Proposition 65 or under the Federal Hazardous Air Pollutants programs. The most recent OEHHA risk assessment guidelines were published in February of 2015.[1] See *Attachment 1* for a detailed description of the community risk modeling methodology used in this assessment.

Regulatory Setting

Federal Regulations

The United States Environmental Protection Agency (EPA) sets nationwide emission standards for mobile sources, which include on-road (highway) motor vehicles such trucks, buses, and automobiles, and non-road (off-road) vehicles and equipment used in construction, agricultural, industrial, and mining activities (such as bulldozers and loaders). The EPA also sets nationwide fuel standards. California also has the ability to set motor vehicle emission standards and standards for fuel used in California, as long as they are the same or more stringent than the Federal standards.

In the past decade the EPA has established a number of emission standards for on- and non-road heavy-duty diesel engines used in trucks and other equipment. This was done in part because diesel engines are a significant source of nitrogen oxides, or NO_X, and particulate matter (PM_{10} and $PM_{2.5}$) and because the EPA has identified diesel particulate matter as a probable carcinogen. Implementation of the heavy-duty diesel on-road vehicle standards and the non-road diesel engine standards are estimated to reduce PM and NO_X emissions from diesel engines up to 95 percent in

[1] OEHHA, 2015. *Air Toxics Hot Spots Program Risk Assessment Guidelines, The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*. Office of Environmental Health Hazard Assessment. February.

2030 when the heavy-duty vehicle fleet is completely replaced with newer heavy-duty vehicles that comply with these emission standards.[2]

In concert with the diesel engine emission standards, the EPA has also substantially reduced the amount of sulfur allowed in diesel fuels. The sulfur contained in diesel fuel is a significant contributor to the formation of particulate matter in diesel-fueled engine exhaust. The new standards reduced the amount of sulfur allowed by 97 percent for highway diesel fuel (from 500 parts per million by weight [ppmw] to 15 ppmw), and by 99 percent for off-highway diesel fuel (from about 3,000 ppmw to 15 ppmw). The low sulfur highway fuel (15 ppmw sulfur), also called ultra-low sulfur diesel (ULSD) is currently required for use by all vehicles in the U.S.

All of the above Federal diesel engine and diesel fuel requirements have been adopted by California, in some cases with modifications making the requirements more stringent or the implementation dates sooner.

State Regulations

To address the issue of diesel emissions in the state, CARB developed the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles[3]. In addition to requiring more stringent emission standards for new on-road and off-road mobile sources and stationary diesel-fueled engines to reduce particulate matter emissions by 90 percent, a significant component of the plan involves application of emission control strategies to existing diesel vehicles and equipment. Many of the measures of the Diesel Risk Reduction Plan have been approved and adopted, including the Federal on-road and non-road diesel engine emission standards for new engines, as well as adoption of regulations for low sulfur fuel in California.

CARB has adopted and implemented a number of regulations for stationary and mobile sources to reduce emissions of DPM. Several of these regulatory programs affect medium and heavy duty diesel trucks that represent the bulk of DPM emissions from California highways. CARB regulations require on-road diesel trucks to be retrofitted with particulate matter controls or replaced to meet 2010 or later engine standards that have much lower DPM and $PM_{2.5}$ emissions. This regulation will substantially reduce these emissions between 2013 and 2023. While new trucks and buses will meet strict federal standards, this measure is intended to accelerate the rate at which the fleet either turns over so there are more cleaner vehicles on the road, or is retrofitted to meet similar standards. With this regulation, older, more polluting trucks would be removed from the roads sooner.

CARB has also adopted and implemented regulations to reduce DPM and NO_X emissions from in-use (existing) and new off-road heavy-duty diesel vehicles (e.g., loaders, tractors, bulldozers,

[2] USEPA, 2000. *Regulatory Announcement, Heavy-Duty Engine and Vehicle Standards and Highway Diesel Fuel Sulfur Control Requirements*. EPA420-F-00-057. December.

[3] California Air Resources Board, 2000. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*. October.

backhoes, off-highway trucks, etc.). The regulations apply to diesel-powered off-road vehicles with engines 25 horsepower (hp) or greater. The regulations are intended to reduce particulate matter and NO_X exhaust emissions by requiring owners to turn over their fleet (replace older equipment with newer equipment) or retrofit existing equipment in order to achieve specified fleet-averaged emission rates. Implementation of this regulation, in conjunction with stringent Federal off-road equipment engine emission limits for new vehicles, will significantly reduce emissions of DPM and NO_X.

Bay Area Air Quality Management District (BAAQMD)

BAAQMD has jurisdiction over an approximately 5,600-square mile area, commonly referred to as the San Francisco Bay Area (Bay Area). The District's boundary encompasses the nine San Francisco Bay Area counties, including Alameda County, Contra Costa County, Marin County, San Francisco County, San Mateo County, Santa Clara County, Napa County, southwestern Solano County and southern Sonoma County.

BAAQMD is the lead agency in developing plans to address attainment and maintenance of the National Ambient Air Quality Standards and California Ambient Air Quality Standards. The District also has permit authority over most types of stationary equipment utilized for the proposed project. The BAAQMD is responsible for permitting and inspection of stationary sources; enforcement of regulations, including setting fees, levying fines, and enforcement actions; and ensuring that public nuisances are minimized.

The BAAQMD *CEQA Air Quality Guidelines*[4] were prepared to assist in the evaluation of air quality impacts of projects and plans proposed within the Bay Area. The guidelines provide recommended procedures for evaluating potential air impacts during the environmental review process consistent with CEQA requirements including thresholds of significance, mitigation measures, and background air quality information. They also include assessment methodologies for air toxics, odors, and greenhouse gas emissions. In June 2010, the BAAQMD's Board of Directors adopted CEQA thresholds of significance and an update of their *CEQA Guidelines*. In May 2011, the updated BAAQMD *CEQA Air Quality Guidelines* were amended to include a risk and hazards threshold for new receptors and modify procedures for assessing impacts related to risk and hazard impacts.

Local Regulations

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.

[4] Bay Area Air Quality Management District, 2011. *CEQA Air Quality Guidelines*. May. (Updated May 2017)

5.10.2-P2 Encourage development patterns that reduce vehicle miles traveled and air 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.

5.10.2-P6 Require "Best Management Practices" for construction dust abatement.

In addition, the Safety Goals of the General Plan are supported by the following policies related to air quality:

5.10.5-P34 Implement minimum setbacks of 500 feet from roadways with average daily trips of 100,000 or more and 100 feet from railroad tracks for new residential or other uses with sensitive receptors, unless a project-specific study identifies measures, such as site design, tiered landscaping, air filtration systems, and window design, to reduce exposure, demonstrating that the potential risks can be reduced to acceptable levels.

5.10.5-P35 Establish minimum buffers between odor sources and new residential or other uses with sensitive receptors, consistent with BAAQMD guidelines, unless a project-specific study demonstrates that these risks can be reduced to acceptable levels.

The General Plan included Prerequisite Goals and Policies that relate to air quality. Some of these policies addressed significant impacts identified in the Draft Environmental Impact Report for the General Plan. The following policy related to air quality was included in the General Plan:

5.1.1-P24 Prior to the implementation of Phase III, the City will include a community Risk Reduction Plan ("CRRP") for acceptable Toxic Air Contaminant ("TAC") concentrations, consistent with the Bay Area Air Quality Management District ("BAAQMD") CEQA Guidelines, including risk and exposure reduction targets, measures to reduce emissions, monitoring procedures, and a public participations process.

Note that the City has not yet developed a CRRP, so health risk assessments are performed for projects that contain sensitive receptors near sources of air pollution or TACs. These include modeling of health risks for individual projects located within the minimum setbacks for roadways and railroads. Mitigation measures such as (but not limited to); site redesign, tiered plantings of trees, air filtration systems, and location of air intakes and design windows to reduce exposure, shall be required to reduce these risks to acceptable levels.

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 by5% 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.

Sensitive Receptors

There are groups of people more affected by air pollution than others. CARB has identified the following persons who are most likely to be affected by air pollution: children under 16, the elderly over 65, athletes, and people with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive receptors. Locations that may contain a high concentration of these sensitive population groups include residential areas, hospitals, daycare facilities, elder care facilities, elementary schools, and parks. For cancer risk assessments, children are the most sensitive receptors, since they are more susceptible to cancer causing TACs. Residential locations are assumed to include infants and small children. A review of the project site did not reveal any sensitive receptors within 1,000 feet of the project site. However, since project construction would be phased, future on-site residences would be considered sensitive receptors for later phases of construction since it is assumed that phases of the project would become operational once constructed.

Significance Thresholds

In June 2010, BAAQMD adopted thresholds of significance to assist in the review of projects under CEQA. These thresholds were designed to establish the level at which BAAQMD believed air pollution emissions would cause significant environmental impacts under CEQA. The significance thresholds identified by BAAQMD and used in this analysis are summarized in Table 1. The BAAQMD's adoption of significance thresholds contained in the 2011 *CEQA Air Quality Guidelines* was called into question by an order issued March 5, 2012, in California Building Industry Association (CBIA) v. BAAQMD (Alameda Superior Court Case No. RGI0548693). The order requires the BAAQMD to set aside its approval of the thresholds until it has conducted environmental review under CEQA. The ruling made in the case concerned the environmental impacts of adopting the thresholds and how the thresholds would indirectly affect land use development patterns. In August 2013, the Appellate Court struck down the lower court's order to set aside the thresholds (Cal. Court of Appeal, First Appellate District, Case Nos. A135335 & A136212). CBIA sought review by the California Supreme Court on three issues, including the appellate court's decision to uphold the BAAQMD's adoption of the thresholds, and the Court granted review on just one: Under what circumstances, if any, does CEQA require an analysis of how existing environmental conditions will impact future residents or users of a proposed project? In December 2015, the Supreme Court determined that an analysis of the impacts of the environment on a project – known as "CEQA-in-reverse" – is only required under two limited circumstances: (1) when a statute provides an express legislative directive to consider such impacts; and (2) when a proposed project risks exacerbating environmental hazards or conditions that already exist (Cal. Supreme Court Case No. S213478). The Supreme Court reversed the Court of Appeal's decision and remanded the matter back to the appellate court to reconsider the case in light of the Supreme Court's ruling. In response to the legal issues, BAAQMD revised their CEQA Guidelines in May 2017. The thresholds identified in Table 1 represent the most recent guidance provided by BAAQMD that are used by the City of Santa Clara. Though not necessarily a CEQA issue, the effect of existing TAC sources on future project receptors (residences) is analyzed to comply with the Clean Air Plan key goal of reducing population TAC exposure and protecting public health in the Bay Area.

Table 1. Air Quality Significance Thresholds

Pollutant	Construction Thresholds	Operational Thresholds	
	Average Daily Emissions (lbs./day)	Average Daily Emissions (lbs./day)	Annual Average Emissions (tons/year)
Criteria Air Pollutants			
ROG	54	54	10
NO_x	54	54	10
PM_{10}	82 (Exhaust)	82	15
$PM_{2.5}$	54 (Exhaust)	54	10
CO	Not Applicable	9.0 ppm (8-hour average) or 20.0 ppm (1-hour average)	
Fugitive Dust	Construction Dust Ordinance or other Best Management Practices	Not Applicable	
Health Risks and Hazards for Single Sources			
Excess Cancer Risk	>10 per one million		
Hazard Index	>1.0		
Incremental annual $PM_{2.5}$	>0.3 $\mu g/m^3$		
Health Risks and Hazards for Combined Sources (Cumulative from all sources within 1,000 foot zone of influence)			
Excess Cancer Risk	>100 per one million		
Hazard Index	>10.0		
Annual Average $PM_{2.5}$	>0.8 $\mu g/m^3$		
Greenhouse Gas Emissions			
GHG Annual Emissions	Compliance with a Qualified GHG Reduction Strategy OR 1,100 metric tons or 4.6 metric tons per capita		
Note: ROG = reactive organic gases, NOx = nitrogen oxides, PM_{10} = course particulate matter or particulates with an aerodynamic diameter of 10 micrometers (µm) or less, $PM_{2.5}$ = fine particulate matter or particulates with an aerodynamic diameter of 2.5µm or less; and GHG = greenhouse gas.			

Impacts and Mitigation Measures

Impact: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable State or federal ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

The Bay Area is considered a non-attainment area for ground-level ozone and $PM_{2.5}$ under both the Federal Clean Air Act and the California Clean Air Act. The area is also considered non-attainment for PM_{10} under the California Clean Air Act, but not the federal act. The area has attained both State and federal ambient air quality standards for carbon monoxide. As part of an effort to attain and maintain ambient air quality standards for ozone and PM_{10}, the BAAQMD has established thresholds of significance for these air pollutants and their precursors. These

thresholds are for ozone precursor pollutants (ROG and NO_X), PM_{10}, and $PM_{2.5}$ and apply to both construction period and operational period impacts.

The California Emissions Estimator Model (CalEEMod) Version 2016.3.1 was used to predict emissions from construction and operation of the site assuming full build out of the project. The project land use types and size, and anticipated construction schedule were input to CalEEMod.

Construction period emissions

CalEEMod provided annual emissions for construction. CalEEMod provides emission estimates for both on-site and off-site construction activities. On-site activities are primarily made up of construction equipment emissions, while off-site activity includes worker, hauling, and vendor traffic. A phase-specific construction build-out scenario, including equipment list and schedule, was developed based on information provided by the project applicant. Emissions from construction of each phase were modeled separately. The proposed project land uses for each phase were input into CalEEMod as follows.

Phase 1:

- 261 dwelling units were entered as "Apartments-Mid Rise"
- 485 spaces were entered as "Enclosed Parking with Elevator"
- 4 spaces as "Parking Lot," and
- 5,300 sf as "Strip Mall"

In addition, 23,542 cubic yards (cy) of soil off-haul is anticipated during the grading phase and hauling of 800 cy of asphalt is anticipated during the paving phase of Phase 1.

Phase 2:

- 332 dwelling units were entered as "Apartments-Mid Rise"
- 625 spaces were entered as "Enclosed Parking with Elevator," and
- 7 spaces as "Parking Lot"

In addition, 19,496 cy of soil off-haul is anticipated during the grading phase and hauling of 800 cy of asphalt is anticipated during the paving phase and was entered into the model for Phase 2.

Phase 3:

- 432 dwelling units were entered as "Apartments-Mid Rise"
- 760 spaces were entered as "Enclosed Parking with elevator"
- 6 spaces as "Parking Lot," and
- 4.900 sf as "Strip Mall"

In addition, 20,919 cubic yards of soil off-haul is anticipated during the grading phase and hauling of 800 cy of asphalt is anticipated during the paving phase and was entered into the model for Phase 3.

Phase 4:

- 556 dwelling units were entered as "Apartments-Mid Rise"
- 905 spaces were entered as "Enclosed Parking with elevator," and
- 4 spaces as "Parking Lot"

In addition, 18,459 cubic yards of soil off-haul is anticipated during the grading phase and hauling of 800 cy of asphalt is anticipated during the paving phase and was entered into the model for Phase 4.

Phase 5:

- 225 rooms were entered as "Hotel"
- 339 spaces were entered as "Enclosed Parking with elevator," and
- 5,200 sf as "Strip Mall"

In addition, 7.585 cubic yards (cy) of soil off-haul is anticipated during the grading phase and hauling of 800 cy of asphalt is anticipated during the paving phase and was entered into the model for Phase 5. The project area was entered as 21.4 acres for each phase.

The project would be built out over a period of approximately 6 to 8 years beginning in October 2018, or an approximate 1,408 to 1,777 construction workdays (assuming an average 260 construction days per year). The construction schedule provided by the applicant makes the following assumptions:

- Phase 1 would be built over a period of 12 months beginning in October 2018.
- Phase 2 would be built over a period of 12 months beginning in July 2019.
- Phase 3 would be built over a period of 12 months beginning in April 2020.
- Phase 4 would be built over a period of 14 months beginning in March 2022.
- Phase 5 would be built over a period of 19 months beginning in January 2024.

Average daily emissions were computed for each phase by dividing the total construction emissions by the number of construction days. Table 2 shows average daily construction emissions of ROG, NO_X, PM_{10} exhaust, and $PM_{2.5}$ exhaust during construction of the project. As indicated in Table 2, estimated the construction period emissions would not exceed the BAAQMD significance thresholds. *Attachment 2* includes the CalEEMod input and output worksheets.

Construction activities, particularly during site preparation and grading, would temporarily generate fugitive dust in the form of PM_{10} and $PM_{2.5}$. Sources of fugitive dust would include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the site would deposit mud on local streets, which could be an additional source of airborne dust after it dries. The BAAQMD CEQA Air Quality Guidelines consider these impacts to be less than significant if best management practices are implemented to reduce these emissions. *Mitigation Measure 1 would implement BAAQMD-recommended best management practices*.

Table 2. Construction Period Emissions by Phase

Scenario	ROG	NOx	PM_{10} Exhaust	$PM_{2.5}$ Exhaust
Phase 1 (tons)	3.06	7.14	0.31	0.29
Phase 2 (tons)	3.60	6.17	0.27	0.25
Phase 3 (tons)	4.34	5.70	0.24	0.22
Phase 4 (tons)	4.78	6.97	0.27	0.25
Phase 5 (tons)	1.69	6.06	0.24	0.22
Total construction emissions (tons)	17.43 tons	32.0 tons	1.32 tons	1.24 tons
Average daily emissions (pounds)[1]	**24.8 lbs./day**	**45.5 lbs./day**	**1.9 lbs./day**	**1.8 lbs./day**
BAAQMD Thresholds (pounds per day)	*54* lbs./day	*54* lbs./day	*82* lbs./day	*54* lbs./day
Exceed Threshold?	**No**	**No**	**No**	**No**
Notes: [1]Assumes 1,408 workdays.				

Operational Period Emissions

Operational air emissions from the project would be generated primarily from autos driven by future residents, employees and customers. Evaporative emissions from architectural coatings and maintenance products (classified as consumer products) are typical emissions from these types of uses. CalEEMod was used to estimate emissions from operation of the proposed project assuming full build-out.

Land Uses

The project land uses were input to CalEEMod, as described above.

Model Year

Emissions associated with vehicle travel depend on the year of analysis because emission control technology requirements are phased-in over time. Therefore, the earlier the year analyzed in the model, the higher the emission rates utilized by CalEEMod. The earliest a component of the project could possibly be constructed and begin operating would be 2020. Emissions associated with build-out later than 2020 would be lower.

Trip Generation Rates

CalEEMod allows the user to enter specific vehicle trip generation rates, which were input to the model using the daily trip generation rate provided in the project trip generation table for net project trips. The default trip lengths and trip types specified by CalEEMod were used.

Energy

CalEEMod defaults for energy use were used, which are assumed to include 2013 Title 24 Building Standards.

Other Inputs

Default model assumptions for emissions associated with solid waste generation and water/wastewater use were applied to the project.

Project Generator

The only source of stationary air pollutants identified with build-out of the project is assumed to be an emergency back-up generator. The project proposes the inclusion of a 100 kW (approximately 135 HP) generator. It is assumed for this assessment that the generator would be driven by a diesel-fueled engine.

The emergency back-up generator would be used for backup power in emergency conditions. The generator would be operated for testing and maintenance purposes, with a maximum of 50 hours each per year of non-emergency operation under normal conditions allowed by BAAQMD. During testing periods the engine would typically be run for less than one hour. The engine would be required to meet CARB and EPA emission standards and consume commercially available California low-sulfur diesel fuel. The generator emissions were modeled using CalEEMod.

Table 3. Operational Emissions

Scenario	ROG	NOx	PM_{10}	$PM_{2.5}$
2020 Phase1	1.82 tons	2.23 tons	1.45 tons	0.42 tons
2021 Phase1+Phase2	4.72 tons	4.86 tons	3.16 tons	0.91 tons
2022 Phase1+Phase2+Phase3	7.61 tons	6.87 tons	5.47 tons	1.57 tons
2024 Phase1+Phase2+Phase3+Phase4	10.65 tons	8.67 tons	8.44 tons	2.42 tons
2026 Full Build Out Phase1+Phase2+Phase3+Phase4+Phase5	11.78 tons	10.09 tons	9.92 tons	2.85 tons
Previous Existing Industrial/Office Use	1.56 tons	1.62 tons	1.62 tons	0.46 tons
Net Emissions	**10.22 tons**	**8.47 tons**	**8.30 tons**	**2.39 tons**
BAAQMD Thresholds (tons /year)	*10 tons*	*10 tons*	*15 tons*	*10 tons*
Exceed Threshold?	**Yes**	**No**	**No**	**No**
Net Project Operational Emissions (*pounds/day*)	56.0 lbs	46.4 lbs	45.5 lbs	13.1 lbs
BAAQMD Thresholds (pounds/day)	*54* lbs.	*54* lbs.	*82* lbs.	*54* lbs.
Exceed Threshold?	**Yes**	**No**	**No**	**No**
[1] Assumes 365-day operation.				

As shown in Table 3, operational emissions of ROG would exceed the BAAQMD significance thresholds. ROG emissions are mostly the result of consumer product use. *Mitigation Measure 2* would reduce mobile emissions from build-out of the project by 10 percent; however, total ROG emissions would still exceed the thresholds of 54 pounds per average day.

***Mitigation Measure 1:* Include basic measures to control dust and exhaust during construction.**

During any construction period ground disturbance, the applicant shall ensure that the project contractor implement measures to control dust and exhaust. Implementation of the measures

recommended by BAAQMD and listed below would reduce the air quality impacts associated with grading and new construction to a less than significant level. The contractor shall implement the following best management practices that are required of all projects:

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.

2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.

3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.

4. All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph).

5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.

6. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.

7. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.

8. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

The project shall develop a plan demonstrating that the off-road equipment used on-site to construct the project would achieve a fleet-wide average 92 percent reduction in PM_{10} exhaust emissions or more. The plan should include, but it not limited to, one or more of the following:

9. All mobile diesel-powered off-road equipment larger than 25 horsepower and operating on the site for more than two days continuously shall meet, at a minimum, U.S. EPA particulate matter emissions standards for Tier 4 engines or

equivalent and include the use of equipment that includes CARB-certified Level 3 Diesel Particulate Filters.[5]

10. Use of alternatively-fueled equipment (i.e., non-diesel), such as electric, biodiesel, or LPG for example, would meet this requirement.

11. Other measures may be the use of added exhaust devices, or a combination of measures, provided that these measures are approved by the City and demonstrated to reduce community risk impacts to less than significant.

Effectiveness of Mitigation Measure 1

Implementation of Mitigation Measure 1 is considered to include all recommended basic control measures listed by BAAQMD and reduce exhaust emissions by 5 percent. This measure would considerably reduce on-site diesel exhaust emissions from off-road equipment operation.

Mitigation Measure 2: Reduce VMT/vehicle trips by at least 20 percent.

The project shall 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.

Mitigation Measure 3: Include low VOC coatings to reduce ROG emissions.

The project shall use low volatile organic compound or VOC (i.e., ROG) coatings, that are below current BAAQMD requirements (i.e., Regulation 8, Rule 3: Architectural Coatings), for at least 50 percent of all residential and nonresidential interior and exterior paints. This includes all architectural coatings applied during both construction and reapplications throughout the project's operational lifetime. At least 50 percent of coatings applied must meet a "super-compliant"" VOC standard of less than 10 grams of VOC per liter of paint. For reapplication of coatings during the project's operational lifetime, the Declaration of Covenants, Conditions, and Restrictions shall contain a stipulation for low VOC coatings to be used.

Effectiveness of Mitigation Measure 2 and 3

Implementation of Mitigation Measure 2 is considered to only feasibly reduce the number of new traffic trips by about 8 percent, assuming weekend trips are not affected. Since 80 percent of the ROG emissions are associated with consumer product use and maintenance painting of individual units and the buildings, total ROG emissions would only be reduced by 2 percent from this mitigation measure. Mitigation Measure 2 would reduce ROG emissions by 0.19 tons per year.

[5] See http://www.arb.ca.gov/diesel/verdev/vt/cvt.htm for more information.

Mitigation Measure 3 would reduce ROG emissions from architectural coatings by about 40 percent. Architectural coatings make up about 11.5 percent of the project ROG emissions, so this would equate to a reduction of 4.6 percent of ROG emissions. Mitigation Measure AQ-3 would reduce ROG emissions by 0.54 tons per year.

The combination of Mitigation Measure 2 and 3 would reduce ROG emissions by 0.73 tons per year. This would reduce the net project ROG emissions from 10.22 to 9.49 tons per year or from 56.0 to 52.0 pounds per day. ROG emissions would be reduced below the annual and average daily thresholds for operational emissions. The impact would be considered *Less than Significant with Mitigation*.

Impact: Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

As discussed above, the project would have less than the significance thresholds adopted by BAAQMD for evaluating impacts related to NOx and particulate matter but significant emissions of ROG. Impacts related to ROG emissions, which could have a very minor effect on ozone levels, are addressed under the impact described above that addresses cumulatively considerable net increases of any criteria pollutant or precursor and were identified as *Significant*. At the local level, the project would not contribute substantially to existing or projected violations of those standards. Carbon monoxide emissions from traffic generated by the project would be the pollutant of greatest concern at the local level. Congested intersections with a large volume of traffic have the greatest potential to cause high-localized concentrations of carbon monoxide. Air pollutant monitoring data indicate that carbon monoxide levels have been at healthy levels (i.e., below State and federal standards) in the Bay Area since the early 1990s. As a result, the region has been designated as attainment for the carbon monoxide standard. The highest measured level over any 8-hour averaging period in the Bay Area during the last 3 years is less than 3.0 ppm, compared to the ambient air quality standard of 9.0 ppm. The project would generate a relatively small amount of new traffic. Based on the trip generation rates, the project would add approximately 9,831 daily trips (or about 1,000 peak hour trips) and would not affect high-volume intersections that have the potential to result in exceedances of an ambient air quality standard for carbon monoxide. BAAQMD screening guidance indicates that the project would have a less than significant impact with respect to carbon monoxide levels if project traffic projections indicate traffic levels would not increase at any affected intersection to more than 44,000 vehicles per hour.[6] Because cumulative traffic volumes at all intersections affected by the project would have less than 44,000 vehicles per hour, the project will have a *less-than significant* effect with respect to carbon monoxide.

Impact: Expose sensitive receptors to substantial pollutant concentrations?

Project impacts related to increased community risk can occur either by introducing a new

[6] For a land-use project type, the BAAQMD CEQA Air Quality Guidelines state that a proposed project would result in a less than significant impact to localized carbon monoxide concentrations if the project would not increase traffic at affected intersections to more than 44,000 vehicles per hour.

sensitive receptor, such as a residential use, in proximity to an existing source of TACs or by introducing a new source of TACs with the potential to adversely affect existing sensitive receptors in the project vicinity. The project would introduce new sensitive receptors (residences) in the proximity of nearby TAC sources, such as El Camino Real (State Route 82), local roadways, stationary sources, and railroad traffic. Though not necessarily a CEQA issue, the effect of existing TAC sources on future project receptors (residences) is analyzed to comply with the Clean Air Plan goal of reducing population exposure and protecting public health in the Bay Area. The BAAQMD recommends using a 1,000-foot screening radius around a project site for purposes of identifying community health risk from siting a new sensitive receptor or a new source of TACs.

The project would not be a substantial source of localized TACs. However, temporary project construction activity would generate dust and equipment exhaust on a temporary basis that could affect nearby sensitive receptors.

Operational Community Risk Impacts (Planning Consideration)

Community health risk assessments typically look at all substantial sources of TACs that can affect sensitive receptors that are located within 1,000 feet of a project site. These sources include freeways or highways, busy surface streets and stationary sources identified by BAAQMD. Traffic on high volume roadways is a source of TAC emissions that may adversely affect sensitive receptors in close proximity to the roadway. For local roadways, BAAQMD considers roadways with traffic volumes of over 10,000 vehicles per day to have a potentially significant impact on a proposed project. A review of the project area identified several sources of TAC emissions, such as SR-82/El Camino Real, local surface streets, multiple stationary sources, and nearby railroad traffic. Community risks from each source are discussed below.

<u>El Camino Real (SR 82) and Local Roadways</u>

BAAQMD provides a Highway Screening Analysis Google Earth Map tool to identify estimated risk and hazard impacts from highways throughout the Bay Area. Cumulative risk, hazard and $PM_{2.5}$ impacts at various distances from the highway are estimated for different segments of the highways. The tool uses the average annual daily traffic (AADT) count, fleet mix and other modeling parameters specific to that segment of the highway. Impacts from Link 319 (6ft elevation) SR-82, which is about 750 feet southwest of the project site, were identified using this tool. The cancer risk at the nearest project receptor was found to be 3.4 in a million. The $PM_{2.5}$ concentration was found to be 0.02 $\mu g/m^3$ and the HI was calculated as less than 0.01. The estimated cancer risk was adjusted using a factor of 1.3744 to account for new OEHHA guidance. This factor was provided by BAAQMD for use with their CEQA screening tools.[7]

For local roadways, BAAQMD has provided the *Roadway Screening Analysis Calculator* to assess whether roadways with traffic volumes of over 10,000 vehicles per day may have a potentially significant effect on a proposed project. Two adjustments were made to the cancer risk predictions

[7] Correspondence with Alison Kirk, BAAQMD, November 23, 2015.

made by this calculator: (1) adjustment for latest vehicle emissions rates and (2) adjustment of cancer risk to reflect new OEHHA guidance (see *Attachment 1*).

The calculator uses EMFAC2011 emission rates for the year 2014. Overall, emission rates will decrease by the time the project is constructed and occupied. A new version of the emissions factor model, EMFAC2014 is available. This version predicts lower emission rates. An adjustment factor of 0.5 was developed by comparing emission rates of total organic gases (TOG) for running exhaust and running losses developed using EMFAC2011 for year 2014 and those from EMFAC2014 for year 2018.[8]

As described previously, the predicted cancer risk was then adjusted using a factor of 1.3744 to account for new OEHHA guidance. This factor was provided by BAAQMD for use with their CEQA screening tools that are used to predict cancer risk.[9]

The average daily traffic (ADT) on Coleman Avenue was estimated to be 48,370 by multiplying cumulative plus project p.m. peak traffic volumes from the project traffic report by ten. Using the BAAQMD *Roadway Screening Analysis Calculator* for Santa Clara County for north-south directional roadways and at a distance of approximately 50 feet east of the roadway, estimated cancer risk from Coleman Avenue at the nearest project site receptor would be would be 21.2 in one million and $PM_{2.5}$ concentration would be 0.7 $\mu g/m^3$. Chronic or acute HI for the roadway would be below 0.03. Estimated cancer risk and $PM_{2.5}$ would exceed the BAAQMD risk thresholds. *Recommended Measure 3 would reduce this risk*, such that excess cancer risk is estimated to be 6.4 in one million and annual $PM_{2.5}$ concentration would be 0.2 $\mu g/m^3$.

Brokaw Road is estimated to have an ADT of 4,780, which is below the BAAQMD roadway screening size of 10,000 and would not result in a substantial health risk to receptors at the project site.

<u>Railroad Traffic</u>

The project site is located near Caltrain and other rail lines, and rail activity currently generates TAC and $PM_{2.5}$ emissions from locomotive exhaust. These rail lines are used for passenger (Caltrain, ACE, and Amtrak) and freight service by trains using diesel fueled locomotives. The project site is about 285 feet or greater from the nearest rail line and about 325 feet from the Santa Clara Caltrain Station Platform. The Peninsula Corridor Electrification Project is a key component of the Caltrain Modernization Program that would electrify the Caltrain Corridor from San Francisco to San Jose. Under this program, diesel-locomotive hauled trains would be converted to Electric Multiple Unit (EMU) trains after 2020.

Currently all of Caltrain's trains use diesel locomotives. As part of the program to modernize operation of the Caltrain rail corridor between San Jose and San Francisco, Caltrain is planning to

[8] Though the project will likely be operational after 2018, this analysis year was used for the *Roadway Screening Analysis Calculator* as a conservative measure for estimating community risk.
[9] Correspondence with Alison Kirk, BAAQMD, November 23, 2015.

switch from diesel locomotives to use of electric trains in the near future.[10] Nearly all of the trains in the future are planned to be EMU trains, which are self-propelled electric rail vehicles that can accelerate and decelerate at faster rates than diesel power trains, even with longer trains. As a result, Caltrain would be able to increase the number of trains during peak periods to accommodate service demand. This plan was formally adopted on January 8, 2015 and electrified service is anticipated to begin in 2020 or 2021.[11]

Based on the current Caltrain schedule, there are 92 trains passing the project site during the weekdays, 32 trains during the weekend, and 4 additional trains that only run on Saturday. Electrification of Caltrain would eliminate DPM emissions from most of these trains and would increase the number of weekday trains from 92 to 114. Amtrak's Capitol Corridor and Coast Starlight passenger trains either stop at or pass by the Santa Clara Station. Based on current Amtrak schedules, the Amtrak Capitol Corridor, which provides service between Sacramento/Auburn and San Jose, has 8 weekday trains and 7 weekend trains that used these rail lines. The Amtrak Coast Starlight operates between Seattle and Los Angles, with 2 daily trains. In addition to the Caltrain and Amtrak trains, there are about ten freight trains that also use this rail line on a daily basis.[12]

Caltrain plans for 2021 service between San Jose and San Francisco to use a mixed fleet of EMUs and diesel locomotives, with approximately 75 percent of the service being electric and 25 percent being diesel. In 2021, some peak service trains would be diesel on weekdays. All other service, including off-peak periods, would be EMU-based. Off-peak periods include early morning, midday, and after 7:00 p.m. After 2020, diesel locomotives would be replaced with EMUs over time as they reach the end of their service life. Caltrain's diesel-powered locomotives would continue to be used to provide service between the San Jose Diridon Station and Gilroy. It is expected that 100 percent of the San Jose to San Francisco fleet would be EMUs by 2026 to 2029.[13]

With Caltrain electrification, it was assumed that during 2020 all trains would continue to use diesel locomotives. There would be 92 daily weekday trips, and 32 daily weekend trips with 4 additional trips on Saturdays. On an annual average basis there would be a total of 75 daily trains using diesel locomotives. Fifty of these trains would stop at the Santa Clara Station and 25 would pass the station without stopping. Starting in 2021 there would be 24 daily weekday trips and 4 daily weekend trips with 4 additional trips on Saturdays using trains with diesel locomotives.[14] On an annual average basis there would be a total of 19 daily trains using diesel locomotives. One of these trains would stop at the Santa Clara Station and 18 would pass the station without stopping. From 2026 on it was conservatively assumed that there would be 4 daily weekday diesel trains that pass by the Santa Clara Station. All of Amtrak's Capitol Corridor trains stop at the Santa Clara Station and the Coast Starlight trains pass by the station. All trains used for freight service were assumed to use diesel powered locomotives and pass by the station.

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[10] Caltrain, 2014. *Peninsula Corridor Electrification Project. Final Environmental Impact Report*. December 2014.
[11] Caltrain, 2015. *Peninsula Corridor Electrification Fact Sheet*. May 2015.
[12] *Bay Area Regional Rail Plan, Technical Memorandum 4a, Conditions, Configuration & Traffic on Existing System*, Metropolitan Transportation Commission, November 15, 2006.
[13] Ibid
[14] Caltrain 2015. *Short Range Transit Plan:FY2015-2024*. October 1, 2015.

The schedule for Caltrain electrification has recently become an issue due to the reliance on federal funds that would contribute to the construction costs. These funds are under review, so the schedule could be delayed and the length of any delay would be unknown. To address this issue, a scenario that assumes Caltrain would use all diesel-powered locomotives in the future was also evaluated. In addition, the future increase in the number of trains was assumed and that increase was also assumed to be made up of diesel locomotives. This provides the worst-case analysis of health risks from the Caltrain railroad. The same modeling parameters described above apply, except all assumed electric trains would be diesel-powered.

DPM and $PM_{2.5}$ emissions from trains on the rail line were calculated using EPA emission factors for locomotives[15] and CARB adjustment factors to account for fuels used in California.[16] Caltrain's current locomotive fleet consists of twenty 3,200 horsepower (hp) locomotives of model year or overhaul date of 1999 or later, three 3,200 hp locomotives of model year 1998, and six 3,600 hp locomotives of model year 2003.[17] The current fleet average locomotive engine size is about 3,285 hp. In estimating diesel emissions for 2021 prior to electrification a fleet average locomotive engine size of 3,285 hp was used. When electrification occurs, Caltrain will retain the six 3,600 hp locomotives and the three model year 1998 3,200 hp locomotives.[18] In estimating diesel locomotive emissions for the case of electrification, average locomotive horsepower of 3,467 hp was used. Amrak passenger trains were assumed to use 3,200 hp diesel locomotives and would continue to do so in the future. Emissions from the freight trains were calculated assuming they would use two diesel locomotives with 2,300 hp engines.

Passenger and freight trains that would not stop at the Santa Clara Station were assumed to be traveling at an average speed of 40 mph in the vicinity of the project site. Passenger trains stopping at the Santa Clara Station were assumed to be traveling at an average speed of 10 mph in the vicinity of the station. Since the exposure duration used in calculating cancer risks is 30 years (in this case the period from 2020 through 2049), the passenger and freight train average DPM emissions were calculated based on average EPA emission factors for 2020 and the periods 2021-2025, 2026-2049.

Dispersion modeling of locomotive emissions was conducted using the EPA's AERMOD dispersion model and five-year data set (2006-2010) of hourly meteorological data from the San Jose Airport prepared for use with the AERMOD model by the BAAQMD. Locomotive emissions from train travel within about 1,000 feet of the project site were modeled as four line sources comprised of a series of volume sources along the rail line. DPM concentrations were calculated at receptor locations placed within the proposed residential areas of the project (Buildings 1 through 4). Receptors heights of 1.5 meters (5 feet), 4.5 meters (15 feet), and 7.6 meters (25 feet), representative of breathing heights on the first, second, and third floor levels of the proposed

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[15] *Emission Factors for Locomotives*, USEPA 2009 (EPA-420-F-09-025)
[16] *Offroad Modeling, Change Technical Memo*, Changes to the Locomotive Inventory, CARB July 2006.
[17] Caltrain *Commute Fleets*. Available at: http://www.caltrain.com/about/statsandreports.html. Accessed March 4, 2016.
[18] Caltrain 2015. *Short Range Transit Plan:FY2015-2024*. October 1, 2015.

residential buildings, were used in the modeling. Figure 1 shows the railroad line segments used for the modeling and receptor locations at the project site where concentrations were calculated.

Maximum health risk impacts at the project site are reported in Table 4. The maximum modeled long-term DPM and $PM_{2.5}$ concentrations occurred at the first floor level in the southwestern portion of the residential area of Building 4. The location of maximum cancer risk is shown in Figure 1. Based on the modeling, the maximum annual $PM_{2.5}$ concentration from DPM emitted by trains was 0.03 $\mu g/m^3$. Increased cancer and non-cancer health risks were calculated using model results and the methods recommended by the BAAQMD, as described in *Attachment 3.*

Table 4. Maximum Health Risk Impacts from Caltrain Rail Line

Roadway/Setback	Cancer Risk (per million)	$PM_{2.5}$ Concentration ($\mu g/m^3$)	Hazard Index (HI)
Trains (assuming Caltrain electrification)	9.2	0.03	<0.01
Trains (assuming no Caltrain electrification	**14.6**	0.03	<0.01
BAAQMD Thresholds	*10.0*	*0.3*	*1.0*

Note: **Bold** denotes levels above single-source thresholds.

As shown in Table 4, the increased lifetime cancer risk assuming electrification would be below the BAAQMD significance thresholds for lifetime cancer risk, annual $PM_{2.5}$ concentrations and hazards based on the predicted Health Index. When assuming no future electrification and an increase in the number of Caltrain trains, the predicted cancer risk would exceed the threshold of 10.0 chances per million. *Recommended Measure 3 would reduce this risk*, such that excess cancer risk is estimated to be 4.4 in one million.

Norman Y. Mineta San Jose International Airport

Located northeast of the project is the San Jose International Airport, which contains multiple TAC sources (such as diesel tugs and trucks). No screening tools are available from BAAQMD for the airport sources as a whole and, as a conservative measure, *Recommended Measure 3* would reduce this risk.

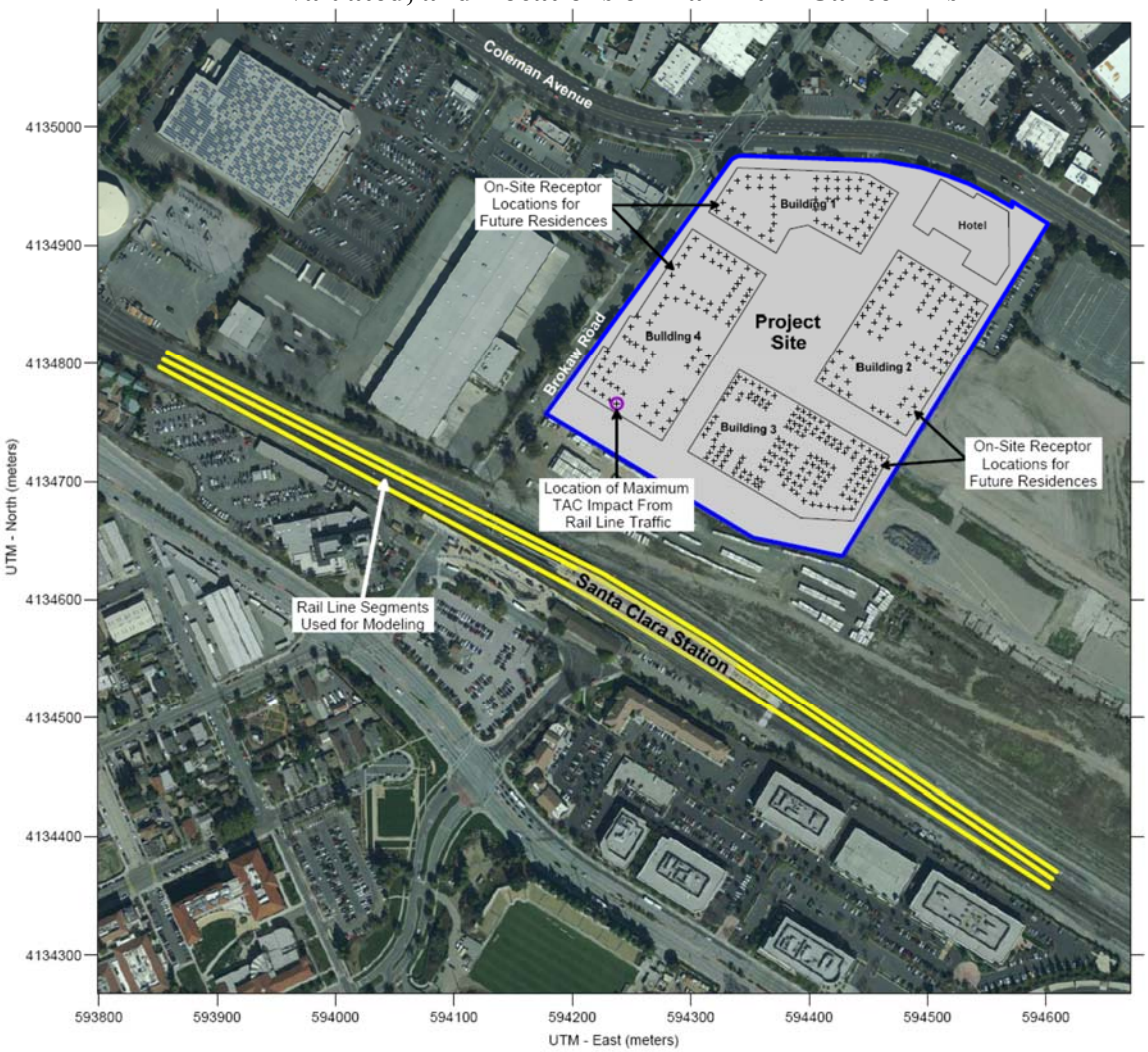
Stationary Sources

Permitted stationary sources of air pollution near the project site were identified using BAAQMD's *Stationary Source Risk & Hazard Analysis Tool*. This mapping tool uses Google Earth and identified the location of four stationary sources and their estimated risk and hazard impacts. The 2012 estimated risk values were adjusted using the 1.3744 factor. The risk values were then adjusted with the appropriate distance multiplier values provided by BAAQMD. The values reported below reflect the above adjustments. Several facilities identified using the tool have since closed, as indicated by correspondence with BAAQMD.[19]

[19] Correspondence with Alison Kirk, BAAQMD & I&R, May 10, 2017.

- Plant 19357, which is a facility operated by Atlantic – San Jose, located at 1250 Aviation Avenue, is about 400 feet northeast of the project site. At BAAQMD's direction, risk and $PM_{2.5}$ concentrations from the facility were adjusted based on BAAQMD's *Distance Adjustment Multiplier Tool for Diesel Internal Combustion Engines*. According to the BAAQMD screening data (and adjusted for the 400 foot distance and 2015 OEHHA methodology), this facility would result in an adjusted lifetime risk of 3.7 per million and 0.0 $\mu g/m^3$ $PM_{2.5}$ concentration, and <0.01 Hazard Index (HI), which would all be below BAAQMD thresholds of significance.

Figure 1. Project Site, On-site Residential Receptors, Rail Line Segments Evaluated, and Locations of Maximum Cancer Risk



- Plant 15839, which is an emergency backup generator operated by Santa Clara Police Facility, located at 601 El Camino Real, is about 700 feet southwest of the project site. At BAAQMD's direction, risk and $PM_{2.5}$ concentrations from the facility were adjusted based

on BAAQMD's *Distance Adjustment Multiplier Tool for Diesel Internal Combustion Engines*. According to the BAAQMD screening data (and adjusted for the 700 foot distance and 2015 OEHHA methodology), this facility would result in an adjusted lifetime cancer risk of 9.1 per million and 0.0 μg/m^3 $PM_{2.5}$ concentration, and <0.01 Hazard Index (HI), which would all be below BAAQMD thresholds of significance.

- Plant G9614, which is a gas dispensing facility operated by Costco Wholesale #129 located at 1601 Coleman Avenue, is about 900 feet west of the project site. At BAAQMD's direction, risk and $PM_{2.5}$ concentrations from the facility were adjusted based on BAAQMD's *Distance Adjustment Multiplier Tool for Gasoline Dispensing Facilities*. According to the BAAQMD screening data (and adjusted for the 900 foot distance and 2015 OEHHA methodology), this facility would result in an adjusted lifetime cancer risk of 4.0 per million and 0.0 μg/m^3 $PM_{2.5}$ concentration, and <0.01 Hazard Index (HI), which would all be below BAAQMD thresholds of significance.

- Plant 10821, which is facility operated by Hewlett-Packard Aviation, located at 1210 Aviation Avenue, is about 850 feet northeast of the project site. At BAAQMD's direction, risk and $PM_{2.5}$ concentrations from the facility were adjusted based on BAAQMD's *Distance Adjustment Multiplier Tool for Diesel Internal Combustion Engines*. According to the BAAQMD screening data (and adjusted for the 850 foot distance and 2015 OEHHA methodology), this facility would result in an adjusted lifetime cancer risk of 1.5 per million and 0.0 μg/m^3 $PM_{2.5}$ concentration, and <0.01 Hazard Index (HI), which would all be below BAAQMD thresholds of significance.

***Recommended Measure 3*: Mechanical Ventilation with Filtration**

Maintained ventilation systems with high-efficiency air filtration of the fresh air supply would reduce overall concentrations of DPM and $PM_{2.5}$ concentrations, substantially lowering cancer risk and annual $PM_{2.5}$ concentrations. These systems should be installed on either an individual unit-by-unit basis, with individual air intake and exhaust ducts ventilating each unit separately, or through a centralized building ventilation system.

The U.S. EPA reports particle size removal efficiency for filters rated MERV13 of 90 percent for particles in the size range of 1 to 3 μm and less than 75 percent for particles 0.3 to 1 μm.[20,21] The BAAQMD's *Planning Healthy Places* guidance indicates that MERV13 air filtration devices installed on an HVAC air intake system can remove 80-90 percent of indoor particulate matter (greater than 0.3 microns in diameter).[22]

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[20] American Society of Heating, Refrigerating, and Air-Conditioning Engineers, Inc., 2007. *Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size*. ANSI/ASHRAE Addendum b to Standard 52.2-2007

[21] United States Environmental Protection Agency (U.S. EPA), 2009. *Residential Air Cleaners (Second Edition): A Summary of Available Information*. U.S. EPA 402-F-09-002. Revised August 2009.

[22] Bay Area Air Quality Management District (BAAQMD), 2016. *Planning Healthy Places A Guidebook for addressing local sources of air pollutants in community planning*. May.

1. Design the site to limit exposure from sources of TACs and fine particulate matter ($PM_{2.5}$) emissions. The final site layout shall locate operable windows and air intakes as far as possible and feasible from TAC sources. Any modifications to the site design shall incorporate buffers between residences and nearby TAC sources.
2. Install air filtration at all residential units. Air filtration devices shall be rated MERV13 or higher. To ensure adequate health protection to sensitive receptors, a ventilation system shall meet the following minimal design standards:
    a. A MERV13 or higher rating;
    b. At least one air exchange(s) per hour of fresh outside filtered air; and
    c. At least four air exchange(s) per hour recirculation.

    Alternately, at the approval of the City, equivalent control technology may be used if it is shown by a qualified air quality consultant or heating, ventilation, and air conditioning (HVAC) engineer that it would reduce risk below significance thresholds.
3. As part of implementing this measure, an ongoing maintenance plan for the building's HVAC air filtration system shall be required. Recognizing that emissions from air pollution sources are decreasing, the maintenance period shall last as long as significant excess cancer risk or annual $PM_{2.5}$ exposures are predicted. Subsequent studies could be conducted by an air quality expert approved by the City to identify the ongoing need for the filtered ventilation systems as future information becomes available.
4. Ensure that the lease agreement and other property documents (1) require cleaning, maintenance, and monitoring of the affected units for air flow leaks; (2) include assurance that new owners and tenants are provided information on the ventilation system; and (3) include provisions that fees associated with owning or leasing a unit(s) in the building include funds for cleaning, maintenance, monitoring, and replacements of the filters, as needed.
5. Require that, prior to building occupancy, an authorized air pollutant consultant or HVAC engineer verify the installation of all necessary measures to reduce toxic air contaminant (TAC) exposure.
6. To the greatest degree possible, plant vegetation along the project site boundaries and around outdoor use areas. This barrier would include trees and shrubs that provide a dense vegetative barrier.

<u>With the Implementation of Recommended Measure 3</u>

A properly installed and operated ventilation system with MERV 13 air filters will reduce $PM_{2.5}$ concentrations, including from DPM, from mobile and stationary sources by 80 percent or greater indoors when compared to outdoors. The U.S. EPA reports that people, on average, spend 90 percent of their time indoors.[23] The overall effectiveness calculations take into effect time spent outdoors. Assuming two hours of outdoor exposure plus one hour of open windows (calculated as outdoor exposure) per day, the overall effectiveness of the MERV 13 filtration systems would be

[23] Klepeis, N.E., Nelsen, WC., Ott, WR., Robinson, JP., Tsang, AM., Switzer, P., Behar, JV., Hern, SC., and Engelmann, WH. 2001. *The National Human Activity Pattern Survey (NHAPS): a resource for assessing exposure to environmental pollutants*. J. Expo Anal Environ Epidemial. 2001 May-Jun;11(3):231-52.

70 percent. Implementation of Recommended Measure 3 is estimated to reduce single-source cancer risk from Coleman Avenue to 6.4 in one million, and single-source cancer risk from railroad traffic to 4.4 in one million, both of which would be below the BAAQMD significance thresholds.

Project Construction Activity

Construction activities, particularly during site preparation and grading would temporarily generate fugitive dust in the form of respirable particulate matter (PM_{10}) and $PM_{2.5}$. Sources of fugitive dust would include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the site would deposit mud on local streets, which could be an additional source of airborne dust after it dries. The BAAQMD CEQA Air Quality Guidelines consider these impacts to be less than significant if best management practices are employed to reduce these emissions. *Mitigation Measure 1 would implement BAAQMD-required best management practices*.

Construction equipment and associated heavy-duty truck traffic generates diesel exhaust, which is a known TAC. These exhaust air pollutant emissions would not be considered to contribute substantially to existing or projected air quality violations. Construction exhaust emissions may still pose community risks for sensitive receptors such as nearby residents. The primary community risk impact issues associated with construction emissions are cancer risk and exposure to $PM_{2.5}$. Diesel exhaust poses both a potential health and nuisance impact to nearby receptors. A community risk assessment of the project construction activities was conducted that evaluated potential health effects of sensitive receptors at these nearby residences from construction emissions of DPM and $PM_{2.5}$.[24] A review of the project site did not reveal any sensitive receptors within 1,000 feet of the project site. However, since project construction would be phased, future on-site residences would be considered sensitive receptors for later phases of construction since it is assumed that phases of the project would become operational once constructed. Emissions and dispersion modeling was conducted to estimate the on-site DPM concentrations resulting from project construction, so that lifetime cancer risks and non-cancer health effects could be evaluated.

<u>On-Site Construction TAC Emissions</u>

Construction period emissions were computed using CalEEMod along with projected construction activity, as described above. The CalEEMod model provided total annual PM_{10} exhaust emissions (assumed to be DPM) for the off-road construction equipment used for construction of the project and for the exhaust emissions from on-road vehicles (haul trucks, vendor trucks, and worker vehicles) of 0.5015 tons (1,003 pounds) over the entire construction period. A trip length of one mile was used to represent vehicle travel while at or near the construction site. For modeling purposes, it was assumed that these emissions from on-road vehicles would occur at the construction site. Fugitive dust $PM_{2.5}$ emissions were also computed and included in this analysis. The model predicts emissions of 0.3763 tons (753 pounds) of fugitive $PM_{2.5}$ over the construction period. *Attachment 2* includes the CalEEMod input and output worksheets and risk modeling calculations.

[24] DPM is identified by California as a toxic air contaminant due to the potential to cause cancer.

Dispersion Modeling

The U.S. EPA AERMOD dispersion model was used to predict concentrations of DPM and $PM_{2.5}$ concentrations at all the sensitive receptors that would be introduced by the proposed project. The AERMOD dispersion model is a BAAQMD-recommended model for use in modeling analysis of these types of emission activities for CEQA projects.[25] Building 1 is scheduled to be occupied by residents by 2020. Phase 2 and Phase 3 would be under construction during 2020. Hence, to estimate DPM and $PM_{2.5}$ concentrations during 2020, four area sources were used – two for DPM and two for fugitive dust. Phase 4 would be constructed between 2022 – 2023. Hence, to compute concentration and risks during 2023 and 2024, two area sources were uses – one for DPM and one for fugitive dust. Phase 5 would be constructed between 2024 – 2025. Again, for computing concentrations during 2024 and 2025, two area sources were uses – one for DPM and one for fugitive dust. To represent the construction equipment exhaust emissions, an emission release height of 6 meters (19.7 feet) was used for the area source. The elevated source height reflects the height of the equipment exhaust pipes plus an additional distance for the height of the exhaust plume above the exhaust pipes to account for plume rise of the exhaust gases. For modeling fugitive $PM_{2.5}$ emissions, a near-ground level release height of 2 meters (6.6 feet) was used for the area source. Emissions from the construction equipment and on-road vehicle travel were distributed throughout the modeled area sources. Construction emissions were modeled as occurring daily between 7 a.m. to 4 p.m., when the majority of construction activity would occur.

The modeling used a 5-year meteorological data set (2006 – 2010) from the Mineta San Jose International Airport meteorological station prepared for use with the AERMOD model by the CARB. Annual DPM and $PM_{2.5}$ concentrations from construction activities during the 2020 – 2026 period were calculated using the model. DPM and $PM_{2.5}$ concentrations were calculated at the future sensitive receptors. Receptor height of 1.5 meters (4.9 feet) and 4.5 meters (14.7 feet) was used to represent the breathing height of the future residents at the first and second floor levels of the proposed residential buildings

Cancer Risks (Planning Consideration)

Results of this assessment indicate that the maximum excess residential cancer risks would be 122.6 in one million for an infant exposure and 2 in one million for an adult exposure. The maximally exposed individual (MEI) would be located at the first floor level of Building 3 (see Figure 2). The maximum residential excess cancer risk at the MEI would be greater than the BAAQMD significance threshold of 10 in one million. *Implementation of Mitigation Measures 1 would reduce this risk to below the BAAQMD threshold of significance.*

Predicted Annual $PM_{2.5}$ Concentration (Planning Consideration)

The maximum-modeled annual $PM_{2.5}$ concentration, which is based on combined exhaust and fugitive dust emissions, was 1.4 $\mu g/m^3$ and would occur at the cancer risk MEI. The maximum

[25] Bay Area Air Quality Management District (BAAQMD), 2012, *Recommended Methods for Screening and Modeling Local Risks and Hazards, Version 3.0.* May.

annual $PM_{2.5}$ concentration would exceed the BAAQMD significance threshold of 0.3 μg/m^3. The implementation of mitigation measure 1 would reduce $PM_{2.5}$ concentrations to 0.24 μg/m^3, which is below the BAAQMD significance threshold.

Non-Cancer Hazards (Planning Consideration)

The maximum computed HI based on DPM concentration would be 0.12, which is lower than the BAAQMD significance threshold of1.0

Project Emergency Generator testing and Maintenance

As previously described, the project would include one 100KW, diesel-fueled generator. The generator will be operated for testing and maintenance purposes, with a maximum of 50 hours per year of non-emergency operation under normal conditions. During testing periods the engine would typically be run for less than one hour under light engine loads. The engines would be required to meet U.S. EPA emission standards and consume commercially available California low sulfur diesel fuel.

The generator would require a permit from the BAAQMD, since it is equipped with an engine larger than 50 hp. As part of the BAAQMD permit requirements, an assessment that shows less-than-significant health risks from diesel particulate matter exposure would be required. The risk assessment, prepared by BAAQMD, would have to show that cancer risks are less than 10 per million and that the project includes Best Available Toxics Control Technology, which would set limits for diesel particulate matter emissions. Sources of air pollutant emissions complying with all applicable BAAQMD regulations generally will not be considered to have a significant air quality community risk impact.

Emissions from the testing and maintenance of the generators were calculated using CARB's OFFROAD emissions model for large compression-ignited engines above 25 horsepower. Results of generator modeling indicate average daily emissions of about 0.0004 pounds of DPM per day. Risk and $PM_{2.5}$ concentrations from a diesel generator of this size and average daily emissions were then calculated based on BAAQMD's *Risk and Hazards Emissions Screening Calculator (Beta Version)*. Results indicate that the project generator would result in an excess cancer risk of 2.4 per million,[26] $PM_{2.5}$ concentration of less than 0.01 μg/m^3 and HI of <0.01 at the nearest on-site receptor, all of which would be below BAAQMD thresholds of significance both on-site affecting project residences and at nearby sensitive receptors. *Attachment 3* includes emission factors and risk modeling calculations for the project emergency back-up generator.

[26] Includes adjustment factor of 1.3744 to account for latest OEHHA methodology per correspondence with Alison Kirk, BAAQMD, November 23, 2015.

Combined Construction Risk Assessment (Planning Consideration)

As discussed above, the project site is affected by multiple sources of TACs. In addition, two nearby construction projects were identified that could occur simultaneously with the proposed project: the Mission Town Center project[27] and the BART Silicon Valley Phase II extension project.[28] Table 5 shows the cancer risk associated with each source affecting the project site. The sum of impacts from combined sources (i.e., sources within 1,000 feet of the project) would exceed the cumulative threshold for cancer risk. However, with implementation of *Mitigation Measure 1 and Recommended Measure 3*, community risk at the project site would be reduced to below BAAQMD significance thresholds.

Table 5. Cumulative Construction Risk Assessment at MEI

Source	Maximum Cancer Risk (per million)	Maximum Annual $PM_{2.5}$ Concentration ($\mu g/m^3$)	Maximum Hazard Index
Project Construction *Unmitigated* *Implementation of Mit. Measure 1 and Recmd. Measure 3*	 122.6 6.1	 1.4 <0.3	 0.12 <0.01
Mission Town Center Construction (Mitigated)	<2.7	<0.1	<0.01
BART Silicon Valley Phase II Construction (Mitigated)	<1.6	<0.1	<0.02
El Camino Real[1]	--	--	--
Coleman Avenue at 900 feet	2.1	0.1	<0.03
Railroad Traffic	<14.6	0.0	<0.01
Plant 19357, Atlantic – San Jose[1] 1250 Aviation Avenue	--	--	--
Plant 15839, Santa Clara Police Facility 601 El Camino Real	<9.1	0.0	<0.01
Plant G9614, Costco Wholesale #129 1601 Coleman Avenue[1]	--	--	--
Plant 10821, Hewlett-Packard Aviation 1210 Aviation Avenue[1]	--	--	--
Project Generator	<0.4	<0.01	<0.01
Cumulative Total **Unmitigated** **Mitigated**	 <153.1 <36.2	 1.7 <0.6	 <0.2 <0.09
BAAQMD Threshold – Cumulative Sources	***>100***	***>0.8***	***>10.0***
Exceeds Threshold After Mitigation?	***No***	***No***	***No***

Notes: [1]This source is located over 1,000 feet from the construction MEI.

[27] City of Santa Clara, 2015. *Mission Town Center Draft Environmental Impact Report*. November.
[28] Santa Clara Valley Transportation Authority, 2016. *VTA's BART Silicon Valley – Phase II Extension Project Air Quality Study*. November.

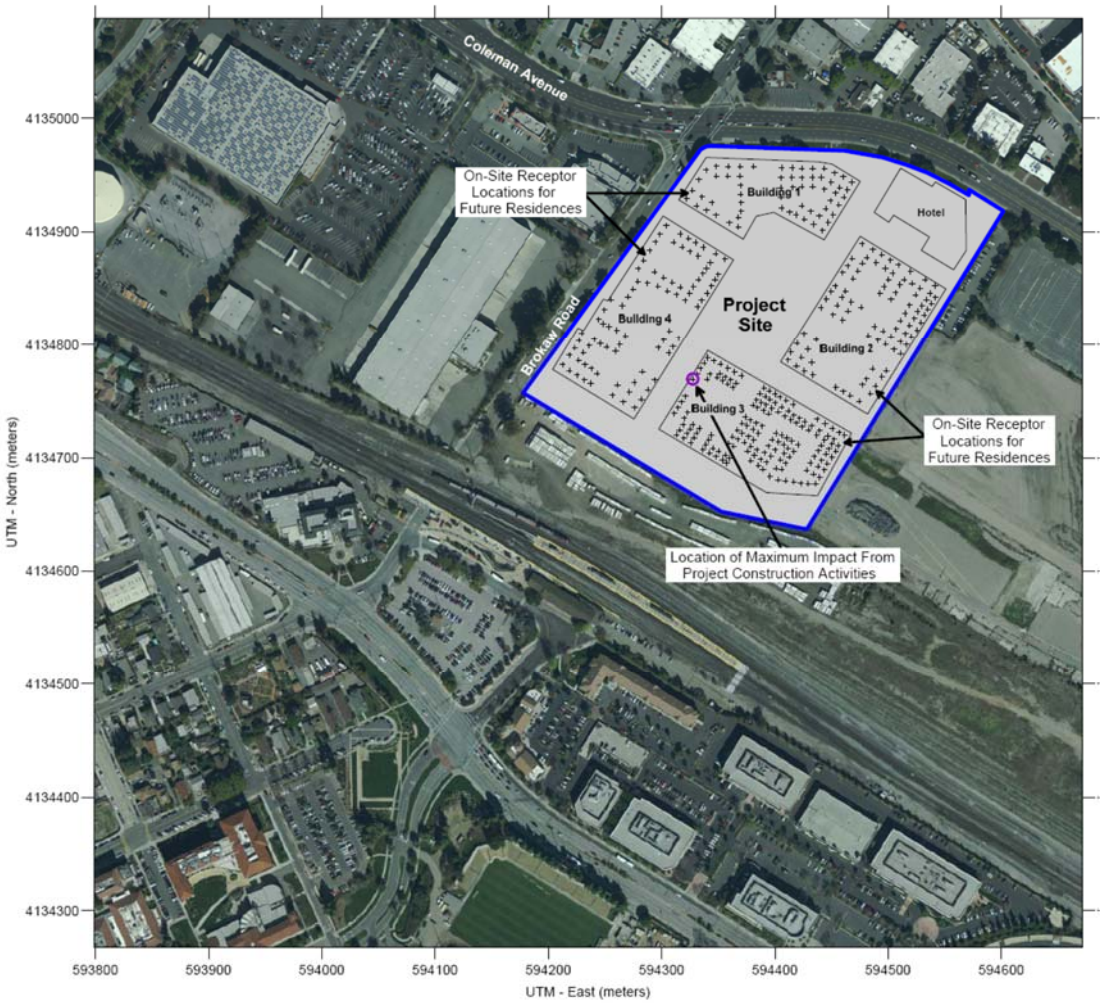
Recommended Measure: **Selection of equipment during construction to minimize emissions. Such equipment selection would include the following.**

See Mitigation Measure 1.

<u>Effectiveness of Mitigation Measure 1</u>

Implementation of Mitigation Measure 1 would reduce on-site diesel particulate matter exhaust emissions by approximately 95 percent. This would reduce the cancer risk proportionally, such that the maximum mitigated risk would be 6.1 in one million. Mitigation measure 1 and Recommended measure 3 would reduce $PM_{2.5}$ emissions by approximately 83 percent. This would proportionally reduce the maximum modeled $PM_{2.5}$ concentration to 0.24 $\mu g/m^3$. After implementation of these measures, the project's community risk caused by construction activities and other cumulative sources would be below BAAQMD significance thresholds.

Figure 2. Project Construction Site and Locations of On-Site Sensitive Receptors and Maximum TAC and $PM_{2.5}$ Impacts



Supporting Documents

Attachment 1: Health Risk Evaluation Methodology
Attachment 2: Construction Schedule, CalEEMod Output Files and Health Risk Calculations
Attachment 3: Rail Line Impacts Modeling
Attachment 4: Generator Risk Modeling
Attachment 5: Roadway Modeling
Attachment 6: Stationary Source

Attachment 1: Health Risk Calculation Methodology

A health risk assessment (HRA) for exposure to Toxic Air Contaminates (TACs) requires the application of a risk characterization model to the results from the air dispersion model to estimate potential health risk at each sensitive receptor location. The State of California Office of Environmental Health Hazard Assessment (OEHHA) and California Air Resources Board (CARB) develop recommended methods for conducting health risk assessments. The most recent OEHHA risk assessment guidelines were published in February of 2015.[32] These guidelines incorporate substantial changes designed to provide for enhanced protection of children, as required by State law, compared to previous published risk assessment guidelines. CARB has provided additional guidance on implementing OEHHA's recommended methods.[33] This HRA used the recent 2015 OEHHA risk assessment guidelines and CARB guidance. The BAAQMD has adopted recommended procedures for applying the newest OEHHA guidelines as part of Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants.[34] Exposure parameters from the OEHHA guidelines and the recent BAAQMD HRA Guidelines were used in this evaluation.

Cancer Risk

Potential increased cancer risk from inhalation of TACs are calculated based on the TAC concentration over the period of exposure, inhalation dose, the TAC cancer potency factor, and an age sensitivity factor to reflect the greater sensitivity of infants and children to cancer causing TACs. The inhalation dose depends on a person's breathing rate, exposure time and frequency of exposure, and the exposure duration. These parameters vary depending on the age, or age range, of the persons being exposed and whether the exposure is considered to occur at a residential location or other sensitive receptor location.

The current OEHHA guidance recommends that cancer risk be calculated by age groups to account for different breathing rates and sensitivity to TACs. Specifically, they recommend evaluating risks for the third trimester of pregnancy to age zero, ages zero to less than two (infant exposure), ages two to less than 16 (child exposure), and ages 16 to 70 (adult exposure). Age sensitivity factors (ASFs) associated with the different types of exposure are an ASF of 10 for the third trimester and infant exposures, an ASF of 3 for a child exposure, and an ASF of 1 for an adult exposure. Also associated with each exposure type are different breathing rates, expressed as liters per kilogram of body weight per day (L/kg-day). As recommended by the BAAQMD, 95th percentile breathing rates are used for the third trimester and infant exposures, and 80th percentile breathing rates for child and adult exposures. Additionally, CARB and the BAAQMD recommend the use of a residential exposure duration of 30 years for sources with long-term emissions (e.g., roadways).

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[32] OEHHA, 2015. *Air Toxics Hot Spots Program Risk Assessment Guidelines, The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*. Office of Environmental Health Hazard Assessment. February.

[33] CARB, 2015. *Risk Management Guidance for Stationary Sources of Air Toxics*. July 23.

[34] BAAQMD, 2016. *BAAQMD Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines*. January 2016.

Under previous OEHHA and BAAQMD HRA guidance, residential receptors are assumed to be at their home 24 hours a day, or 100 percent of the time. In the 2015 Risk Assessment Guidance, OEHHA includes adjustments to exposure duration to account for the fraction of time at home (FAH), which can be less than 100 percent of the time, based on updated population and activity statistics. The FAH factors are age-specific and are: 0.85 for third trimester of pregnancy to less than 2 years old, 0.72 for ages 2 to less than 16 years, and 0.73 for ages 16 to 70 years. Use of the FAH factors is allowed by the BAAQMD if there are no schools in the project vicinity that would have a cancer risk of one in a million or greater assuming 100 percent exposure (FAH = 1.0).

Functionally, cancer risk is calculated using the following parameters and formulas:

Cancer Risk (per million) = $CPF \times Inhalation\ Dose \times ASF \times ED/AT \times FAH \times 10^{6}$

Where:

CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = $C_{air} \times DBR \times A \times (EF/365) \times 10^{-6}$

Where:

C_{air} = concentration in air ($\mu g/m^3$)
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

The health risk parameters used in this evaluation are summarized as follows:

Parameter	***Exposure Type →***	**Infant**		**Child**		**Adult**
	Age Range →	**3rd Trimester**	**0<2**	**2 < 9**	**2 < 16**	**16 - 30**
DPM Cancer Potency Factor $(mg/kg\text{-}day)^{-1}$		1.10E+00	1.10E+00	1.10E+00	1.10E+00	1.10E+00
Daily Breathing Rate (L/kg-day)*		361	1,090	631	572	261
Inhalation Absorption Factor		1	1	1	1	1
Averaging Time (years)		70	70	70	70	70
Exposure Duration (years)		0.25	2	14	14	14
Exposure Frequency (days/year)		350	350	350	350	350
Age Sensitivity Factor		10	10	3	3	1
Fraction of Time at Home		0.85-1.0	0.85-1.0	0.72-1.0	0.72-1.0	0.73

* 95th percentile breathing rates for 3rd trimester and infants and 80th percentile for children and adults

Attachment 2 : Construction Schedule, CalEEMod Output Files, Health Risk Calculations

Project Name:		**Gateway Crossings (Coleman/Brokaw) Phase 1**					
	Project Size	**261**	**Dwelling Units**	**21.4 ac (includes site)**	**total project acres disturbed**		
		238,671	**s.f. residential**	**5,300**	**s.f. retail**		
		324,000	**s.f. conditioned area**	**n/a**	**s.f. other, specify:**		
		7,000	**s.f. other, specify:**	**Amenity**		**Complete ALL Portions in Yellow**	
		256,900	**s.f. parking garage**	**485**	**spaces**		
		n/a	**s.f. parking lot**	**4**	**spaces**		
	Construction Hours	**7**	**am to**	**4**	**pm**		

Qty	Description	HP	Load Factor	Hours/day	Total Work Days	Avg. Hours per day	Comments
	Demolition	**Start Date:**	**e.g., 9/1/2016**	**Total phase:**			**Overall Import/Export Volumes**
		End Date:					
	Concrete/Industrial Saws	81	0.73			#DIV/0!	**Demolition Volume**
	Excavators	162	0.38			#DIV/0!	Square footage of buildings to be demolished
	Rubber-Tired Dozers	255	0.4			#DIV/0!	(*or* total tons to be hauled)
	Tractors/Loaders/Backhoes	97	0.37			#DIV/0!	**_?_** square feet *or*
							_?_ Hauling volume (tons)
	Site Preperation	**Start Date:**	**10/1/2018**	**Total phase:**	**20**		Any pavement demolished and hauled? **_?_ tons**
		End Date:	**11/1/2018**				
3	Scrapers	361	0.48	8	20	8	
1	Skid Steer Loaders	64	0.37	8	20	8	
2	Graders	174	0.41	8	20	8	
2	Rubber Tired Dozers	255	0.4	8	20	8	
1	Tractors/Loaders/Backhoes	97	0.37	8	20	8	
	Grading / Excavation	**Start Date:**	**11/1/2018**	**Total phase:**	**40**		
		End Date:	**1/1/2019**				**Soil Hauling Volume**
3	Scrapers	361	0.48	**8**	40	8	
2	Excavators	162	0.38	8	40	8	Export volume = **_23,542_** cubic yards?
2	Graders	174	0.41	8	40	8	Import volume = **_?_** cubic yards?
1	Rubber Tired Dozers	255	0.4	8	40	8	
1	Tractors/Loaders/Backhoes	97	0.37	8	40	8	
2	Rollers	80	0.38	8	40	8	
1	Skid Steer Loaders	64	0.37	8	40	8	
1	Sweepers	64	0.46	8	40	8	
	Trenching	**Start Date:**	**12/1/2018**	**Total phase:**	**20**		
		End Date:	**1/1/2019**				
1	Tractor/Loader/Backhoe	97	0.37	8	20	8	
2	Excavators	162	0.38	8	20	8	
2	Loaders	97	0.37	8	20	8	
1	Rough Terrain Forklifts	100	0.4	8	20	8	
1	Skid Steer Loaders	64	0.37	8	20	8	
	Building - Exterior	**Start Date:**	**1/1/2019**	**Total phase:**	**100**		**Cement Trucks? _?_ Total Round-Trips**
		End Date:	**6/1/2019**				
1	Cranes	226	0.29	8	100	8	Electric? (Y/N) ___ Otherwise assumed diesel
4	Forklifts	89	0.2	8	100	8	Liquid Propane (LPG)? (Y/N) ___ Otherwise Assumed diesel
1	Generator Sets	84	0.74	8	100	8	Or temporary line power? (Y/N) ___
1	Tractors/Loaders/Backhoes	97	0.37	8	100	8	otherwise, assume diesel generator
4	Welders	46	0.45	8	100	8	
3	Boom/Aerial Lifts	62	0.31	8	100	8	
3	Other Construction Equipment	171	0.42	**8**	100	8	
Building - Interior/Architectural Coating		**Start Date:**	**5/1/2019**	**Total phase:**	**100**		
		End Date:	**10/1/2019**				
2	Air Compressors	78	0.48	8	40	3.2	
1	Aerial Lift	62	0.31	8	100	8	
1	Cranes	226	0.29	8	50	4	
1	Forklifts	89	0.2	8	100	8	
	Paving	**Start Date:**	**7/1/2019**	**Total phase:**	**40**		
		Start Date:	**9/1/2019**				
1	Cement and Mortar Mixers	9	0.56	8	20	4	
1	Pavers	125	0.42	8	40	8	**Asphalt? 800 cubic yards or ____ round trips?**
1	Paving Equipment	130	0.36	8	40	8	
2	Rollers	80	0.38	8	40	8	
1	Tractors/Loaders/Backhoes	97	0.37	8	20	4	
1	Sweepers	64	0.46	8	40	8	

Equipment listed in this sheet is to provide an example of inputs — **Add or subtract phases and equipment, as appropriate**

It is assumed that water trucks would be used during grading — **Modify horepower or load factor, as appropriate**

Typical Equipment Type & Load Factors

OFFROAD Equipment Type	HP	Load Factor
Aerial Lifts	62	0.31
Air Compressors	78	0.48
Bore/Drill Rigs	205	0.5
Cement and Mortar Mixers	9	0.56
Concrete/Industrial Saws	81	0.73
Cranes	226	0.29
Crawler Tractors	208	0.43
Crushing/Proc. Equipment	85	0.78
Dumpers/Tenders	16	0.38
Excavators	162	0.38
Forklifts	89	0.2
Generator Sets	84	0.74
Graders	174	0.41
Off-Highway Tractors	122	0.44
Off-Highway Trucks	400	0.38
Other Construction Equipment	171	0.42
Other General Industrial Equipment	150	0.34
Other Material Handling Equipment	167	0.4
Pavers	125	0.42
Paving Equipment	130	0.36
Plate Compactors	8	0.43
Pressure Washers	13	0.2
Pumps	84	0.74
Rollers	80	0.38
Rough Terrain Forklifts	100	0.4
Rubber Tired Dozers	255	0.4
Rubber Tired Loaders	199	0.36
Scrapers	361	0.48
Signal Boards	6	0.82
Skid Steer Loaders	64	0.37
Surfacing Equipment	253	0.3
Sweepers/Scrubbers	64	0.46
Tractors/Loaders/Backhoes	97	0.37
Trenchers	80	0.5
Welders	46	0.45

Project Name: Gateway Crossings (Coleman/Brokaw) Phase 2

Project Size	332	Dwelling Units	n/a	total project acres disturbed
	307,994	s.f. residential	n/a	s.f. retail
	414,000	s.f. conditioned area	n/a	s.f. other, specify:
	8,900	s.f. other, specify:	Amenity	
	256,900	s.f. parking garage	625	spaces
	n/a	s.f. parking lot	7	spaces
Construction Hours	7	am to	4	pm

Complete ALL Portions in Yellow

Qty	Description	HP	Load Factor	Hours/day	Total Work Days	Avg. Hours per day	Comments
	Demolition	Start Date:	e.g., 9/1/2016	Total phase:			Overall Import/Export Volumes
		End Date:					
	Concrete/Industrial Saws	81	0.73			#DIV/0!	**Demolition Volume**
	Excavators	162	0.38			#DIV/0!	Square footage of buildings to be demolished
	Rubber-Tired Dozers	255	0.4			#DIV/0!	(*or* total tons to be hauled)
	Tractors/Loaders/Backhoes	97	0.37			#DIV/0!	_?_ square feet *or*
							_?_ Hauling volume (tons)
	Site Preperation	Start Date:	7/1/2019	Total phase:	20		Any pavement demolished and hauled? _?_ tons
		End Date:	8/1/2019				
3	Scrapers	361	0.48	8	20	8	
1	Skid Steer Loaders	64	0.37	8	20	8	
2	Graders	174	0.41	8	20	8	
2	Rubber Tired Dozers	255	0.4	8	20	8	
1	Tractors/Loaders/Backhoes	97	0.37	8	20	8	
	Grading / Excavation	Start Date:	8/1/2019	Total phase:	40		
		End Date:	10/1/2019				**Soil Hauling Volume**
3	Scrapers	361	0.48	8	40	8	
2	Excavators	162	0.38	8	40	8	Export volume = 19,496 cubic yards?
2	Graders	174	0.41	8	40	8	Import volume = _?_ cubic yards?
1	Rubber Tired Dozers	255	0.4	8	40	8	
1	Tractors/Loaders/Backhoes	97	0.37	8	40	8	
2	Rollers	80	0.38	8	40	8	
1	Skid Steer Loaders	64	0.37	8	40	8	
1	Sweepers	64	0.46	8	40	8	
	Trenching	Start Date:	9/1/2019	Total phase:	20		
		End Date:	10/1/2019				
1	Tractor/Loader/Backhoe	97	0.37	8	20	8	
2	Excavators	162	0.38	8	20	8	
2	Loaders	97	0.37	8	20	8	
1	Rough Terrain Forklifts	100	0.4	8	20	8	
1	Skid Steer Loaders	64	0.37	8	20	8	
	Building - Exterior	Start Date:	10/1/2019	Total phase:	100		**Cement Trucks? _?_ Total Round-Trips**
		End Date:	3/1/2020				
1	Cranes	226	0.29	8	100	8	Electric? (Y/N) ___ Otherwise assumed diesel
4	Forklifts	89	0.2	8	100	8	Liquid Propane (LPG)? (Y/N) ___ Otherwise Assumed diesel
1	Generator Sets	84	0.74	8	100	8	Or temporary line power? (Y/N) ___
1	Tractors/Loaders/Backhoes	97	0.37	8	100	8	otherwise, assume diesel generator
4	Welders	46	0.45	8	100	8	
3	Boom/Aerial Lifts	62	0.31	8	100	8	
3	Other Construction Equipment	171	0.42	8	100	8	
Building - Interior/Architectural Coating		Start Date:	2/1/2020	Total phase:	100		
		End Date:	7/1/2020				
2	Air Compressors	78	0.48	8	40	3.2	
1	Aerial Lift	62	0.31	8	100	8	
1	Cranes	226	0.29	8	50	4	
1	Forklifts	89	0.2	8	100	8	
	Paving	Start Date:	4/1/2020	Total phase:	40		
		Start Date:	6/1/2020				
1	Cement and Mortar Mixers	9	0.56	8	20	4	
1	Pavers	125	0.42	8	40	8	**Asphalt? 800 cubic yards or ____ round trips?**
1	Paving Equipment	130	0.36	8	40	8	
2	Rollers	80	0.38	8	40	8	
1	Tractors/Loaders/Backhoes	97	0.37	8	20	4	
1	Sweepers	64	0.46	8	40	8	

Equipment listed in this sheet is to provide an example of inputs — **Add or subtract phases and equipment, as appropriate**

It is assumed that water trucks would be used during grading — **Modify horepower or load factor, as appropriate**

Typical Equipment Type & Load Factors

OFFROAD Equipment Type	HP	Load Factor
Aerial Lifts	62	0.31
Air Compressors	78	0.48
Bore/Drill Rigs	205	0.5
Cement and Mortar Mixers	9	0.56
Concrete/Industrial Saws	81	0.73
Cranes	226	0.29
Crawler Tractors	208	0.43
Crushing/Proc. Equipment	85	0.78
Dumpers/Tenders	16	0.38
Excavators	162	0.38
Forklifts	89	0.2
Generator Sets	84	0.74
Graders	174	0.41
Off-Highway Tractors	122	0.44
Off-Highway Trucks	400	0.38
Other Construction Equipment	171	0.42
Other General Industrial Equipment	150	0.34
Other Material Handling Equipment	167	0.4
Pavers	125	0.42
Paving Equipment	130	0.36
Plate Compactors	8	0.43
Pressure Washers	13	0.2
Pumps	84	0.74
Rollers	80	0.38
Rough Terrain Forklifts	100	0.4
Rubber Tired Dozers	255	0.4
Rubber Tired Loaders	199	0.36
Scrapers	361	0.48
Signal Boards	6	0.82
Skid Steer Loaders	64	0.37
Surfacing Equipment	253	0.3
Sweepers/Scrubbers	64	0.46
Tractors/Loaders/Backhoes	97	0.37
Trenchers	80	0.5
Welders	46	0.45

Project Name:		**Gateway Crossings (Coleman/Brokaw) Phase 3**					
	Project Size	**432**	**Dwelling Units**	**n/a**	**total project acres disturbed**		
		378,924	**s.f. residential**	**4,900**	**s.f. retail**		
		522,000	**s.f. conditioned area**	**n/a**	**s.f. other, specify:**		
		7,400	**s.f. other, specify:**	**Amenity**		**Complete ALL Portions in Yellow**	
		311,800	**s.f. parking garage**	**760**	**spaces**		
		n/a	**s.f. parking lot**	**6**	**spaces**		
	Construction Hours	**7**	**am to**	**4**	**pm**		

Qty	Description	HP	Load Factor	Hours/day	Total Work Days	Avg. Hours per day	Comments
	Demolition	**Start Date:**	**e.g., 9/1/2016**	**Total phase:**			**Overall Import/Export Volumes**
		End Date:					
	Concrete/Industrial Saws	81	0.73			#DIV/0!	**Demolition Volume**
	Excavators	162	0.38			#DIV/0!	Square footage of buildings to be demolished
	Rubber-Tired Dozers	255	0.4			#DIV/0!	(*or* total tons to be hauled)
	Tractors/Loaders/Backhoes	97	0.37			#DIV/0!	**_?_** square feet *or*
							_?_ Hauling volume (tons)
	Site Preperation	**Start Date:**	**4/1/2020**	**Total phase:**	**20**		Any pavement demolished and hauled? **_?_ tons**
		End Date:	**5/1/2020**				
3	Scrapers	361	0.48	8	20	8	
1	Skid Steer Loaders	64	0.37	8	20	8	
2	Graders	174	0.41	8	20	8	
2	Rubber Tired Dozers	255	0.4	8	20	8	
1	Tractors/Loaders/Backhoes	97	0.37	8	20	8	
	Grading / Excavation	**Start Date:**	**5/1/2020**	**Total phase:**	**40**		
		End Date:	**7/1/2020**				**Soil Hauling Volume**
3	Scrapers	361	0.48	**8**	40	8	
2	Excavators	162	0.38	8	40	8	Export volume = **_20,919_** cubic yards?
2	Graders	174	0.41	8	40	8	Import volume = **_?_** cubic yards?
1	Rubber Tired Dozers	255	0.4	8	40	8	
1	Tractors/Loaders/Backhoes	97	0.37	8	40	8	
2	Rollers	80	0.38	8	40	8	
1	Skid Steer Loaders	64	0.37	8	40	8	
1	Sweepers	64	0.46	8	40	8	
	Trenching	**Start Date:**	**6/1/2020**	**Total phase:**	**20**		
		End Date:	**7/1/2020**				
1	Tractor/Loader/Backhoe	97	0.37	8	20	8	
2	Excavators	162	0.38	8	20	8	
2	Loaders	97	0.37	8	20	8	
1	Rough Terrain Forklifts	100	0.4	8	20	8	
1	Skid Steer Loaders	64	0.37	8	20	8	
	Building - Exterior	**Start Date:**	**7/1/2020**	**Total phase:**	**100**		**Cement Trucks? _?_ Total Round-Trips**
		End Date:	**12/1/2020**				
1	Cranes	226	0.29	8	100	8	Electric? (Y/N) ___ Otherwise assumed diesel
4	Forklifts	89	0.2	8	100	8	Liquid Propane (LPG)? (Y/N) ___ Otherwise Assumed diesel
1	Generator Sets	84	0.74	8	100	8	Or temporary line power? (Y/N) ___
1	Tractors/Loaders/Backhoes	97	0.37	8	100	8	otherwise, assume diesel generator
4	Welders	46	0.45	8	100	8	
3	Boom/Aerial Lifts	62	0.31	8	100	8	
3	Other Construction Equipment	171	0.42	**8**	100	8	
Building - Interior/Architectural Coating		**Start Date:**	**11/1/2020**	**Total phase:**	**100**		
		End Date:	**4/1/2021**				
2	Air Compressors	78	0.48	8	40	3.2	
1	Aerial Lift	62	0.31	8	100	8	
1	Cranes	226	0.29	8	50	4	
1	Forklifts	89	0.2	8	100	8	
	Paving	**Start Date:**	**1/1/2021**	**Total phase:**	**40**		
		Start Date:	**3/1/2021**				
1	Cement and Mortar Mixers	9	0.56	8	20	4	
1	Pavers	125	0.42	8	40	8	**Asphalt? 800 cubic yards or ____ round trips?**
1	Paving Equipment	130	0.36	8	40	8	
2	Rollers	80	0.38	8	40	8	
1	Tractors/Loaders/Backhoes	97	0.37	8	20	4	
1	Sweepers	64	0.46	8	40	8	

Equipment listed in this sheet is to provide an example of inputs — **Add or subtract phases and equipment, as appropriate**

It is assumed that water trucks would be used during grading — **Modify horepower or load factor, as appropriate**

Typical Equipment Type & Load Factors

OFFROAD Equipment Type	HP	Load Factor
Aerial Lifts	62	0.31
Air Compressors	78	0.48
Bore/Drill Rigs	205	0.5
Cement and Mortar Mixers	9	0.56
Concrete/Industrial Saws	81	0.73
Cranes	226	0.29
Crawler Tractors	208	0.43
Crushing/Proc. Equipment	85	0.78
Dumpers/Tenders	16	0.38
Excavators	162	0.38
Forklifts	89	0.2
Generator Sets	84	0.74
Graders	174	0.41
Off-Highway Tractors	122	0.44
Off-Highway Trucks	400	0.38
Other Construction Equipment	171	0.42
Other General Industrial Equipment	150	0.34
Other Material Handling Equipment	167	0.4
Pavers	125	0.42
Paving Equipment	130	0.36
Plate Compactors	8	0.43
Pressure Washers	13	0.2
Pumps	84	0.74
Rollers	80	0.38
Rough Terrain Forklifts	100	0.4
Rubber Tired Dozers	255	0.4
Rubber Tired Loaders	199	0.36
Scrapers	361	0.48
Signal Boards	6	0.82
Skid Steer Loaders	64	0.37
Surfacing Equipment	253	0.3
Sweepers/Scrubbers	64	0.46
Tractors/Loaders/Backhoes	97	0.37
Trenchers	80	0.5
Welders	46	0.45

Project Name: Gateway Crossings (Coleman/Brokaw) Phase 2

Project Size	556	Dwelling Units	n/a	total project acres disturbed
	407,089	s.f. residential (net rentable)	n/a	s.f. retail
	556,885	s.f. conditioned area	n/a	s.f. other, specify:
	7,439	s.f. other, specify: amenity		
	357,109	s.f. parking garage	905	spaces
	n/a	s.f. parking lot	4	spaces parallel parking
Construction Hours	7	am to	6	pm

Complete ALL Portions in Yellow

Qty	Description	HP	Load Factor	Hours/day	Total Work Days	Avg. Hours per day	Comments
	Demolition	**Start Date:**	**e.g., 9/1/2016**	**Total phase:**			**Overall Import/Export Volumes**
		End Date:					
	Concrete/Industrial Saws	81	0.73			#DIV/0!	**Demolition Volume**
	Excavators	162	0.38			#DIV/0!	Square footage of buildings to be demolished
	Rubber-Tired Dozers	255	0.4			#DIV/0!	(*or* total tons to be hauled)
	Tractors/Loaders/Backhoes	97	0.37			#DIV/0!	_?_ square feet *or*
							_?_ Hauling volume (tons)
	Site Preperation	**Start Date:**	**3/1/2022**	**Total phase:**	**20**		Any pavement demolished and hauled? _?_ tons
		End Date:	**4/1/2022**				
3	Scrapers	361	0.48	8	20	8	
1	Skid Steer Loaders	64	0.37	8	20	8	
2	Graders	174	0.41	8	20	8	
2	Rubber Tired Dozers	255	0.4	8	20	8	
1	Tractors/Loaders/Backhoes	97	0.37	8	20	8	
	Grading / Excavation	**Start Date:**	**4/1/2022**	**Total phase:**	**60**		
		End Date:	**7/1/2022**				**Soil Hauling Volume**
3	Scrapers	361	0.48	8	60	8	
2	Excavators	162	0.38	8	60	8	Export volume = 18,459 cubic yards?
2	Graders	174	0.41	8	60	8	Import volume = _?_ cubic yards?
1	Rubber Tired Dozers	255	0.4	8	60	8	
1	Tractors/Loaders/Backhoes	97	0.37	8	60	8	
2	Rollers	80	0.38	8	60	8	
1	Skid Steer Loaders	64	0.37	8	60	8	
1	Sweepers	64	0.46	8	60	8	
	Trenching	**Start Date:**	**5/1/2022**	**Total phase:**	**40**		
		End Date:	**7/1/2022**				
1	Tractor/Loader/Backhoe	97	0.37	8	40	8	
2	Excavators	162	0.38	8	40	8	
2	Loaders	97	0.37	8	40	8	
1	Rough Terrain Forklifts	100	0.4	8	40	8	
1	Skid Steer Loaders	64	0.37	8	40	8	
	Building - Exterior	**Start Date:**	**6/1/2022**	**Total phase:**	**160**		**Cement Trucks? _?_ Total Round-Trips**
		End Date:	**2/1/2023**				
1	Cranes	226	0.29	8	120	6	Electric? (Y/N) ___ Otherwise assumed diesel
4	Forklifts	89	0.2	8	160	8	Liquid Propane (LPG)? (Y/N) ___ Otherwise Assumed diesel
1	Generator Sets	84	0.74	8	160	8	Or temporary line power? (Y/N) ___
1	Tractors/Loaders/Backhoes	97	0.37	8	160	8	otherwise, assume diesel generator
4	Welders	46	0.45	8	160	8	
3	Boom/Aerial Lifts	62	0.31	8	160	8	
3	Other Construction Equipment	171	0.42	8	160	8	
Building - Interior/Architectural Coating		**Start Date:**	**10/1/2022**	**Total phase:**	**140**		
		End Date:	**5/1/2023**				
2	Air Compressors	78	0.48	8	60	3.4285714	
1	Aerial Lift	62	0.31	8	140	8	
1	Cranes	226	0.29	8	80	4.5714286	
1	Forklifts	89	0.2	8	140	8	
	Paving	**Start Date:**	**2/1/2023**	**Total phase:**	**60**		
		Start Date:	**5/1/2023**				
1	Cement and Mortar Mixers	9	0.56	8	40	5.3333333	
1	Pavers	125	0.42	8	60	8	**Asphalt? 800 cubic yards or ____ round trips?**
1	Paving Equipment	130	0.36	8	60	8	
2	Rollers	80	0.38	8	60	8	
1	Tractors/Loaders/Backhoes	97	0.37	8	40	5.3333333	
1	Sweepers	64	0.46	8	60	8	

Equipment listed in this sheet is to provide an example of inputs — **Add or subtract phases and equipment, as appropriate**

It is assumed that water trucks would be used during grading — **Modify horepower or load factor, as appropriate**

Typical Equipment Type & Load Factors

OFFROAD Equipment Type	HP	Load Factor
Aerial Lifts	62	0.31
Air Compressors	78	0.48
Bore/Drill Rigs	205	0.5
Cement and Mortar Mixers	9	0.56
Concrete/Industrial Saws	81	0.73
Cranes	226	0.29
Crawler Tractors	208	0.43
Crushing/Proc. Equipment	85	0.78
Dumpers/Tenders	16	0.38
Excavators	162	0.38
Forklifts	89	0.2
Generator Sets	84	0.74
Graders	174	0.41
Off-Highway Tractors	122	0.44
Off-Highway Trucks	400	0.38
Other Construction Equipment	171	0.42
Other General Industrial Equipment	150	0.34
Other Material Handling Equipment	167	0.4
Pavers	125	0.42
Paving Equipment	130	0.36
Plate Compactors	8	0.43
Pressure Washers	13	0.2
Pumps	84	0.74
Rollers	80	0.38
Rough Terrain Forklifts	100	0.4
Rubber Tired Dozers	255	0.4
Rubber Tired Loaders	199	0.36
Scrapers	361	0.48
Signal Boards	6	0.82
Skid Steer Loaders	64	0.37
Surfacing Equipment	253	0.3
Sweepers/Scrubbers	64	0.46
Tractors/Loaders/Backhoes	97	0.37
Trenchers	80	0.5
Welders	46	0.45

Project Name:		**Gateway Crossings (Coleman/Brokaw) Phase 5**					
	Project Size	**225**	**Hotel Room**	**n/a**	**total project acres disturbed**		
		108,622	**s.f. Room Area**	**5,200**	**s.f. retail (food and beverage)**		
		182,000	**s.f. conditioned area**	**4,400**	**s.f. other, specify: fitness/spa, hotel bar**		
		8,300	**s.f. other, specify: meeting rooms, pre-function**			**Complete ALL Portions in Yellow**	
		142,500	**s.f. parking garage**	**339**	**spaces**		
		n/a	**s.f. parking lot**	**n/a**	**spaces parallel parking**		
	Construction Hours	**7**	**am to**	**4**	**pm**		

Qty	Description	HP	Load Factor	Hours/day	Total Work Days	Avg. Hours per day	Comments
	Demolition	**Start Date:**	**e.g., 9/1/2016**	**Total phase:**			**Overall Import/Export Volumes**
		End Date:					
	Concrete/Industrial Saws	81	0.73			#DIV/0!	**Demolition Volume**
	Excavators	162	0.38			#DIV/0!	Square footage of buildings to be demolished
	Rubber-Tired Dozers	255	0.4			#DIV/0!	(*or* total tons to be hauled)
	Tractors/Loaders/Backhoes	97	0.37			#DIV/0!	_?_ square feet *or*
							_?_ Hauling volume (tons)
	Site Preperation	**Start Date:**	**1/1/2024**	**Total phase:**	**20**		Any pavement demolished and hauled? _?_ **tons**
		End Date:	**2/1/2024**				
3	Scrapers	361	0.48	8	20	8	
1	Skid Steer Loaders	64	0.37	8	20	8	
2	Graders	174	0.41	8	20	8	
2	Rubber Tired Dozers	255	0.4	8	20	8	
1	Tractors/Loaders/Backhoes	97	0.37	8	20	8	
	Grading / Excavation	**Start Date:**	**2/1/2024**	**Total phase:**	**20**		
		End Date:	**3/1/2024**				**Soil Hauling Volume**
3	Scrapers	361	0.48	**8**	20	8	
2	Excavators	162	0.38	8	20	8	Export volume = **_7,585_** cubic yards?
2	Graders	174	0.41	8	20	8	Import volume = **_?_** cubic yards?
1	Rubber Tired Dozers	255	0.4	8	20	8	
1	Tractors/Loaders/Backhoes	97	0.37	8	20	8	
2	Rollers	80	0.38	8	20	8	
1	Skid Steer Loaders	64	0.37	8	20	8	
1	Sweepers	64	0.46	8	20	8	
	Trenching	**Start Date:**	**2/1/2024**	**Total phase:**	**20**		
		End Date:	**3/1/2024**				
1	Tractor/Loader/Backhoe	97	0.37	8	20	8	
2	Excavators	162	0.38	8	20	8	
2	Loaders	97	0.37	8	20	8	
1	Rough Terrain Forklifts	100	0.4	8	20	8	
1	Skid Steer Loaders	64	0.37	8	20	8	
	Building - Exterior	**Start Date:**	**3/1/2024**	**Total phase:**	**300**		**Cement Trucks? _?_ Total Round-Trips**
		End Date:	**6/1/2025**				
1	Cranes	226	0.29	8	160	4.2666667	Electric? (Y/N) ___ Otherwise assumed diesel
4	Forklifts	89	0.2	8	300	8	Liquid Propane (LPG)? (Y/N) ___ Otherwise Assumed diesel
1	Generator Sets	84	0.74	8	300	8	Or temporary line power? (Y/N) ___
1	Tractors/Loaders/Backhoes	97	0.37	8	300	8	otherwise, assume diesel generator
4	Welders	46	0.45	8	300	8	
3	Boom/Aerial Lifts	62	0.31	8	200	5.3333333	
3	Other Construction Equipment	171	0.42	**8**	300	8	
Building - Interior/Architectural Coating		**Start Date:**	**9/1/2024**	**Total phase:**	**200**		
		End Date:	**7/1/2025**				
2	Air Compressors	78	0.48	8	60	2.4	
1	Aerial Lift	62	0.31	8	120	4.8	
1	Cranes	226	0.29	8	60	2.4	
1	Forklifts	89	0.2	8	120	4.8	
	Paving	**Start Date:**	**5/1/2025**	**Total phase:**	**60**		
		Start Date:	**8/1/2025**				
1	Cement and Mortar Mixers	9	0.56	8	20	2.6666667	
1	Pavers	125	0.42	8	60	8	**Asphalt? 800 cubic yards or ____ round trips?**
1	Paving Equipment	130	0.36	8	60	8	
2	Rollers	80	0.38	8	60	8	
1	Tractors/Loaders/Backhoes	97	0.37	8	20	2.6666667	
1	Sweepers	64	0.46	8	60	8	

Equipment listed in this sheet is to provide an example of inputs — **Add or subtract phases and equipment, as appropriate**

It is assumed that water trucks would be used during grading — **Modify horepower or load factor, as appropriate**

Typical Equipment Type & Load Factors

OFFROAD Equipment Type	HP	Load Factor
Aerial Lifts	62	0.31
Air Compressors	78	0.48
Bore/Drill Rigs	205	0.5
Cement and Mortar Mixers	9	0.56
Concrete/Industrial Saws	81	0.73
Cranes	226	0.29
Crawler Tractors	208	0.43
Crushing/Proc. Equipment	85	0.78
Dumpers/Tenders	16	0.38
Excavators	162	0.38
Forklifts	89	0.2
Generator Sets	84	0.74
Graders	174	0.41
Off-Highway Tractors	122	0.44
Off-Highway Trucks	400	0.38
Other Construction Equipment	171	0.42
Other General Industrial Equipment	150	0.34
Other Material Handling Equipment	167	0.4
Pavers	125	0.42
Paving Equipment	130	0.36
Plate Compactors	8	0.43
Pressure Washers	13	0.2
Pumps	84	0.74
Rollers	80	0.38
Rough Terrain Forklifts	100	0.4
Rubber Tired Dozers	255	0.4
Rubber Tired Loaders	199	0.36
Scrapers	361	0.48
Signal Boards	6	0.82
Skid Steer Loaders	64	0.37
Surfacing Equipment	253	0.3
Sweepers/Scrubbers	64	0.46
Tractors/Loaders/Backhoes	97	0.37
Trenchers	80	0.5
Welders	46	0.45

Gateway Crossings, Phase 1 , Mitigated Criteria Emissions

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	485.00	Space	0.00	256,900.00	0
Parking Lot	4.00	Space	0.04	1,600.00	0
Apartments Mid Rise	261.00	Dwelling Unit	21.36	324,000.00	746
Strip Mall	5.30	1000sqft	0.00	5,300.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2020
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 - Current CO2 Emission Intensity Rate for SVP from Climate Action Plan,2020

Land Use - From Construction information for Phase 1

Construction Phase - Assumed additional phase: demolition

Off-road Equipment -

Off-road Equipment - Applicant provided infromation

Off-road Equipment - Applicant provided information

Off-road Equipment - Defaults used

Off-road Equipment - Applicant provided infromation

Off-road Equipment - applicant provided information

Off-road Equipment - Applicant provided equipment information

Off-road Equipment - Applicant provided information

Trips and VMT - Default trip numbers used
800 cy of asphalt hauled
Demolition - demolition: 272,840 sf (From project description- Existing Building)

Grading - Export Volume: 23542 cy

Architectural Coating -

Vehicle Trips - project traffic report

Woodstoves - No wood stoves or wood based fireplaces

Area Coating -

Energy Use - Title 24, 2013 values used

Construction Off-road Equipment Mitigation - Best Management Practices
Energy Mitigation - Title 24, 2016 came into effect on January 1st, 2017
Stationary Sources - Emergency Generators and Fire Pumps -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3

tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3

tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
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tblConstEquipMitigation	Tier	No Change	Tier 3
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tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
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tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	39.15	261.00
tblFireplaces	NumberNoFireplace	10.44	0.00
tblFireplaces	NumberWood	44.37	0.00
tblGrading	MaterialExported	0.00	23,542.00
tblLandUse	BuildingSpaceSquareFeet	194,000.00	256,900.00
tblLandUse	BuildingSpaceSquareFeet	261,000.00	324,000.00
tblLandUse	LandUseSquareFeet	194,000.00	256,900.00
tblLandUse	LandUseSquareFeet	261,000.00	324,000.00
tblLandUse	LotAcreage	4.36	0.00
tblLandUse	LotAcreage	6.87	21.36
tblLandUse	LotAcreage	0.12	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	380

tblProjectCharacteristics	OperationalYear	2018	2020
tblTripsAndVMT	HaulingTripNumber	0.00	100.00
tblVehicleTrips	ST_TR	6.39	5.83
tblVehicleTrips	ST_TR	42.04	28.95
tblVehicleTrips	SU_TR	5.86	5.35
tblVehicleTrips	SU_TR	20.43	14.07
tblVehicleTrips	WD_TR	6.65	6.07
tblVehicleTrips	WD_TR	44.32	30.52
tblWoodstoves	NumberCatalytic	5.22	0.00
tblWoodstoves	NumberNoncatalytic	5.22	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	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
Year	tons/yr										MT/yr					
2018	0.2983	3.8453	2.0089	5.0500e-003	0.5489	0.1457	0.6946	0.1790	0.1343	0.3134	0.0000	469.1549	469.1549	0.0993	0.0000	471.6376
2019	2.7635	3.3052	2.9597	6.0400e-003	0.1690	0.1613	0.3303	0.0455	0.1516	0.1971	0.0000	539.0598	539.0598	0.0915	0.0000	541.3475
Maximum	**2.7635**	**3.8453**	**2.9597**	**6.0400e-003**	**0.5489**	**0.1613**	**0.6946**	**0.1790**	**0.1516**	**0.3134**	**0.0000**	**539.0598**	**539.0598**	**0.0993**	**0.0000**	**541.3475**

Mitigated Construction

	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
Year	tons/yr										MT/yr					
2018	0.1047	2.2759	2.1200	5.0500e-003	0.2718	0.0136	0.2854	0.0498	0.0134	0.0633	0.0000	469.1545	469.1545	0.0993	0.0000	471.6373
2019	2.5416	2.4046	3.1120	6.0400e-003	0.1690	0.0209	0.1899	0.0455	0.0207	0.0662	0.0000	539.0594	539.0594	0.0915	0.0000	541.3471
Maximum	**2.5416**	**2.4046**	**3.1120**	**6.0400e-003**	**0.2718**	**0.0209**	**0.2854**	**0.0498**	**0.0207**	**0.0662**	**0.0000**	**539.0594**	**539.0594**	**0.0993**	**0.0000**	**541.3471**

	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	**13.57**	**34.54**	**-5.30**	**0.00**	**38.59**	**88.77**	**53.62**	**57.54**	**88.06**	**74.64**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**10-1-2018**	**12-31-2018**	3.9506	2.2756
2	**1-1-2019**	**3-31-2019**	1.9217	1.3595
3	**4-1-2019**	**6-30-2019**	2.2685	1.8914
4	**7-1-2019**	**9-30-2019**	1.8701	1.6905
		Highest	3.9506	2.2756

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	10/1/2018	10/26/2018	5	20	
2	Site Preparation	Site Preparation	10/1/2018	10/26/2018	5	20	
3	Grading	Grading	10/29/2018	12/21/2018	5	40	
4	Trenching	Trenching	12/1/2018	12/28/2018	5	20	
5	Building Construction	Building Construction	1/1/2019	5/20/2019	5	100	
6	Architectural Coating	Architectural Coating	5/1/2019	9/17/2019	5	100	
7	Paving	Paving	7/1/2019	8/23/2019	5	40	

Acres of Grading (Site Preparation Phase): 80

Acres of Grading (Grading Phase): 160

Acres of Paving: 0.04

Residential Indoor: 656,100; Residential Outdoor: 218,700; Non-Residential Indoor: 7,950; Non-Residential Outdoor: 2,650; Striped

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	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Graders	2	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Scrapers	3	8.00	367	0.48
Site Preparation	Skid Steer Loaders	1	8.00	65	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	2	8.00	187	0.41
Grading	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	3	8.00	367	0.48
Grading	Skid Steer Loaders	1	8.00	65	0.37
Grading	Sweepers/Scrubbers	1	8.00	64	0.46
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Trenching	Excavators	2	8.00	158	0.38
Trenching	Rough Terrain Forklifts	1	8.00	100	0.40
Trenching	Skid Steer Loaders	1	8.00	65	0.37
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Trenching	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Aerial Lifts	3	8.00	63	0.31
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	4	8.00	89	0.20

Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Other Construction Equipment	3	8.00	172	0.42
Building Construction	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Welders	4	8.00	46	0.45
Architectural Coating	Aerial Lifts	1	8.00	63	0.31
Architectural Coating	Air Compressors	2	3.20	78	0.48
Architectural Coating	Cranes	1	4.00	231	0.29
Architectural Coating	Forklifts	1	8.00	89	0.20
Paving	Cement and Mortar Mixers	1	4.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Sweepers/Scrubbers	1	4.00	64	0.46
Paving	Tractors/Loaders/Backhoes	1	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	6	15.00	0.00	1,241.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	9	23.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	13	33.00	0.00	2,943.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	17	298.00	71.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	5	60.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	100.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2018

Unmitigated Construction On-Site

	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					
Fugitive Dust					0.1343	0.0000	0.1343	0.0203	0.0000	0.0203	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0372	0.3832	0.2230	3.9000e-004		0.0194	0.0194		0.0181	0.0181	0.0000	35.1241	35.1241	9.6800e-003	0.0000	35.3660
Total	**0.0372**	**0.3832**	**0.2230**	**3.9000e-004**	**0.1343**	**0.0194**	**0.1537**	**0.0203**	**0.0181**	**0.0384**	**0.0000**	**35.1241**	**35.1241**	**9.6800e-003**	**0.0000**	**35.3660**

Unmitigated Construction Off-Site

	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					
Hauling	5.9400e-003	0.2034	0.0396	5.0000e-004	0.0105	8.1000e-004	0.0113	2.8900e-003	7.8000e-004	3.6700e-003	0.0000	48.2932	48.2932	2.2800e-003	0.0000	48.3502
Vendor	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	0.0000	0.0000
Worker	6.0000e-004	4.6000e-004	4.7300e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	1.0854	1.0854	3.0000e-005	0.0000	1.0862
Total	**6.5400e-003**	**0.2039**	**0.0443**	**5.1000e-004**	**0.0117**	**8.2000e-004**	**0.0125**	**3.2100e-003**	**7.9000e-004**	**3.9900e-003**	**0.0000**	**49.3786**	**49.3786**	**2.3100e-003**	**0.0000**	**49.4364**

Mitigated Construction On-Site

	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					
Fugitive Dust					0.0604	0.0000	0.0604	4.5700e-003	0.0000	4.5700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.2500e-003	0.1831	0.2467	3.9000e-004		1.2900e-003	1.2900e-003		1.2900e-003	1.2900e-003	0.0000	35.1240	35.1240	9.6800e-003	0.0000	35.3660
Total	**9.2500e-003**	**0.1831**	**0.2467**	**3.9000e-004**	**0.0604**	**1.2900e-003**	**0.0617**	**4.5700e-003**	**1.2900e-003**	**5.8600e-003**	**0.0000**	**35.1240**	**35.1240**	**9.6800e-003**	**0.0000**	**35.3660**

Mitigated Construction Off-Site

	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					
Hauling	5.9400e-003	0.2034	0.0396	5.0000e-004	0.0105	8.1000e-004	0.0113	2.8900e-003	7.8000e-004	3.6700e-003	0.0000	48.2932	48.2932	2.2800e-003	0.0000	48.3502
Vendor	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	0.0000	0.0000
Worker	6.0000e-004	4.6000e-004	4.7300e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	1.0854	1.0854	3.0000e-005	0.0000	1.0862
Total	**6.5400e-003**	**0.2039**	**0.0443**	**5.1000e-004**	**0.0117**	**8.2000e-004**	**0.0125**	**3.2100e-003**	**7.9000e-004**	**3.9900e-003**	**0.0000**	**49.3786**	**49.3786**	**2.3100e-003**	**0.0000**	**49.4364**

3.3 Site Preparation - 2018

Unmitigated Construction On-Site

	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					
Fugitive Dust					0.1629	0.0000	0.1629	0.0708	0.0000	0.0708	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0717	0.8579	0.4267	8.1000e-004		0.0361	0.0361		0.0332	0.0332	0.0000	73.9834	73.9834	0.0230	0.0000	74.5592
Total	**0.0717**	**0.8579**	**0.4267**	**8.1000e-004**	**0.1629**	**0.0361**	**0.1989**	**0.0708**	**0.0332**	**0.1040**	**0.0000**	**73.9834**	**73.9834**	**0.0230**	**0.0000**	**74.5592**

Unmitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	9.3000e-004	7.1000e-004	7.2500e-003	2.0000e-005	1.8200e-003	1.0000e-005	1.8400e-003	4.9000e-004	1.0000e-005	5.0000e-004	0.0000	1.6643	1.6643	5.0000e-005	0.0000	1.6655
Total	**9.3000e-004**	**7.1000e-004**	**7.2500e-003**	**2.0000e-005**	**1.8200e-003**	**1.0000e-005**	**1.8400e-003**	**4.9000e-004**	**1.0000e-005**	**5.0000e-004**	**0.0000**	**1.6643**	**1.6643**	**5.0000e-005**	**0.0000**	**1.6655**

Mitigated Construction On-Site

	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					
Fugitive Dust					0.0733	0.0000	0.0733	0.0159	0.0000	0.0159	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0199	0.3888	0.4424	8.1000e-004		2.3500e-003	2.3500e-003		2.3500e-003	2.3500e-003	0.0000	73.9833	73.9833	0.0230	0.0000	74.5591

Total	**0.0199**	**0.3888**	**0.4424**	**8.1000e-004**	**0.0733**	**2.3500e-003**	**0.0756**	**0.0159**	**2.3500e-003**	**0.0183**	**0.0000**	**73.9833**	**73.9833**	**0.0230**	**0.0000**	**74.5591**

Mitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	9.3000e-004	7.1000e-004	7.2500e-003	2.0000e-005	1.8200e-003	1.0000e-005	1.8400e-003	4.9000e-004	1.0000e-005	5.0000e-004	0.0000	1.6643	1.6643	5.0000e-005	0.0000	1.6655
Total	**9.3000e-004**	**7.1000e-004**	**7.2500e-003**	**2.0000e-005**	**1.8200e-003**	**1.0000e-005**	**1.8400e-003**	**4.9000e-004**	**1.0000e-005**	**5.0000e-004**	**0.0000**	**1.6643**	**1.6643**	**5.0000e-005**	**0.0000**	**1.6655**

3.4 Grading - 2018

Unmitigated Construction On-Site

	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					
Fugitive Dust					0.2066	0.0000	0.2066	0.0756	0.0000	0.0756	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1482	1.7416	1.0147	1.8100e-003		0.0773	0.0773		0.0711	0.0711	0.0000	165.4312	165.4312	0.0515	0.0000	166.7187
Total	**0.1482**	**1.7416**	**1.0147**	**1.8100e-003**	**0.2066**	**0.0773**	**0.2839**	**0.0756**	**0.0711**	**0.1467**	**0.0000**	**165.4312**	**165.4312**	**0.0515**	**0.0000**	**166.7187**

Unmitigated Construction Off-Site

	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					
Hauling	0.0141	0.4824	0.0938	1.1900e-003	0.0249	1.9300e-003	0.0269	6.8600e-003	1.8400e-003	8.7000e-003	0.0000	114.5260	114.5260	5.4100e-003	0.0000	114.6612
Vendor	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	0.0000	0.0000
Worker	2.6600e-003	2.0400e-003	0.0208	5.0000e-005	5.2300e-003	4.0000e-005	5.2700e-003	1.3900e-003	3.0000e-005	1.4200e-003	0.0000	4.7757	4.7757	1.4000e-004	0.0000	4.7793
Total	**0.0168**	**0.4844**	**0.1146**	**1.2400e-003**	**0.0302**	**1.9700e-003**	**0.0321**	**8.2500e-003**	**1.8700e-003**	**0.0101**	**0.0000**	**119.3018**	**119.3018**	**5.5500e-003**	**0.0000**	**119.4405**

Mitigated Construction On-Site

	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					
Fugitive Dust					0.0930	0.0000	0.0930	0.0170	0.0000	0.0170	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0445	0.8822	1.0687	1.8100e-003		5.8700e-003	5.8700e-003		5.8700e-003	5.8700e-003	0.0000	165.4310	165.4310	0.0515	0.0000	166.7185
Total	**0.0445**	**0.8822**	**1.0687**	**1.8100e-003**	**0.0930**	**5.8700e-003**	**0.0989**	**0.0170**	**5.8700e-003**	**0.0229**	**0.0000**	**165.4310**	**165.4310**	**0.0515**	**0.0000**	**166.7185**

Mitigated Construction Off-Site

	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					

Hauling	0.0141	0.4824	0.0938	1.1900e-003	0.0249	1.9300e-003	0.0269	6.8600e-003	1.8400e-003	8.7000e-003	0.0000	114.5260	114.5260	5.4100e-003	0.0000	114.6612
Vendor	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	0.0000	0.0000
Worker	2.6600e-003	2.0400e-003	0.0208	5.0000e-005	5.2300e-003	4.0000e-005	5.2700e-003	1.3900e-003	3.0000e-005	1.4200e-003	0.0000	4.7757	4.7757	1.4000e-004	0.0000	4.7793
Total	**0.0168**	**0.4844**	**0.1146**	**1.2400e-003**	**0.0302**	**1.9700e-003**	**0.0321**	**8.2500e-003**	**1.8700e-003**	**0.0101**	**0.0000**	**119.3018**	**119.3018**	**5.5500e-003**	**0.0000**	**119.4405**

3.5 Trenching - 2018

Unmitigated Construction On-Site

	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					
Off-Road	0.0163	0.1730	0.1726	2.5000e-004		0.0101	0.0101		9.3300e-003	9.3300e-003	0.0000	22.9692	22.9692	7.1500e-003	0.0000	23.1480
Total	**0.0163**	**0.1730**	**0.1726**	**2.5000e-004**		**0.0101**	**0.0101**		**9.3300e-003**	**9.3300e-003**	**0.0000**	**22.9692**	**22.9692**	**7.1500e-003**	**0.0000**	**23.1480**

Unmitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	7.2000e-004	5.6000e-004	5.6800e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.3025	1.3025	4.0000e-005	0.0000	1.3035
Total	**7.2000e-004**	**5.6000e-004**	**5.6800e-003**	**1.0000e-005**	**1.4300e-003**	**1.0000e-005**	**1.4400e-003**	**3.8000e-004**	**1.0000e-005**	**3.9000e-004**	**0.0000**	**1.3025**	**1.3025**	**4.0000e-005**	**0.0000**	**1.3035**

Mitigated Construction On-Site

	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					
Off-Road	6.1800e-003	0.1321	0.1904	2.5000e-004		1.2300e-003	1.2300e-003		1.2300e-003	1.2300e-003	0.0000	22.9692	22.9692	7.1500e-003	0.0000	23.1479
Total	**6.1800e-003**	**0.1321**	**0.1904**	**2.5000e-004**		**1.2300e-003**	**1.2300e-003**		**1.2300e-003**	**1.2300e-003**	**0.0000**	**22.9692**	**22.9692**	**7.1500e-003**	**0.0000**	**23.1479**

Mitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	7.2000e-004	5.6000e-004	5.6800e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.3025	1.3025	4.0000e-005	0.0000	1.3035
Total	**7.2000e-004**	**5.6000e-004**	**5.6800e-003**	**1.0000e-005**	**1.4300e-003**	**1.0000e-005**	**1.4400e-003**	**3.8000e-004**	**1.0000e-005**	**3.9000e-004**	**0.0000**	**1.3025**	**1.3025**	**4.0000e-005**	**0.0000**	**1.3035**

3.6 Building Construction - 2019

Unmitigated Construction On-Site

	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					
Off-Road	0.2529	2.1660	1.8024	2.7700e-003		0.1210	0.1210		0.1138	0.1138	0.0000	239.1387	239.1387	0.0629	0.0000	240.7110
Total	**0.2529**	**2.1660**	**1.8024**	**2.7700e-003**		**0.1210**	**0.1210**		**0.1138**	**0.1138**	**0.0000**	**239.1387**	**239.1387**	**0.0629**	**0.0000**	**240.7110**

Unmitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	0.0174	0.4483	0.1203	9.7000e-004	0.0234	3.2200e-003	0.0266	6.7500e-003	3.0800e-003	9.8300e-003	0.0000	93.3834	93.3834	4.6300e-003	0.0000	93.4992
Worker	0.0541	0.0403	0.4162	1.1600e-003	0.1182	7.8000e-004	0.1190	0.0314	7.2000e-004	0.0322	0.0000	104.6104	104.6104	2.8500e-003	0.0000	104.6816
Total	**0.0715**	**0.4886**	**0.5366**	**2.1300e-003**	**0.1415**	**4.0000e-003**	**0.1455**	**0.0382**	**3.8000e-003**	**0.0420**	**0.0000**	**197.9938**	**197.9938**	**7.4800e-003**	**0.0000**	**198.1808**

Mitigated Construction On-Site

	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					
Off-Road	0.0753	1.4690	1.9035	2.7700e-003		0.0128	0.0128		0.0128	0.0128	0.0000	239.1384	239.1384	0.0629	0.0000	240.7107

Total	**0.0753**	**1.4690**	**1.9035**	**2.7700e-003**		**0.0128**	**0.0128**		**0.0128**	**0.0128**	**0.0000**	**239.1384**	**239.1384**	**0.0629**	**0.0000**	**240.7107**

Mitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	0.0174	0.4483	0.1203	9.7000e-004	0.0234	3.2200e-003	0.0266	6.7500e-003	3.0800e-003	9.8300e-003	0.0000	93.3834	93.3834	4.6300e-003	0.0000	93.4992
Worker	0.0541	0.0403	0.4162	1.1600e-003	0.1182	7.8000e-004	0.1190	0.0314	7.2000e-004	0.0322	0.0000	104.6104	104.6104	2.8500e-003	0.0000	104.6816
Total	**0.0715**	**0.4886**	**0.5366**	**2.1300e-003**	**0.1415**	**4.0000e-003**	**0.1455**	**0.0382**	**3.8000e-003**	**0.0420**	**0.0000**	**197.9938**	**197.9938**	**7.4800e-003**	**0.0000**	**198.1808**

3.7 Architectural Coating - 2019

Unmitigated Construction On-Site

	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					
Archit. Coating	2.3623					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0368	0.3535	0.2699	4.6000e-004		0.0196	0.0196		0.0186	0.0186	0.0000	40.9762	40.9762	9.8100e-003	0.0000	41.2214
Total	**2.3992**	**0.3535**	**0.2699**	**4.6000e-004**		**0.0196**	**0.0196**		**0.0186**	**0.0186**	**0.0000**	**40.9762**	**40.9762**	**9.8100e-003**	**0.0000**	**41.2214**

Unmitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	0.0109	8.1100e-003	0.0838	2.3000e-004	0.0238	1.6000e-004	0.0240	6.3300e-003	1.4000e-004	6.4700e-003	0.0000	21.0625	21.0625	5.7000e-004	0.0000	21.0768
Total	**0.0109**	**8.1100e-003**	**0.0838**	**2.3000e-004**	**0.0238**	**1.6000e-004**	**0.0240**	**6.3300e-003**	**1.4000e-004**	**6.4700e-003**	**0.0000**	**21.0625**	**21.0625**	**5.7000e-004**	**0.0000**	**21.0768**

Mitigated Construction On-Site

	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					
Archit. Coating	2.3623					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0107	0.2311	0.2963	4.6000e-004		2.1000e-003	2.1000e-003		2.1000e-003	2.1000e-003	0.0000	40.9762	40.9762	9.8100e-003	0.0000	41.2213
Total	**2.3730**	**0.2311**	**0.2963**	**4.6000e-004**		**2.1000e-003**	**2.1000e-003**		**2.1000e-003**	**2.1000e-003**	**0.0000**	**40.9762**	**40.9762**	**9.8100e-003**	**0.0000**	**41.2213**

Mitigated Construction Off-Site

	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					

Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	0.0109	8.1100e-003	0.0838	2.3000e-004	0.0238	1.6000e-004	0.0240	6.3300e-003	1.4000e-004	6.4700e-003	0.0000	21.0625	21.0625	5.7000e-004	0.0000	21.0768
Total	**0.0109**	**8.1100e-003**	**0.0838**	**2.3000e-004**	**0.0238**	**1.6000e-004**	**0.0240**	**6.3300e-003**	**1.4000e-004**	**6.4700e-003**	**0.0000**	**21.0625**	**21.0625**	**5.7000e-004**	**0.0000**	**21.0768**

3.8 Paving - 2019

Unmitigated Construction On-Site

	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					
Off-Road	0.0272	0.2725	0.2539	3.8000e-004		0.0165	0.0165		0.0152	0.0152	0.0000	33.5079	33.5079	0.0105	0.0000	33.7705
Paving	5.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0272**	**0.2725**	**0.2539**	**3.8000e-004**		**0.0165**	**0.0165**		**0.0152**	**0.0152**	**0.0000**	**33.5079**	**33.5079**	**0.0105**	**0.0000**	**33.7705**

Unmitigated Construction Off-Site

	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					
Hauling	4.5000e-004	0.0156	3.0700e-003	4.0000e-005	8.5000e-004	6.0000e-005	9.1000e-004	2.3000e-004	6.0000e-005	2.9000e-004	0.0000	3.8532	3.8532	1.8000e-004	0.0000	3.8577
Vendor	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	0.0000	0.0000
Worker	1.3100e-003	9.7000e-004	0.0101	3.0000e-005	2.8600e-003	2.0000e-005	2.8700e-003	7.6000e-004	2.0000e-005	7.8000e-004	0.0000	2.5275	2.5275	7.0000e-005	0.0000	2.5292
Total	**1.7600e-003**	**0.0165**	**0.0131**	**7.0000e-005**	**3.7100e-003**	**8.0000e-005**	**3.7800e-003**	**9.9000e-004**	**8.0000e-005**	**1.0700e-003**	**0.0000**	**6.3807**	**6.3807**	**2.5000e-004**	**0.0000**	**6.3870**

Mitigated Construction On-Site

	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					
Off-Road	9.0400e-003	0.1913	0.2787	3.8000e-004		1.7400e-003	1.7400e-003		1.7400e-003	1.7400e-003	0.0000	33.5079	33.5079	0.0105	0.0000	33.7705
Paving	5.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.0900e-003**	**0.1913**	**0.2787**	**3.8000e-004**		**1.7400e-003**	**1.7400e-003**		**1.7400e-003**	**1.7400e-003**	**0.0000**	**33.5079**	**33.5079**	**0.0105**	**0.0000**	**33.7705**

Mitigated Construction Off-Site

	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					
Hauling	4.5000e-004	0.0156	3.0700e-003	4.0000e-005	8.5000e-004	6.0000e-005	9.1000e-004	2.3000e-004	6.0000e-005	2.9000e-004	0.0000	3.8532	3.8532	1.8000e-004	0.0000	3.8577
Vendor	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	0.0000	0.0000
Worker	1.3100e-003	9.7000e-004	0.0101	3.0000e-005	2.8600e-003	2.0000e-005	2.8700e-003	7.6000e-004	2.0000e-005	7.8000e-004	0.0000	2.5275	2.5275	7.0000e-005	0.0000	2.5292
Total	**1.7600e-003**	**0.0165**	**0.0131**	**7.0000e-005**	**3.7100e-003**	**8.0000e-005**	**3.7800e-003**	**9.9000e-004**	**8.0000e-005**	**1.0700e-003**	**0.0000**	**6.3807**	**6.3807**	**2.5000e-004**	**0.0000**	**6.3870**

Gateway Crossings Phase 2, Criteria and Operational

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	625.00	Space	0.00	256,900.00	0
Parking Lot	7.00	Space	0.06	2,800.00	0
Apartments Mid Rise	332.00	Dwelling Unit	21.34	414,000.00	950

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2021
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 - Utility company is silicon valley power-CO2 factor from climate action plan 2020

Land Use - Applicant provided land use sizes

Construction Phase - Applicant provided construction schedule

Off-road Equipment - Applicant provided construction infromation

Off-road Equipment - Applicant provided construction infromation

Off-road Equipment - Applicant provided infromation

Off-road Equipment - Applicant provided construction infromation

Off-road Equipment - Applicant provided infromation

Off-road Equipment - Applicant provided information

Trips and VMT - Default trip numbers used

800 cy pf paving

Demolition -

Grading - Soil export during grading: 19,496 cy

Vehicle Trips - From project traffic report

Woodstoves - No wood based fireplaces or woodstoves

Energy Use - title 24, 2013

Construction Off-road Equipment Mitigation - Best Management Practices
Tier 3 DPF Level 3

Energy Mitigation - title 24 106 values came into effect on 1st January, 2017

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
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tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3

tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
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tblConstEquipMitigation	Tier	No Change	Tier 3
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tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	20.00	100.00
tblConstructionPhase	NumDays	370.00	100.00
tblConstructionPhase	NumDays	35.00	40.00
tblConstructionPhase	NumDays	20.00	40.00
tblConstructionPhase	NumDays	10.00	20.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	49.80	332.00
tblFireplaces	NumberNoFireplace	13.28	0.00
tblFireplaces	NumberWood	56.44	0.00
tblFleetMix	FleetMixLandUseSubType	Enclosed Parking with Elevator	Apartments Mid Rise
tblFleetMix	FleetMixLandUseSubType	Parking Lot	Enclosed Parking with Elevator
tblFleetMix	FleetMixLandUseSubType	Apartments Mid Rise	Parking Lot
tblGrading	MaterialExported	0.00	19,496.00
tblLandUse	BuildingSpaceSquareFeet	250,000.00	256,900.00
tblLandUse	BuildingSpaceSquareFeet	332,000.00	414,000.00
tblLandUse	LandUseSquareFeet	250,000.00	256,900.00
tblLandUse	LandUseSquareFeet	332,000.00	414,000.00
tblLandUse	LotAcreage	5.63	0.00
tblLandUse	LotAcreage	8.74	21.34
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	UsageHours	6.00	3.20
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	380
tblProjectCharacteristics	OperationalYear	2018	2021
tblTripsAndVMT	HaulingTripNumber	0.00	100.00
tblVehicleTrips	ST_TR	6.39	5.83
tblVehicleTrips	SU_TR	5.86	5.35
tblVehicleTrips	WD_TR	6.65	6.07
tblWoodstoves	NumberCatalytic	6.64	0.00
tblWoodstoves	NumberNoncatalytic	6.64	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	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

Year	tons/yr										MT/yr					
2019	0.4760	4.8742	3.3837	7.6600e-003	0.5162	0.2035	0.7198	0.1860	0.1892	0.3752	0.0000	693.4137	693.4137	0.1376	0.0000	696.8531
2020	3.1261	1.2963	1.2665	2.6000e-003	0.0773	0.0637	0.1410	0.0207	0.0598	0.0805	0.0000	230.3285	230.3285	0.0403	0.0000	231.3370
Maximum	**3.1261**	**4.8742**	**3.3837**	**7.6600e-003**	**0.5162**	**0.2035**	**0.7198**	**0.1860**	**0.1892**	**0.3752**	**0.0000**	**693.4137**	**693.4137**	**0.1376**	**0.0000**	**696.8531**

Mitigated Construction

	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
Year	tons/yr										MT/yr					
2019	0.1990	3.2316	3.6220	7.6600e-003	0.3131	0.0234	0.3366	0.0726	0.0232	0.0958	0.0000	693.4132	693.4132	0.1376	0.0000	696.8526
2020	3.0430	0.9903	1.3584	2.6000e-003	0.0773	8.5100e-003	0.0858	0.0207	8.4500e-003	0.0292	0.0000	230.3283	230.3283	0.0403	0.0000	231.3369
Maximum	**3.0430**	**3.2316**	**3.6220**	**7.6600e-003**	**0.3131**	**0.0234**	**0.3366**	**0.0726**	**0.0232**	**0.0958**	**0.0000**	**693.4132**	**693.4132**	**0.1376**	**0.0000**	**696.8526**

	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	**10.00**	**31.58**	**-7.10**	**0.00**	**34.22**	**88.05**	**50.93**	**54.85**	**87.29**	**72.57**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	**Start Date**	**End Date**	**Maximum Unmitigated ROG + NOX (tons/quarter)**	**Maximum Mitigated ROG + NOX (tons/quarter)**
1	**7-1-2019**	**9-30-2019**	3.1765	1.9000
2	**10-1-2019**	**12-31-2019**	2.0061	1.4314
3	**1-1-2020**	**3-31-2020**	2.1473	1.9128
4	**4-1-2020**	**6-30-2020**	2.2065	2.0594
		Highest	3.1765	2.0594

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	7/1/2019	7/26/2019	5	20	
2	Grading	Grading	7/29/2019	9/20/2019	5	40	
3	Trenching	Trenching	9/2/2019	9/27/2019	5	20	
4	Building Construction	Building Construction	9/23/2019	2/7/2020	5	100	
5	Architectural Coating	Architectural Coating	2/3/2020	6/19/2020	5	100	
6	Paving	Paving	4/1/2020	5/26/2020	5	40	

Acres of Grading (Site Preparation Phase): 80

Acres of Grading (Grading Phase): 160

Acres of Paving: 0.06

Residential Indoor: 838,350; Residential Outdoor: 279,450; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	2	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Scrapers	3	8.00	367	0.48
Site Preparation	Skid Steer Loaders	1	8.00	65	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	2	8.00	187	0.41
Grading	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	3	8.00	367	0.48
Grading	Skid Steer Loaders	1	8.00	65	0.37
Grading	Sweepers/Scrubbers	1	8.00	64	0.46
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Trenching	Excavators	2	8.00	158	0.38

Trenching	Rough Terrain Forklifts	1	8.00	100	0.40
Trenching	Skid Steer Loaders	1	8.00	65	0.37
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Trenching	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Aerial Lifts	3	8.00	63	0.31
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	4	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Other Construction Equipment	3	8.00	172	0.42
Building Construction	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Welders	4	8.00	46	0.45
Architectural Coating	Aerial Lifts	1	8.00	63	0.31
Architectural Coating	Air Compressors	2	3.20	78	0.48
Architectural Coating	Cranes	1	4.00	231	0.29
Architectural Coating	Forklifts	1	8.00	89	0.20
Paving	Cement and Mortar Mixers	1	4.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Sweepers/Scrubbers	1	8.00	64	0.46
Paving	Tractors/Loaders/Backhoes	1	4.00	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
Site Preparation	9	23.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	13	33.00	0.00	2,437.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	17	348.00	78.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	5	70.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

Paving	7	18.00	0.00	100.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Site Preparation - 2019

Unmitigated Construction On-Site

	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					
Fugitive Dust					0.1629	0.0000	0.1629	0.0708	0.0000	0.0708	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0676	0.7951	0.4012	8.1000e-004		0.0333	0.0333		0.0306	0.0306	0.0000	72.7354	72.7354	0.0230	0.0000	73.3108
Total	**0.0676**	**0.7951**	**0.4012**	**8.1000e-004**	**0.1629**	**0.0333**	**0.1961**	**0.0708**	**0.0306**	**0.1014**	**0.0000**	**72.7354**	**72.7354**	**0.0230**	**0.0000**	**73.3108**

Unmitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000

Vendor	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	0.0000	0.0000
Worker	8.4000e-004	6.2000e-004	6.4300e-003	2.0000e-005	1.8200e-003	1.0000e-005	1.8400e-003	4.9000e-004	1.0000e-005	5.0000e-004	0.0000	1.6148	1.6148	4.0000e-005	0.0000	1.6159
Total	**8.4000e-004**	**6.2000e-004**	**6.4300e-003**	**2.0000e-005**	**1.8200e-003**	**1.0000e-005**	**1.8400e-003**	**4.9000e-004**	**1.0000e-005**	**5.0000e-004**	**0.0000**	**1.6148**	**1.6148**	**4.0000e-005**	**0.0000**	**1.6159**

Mitigated Construction On-Site

	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					
Fugitive Dust					0.0733	0.0000	0.0733	0.0159	0.0000	0.0159	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0199	0.3888	0.4424	8.1000e-004		2.3500e-003	2.3500e-003		2.3500e-003	2.3500e-003	0.0000	72.7354	72.7354	0.0230	0.0000	73.3107
Total	**0.0199**	**0.3888**	**0.4424**	**8.1000e-004**	**0.0733**	**2.3500e-003**	**0.0756**	**0.0159**	**2.3500e-003**	**0.0183**	**0.0000**	**72.7354**	**72.7354**	**0.0230**	**0.0000**	**73.3107**

Mitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	8.4000e-004	6.2000e-004	6.4300e-003	2.0000e-005	1.8200e-003	1.0000e-005	1.8400e-003	4.9000e-004	1.0000e-005	5.0000e-004	0.0000	1.6148	1.6148	4.0000e-005	0.0000	1.6159
Total	**8.4000e-004**	**6.2000e-004**	**6.4300e-003**	**2.0000e-005**	**1.8200e-003**	**1.0000e-005**	**1.8400e-003**	**4.9000e-004**	**1.0000e-005**	**5.0000e-004**	**0.0000**	**1.6148**	**1.6148**	**4.0000e-005**	**0.0000**	**1.6159**

3.3 Grading - 2019

Unmitigated Construction On-Site

	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					
Fugitive Dust					0.2064	0.0000	0.2064	0.0755	0.0000	0.0755	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1376	1.5953	0.9635	1.8100e-003		0.0698	0.0698		0.0642	0.0642	0.0000	162.6681	162.6681	0.0515	0.0000	163.9548
Total	**0.1376**	**1.5953**	**0.9635**	**1.8100e-003**	**0.2064**	**0.0698**	**0.2762**	**0.0755**	**0.0642**	**0.1398**	**0.0000**	**162.6681**	**162.6681**	**0.0515**	**0.0000**	**163.9548**

Unmitigated Construction Off-Site

	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					
Hauling	0.0111	0.3794	0.0749	9.7000e-004	0.0207	1.4600e-003	0.0221	5.6800e-003	1.3900e-003	7.0700e-003	0.0000	93.9031	93.9031	4.4000e-003	0.0000	94.0131
Vendor	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	0.0000	0.0000
Worker	2.4000e-003	1.7800e-003	0.0184	5.0000e-005	5.2300e-003	3.0000e-005	5.2700e-003	1.3900e-003	3.0000e-005	1.4200e-003	0.0000	4.6338	4.6338	1.3000e-004	0.0000	4.6369
Total	**0.0135**	**0.3812**	**0.0934**	**1.0200e-003**	**0.0259**	**1.4900e-003**	**0.0274**	**7.0700e-003**	**1.4200e-003**	**8.4900e-003**	**0.0000**	**98.5368**	**98.5368**	**4.5300e-003**	**0.0000**	**98.6500**

Mitigated Construction On-Site

	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					
Fugitive Dust					0.0929	0.0000	0.0929	0.0170	0.0000	0.0170	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0445	0.8822	1.0687	1.8100e-003		5.8700e-003	5.8700e-003		5.8700e-003	5.8700e-003	0.0000	162.6680	162.6680	0.0515	0.0000	163.9546
Total	**0.0445**	**0.8822**	**1.0687**	**1.8100e-003**	**0.0929**	**5.8700e-003**	**0.0987**	**0.0170**	**5.8700e-003**	**0.0229**	**0.0000**	**162.6680**	**162.6680**	**0.0515**	**0.0000**	**163.9546**

Mitigated Construction Off-Site

	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					
Hauling	0.0111	0.3794	0.0749	9.7000e-004	0.0207	1.4600e-003	0.0221	5.6800e-003	1.3900e-003	7.0700e-003	0.0000	93.9031	93.9031	4.4000e-003	0.0000	94.0131
Vendor	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	0.0000	0.0000
Worker	2.4000e-003	1.7800e-003	0.0184	5.0000e-005	5.2300e-003	3.0000e-005	5.2700e-003	1.3900e-003	3.0000e-005	1.4200e-003	0.0000	4.6338	4.6338	1.3000e-004	0.0000	4.6369
Total	**0.0135**	**0.3812**	**0.0934**	**1.0200e-003**	**0.0259**	**1.4900e-003**	**0.0274**	**7.0700e-003**	**1.4200e-003**	**8.4900e-003**	**0.0000**	**98.5368**	**98.5368**	**4.5300e-003**	**0.0000**	**98.6500**

3.4 Trenching - 2019

Unmitigated Construction On-Site

	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					
Off-Road	0.0145	0.1535	0.1712	2.5000e-004		8.6100e-003	8.6100e-003		7.9200e-003	7.9200e-003	0.0000	22.5930	22.5930	7.1500e-003	0.0000	22.7717
Total	**0.0145**	**0.1535**	**0.1712**	**2.5000e-004**		**8.6100e-003**	**8.6100e-003**		**7.9200e-003**	**7.9200e-003**	**0.0000**	**22.5930**	**22.5930**	**7.1500e-003**	**0.0000**	**22.7717**

Unmitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	6.5000e-004	4.9000e-004	5.0300e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.2638	1.2638	3.0000e-005	0.0000	1.2646
Total	**6.5000e-004**	**4.9000e-004**	**5.0300e-003**	**1.0000e-005**	**1.4300e-003**	**1.0000e-005**	**1.4400e-003**	**3.8000e-004**	**1.0000e-005**	**3.9000e-004**	**0.0000**	**1.2638**	**1.2638**	**3.0000e-005**	**0.0000**	**1.2646**

Mitigated Construction On-Site

	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					
Off-Road	6.1800e-003	0.1321	0.1904	2.5000e-004		1.2300e-003	1.2300e-003		1.2300e-003	1.2300e-003	0.0000	22.5930	22.5930	7.1500e-003	0.0000	22.7717
Total	**6.1800e-003**	**0.1321**	**0.1904**	**2.5000e-004**		**1.2300e-003**	**1.2300e-003**		**1.2300e-003**	**1.2300e-003**	**0.0000**	**22.5930**	**22.5930**	**7.1500e-003**	**0.0000**	**22.7717**

Mitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	6.5000e-004	4.9000e-004	5.0300e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.2638	1.2638	3.0000e-005	0.0000	1.2646
Total	**6.5000e-004**	**4.9000e-004**	**5.0300e-003**	**1.0000e-005**	**1.4300e-003**	**1.0000e-005**	**1.4400e-003**	**3.8000e-004**	**1.0000e-005**	**3.9000e-004**	**0.0000**	**1.2638**	**1.2638**	**3.0000e-005**	**0.0000**	**1.2646**

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	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					
Off-Road	0.1821	1.5595	1.2978	1.9900e-003		0.0871	0.0871		0.0820	0.0820	0.0000	172.1798	172.1798	0.0453	0.0000	173.3119
Total	**0.1821**	**1.5595**	**1.2978**	**1.9900e-003**		**0.0871**	**0.0871**		**0.0820**	**0.0820**	**0.0000**	**172.1798**	**172.1798**	**0.0453**	**0.0000**	**173.3119**

Unmitigated Construction Off-Site

	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					

Hauling	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	0.0000	0.0000
Vendor	0.0138	0.3546	0.0952	7.7000e-004	0.0185	2.5500e-003	0.0210	5.3400e-003	2.4400e-003	7.7800e-003	0.0000	73.8650	73.8650	3.6600e-003	0.0000	73.9566
Worker	0.0455	0.0339	0.3500	9.7000e-004	0.0994	6.6000e-004	0.1000	0.0264	6.0000e-004	0.0270	0.0000	87.9570	87.9570	2.3900e-003	0.0000	88.0169
Total	**0.0593**	**0.3885**	**0.4452**	**1.7400e-003**	**0.1178**	**3.2100e-003**	**0.1210**	**0.0318**	**3.0400e-003**	**0.0348**	**0.0000**	**161.8220**	**161.8220**	**6.0500e-003**	**0.0000**	**161.9734**

Mitigated Construction On-Site

	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					
Off-Road	0.0542	1.0577	1.3705	1.9900e-003		9.2500e-003	9.2500e-003		9.2500e-003	9.2500e-003	0.0000	172.1796	172.1796	0.0453	0.0000	173.3117
Total	**0.0542**	**1.0577**	**1.3705**	**1.9900e-003**		**9.2500e-003**	**9.2500e-003**		**9.2500e-003**	**9.2500e-003**	**0.0000**	**172.1796**	**172.1796**	**0.0453**	**0.0000**	**173.3117**

Mitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	0.0138	0.3546	0.0952	7.7000e-004	0.0185	2.5500e-003	0.0210	5.3400e-003	2.4400e-003	7.7800e-003	0.0000	73.8650	73.8650	3.6600e-003	0.0000	73.9566
Worker	0.0455	0.0339	0.3500	9.7000e-004	0.0994	6.6000e-004	0.1000	0.0264	6.0000e-004	0.0270	0.0000	87.9570	87.9570	2.3900e-003	0.0000	88.0169
Total	**0.0593**	**0.3885**	**0.4452**	**1.7400e-003**	**0.1178**	**3.2100e-003**	**0.1210**	**0.0318**	**3.0400e-003**	**0.0348**	**0.0000**	**161.8220**	**161.8220**	**6.0500e-003**	**0.0000**	**161.9734**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	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					
Off-Road	0.0645	0.5614	0.4975	7.8000e-004		0.0302	0.0302		0.0284	0.0284	0.0000	65.9021	65.9021	0.0174	0.0000	66.3358
Total	**0.0645**	**0.5614**	**0.4975**	**7.8000e-004**		**0.0302**	**0.0302**		**0.0284**	**0.0284**	**0.0000**	**65.9021**	**65.9021**	**0.0174**	**0.0000**	**66.3358**

Unmitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	4.3300e-003	0.1243	0.0331	3.0000e-004	7.1800e-003	6.2000e-004	7.8000e-003	2.0800e-003	5.9000e-004	2.6700e-003	0.0000	28.5496	28.5496	1.3100e-003	0.0000	28.5823
Worker	0.0162	0.0116	0.1219	3.7000e-004	0.0386	2.5000e-004	0.0389	0.0103	2.3000e-004	0.0105	0.0000	33.1369	33.1369	8.1000e-004	0.0000	33.1572
Total	**0.0205**	**0.1360**	**0.1551**	**6.7000e-004**	**0.0458**	**8.7000e-004**	**0.0467**	**0.0124**	**8.2000e-004**	**0.0132**	**0.0000**	**61.6864**	**61.6864**	**2.1200e-003**	**0.0000**	**61.7395**

Mitigated Construction On-Site

	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					
Off-Road	0.0211	0.4113	0.5330	7.8000e-004		3.6000e-003	3.6000e-003		3.6000e-003	3.6000e-003	0.0000	65.9020	65.9020	0.0174	0.0000	66.3357
Total	**0.0211**	**0.4113**	**0.5330**	**7.8000e-004**		**3.6000e-003**	**3.6000e-003**		**3.6000e-003**	**3.6000e-003**	**0.0000**	**65.9020**	**65.9020**	**0.0174**	**0.0000**	**66.3357**

Mitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	4.3300e-003	0.1243	0.0331	3.0000e-004	7.1800e-003	6.2000e-004	7.8000e-003	2.0800e-003	5.9000e-004	2.6700e-003	0.0000	28.5496	28.5496	1.3100e-003	0.0000	28.5823
Worker	0.0162	0.0116	0.1219	3.7000e-004	0.0386	2.5000e-004	0.0389	0.0103	2.3000e-004	0.0105	0.0000	33.1369	33.1369	8.1000e-004	0.0000	33.1572
Total	**0.0205**	**0.1360**	**0.1551**	**6.7000e-004**	**0.0458**	**8.7000e-004**	**0.0467**	**0.0124**	**8.2000e-004**	**0.0132**	**0.0000**	**61.6864**	**61.6864**	**2.1200e-003**	**0.0000**	**61.7395**

3.6 Architectural Coating - 2020

Unmitigated Construction On-Site

	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					
Archit. Coating	2.9685					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Off-Road	0.0334	0.3217	0.2643	4.6000e-004		0.0170	0.0170		0.0161	0.0161	0.0000	40.3814	40.3814	9.7100e-003	0.0000	40.6241
Total	**3.0019**	**0.3217**	**0.2643**	**4.6000e-004**		**0.0170**	**0.0170**		**0.0161**	**0.0161**	**0.0000**	**40.3814**	**40.3814**	**9.7100e-003**	**0.0000**	**40.6241**

Unmitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	0.0116	8.3500e-003	0.0876	2.6000e-004	0.0278	1.8000e-004	0.0279	7.3800e-003	1.7000e-004	7.5500e-003	0.0000	23.8052	23.8052	5.8000e-004	0.0000	23.8198
Total	**0.0116**	**8.3500e-003**	**0.0876**	**2.6000e-004**	**0.0278**	**1.8000e-004**	**0.0279**	**7.3800e-003**	**1.7000e-004**	**7.5500e-003**	**0.0000**	**23.8052**	**23.8052**	**5.8000e-004**	**0.0000**	**23.8198**

Mitigated Construction On-Site

	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					
Archit. Coating	2.9685					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0107	0.2311	0.2963	4.6000e-004		2.1000e-003	2.1000e-003		2.1000e-003	2.1000e-003	0.0000	40.3813	40.3813	9.7100e-003	0.0000	40.6241
Total	**2.9791**	**0.2311**	**0.2963**	**4.6000e-004**		**2.1000e-003**	**2.1000e-003**		**2.1000e-003**	**2.1000e-003**	**0.0000**	**40.3813**	**40.3813**	**9.7100e-003**	**0.0000**	**40.6241**

Mitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	0.0116	8.3500e-003	0.0876	2.6000e-004	0.0278	1.8000e-004	0.0279	7.3800e-003	1.7000e-004	7.5500e-003	0.0000	23.8052	23.8052	5.8000e-004	0.0000	23.8198
Total	**0.0116**	**8.3500e-003**	**0.0876**	**2.6000e-004**	**0.0278**	**1.8000e-004**	**0.0279**	**7.3800e-003**	**1.7000e-004**	**7.5500e-003**	**0.0000**	**23.8052**	**23.8052**	**5.8000e-004**	**0.0000**	**23.8198**

3.7 Paving - 2020

Unmitigated Construction On-Site

	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					
Off-Road	0.0258	0.2536	0.2500	3.7000e-004		0.0154	0.0154		0.0142	0.0142	0.0000	32.2913	32.2913	0.0103	0.0000	32.5499
Paving	8.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0259**	**0.2536**	**0.2500**	**3.7000e-004**		**0.0154**	**0.0154**		**0.0142**	**0.0142**	**0.0000**	**32.2913**	**32.2913**	**0.0103**	**0.0000**	**32.5499**

Unmitigated Construction Off-Site

	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					

Hauling	4.2000e-004	0.0145	2.9700e-003	4.0000e-005	8.5000e-004	5.0000e-005	8.9000e-004	2.3000e-004	5.0000e-005	2.8000e-004	0.0000	3.8135	3.8135	1.7000e-004	0.0000	3.8179
Vendor	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	0.0000	0.0000
Worker	1.2000e-003	8.6000e-004	9.0100e-003	3.0000e-005	2.8600e-003	2.0000e-005	2.8700e-003	7.6000e-004	2.0000e-005	7.8000e-004	0.0000	2.4485	2.4485	6.0000e-005	0.0000	2.4500
Total	**1.6200e-003**	**0.0154**	**0.0120**	**7.0000e-005**	**3.7100e-003**	**7.0000e-005**	**3.7600e-003**	**9.9000e-004**	**7.0000e-005**	**1.0600e-003**	**0.0000**	**6.2621**	**6.2621**	**2.3000e-004**	**0.0000**	**6.2679**

Mitigated Construction On-Site

	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					
Off-Road	8.9000e-003	0.1881	0.2745	3.7000e-004		1.7000e-003	1.7000e-003		1.7000e-003	1.7000e-003	0.0000	32.2912	32.2912	0.0103	0.0000	32.5498
Paving	8.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**8.9800e-003**	**0.1881**	**0.2745**	**3.7000e-004**		**1.7000e-003**	**1.7000e-003**		**1.7000e-003**	**1.7000e-003**	**0.0000**	**32.2912**	**32.2912**	**0.0103**	**0.0000**	**32.5498**

Mitigated Construction Off-Site

	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					
Hauling	4.2000e-004	0.0145	2.9700e-003	4.0000e-005	8.5000e-004	5.0000e-005	8.9000e-004	2.3000e-004	5.0000e-005	2.8000e-004	0.0000	3.8135	3.8135	1.7000e-004	0.0000	3.8179
Vendor	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	0.0000	0.0000
Worker	1.2000e-003	8.6000e-004	9.0100e-003	3.0000e-005	2.8600e-003	2.0000e-005	2.8700e-003	7.6000e-004	2.0000e-005	7.8000e-004	0.0000	2.4485	2.4485	6.0000e-005	0.0000	2.4500
Total	**1.6200e-003**	**0.0154**	**0.0120**	**7.0000e-005**	**3.7100e-003**	**7.0000e-005**	**3.7600e-003**	**9.9000e-004**	**7.0000e-005**	**1.0600e-003**	**0.0000**	**6.2621**	**6.2621**	**2.3000e-004**	**0.0000**	**6.2679**

Phase 3, Mitigated Criteria Emissions

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	760.00	Space	0.00	311,800.00	0
Parking Lot	6.00	Space	0.05	2,400.00	0
Apartments Mid Rise	432.00	Dwelling Unit	21.35	522,000.00	1236
Strip Mall	4.90	1000sqft	0.00	4,900.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2022
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 - PG&E used to reprsent SVP. Current CO2 emisison factor from Santa Clara CLimate Action Plan 2020

Land Use - Applicant provided information on construction spreadsheet

Construction Phase - Applicant provided construction schedule

Off-road Equipment -

Off-road Equipment - Applicant provided infromation

Off-road Equipment - Applicant provided infromation

Off-road Equipment - Applicant provided information

Off-road Equipment - Applicant provided infromation

Off-road Equipment - Applicant provided infromation

Off-road Equipment - Applicant provided infromation

Trips and VMT - Paving trips= 800/16*2

Grading - 20919 cy of soil hauled

Vehicle Trips - Project traffic report

Woodstoves - no woodstoves or wood based firplaces

Energy Use - Title 24, 2013 values

Construction Off-road Equipment Mitigation - Best Management Practices
tier 3 DPF level 3
Energy Mitigation - title 24,2016 came into effect on 1st january, 2017

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
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tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3

tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
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tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
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tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	64.80	432.00
tblFireplaces	NumberNoFireplace	17.28	0.00
tblFireplaces	NumberWood	73.44	0.00
tblGrading	MaterialExported	0.00	20,919.00
tblLandUse	BuildingSpaceSquareFeet	304,000.00	311,800.00
tblLandUse	BuildingSpaceSquareFeet	432,000.00	522,000.00
tblLandUse	LandUseSquareFeet	304,000.00	311,800.00
tblLandUse	LandUseSquareFeet	432,000.00	522,000.00
tblLandUse	LotAcreage	6.84	0.00
tblLandUse	LotAcreage	11.37	21.35
tblLandUse	LotAcreage	0.11	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	380
tblProjectCharacteristics	OperationalYear	2018	2022
tblTripsAndVMT	HaulingTripNumber	0.00	100.00
tblVehicleTrips	ST_TR	6.39	5.83
tblVehicleTrips	ST_TR	42.04	28.95
tblVehicleTrips	SU_TR	5.86	5.35
tblVehicleTrips	SU_TR	20.43	14.07

tblVehicleTrips	WD_TR	6.65	6.07
tblVehicleTrips	WD_TR	44.32	30.52
tblWoodstoves	NumberCatalytic	8.64	0.00
tblWoodstoves	NumberNoncatalytic	8.64	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	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
Year	tons/yr										MT/yr					
2020	2.1787	5.2608	3.9988	9.6800e-003	0.6242	0.2163	0.8405	0.2151	0.2005	0.4156	0.0000	873.0970	873.0970	0.1571	0.0000	877.0236
2021	2.1621	0.4300	0.4940	8.6000e-004	0.0235	0.0249	0.0484	6.2500e-003	0.0231	0.0294	0.0000	76.5182	76.5182	0.0160	0.0000	76.9189
Maximum	**2.1787**	**5.2608**	**3.9988**	**9.6800e-003**	**0.6242**	**0.2163**	**0.8405**	**0.2151**	**0.2005**	**0.4156**	**0.0000**	**873.0970**	**873.0970**	**0.1571**	**0.0000**	**877.0236**

Mitigated Construction

	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
Year	tons/yr										MT/yr					
2020	1.9048	3.7053	4.3666	9.6800e-003	0.4211	0.0264	0.4475	0.1017	0.0261	0.1278	0.0000	873.0964	873.0964	0.1571	0.0000	877.0231
2021	2.1327	0.3386	0.5196	8.6000e-004	0.0235	3.2700e-003	0.0267	6.2500e-003	3.2500e-003	9.5000e-003	0.0000	76.5181	76.5181	0.0160	0.0000	76.9188

Maximum	**2.1327**	**3.7053**	**4.3666**	**9.6800e-003**	**0.4211**	**0.0264**	**0.4475**	**0.1017**	**0.0261**	**0.1278**	**0.0000**	**873.0964**	**873.0964**	**0.1571**	**0.0000**	**877.0231**

	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	**6.99**	**28.94**	**-8.76**	**0.00**	**31.36**	**87.71**	**46.65**	**51.24**	**86.88**	**69.15**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**4-1-2020**	**6-30-2020**	2.9642	1.8655
2	**7-1-2020**	**9-30-2020**	1.7370	1.2944
3	**10-1-2020**	**12-31-2020**	2.6328	2.3568
4	**1-1-2021**	**3-31-2021**	2.5819	2.4614
		Highest	2.9642	2.4614

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	4/1/2020	4/28/2020	5	20	
2	Grading	Grading	4/29/2020	6/23/2020	5	40	
3	Trenching	Trenching	6/1/2020	6/26/2020	5	20	
4	Building Construction	Building Construction	6/29/2020	11/13/2020	5	100	
5	Architectural Coating	Architectural Coating	11/2/2020	3/19/2021	5	100	
6	Paving	Paving	1/1/2021	2/25/2021	5	40	

Acres of Grading (Site Preparation Phase): 80

Acres of Grading (Grading Phase): 160

Acres of Paving: 0.05

Residential Indoor: 1,057,050; Residential Outdoor: 352,350; Non-Residential Indoor: 7,350; Non-Residential Outdoor: 2,450; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	2	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Scrapers	3	8.00	367	0.48
Site Preparation	Skid Steer Loaders	1	8.00	65	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	187	0.41
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	2	8.00	187	0.41
Grading	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	3	8.00	367	0.48
Grading	Skid Steer Loaders	1	8.00	65	0.37
Grading	Sweepers/Scrubbers	1	8.00	64	0.46
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Trenching	Excavators	2	8.00	158	0.38
Trenching	Rough Terrain Forklifts	1	8.00	100	0.40
Trenching	Skid Steer Loaders	1	8.00	65	0.37
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Trenching	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Aerial Lifts	3	8.00	63	0.31
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	4	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Other Construction Equipment	3	8.00	172	0.42
Building Construction	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Aerial Lifts	1	8.00	63	0.31
Architectural Coating	Air Compressors	2	3.20	78	0.48
Architectural Coating	Cranes	1	4.00	81	0.73
Architectural Coating	Forklifts	1	8.00	89	0.20
Paving	Cement and Mortar Mixers	1	4.00	9	0.56

Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Sweepers/Scrubbers	1	8.00	64	0.46
Paving	Tractors/Loaders/Backhoes	1	4.00	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
Site Preparation	9	23.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	13	33.00	0.00	2,615.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	14	445.00	98.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	5	89.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	100.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Site Preparation - 2020

Unmitigated Construction On-Site

	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					
Fugitive Dust					0.1629	0.0000	0.1629	0.0708	0.0000	0.0708	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0676	0.7247	0.3942	7.7000e-004		0.0344	0.0344		0.0317	0.0317	0.0000	67.9145	67.9145	0.0220	0.0000	68.4636
Total	**0.0676**	**0.7247**	**0.3942**	**7.7000e-004**	**0.1629**	**0.0344**	**0.1973**	**0.0708**	**0.0317**	**0.1024**	**0.0000**	**67.9145**	**67.9145**	**0.0220**	**0.0000**	**68.4636**

Unmitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	7.6000e-004	5.5000e-004	5.7600e-003	2.0000e-005	1.8200e-003	1.0000e-005	1.8400e-003	4.9000e-004	1.0000e-005	5.0000e-004	0.0000	1.5643	1.5643	4.0000e-005	0.0000	1.5653
Total	**7.6000e-004**	**5.5000e-004**	**5.7600e-003**	**2.0000e-005**	**1.8200e-003**	**1.0000e-005**	**1.8400e-003**	**4.9000e-004**	**1.0000e-005**	**5.0000e-004**	**0.0000**	**1.5643**	**1.5643**	**4.0000e-005**	**0.0000**	**1.5653**

Mitigated Construction On-Site

	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					
Fugitive Dust					0.0733	0.0000	0.0733	0.0159	0.0000	0.0159	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0190	0.3748	0.4307	7.7000e-004		2.3600e-003	2.3600e-003		2.3600e-003	2.3600e-003	0.0000	67.9144	67.9144	0.0220	0.0000	68.4636

Total	**0.0190**	**0.3748**	**0.4307**	**7.7000e-004**	**0.0733**	**2.3600e-003**	**0.0757**	**0.0159**	**2.3600e-003**	**0.0183**	**0.0000**	**67.9144**	**67.9144**	**0.0220**	**0.0000**	**68.4636**

Mitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	7.6000e-004	5.5000e-004	5.7600e-003	2.0000e-005	1.8200e-003	1.0000e-005	1.8400e-003	4.9000e-004	1.0000e-005	5.0000e-004	0.0000	1.5643	1.5643	4.0000e-005	0.0000	1.5653
Total	**7.6000e-004**	**5.5000e-004**	**5.7600e-003**	**2.0000e-005**	**1.8200e-003**	**1.0000e-005**	**1.8400e-003**	**4.9000e-004**	**1.0000e-005**	**5.0000e-004**	**0.0000**	**1.5643**	**1.5643**	**4.0000e-005**	**0.0000**	**1.5653**

3.3 Grading - 2020

Unmitigated Construction On-Site

	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					
Fugitive Dust					0.2065	0.0000	0.2065	0.0755	0.0000	0.0755	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1295	1.4744	0.9223	1.8100e-003		0.0640	0.0640		0.0589	0.0589	0.0000	159.1077	159.1077	0.0515	0.0000	160.3941
Total	**0.1295**	**1.4744**	**0.9223**	**1.8100e-003**	**0.2065**	**0.0640**	**0.2705**	**0.0755**	**0.0589**	**0.1344**	**0.0000**	**159.1077**	**159.1077**	**0.0515**	**0.0000**	**160.3941**

Unmitigated Construction Off-Site

	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					
Hauling	0.0109	0.3794	0.0777	1.0300e-003	0.0222	1.2300e-003	0.0234	6.0900e-003	1.1800e-003	7.2700e-003	0.0000	99.7241	99.7241	4.5600e-003	0.0000	99.8381
Vendor	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	0.0000	0.0000
Worker	2.1900e-003	1.5800e-003	0.0165	5.0000e-005	5.2300e-003	3.0000e-005	5.2700e-003	1.3900e-003	3.0000e-005	1.4200e-003	0.0000	4.4890	4.4890	1.1000e-004	0.0000	4.4917
Total	**0.0131**	**0.3810**	**0.0942**	**1.0800e-003**	**0.0274**	**1.2600e-003**	**0.0287**	**7.4800e-003**	**1.2100e-003**	**8.6900e-003**	**0.0000**	**104.2131**	**104.2131**	**4.6700e-003**	**0.0000**	**104.3299**

Mitigated Construction On-Site

	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					
Fugitive Dust					0.0929	0.0000	0.0929	0.0170	0.0000	0.0170	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0445	0.8822	1.0687	1.8100e-003		5.8700e-003	5.8700e-003		5.8700e-003	5.8700e-003	0.0000	159.1075	159.1075	0.0515	0.0000	160.3939
Total	**0.0445**	**0.8822**	**1.0687**	**1.8100e-003**	**0.0929**	**5.8700e-003**	**0.0988**	**0.0170**	**5.8700e-003**	**0.0229**	**0.0000**	**159.1075**	**159.1075**	**0.0515**	**0.0000**	**160.3939**

Mitigated Construction Off-Site

	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					

Hauling	0.0109	0.3794	0.0777	1.0300e-003	0.0222	1.2300e-003	0.0234	6.0900e-003	1.1800e-003	7.2700e-003	0.0000	99.7241	99.7241	4.5600e-003	0.0000	99.8381
Vendor	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	0.0000	0.0000
Worker	2.1900e-003	1.5800e-003	0.0165	5.0000e-005	5.2300e-003	3.0000e-005	5.2700e-003	1.3900e-003	3.0000e-005	1.4200e-003	0.0000	4.4890	4.4890	1.1000e-004	0.0000	4.4917
Total	**0.0131**	**0.3810**	**0.0942**	**1.0800e-003**	**0.0274**	**1.2600e-003**	**0.0287**	**7.4800e-003**	**1.2100e-003**	**8.6900e-003**	**0.0000**	**104.2131**	**104.2131**	**4.6700e-003**	**0.0000**	**104.3299**

3.4 Trenching - 2020

Unmitigated Construction On-Site

	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					
Off-Road	0.0133	0.1393	0.1706	2.5000e-004		7.5100e-003	7.5100e-003		6.9100e-003	6.9100e-003	0.0000	22.1026	22.1026	7.1500e-003	0.0000	22.2813
Total	**0.0133**	**0.1393**	**0.1706**	**2.5000e-004**		**7.5100e-003**	**7.5100e-003**		**6.9100e-003**	**6.9100e-003**	**0.0000**	**22.1026**	**22.1026**	**7.1500e-003**	**0.0000**	**22.2813**

Unmitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	6.0000e-004	4.3000e-004	4.5000e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.2243	1.2243	3.0000e-005	0.0000	1.2250
Total	**6.0000e-004**	**4.3000e-004**	**4.5000e-003**	**1.0000e-005**	**1.4300e-003**	**1.0000e-005**	**1.4400e-003**	**3.8000e-004**	**1.0000e-005**	**3.9000e-004**	**0.0000**	**1.2243**	**1.2243**	**3.0000e-005**	**0.0000**	**1.2250**

Mitigated Construction On-Site

	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					
Off-Road	6.1800e-003	0.1321	0.1904	2.5000e-004		1.2300e-003	1.2300e-003		1.2300e-003	1.2300e-003	0.0000	22.1026	22.1026	7.1500e-003	0.0000	22.2813
Total	**6.1800e-003**	**0.1321**	**0.1904**	**2.5000e-004**		**1.2300e-003**	**1.2300e-003**		**1.2300e-003**	**1.2300e-003**	**0.0000**	**22.1026**	**22.1026**	**7.1500e-003**	**0.0000**	**22.2813**

Mitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	6.0000e-004	4.3000e-004	4.5000e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.2243	1.2243	3.0000e-005	0.0000	1.2250
Total	**6.0000e-004**	**4.3000e-004**	**4.5000e-003**	**1.0000e-005**	**1.4300e-003**	**1.0000e-005**	**1.4400e-003**	**3.8000e-004**	**1.0000e-005**	**3.9000e-004**	**0.0000**	**1.2243**	**1.2243**	**3.0000e-005**	**0.0000**	**1.2250**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	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					
Off-Road	0.1791	1.7692	1.5119	2.3800e-003		0.0949	0.0949		0.0884	0.0884	0.0000	207.1314	207.1314	0.0578	0.0000	208.5761
Total	**0.1791**	**1.7692**	**1.5119**	**2.3800e-003**		**0.0949**	**0.0949**		**0.0884**	**0.0884**	**0.0000**	**207.1314**	**207.1314**	**0.0578**	**0.0000**	**208.5761**

Unmitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	0.0194	0.5579	0.1486	1.3400e-003	0.0322	2.7600e-003	0.0350	9.3200e-003	2.6400e-003	0.0120	0.0000	128.1070	128.1070	5.8700e-003	0.0000	128.2538
Worker	0.0739	0.0531	0.5568	1.6700e-003	0.1765	1.1400e-003	0.1776	0.0469	1.0500e-003	0.0480	0.0000	151.3333	151.3333	3.7100e-003	0.0000	151.4261
Total	**0.0933**	**0.6110**	**0.7054**	**3.0100e-003**	**0.2087**	**3.9000e-003**	**0.2126**	**0.0563**	**3.6900e-003**	**0.0599**	**0.0000**	**279.4402**	**279.4402**	**9.5800e-003**	**0.0000**	**279.6799**

Mitigated Construction On-Site

	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					
Off-Road	0.0594	1.2155	1.6790	2.3800e-003		0.0105	0.0105		0.0105	0.0105	0.0000	207.1312	207.1312	0.0578	0.0000	208.5759

Total	**0.0594**	**1.2155**	**1.6790**	**2.3800e-003**		**0.0105**	**0.0105**		**0.0105**	**0.0105**	**0.0000**	**207.1312**	**207.1312**	**0.0578**	**0.0000**	**208.5759**

Mitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	0.0194	0.5579	0.1486	1.3400e-003	0.0322	2.7600e-003	0.0350	9.3200e-003	2.6400e-003	0.0120	0.0000	128.1070	128.1070	5.8700e-003	0.0000	128.2538
Worker	0.0739	0.0531	0.5568	1.6700e-003	0.1765	1.1400e-003	0.1776	0.0469	1.0500e-003	0.0480	0.0000	151.3333	151.3333	3.7100e-003	0.0000	151.4261
Total	**0.0933**	**0.6110**	**0.7054**	**3.0100e-003**	**0.2087**	**3.9000e-003**	**0.2126**	**0.0563**	**3.6900e-003**	**0.0599**	**0.0000**	**279.4402**	**279.4402**	**9.5800e-003**	**0.0000**	**279.6799**

3.6 Architectural Coating - 2020

Unmitigated Construction On-Site

	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					
Archit. Coating	1.6569					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0181	0.1554	0.1409	2.0000e-004		0.0102	0.0102		9.6300e-003	9.6300e-003	0.0000	17.0816	17.0816	4.0500e-003	0.0000	17.1829
Total	**1.6750**	**0.1554**	**0.1409**	**2.0000e-004**		**0.0102**	**0.0102**		**9.6300e-003**	**9.6300e-003**	**0.0000**	**17.0816**	**17.0816**	**4.0500e-003**	**0.0000**	**17.1829**

Unmitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	6.5000e-003	4.6700e-003	0.0490	1.5000e-004	0.0155	1.0000e-004	0.0156	4.1300e-003	9.0000e-005	4.2200e-003	0.0000	13.3173	13.3173	3.3000e-004	0.0000	13.3255
Total	**6.5000e-003**	**4.6700e-003**	**0.0490**	**1.5000e-004**	**0.0155**	**1.0000e-004**	**0.0156**	**4.1300e-003**	**9.0000e-005**	**4.2200e-003**	**0.0000**	**13.3173**	**13.3173**	**3.3000e-004**	**0.0000**	**13.3255**

Mitigated Construction On-Site

	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					
Archit. Coating	1.6569					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.5100e-003	0.1030	0.1390	2.0000e-004		1.0800e-003	1.0800e-003		1.0800e-003	1.0800e-003	0.0000	17.0816	17.0816	4.0500e-003	0.0000	17.1829
Total	**1.6614**	**0.1030**	**0.1390**	**2.0000e-004**		**1.0800e-003**	**1.0800e-003**		**1.0800e-003**	**1.0800e-003**	**0.0000**	**17.0816**	**17.0816**	**4.0500e-003**	**0.0000**	**17.1829**

Mitigated Construction Off-Site

	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					

Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	6.5000e-003	4.6700e-003	0.0490	1.5000e-004	0.0155	1.0000e-004	0.0156	4.1300e-003	9.0000e-005	4.2200e-003	0.0000	13.3173	13.3173	3.3000e-004	0.0000	13.3255
Total	**6.5000e-003**	**4.6700e-003**	**0.0490**	**1.5000e-004**	**0.0155**	**1.0000e-004**	**0.0156**	**4.1300e-003**	**9.0000e-005**	**4.2200e-003**	**0.0000**	**13.3173**	**13.3173**	**3.3000e-004**	**0.0000**	**13.3255**

3.6 Architectural Coating - 2021

Unmitigated Construction On-Site

	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					
Archit. Coating	2.1088					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0207	0.1791	0.1770	2.5000e-004		0.0113	0.0113		0.0106	0.0106	0.0000	21.7403	21.7403	5.0900e-003	0.0000	21.8675
Total	**2.1295**	**0.1791**	**0.1770**	**2.5000e-004**		**0.0113**	**0.0113**		**0.0106**	**0.0106**	**0.0000**	**21.7403**	**21.7403**	**5.0900e-003**	**0.0000**	**21.8675**

Unmitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	7.6800e-003	5.3200e-003	0.0570	1.8000e-004	0.0198	1.2000e-004	0.0199	5.2600e-003	1.1000e-004	5.3700e-003	0.0000	16.3610	16.3610	3.7000e-004	0.0000	16.3703
Total	**7.6800e-003**	**5.3200e-003**	**0.0570**	**1.8000e-004**	**0.0198**	**1.2000e-004**	**0.0199**	**5.2600e-003**	**1.1000e-004**	**5.3700e-003**	**0.0000**	**16.3610**	**16.3610**	**3.7000e-004**	**0.0000**	**16.3703**

Mitigated Construction On-Site

	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					
Archit. Coating	2.1088					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.7400e-003	0.1310	0.1770	2.5000e-004		1.3800e-003	1.3800e-003		1.3800e-003	1.3800e-003	0.0000	21.7403	21.7403	5.0900e-003	0.0000	21.8675
Total	**2.1145**	**0.1310**	**0.1770**	**2.5000e-004**		**1.3800e-003**	**1.3800e-003**		**1.3800e-003**	**1.3800e-003**	**0.0000**	**21.7403**	**21.7403**	**5.0900e-003**	**0.0000**	**21.8675**

Mitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	7.6800e-003	5.3200e-003	0.0570	1.8000e-004	0.0198	1.2000e-004	0.0199	5.2600e-003	1.1000e-004	5.3700e-003	0.0000	16.3610	16.3610	3.7000e-004	0.0000	16.3703
Total	**7.6800e-003**	**5.3200e-003**	**0.0570**	**1.8000e-004**	**0.0198**	**1.2000e-004**	**0.0199**	**5.2600e-003**	**1.1000e-004**	**5.3700e-003**	**0.0000**	**16.3610**	**16.3610**	**3.7000e-004**	**0.0000**	**16.3703**

3.7 Paving - 2021

Unmitigated Construction On-Site

	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					
Off-Road	0.0234	0.2315	0.2489	3.7000e-004		0.0134	0.0134		0.0124	0.0124	0.0000	32.2881	32.2881	0.0103	0.0000	32.5467
Paving	7.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0235**	**0.2315**	**0.2489**	**3.7000e-004**		**0.0134**	**0.0134**		**0.0124**	**0.0124**	**0.0000**	**32.2881**	**32.2881**	**0.0103**	**0.0000**	**32.5467**

Unmitigated Construction Off-Site

	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					
Hauling	3.9000e-004	0.0134	2.9100e-003	4.0000e-005	8.5000e-004	4.0000e-005	8.9000e-004	2.3000e-004	4.0000e-005	2.7000e-004	0.0000	3.7652	3.7652	1.7000e-004	0.0000	3.7694
Vendor	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	0.0000	0.0000
Worker	1.1100e-003	7.7000e-004	8.2400e-003	3.0000e-005	2.8600e-003	2.0000e-005	2.8700e-003	7.6000e-004	2.0000e-005	7.8000e-004	0.0000	2.3636	2.3636	5.0000e-005	0.0000	2.3649
Total	**1.5000e-003**	**0.0141**	**0.0112**	**7.0000e-005**	**3.7100e-003**	**6.0000e-005**	**3.7600e-003**	**9.9000e-004**	**6.0000e-005**	**1.0500e-003**	**0.0000**	**6.1287**	**6.1287**	**2.2000e-004**	**0.0000**	**6.1343**

Mitigated Construction On-Site

	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					
Off-Road	8.9000e-003	0.1881	0.2745	3.7000e-004		1.7000e-003	1.7000e-003		1.7000e-003	1.7000e-003	0.0000	32.2881	32.2881	0.0103	0.0000	32.5467

Paving	7.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**8.9700e-003**	**0.1881**	**0.2745**	**3.7000e-004**		**1.7000e-003**	**1.7000e-003**		**1.7000e-003**	**1.7000e-003**	**0.0000**	**32.2881**	**32.2881**	**0.0103**	**0.0000**	**32.5467**

Mitigated Construction Off-Site

	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					
Hauling	3.9000e-004	0.0134	2.9100e-003	4.0000e-005	8.5000e-004	4.0000e-005	8.9000e-004	2.3000e-004	4.0000e-005	2.7000e-004	0.0000	3.7652	3.7652	1.7000e-004	0.0000	3.7694
Vendor	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	0.0000	0.0000
Worker	1.1100e-003	7.7000e-004	8.2400e-003	3.0000e-005	2.8600e-003	2.0000e-005	2.8700e-003	7.6000e-004	2.0000e-005	7.8000e-004	0.0000	2.3636	2.3636	5.0000e-005	0.0000	2.3649
Total	**1.5000e-003**	**0.0141**	**0.0112**	**7.0000e-005**	**3.7100e-003**	**6.0000e-005**	**3.7600e-003**	**9.9000e-004**	**6.0000e-005**	**1.0500e-003**	**0.0000**	**6.1287**	**6.1287**	**2.2000e-004**	**0.0000**	**6.1343**

Gateway Crossings, Phase 4 Criteria and Operational Emissions

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	905.00	Space	0.00	362,000.00	0
Parking Lot	4.00	Space	0.04	1,600.00	0
Apartments Mid Rise	556.00	Dwelling Unit	21.36	556,885.00	1590

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2024
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 - PG&E used to represent SVP (Silicon Valley Power. Current CO2 emission factor from City of Santa Clara 2020 Climate Action Plan

Land Use - Applicant provided project description

Construction Phase - Applicant provided construction schedule

Off-road Equipment -

Off-road Equipment - Applicant provided equipment information

Off-road Equipment - Applicant provided equipment information

Off-road Equipment - Applicant provided equipment information

Off-road Equipment - Applicant provided equipment information

Off-road Equipment - Applicant provided equipment infromation

Off-road Equipment - Applicant provided equipment information

Trips and VMT - Paving trips= 800 cy= 100 trips

Grading - 18459 cy of soil export

Vehicle Trips - From Project Traffic Report

Woodstoves - No woodstoves or wood based fireplaces

Energy Use - Title 24,2013 values used

Construction Off-road Equipment Mitigation - Tier 2 Mitigation and Best Management practices

Energy Mitigation - Title 24, 2016 came into effect on 1st January, 2017

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
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tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3

tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
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tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	83.40	556.00
tblFireplaces	NumberNoFireplace	22.24	0.00
tblFireplaces	NumberWood	94.52	0.00
tblGrading	MaterialExported	0.00	18,459.00
tblLandUse	BuildingSpaceSquareFeet	556,000.00	556,885.00
tblLandUse	LandUseSquareFeet	556,000.00	556,885.00
tblLandUse	LotAcreage	8.14	0.00
tblLandUse	LotAcreage	14.63	21.36
tblProjectCharacteristics	CO2IntensityFactor	641.35	380
tblProjectCharacteristics	OperationalYear	2018	2024
tblTripsAndVMT	HaulingTripNumber	0.00	100.00
tblVehicleTrips	ST_TR	6.39	5.83
tblVehicleTrips	SU_TR	5.86	5.35
tblVehicleTrips	WD_TR	6.65	6.07
tblWoodstoves	NumberCatalytic	11.12	0.00
tblWoodstoves	NumberNoncatalytic	11.12	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	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
Year	tons/yr										MT/yr					
2022	2.5532	6.3312	6.0124	0.0151	0.9280	0.2374	1.1654	0.3069	0.2213	0.5281	0.0000	1,352.6811	1,352.6811	0.2309	0.0000	1,358.4539
2023	2.2222	0.6355	0.8442	1.7300e-003	0.0562	0.0296	0.0858	0.0150	0.0276	0.0426	0.0000	153.0591	153.0591	0.0290	0.0000	153.7839
Maximum	**2.5532**	**6.3312**	**6.0124**	**0.0151**	**0.9280**	**0.2374**	**1.1654**	**0.3069**	**0.2213**	**0.5281**	**0.0000**	**1,352.6811**	**1,352.6811**	**0.2309**	**0.0000**	**1,358.4539**

Mitigated Construction

	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
Year	tons/yr										MT/yr					
2022	2.2470	5.5914	6.7850	0.0151	0.6684	0.0394	0.7078	0.1643	0.0391	0.2033	0.0000	1,352.6802	1,352.6802	0.2309	0.0000	1,358.4530
2023	2.1873	0.6274	0.9321	1.7300e-003	0.0562	5.5700e-003	0.0618	0.0150	5.5400e-003	0.0206	0.0000	153.0590	153.0590	0.0290	0.0000	153.7838
Maximum	**2.2470**	**5.5914**	**6.7850**	**0.0151**	**0.6684**	**0.0394**	**0.7078**	**0.1643**	**0.0391**	**0.2033**	**0.0000**	**1,352.6802**	**1,352.6802**	**0.2309**	**0.0000**	**1,358.4530**

	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	**7.14**	**10.74**	**-12.55**	**0.00**	**26.37**	**83.17**	**38.49**	**44.30**	**82.07**	**60.77**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**3-1-2022**	**5-31-2022**	2.4172	1.8402
2	**6-1-2022**	**8-31-2022**	2.2296	1.9840
3	**9-1-2022**	**11-30-2022**	2.9465	2.7827

4	**12-1-2022**	**2-28-2023**	2.8561	2.7727
5	**3-1-2023**	**5-31-2023**	1.2391	1.2195
		Highest	2.9465	2.7827

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	3/1/2022	3/28/2022	5	20	
2	Grading	Grading	3/29/2022	6/20/2022	5	60	
3	Trenching	Trenching	5/2/2022	6/24/2022	5	40	
4	Building Construction	Building Construction	6/1/2022	1/10/2023	5	160	
5	Architectural Coating	Architectural Coating	10/3/2022	4/14/2023	5	140	
6	Paving	Paving	2/1/2023	4/25/2023	5	60	

Acres of Grading (Site Preparation Phase): 80

Acres of Grading (Grading Phase): 240

Acres of Paving: 0.04

Residential Indoor: 1,127,692; Residential Outdoor: 375,897; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	2	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Scrapers	3	8.00	367	0.48
Site Preparation	Skid Steer Loaders	1	8.00	65	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	2	8.00	187	0.41
Grading	Rollers	2	8.00	80	0.38

Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	3	8.00	367	0.48
Grading	Skid Steer Loaders	1	8.00	65	0.37
Grading	Sweepers/Scrubbers	1	8.00	64	0.46
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Trenching	Excavators	2	8.00	158	0.38
Trenching	Rough Terrain Forklifts	1	8.00	100	0.40
Trenching	Skid Steer Loaders	1	8.00	65	0.37
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Trenching	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Aerial Lifts	3	8.00	63	0.31
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	4	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Other Construction Equipment	3	8.00	172	0.42
Building Construction	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Welders	4	8.00	46	0.45
Architectural Coating	Aerial Lifts	1	8.00	63	0.31
Architectural Coating	Air Compressors	2	3.50	78	0.48
Architectural Coating	Cranes	1	4.60	231	0.29
Architectural Coating	Forklifts	1	8.00	89	0.20
Paving	Cement and Mortar Mixers	1	5.30	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Sweepers/Scrubbers	1	8.00	64	0.46
Paving	Tractors/Loaders/Backhoes	1	5.30	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
Site Preparation	9	23.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	13	33.00	0.00	2,307.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	17	553.00	119.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	5	111.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	100.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

	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					
Fugitive Dust					0.1629	0.0000	0.1629	0.0708	0.0000	0.0708	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0520	0.5754	0.3336	8.1000e-004		0.0234	0.0234		0.0215	0.0215	0.0000	71.2062	71.2062	0.0230	0.0000	71.7819
Total	**0.0520**	**0.5754**	**0.3336**	**8.1000e-004**	**0.1629**	**0.0234**	**0.1863**	**0.0708**	**0.0215**	**0.0923**	**0.0000**	**71.2062**	**71.2062**	**0.0230**	**0.0000**	**71.7819**

Unmitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	6.6000e-004	4.4000e-004	4.8400e-003	2.0000e-005	1.8200e-003	1.0000e-005	1.8400e-003	4.9000e-004	1.0000e-005	5.0000e-004	0.0000	1.4552	1.4552	3.0000e-005	0.0000	1.4560
Total	**6.6000e-004**	**4.4000e-004**	**4.8400e-003**	**2.0000e-005**	**1.8200e-003**	**1.0000e-005**	**1.8400e-003**	**4.9000e-004**	**1.0000e-005**	**5.0000e-004**	**0.0000**	**1.4552**	**1.4552**	**3.0000e-005**	**0.0000**	**1.4560**

Mitigated Construction On-Site

	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					
Fugitive Dust					0.0733	0.0000	0.0733	0.0159	0.0000	0.0159	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0199	0.3888	0.4424	8.1000e-004		2.3500e-003	2.3500e-003		2.3500e-003	2.3500e-003	0.0000	71.2061	71.2061	0.0230	0.0000	71.7819
Total	**0.0199**	**0.3888**	**0.4424**	**8.1000e-004**	**0.0733**	**2.3500e-003**	**0.0756**	**0.0159**	**2.3500e-003**	**0.0183**	**0.0000**	**71.2061**	**71.2061**	**0.0230**	**0.0000**	**71.7819**

Mitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	6.6000e-004	4.4000e-004	4.8400e-003	2.0000e-005	1.8200e-003	1.0000e-005	1.8400e-003	4.9000e-004	1.0000e-005	5.0000e-004	0.0000	1.4552	1.4552	3.0000e-005	0.0000	1.4560
Total	**6.6000e-004**	**4.4000e-004**	**4.8400e-003**	**2.0000e-005**	**1.8200e-003**	**1.0000e-005**	**1.8400e-003**	**4.9000e-004**	**1.0000e-005**	**5.0000e-004**	**0.0000**	**1.4552**	**1.4552**	**3.0000e-005**	**0.0000**	**1.4560**

3.3 Grading - 2022

Unmitigated Construction On-Site

	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					
Fugitive Dust					0.3090	0.0000	0.3090	0.1132	0.0000	0.1132	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1587	1.7266	1.2578	2.7200e-003		0.0725	0.0725		0.0667	0.0667	0.0000	238.8577	238.8577	0.0773	0.0000	240.7890
Total	**0.1587**	**1.7266**	**1.2578**	**2.7200e-003**	**0.3090**	**0.0725**	**0.3814**	**0.1132**	**0.0667**	**0.1799**	**0.0000**	**238.8577**	**238.8577**	**0.0773**	**0.0000**	**240.7890**

Unmitigated Construction Off-Site

	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					
Hauling	8.5200e-003	0.2833	0.0661	8.8000e-004	0.0196	8.2000e-004	0.0204	5.3800e-003	7.9000e-004	6.1700e-003	0.0000	85.6913	85.6913	3.8500e-003	0.0000	85.7876
Vendor	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	0.0000	0.0000
Worker	2.8500e-003	1.8900e-003	0.0208	7.0000e-005	7.8500e-003	5.0000e-005	7.9000e-003	2.0900e-003	4.0000e-005	2.1300e-003	0.0000	6.2637	6.2637	1.3000e-004	0.0000	6.2670

Total	**0.0114**	**0.2852**	**0.0869**	**9.5000e-004**	**0.0274**	**8.7000e-004**	**0.0283**	**7.4700e-003**	**8.3000e-004**	**8.3000e-003**	**0.0000**	**91.9550**	**91.9550**	**3.9800e-003**	**0.0000**	**92.0546**

Mitigated Construction On-Site

	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					
Fugitive Dust					0.1390	0.0000	0.1390	0.0255	0.0000	0.0255	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0667	1.3234	1.6030	2.7200e-003		8.8100e-003	8.8100e-003		8.8100e-003	8.8100e-003	0.0000	238.8575	238.8575	0.0773	0.0000	240.7887
Total	**0.0667**	**1.3234**	**1.6030**	**2.7200e-003**	**0.1390**	**8.8100e-003**	**0.1478**	**0.0255**	**8.8100e-003**	**0.0343**	**0.0000**	**238.8575**	**238.8575**	**0.0773**	**0.0000**	**240.7887**

Mitigated Construction Off-Site

	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					
Hauling	8.5200e-003	0.2833	0.0661	8.8000e-004	0.0196	8.2000e-004	0.0204	5.3800e-003	7.9000e-004	6.1700e-003	0.0000	85.6913	85.6913	3.8500e-003	0.0000	85.7876
Vendor	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	0.0000	0.0000
Worker	2.8500e-003	1.8900e-003	0.0208	7.0000e-005	7.8500e-003	5.0000e-005	7.9000e-003	2.0900e-003	4.0000e-005	2.1300e-003	0.0000	6.2637	6.2637	1.3000e-004	0.0000	6.2670
Total	**0.0114**	**0.2852**	**0.0869**	**9.5000e-004**	**0.0274**	**8.7000e-004**	**0.0283**	**7.4700e-003**	**8.3000e-004**	**8.3000e-003**	**0.0000**	**91.9550**	**91.9550**	**3.9800e-003**	**0.0000**	**92.0546**

3.4 Trenching - 2022

Unmitigated Construction On-Site

	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					
Off-Road	0.0216	0.2198	0.3380	5.0000e-004		0.0106	0.0106		9.7200e-003	9.7200e-003	0.0000	44.2324	44.2324	0.0143	0.0000	44.5900
Total	**0.0216**	**0.2198**	**0.3380**	**5.0000e-004**		**0.0106**	**0.0106**		**9.7200e-003**	**9.7200e-003**	**0.0000**	**44.2324**	**44.2324**	**0.0143**	**0.0000**	**44.5900**

Unmitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	1.0400e-003	6.9000e-004	7.5700e-003	3.0000e-005	2.8600e-003	2.0000e-005	2.8700e-003	7.6000e-004	2.0000e-005	7.8000e-004	0.0000	2.2777	2.2777	5.0000e-005	0.0000	2.2789
Total	**1.0400e-003**	**6.9000e-004**	**7.5700e-003**	**3.0000e-005**	**2.8600e-003**	**2.0000e-005**	**2.8700e-003**	**7.6000e-004**	**2.0000e-005**	**7.8000e-004**	**0.0000**	**2.2777**	**2.2777**	**5.0000e-005**	**0.0000**	**2.2789**

Mitigated Construction On-Site

	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					

Off-Road	0.0124	0.2642	0.3808	5.0000e-004		2.4600e-003	2.4600e-003		2.4600e-003	2.4600e-003	0.0000	44.2323	44.2323	0.0143	0.0000	44.5900
Total	**0.0124**	**0.2642**	**0.3808**	**5.0000e-004**		**2.4600e-003**	**2.4600e-003**		**2.4600e-003**	**2.4600e-003**	**0.0000**	**44.2323**	**44.2323**	**0.0143**	**0.0000**	**44.5900**

Mitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	1.0400e-003	6.9000e-004	7.5700e-003	3.0000e-005	2.8600e-003	2.0000e-005	2.8700e-003	7.6000e-004	2.0000e-005	7.8000e-004	0.0000	2.2777	2.2777	5.0000e-005	0.0000	2.2789
Total	**1.0400e-003**	**6.9000e-004**	**7.5700e-003**	**3.0000e-005**	**2.8600e-003**	**2.0000e-005**	**2.8700e-003**	**7.6000e-004**	**2.0000e-005**	**7.8000e-004**	**0.0000**	**2.2777**	**2.2777**	**5.0000e-005**	**0.0000**	**2.2789**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	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					
Off-Road	0.2733	2.3669	2.6067	4.1300e-003		0.1171	0.1171		0.1102	0.1102	0.0000	350.3490	350.3490	0.0896	0.0000	352.5902
Total	**0.2733**	**2.3669**	**2.6067**	**4.1300e-003**		**0.1171**	**0.1171**		**0.1102**	**0.1102**	**0.0000**	**350.3490**	**350.3490**	**0.0896**	**0.0000**	**352.5902**

Unmitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	0.0277	0.8843	0.2345	2.4300e-003	0.0599	1.8000e-003	0.0617	0.0173	1.7200e-003	0.0190	0.0000	233.5515	233.5515	9.8100e-003	0.0000	233.7968
Worker	0.1216	0.0810	0.8895	2.9600e-003	0.3355	2.0600e-003	0.3376	0.0892	1.9000e-003	0.0911	0.0000	267.6579	267.6579	5.6700e-003	0.0000	267.7996
Total	**0.1493**	**0.9652**	**1.1240**	**5.3900e-003**	**0.3954**	**3.8600e-003**	**0.3993**	**0.1066**	**3.6200e-003**	**0.1102**	**0.0000**	**501.2094**	**501.2094**	**0.0155**	**0.0000**	**501.5963**

Mitigated Construction On-Site

	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					
Off-Road	0.1125	2.1952	2.8536	4.1300e-003		0.0194	0.0194		0.0194	0.0194	0.0000	350.3486	350.3486	0.0896	0.0000	352.5897
Total	**0.1125**	**2.1952**	**2.8536**	**4.1300e-003**		**0.0194**	**0.0194**		**0.0194**	**0.0194**	**0.0000**	**350.3486**	**350.3486**	**0.0896**	**0.0000**	**352.5897**

Mitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	0.0277	0.8843	0.2345	2.4300e-003	0.0599	1.8000e-003	0.0617	0.0173	1.7200e-003	0.0190	0.0000	233.5515	233.5515	9.8100e-003	0.0000	233.7968
Worker	0.1216	0.0810	0.8895	2.9600e-003	0.3355	2.0600e-003	0.3376	0.0892	1.9000e-003	0.0911	0.0000	267.6579	267.6579	5.6700e-003	0.0000	267.7996
Total	**0.1493**	**0.9652**	**1.1240**	**5.3900e-003**	**0.3954**	**3.8600e-003**	**0.3993**	**0.1066**	**3.6200e-003**	**0.1102**	**0.0000**	**501.2094**	**501.2094**	**0.0155**	**0.0000**	**501.5963**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	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					
Off-Road	0.0115	0.0999	0.1185	1.9000e-004		4.7100e-003	4.7100e-003		4.4300e-003	4.4300e-003	0.0000	16.0294	16.0294	4.0700e-003	0.0000	16.1311
Total	**0.0115**	**0.0999**	**0.1185**	**1.9000e-004**		**4.7100e-003**	**4.7100e-003**		**4.4300e-003**	**4.4300e-003**	**0.0000**	**16.0294**	**16.0294**	**4.0700e-003**	**0.0000**	**16.1311**

Unmitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	9.6000e-004	0.0307	9.6400e-003	1.1000e-004	2.7400e-003	4.0000e-005	2.7800e-003	7.9000e-004	3.0000e-005	8.3000e-004	0.0000	10.3816	10.3816	3.8000e-004	0.0000	10.3911
Worker	5.2100e-003	3.3300e-003	0.0374	1.3000e-004	0.0154	9.0000e-005	0.0154	4.0800e-003	9.0000e-005	4.1700e-003	0.0000	11.7806	11.7806	2.3000e-004	0.0000	11.7864

Total	**6.1700e-003**	**0.0340**	**0.0471**	**2.4000e-004**	**0.0181**	**1.3000e-004**	**0.0182**	**4.8700e-003**	**1.2000e-004**	**5.0000e-003**	**0.0000**	**22.1622**	**22.1622**	**6.1000e-004**	**0.0000**	**22.1776**

Mitigated Construction On-Site

	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					
Off-Road	5.1500e-003	0.1004	0.1306	1.9000e-004		8.9000e-004	8.9000e-004		8.9000e-004	8.9000e-004	0.0000	16.0294	16.0294	4.0700e-003	0.0000	16.1311
Total	**5.1500e-003**	**0.1004**	**0.1306**	**1.9000e-004**		**8.9000e-004**	**8.9000e-004**		**8.9000e-004**	**8.9000e-004**	**0.0000**	**16.0294**	**16.0294**	**4.0700e-003**	**0.0000**	**16.1311**

Mitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	9.6000e-004	0.0307	9.6400e-003	1.1000e-004	2.7400e-003	4.0000e-005	2.7800e-003	7.9000e-004	3.0000e-005	8.3000e-004	0.0000	10.3816	10.3816	3.8000e-004	0.0000	10.3911
Worker	5.2100e-003	3.3300e-003	0.0374	1.3000e-004	0.0154	9.0000e-005	0.0154	4.0800e-003	9.0000e-005	4.1700e-003	0.0000	11.7806	11.7806	2.3000e-004	0.0000	11.7864
Total	**6.1700e-003**	**0.0340**	**0.0471**	**2.4000e-004**	**0.0181**	**1.3000e-004**	**0.0182**	**4.8700e-003**	**1.2000e-004**	**5.0000e-003**	**0.0000**	**22.1622**	**22.1622**	**6.1000e-004**	**0.0000**	**22.1776**

3.6 Architectural Coating - 2022

Unmitigated Construction On-Site

	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					
Archit. Coating	1.8553					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0196	0.1841	0.1772	3.2000e-004		8.9500e-003	8.9500e-003		8.4900e-003	8.4900e-003	0.0000	28.3140	28.3140	6.6600e-003	0.0000	28.4804
Total	**1.8749**	**0.1841**	**0.1772**	**3.2000e-004**		**8.9500e-003**	**8.9500e-003**		**8.4900e-003**	**8.4900e-003**	**0.0000**	**28.3140**	**28.3140**	**6.6600e-003**	**0.0000**	**28.4804**

Unmitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	0.0104	6.9000e-003	0.0759	2.5000e-004	0.0286	1.8000e-004	0.0288	7.6100e-003	1.6000e-004	7.7700e-003	0.0000	22.8244	22.8244	4.8000e-004	0.0000	22.8365
Total	**0.0104**	**6.9000e-003**	**0.0759**	**2.5000e-004**	**0.0286**	**1.8000e-004**	**0.0288**	**7.6100e-003**	**1.6000e-004**	**7.7700e-003**	**0.0000**	**22.8244**	**22.8244**	**4.8000e-004**	**0.0000**	**22.8365**

Mitigated Construction On-Site

	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					

Archit. Coating	1.8553					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.4700e-003	0.1613	0.2061	3.2000e-004		1.4500e-003	1.4500e-003		1.4500e-003	1.4500e-003	0.0000	28.3140	28.3140	6.6600e-003	0.0000	28.4804
Total	**1.8627**	**0.1613**	**0.2061**	**3.2000e-004**		**1.4500e-003**	**1.4500e-003**		**1.4500e-003**	**1.4500e-003**	**0.0000**	**28.3140**	**28.3140**	**6.6600e-003**	**0.0000**	**28.4804**

Mitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	0.0104	6.9000e-003	0.0759	2.5000e-004	0.0286	1.8000e-004	0.0288	7.6100e-003	1.6000e-004	7.7700e-003	0.0000	22.8244	22.8244	4.8000e-004	0.0000	22.8365
Total	**0.0104**	**6.9000e-003**	**0.0759**	**2.5000e-004**	**0.0286**	**1.8000e-004**	**0.0288**	**7.6100e-003**	**1.6000e-004**	**7.7700e-003**	**0.0000**	**22.8244**	**22.8244**	**4.8000e-004**	**0.0000**	**22.8365**

3.6 Architectural Coating - 2023

Unmitigated Construction On-Site

	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					
Archit. Coating	2.1407					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0211	0.1953	0.2027	3.7000e-004		9.1000e-003	9.1000e-003		8.6200e-003	8.6200e-003	0.0000	32.6698	32.6698	7.6200e-003	0.0000	32.8603
Total	**2.1618**	**0.1953**	**0.2027**	**3.7000e-004**		**9.1000e-003**	**9.1000e-003**		**8.6200e-003**	**8.6200e-003**	**0.0000**	**32.6698**	**32.6698**	**7.6200e-003**	**0.0000**	**32.8603**

Unmitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	0.0112	7.1600e-003	0.0805	2.8000e-004	0.0330	2.0000e-004	0.0332	8.7800e-003	1.8000e-004	8.9600e-003	0.0000	25.3355	25.3355	5.0000e-004	0.0000	25.3480
Total	**0.0112**	**7.1600e-003**	**0.0805**	**2.8000e-004**	**0.0330**	**2.0000e-004**	**0.0332**	**8.7800e-003**	**1.8000e-004**	**8.9600e-003**	**0.0000**	**25.3355**	**25.3355**	**5.0000e-004**	**0.0000**	**25.3480**

Mitigated Construction On-Site

	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					
Archit. Coating	2.1407					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.6200e-003	0.1861	0.2378	3.7000e-004		1.6700e-003	1.6700e-003		1.6700e-003	1.6700e-003	0.0000	32.6698	32.6698	7.6200e-003	0.0000	32.8603
Total	**2.1493**	**0.1861**	**0.2378**	**3.7000e-004**		**1.6700e-003**	**1.6700e-003**		**1.6700e-003**	**1.6700e-003**	**0.0000**	**32.6698**	**32.6698**	**7.6200e-003**	**0.0000**	**32.8603**

Mitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	0.0112	7.1600e-003	0.0805	2.8000e-004	0.0330	2.0000e-004	0.0332	8.7800e-003	1.8000e-004	8.9600e-003	0.0000	25.3355	25.3355	5.0000e-004	0.0000	25.3480
Total	**0.0112**	**7.1600e-003**	**0.0805**	**2.8000e-004**	**0.0330**	**2.0000e-004**	**0.0332**	**8.7800e-003**	**1.8000e-004**	**8.9600e-003**	**0.0000**	**25.3355**	**25.3355**	**5.0000e-004**	**0.0000**	**25.3480**

3.7 Paving - 2023

Unmitigated Construction On-Site

	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					
Off-Road	0.0297	0.2902	0.3824	5.7000e-004		0.0154	0.0154		0.0142	0.0142	0.0000	50.0041	50.0041	0.0160	0.0000	50.4035
Paving	5.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0298**	**0.2902**	**0.3824**	**5.7000e-004**		**0.0154**	**0.0154**		**0.0142**	**0.0142**	**0.0000**	**50.0041**	**50.0041**	**0.0160**	**0.0000**	**50.4035**

Unmitigated Construction Off-Site

	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					
Hauling	2.5000e-004	8.0800e-003	2.6000e-003	4.0000e-005	8.5000e-004	1.0000e-005	8.6000e-004	2.3000e-004	1.0000e-005	2.5000e-004	0.0000	3.5713	3.5713	1.5000e-004	0.0000	3.5751
Vendor	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	0.0000	0.0000
Worker	1.4500e-003	9.3000e-004	0.0105	4.0000e-005	4.2800e-003	3.0000e-005	4.3100e-003	1.1400e-003	2.0000e-005	1.1600e-003	0.0000	3.2868	3.2868	6.0000e-005	0.0000	3.2884

Total	**1.7000e-003**	**9.0100e-003**	**0.0131**	**8.0000e-005**	**5.1300e-003**	**4.0000e-005**	**5.1700e-003**	**1.3700e-003**	**3.0000e-005**	**1.4100e-003**	**0.0000**	**6.8581**	**6.8581**	**2.1000e-004**	**0.0000**	**6.8635**

Mitigated Construction On-Site

	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					
Off-Road	0.0137	0.2907	0.4231	5.7000e-004		2.6500e-003	2.6500e-003		2.6500e-003	2.6500e-003	0.0000	50.0041	50.0041	0.0160	0.0000	50.4034
Paving	5.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0138**	**0.2907**	**0.4231**	**5.7000e-004**		**2.6500e-003**	**2.6500e-003**		**2.6500e-003**	**2.6500e-003**	**0.0000**	**50.0041**	**50.0041**	**0.0160**	**0.0000**	**50.4034**

Mitigated Construction Off-Site

	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					
Hauling	2.5000e-004	8.0800e-003	2.6000e-003	4.0000e-005	8.5000e-004	1.0000e-005	8.6000e-004	2.3000e-004	1.0000e-005	2.5000e-004	0.0000	3.5713	3.5713	1.5000e-004	0.0000	3.5751
Vendor	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	0.0000	0.0000
Worker	1.4500e-003	9.3000e-004	0.0105	4.0000e-005	4.2800e-003	3.0000e-005	4.3100e-003	1.1400e-003	2.0000e-005	1.1600e-003	0.0000	3.2868	3.2868	6.0000e-005	0.0000	3.2884
Total	**1.7000e-003**	**9.0100e-003**	**0.0131**	**8.0000e-005**	**5.1300e-003**	**4.0000e-005**	**5.1700e-003**	**1.3700e-003**	**3.0000e-005**	**1.4100e-003**	**0.0000**	**6.8581**	**6.8581**	**2.1000e-004**	**0.0000**	**6.8635**

Gateway Crossings, Phase 5,Mitigated Criteria Emissions

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	339.00	Space	0.00	142,500.00	0
Hotel	225.00	Room	21.40	182,000.00	0
Strip Mall	5.20	1000sqft	0.00	5,200.00	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 - PG&E used to represent SVP (Silicon Valley Power).CO2 emission factor from City of Santa Clara 2020 Climate Action Plan

Land Use - Land Use Sizes frim construction infromation provided by project applicant

Construction Phase - Applicant provided construction schedule

Off-road Equipment -

Off-road Equipment - Aoolicant provided information

Off-road Equipment - applicant provided information

Off-road Equipment - Applicant provided euqipment information

Off-road Equipment - Applicant provided information

Off-road Equipment - Applicant provided construction information

Off-road Equipment - Applicant provided equipment information

Trips and VMT - 100 paving trips based on 800 cy of asphalt hauled

Grading - 7585 cy of soil off haul

Architectural Coating -

Vehicle Trips - trip rates from TIA

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves -

Area Coating -

Landscape Equipment -

Energy Use - default 2013, title 24 values used

Construction Off-road Equipment Mitigation - Best Management Practices, tier 3 DPF Level 3

Area Mitigation -

Energy Mitigation - title 24, 2016 values became effective on 1st January ,2017

Stationary Sources - Emergency Generators and Fire Pumps - 100 kw generator in the garage

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	100	150
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	150	100
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
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tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00

tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
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tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblGrading	MaterialExported	0.00	7,585.00
tblLandUse	BuildingSpaceSquareFeet	135,600.00	142,500.00
tblLandUse	BuildingSpaceSquareFeet	326,700.00	182,000.00
tblLandUse	LandUseSquareFeet	135,600.00	142,500.00
tblLandUse	LandUseSquareFeet	326,700.00	182,000.00
tblLandUse	LotAcreage	3.05	0.00
tblLandUse	LotAcreage	7.50	21.40
tblLandUse	LotAcreage	0.12	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	380
tblProjectCharacteristics	OperationalYear	2018	2026
tblTripsAndVMT	HaulingTripNumber	0.00	100.00

tblVehicleTrips	ST_TR	8.19	8.82
tblVehicleTrips	ST_TR	42.04	28.95
tblVehicleTrips	SU_TR	5.95	6.40
tblVehicleTrips	SU_TR	20.43	14.83
tblVehicleTrips	WD_TR	8.17	8.79
tblVehicleTrips	WD_TR	44.32	30.52

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	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
Year	tons/yr										MT/yr					
2024	0.9457	4.5606	5.0768	0.0109	0.4504	0.1795	0.6299	0.1586	0.1680	0.3266	0.0000	958.6107	958.6107	0.1886	0.0000	963.3245
2025	0.7441	1.4996	2.0198	3.9800e-003	0.0742	0.0592	0.1334	0.0201	0.0555	0.0756	0.0000	348.9968	348.9968	0.0677	0.0000	350.6887
Maximum	**0.9457**	**4.5606**	**5.0768**	**0.0109**	**0.4504**	**0.1795**	**0.6299**	**0.1586**	**0.1680**	**0.3266**	**0.0000**	**958.6107**	**958.6107**	**0.1886**	**0.0000**	**963.3245**

Mitigated Construction

	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
Year	tons/yr										MT/yr					
2024	0.7065	4.6441	5.7280	0.0109	0.3042	0.0358	0.3399	0.0745	0.0357	0.1102	0.0000	958.6099	958.6099	0.1886	0.0000	963.3236
2025	0.6679	1.7057	2.2165	3.9800e-003	0.0742	0.0143	0.0885	0.0201	0.0142	0.0343	0.0000	348.9965	348.9965	0.0677	0.0000	350.6884

Maximum	**0.7065**	**4.6441**	**5.7280**	**0.0109**	**0.3042**	**0.0358**	**0.3399**	**0.0745**	**0.0357**	**0.1102**	**0.0000**	**958.6099**	**958.6099**	**0.1886**	**0.0000**	**963.3236**

	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	**18.66**	**-4.78**	**-11.95**	**0.00**	**27.88**	**79.04**	**43.88**	**47.08**	**77.67**	**64.08**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**1-1-2024**	**3-31-2024**	1.6168	1.4771
2	**4-1-2024**	**6-30-2024**	1.0781	1.0765
3	**7-1-2024**	**9-30-2024**	1.2284	1.2261
4	**10-1-2024**	**12-31-2024**	1.5327	1.5290
5	**1-1-2025**	**3-31-2025**	1.4101	1.4923
6	**4-1-2025**	**6-30-2025**	0.7438	0.7838
7	**7-1-2025**	**9-30-2025**	0.0654	0.0713
		Highest	1.6168	1.5290

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2024	1/26/2024	5	20	
2	Grading	Grading	1/27/2024	2/23/2024	5	20	
3	Trenching	Trenching	1/27/2024	2/23/2024	5	20	
4	Building Construction	Building Construction	2/26/2024	4/18/2025	5	300	
5	Architectural Coating	Architectural Coating	9/2/2024	6/6/2025	5	200	
6	Paving	Paving	4/28/2025	7/18/2025	5	60	

Acres of Grading (Site Preparation Phase): 80

Acres of Grading (Grading Phase): 80

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 280,800; Non-Residential Outdoor: 93,600; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	2	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Scrapers	3	8.00	367	0.48
Site Preparation	Skid Steer Loaders	1	8.00	65	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	2	8.00	187	0.41
Grading	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	3	8.00	367	0.48
Grading	Skid Steer Loaders	1	8.00	65	0.37
Grading	Sweepers/Scrubbers	1	8.00	64	0.46
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Trenching	Excavators	2	8.00	158	0.38
Trenching	Rough Terrain Forklifts	1	8.00	100	0.40
Trenching	Skid Steer Loaders	1	8.00	65	0.37
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Trenching	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Aerial Lifts	3	5.30	63	0.31
Building Construction	Cranes	1	4.30	231	0.29
Building Construction	Forklifts	4	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Other Construction Equipment	3	8.00	172	0.42
Building Construction	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Welders	4	8.00	46	0.45
Architectural Coating	Aerial Lifts	1	4.80	63	0.31
Architectural Coating	Air Compressors	2	2.40	78	0.48
Architectural Coating	Cranes	1	2.40	231	0.29

Architectural Coating	Forklifts	1	4.80	89	0.20
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Sweepers/Scrubbers	1	8.00	64	0.46
Paving	Tractors/Loaders/Backhoes	1	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
Site Preparation	9	23.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	13	33.00	0.00	948.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	17	138.00	54.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	5	28.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	100.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Site Preparation - 2024

Unmitigated Construction On-Site

	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					
Fugitive Dust					0.1629	0.0000	0.1629	0.0708	0.0000	0.0708	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0459	0.4793	0.3110	8.1000e-004		0.0192	0.0192		0.0176	0.0176	0.0000	71.1651	71.1651	0.0230	0.0000	71.7405
Total	**0.0459**	**0.4793**	**0.3110**	**8.1000e-004**	**0.1629**	**0.0192**	**0.1820**	**0.0708**	**0.0176**	**0.0884**	**0.0000**	**71.1651**	**71.1651**	**0.0230**	**0.0000**	**71.7405**

Unmitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	5.8000e-004	3.6000e-004	4.1300e-003	1.0000e-005	1.8200e-003	1.0000e-005	1.8300e-003	4.9000e-004	1.0000e-005	5.0000e-004	0.0000	1.3449	1.3449	2.0000e-005	0.0000	1.3456
Total	**5.8000e-004**	**3.6000e-004**	**4.1300e-003**	**1.0000e-005**	**1.8200e-003**	**1.0000e-005**	**1.8300e-003**	**4.9000e-004**	**1.0000e-005**	**5.0000e-004**	**0.0000**	**1.3449**	**1.3449**	**2.0000e-005**	**0.0000**	**1.3456**

Mitigated Construction On-Site

	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					
Fugitive Dust					0.0733	0.0000	0.0733	0.0159	0.0000	0.0159	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Off-Road	0.0199	0.3888	0.4424	8.1000e-004		2.3500e-003	2.3500e-003		2.3500e-003	2.3500e-003	0.0000	71.1650	71.1650	0.0230	0.0000	71.7404
Total	**0.0199**	**0.3888**	**0.4424**	**8.1000e-004**	**0.0733**	**2.3500e-003**	**0.0756**	**0.0159**	**2.3500e-003**	**0.0183**	**0.0000**	**71.1650**	**71.1650**	**0.0230**	**0.0000**	**71.7404**

Mitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	5.8000e-004	3.6000e-004	4.1300e-003	1.0000e-005	1.8200e-003	1.0000e-005	1.8300e-003	4.9000e-004	1.0000e-005	5.0000e-004	0.0000	1.3449	1.3449	2.0000e-005	0.0000	1.3456
Total	**5.8000e-004**	**3.6000e-004**	**4.1300e-003**	**1.0000e-005**	**1.8200e-003**	**1.0000e-005**	**1.8300e-003**	**4.9000e-004**	**1.0000e-005**	**5.0000e-004**	**0.0000**	**1.3449**	**1.3449**	**2.0000e-005**	**0.0000**	**1.3456**

3.3 Grading - 2024

Unmitigated Construction On-Site

	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					
Fugitive Dust					0.1031	0.0000	0.1031	0.0378	0.0000	0.0378	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0472	0.4826	0.4011	9.1000e-004		0.0199	0.0199		0.0183	0.0183	0.0000	79.5839	79.5839	0.0257	0.0000	80.2274
Total	**0.0472**	**0.4826**	**0.4011**	**9.1000e-004**	**0.1031**	**0.0199**	**0.1230**	**0.0378**	**0.0183**	**0.0561**	**0.0000**	**79.5839**	**79.5839**	**0.0257**	**0.0000**	**80.2274**

Unmitigated Construction Off-Site

	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					
Hauling	2.3700e-003	0.0749	0.0248	3.5000e-004	8.0400e-003	1.4000e-004	8.1800e-003	2.2100e-003	1.3000e-004	2.3400e-003	0.0000	33.6040	33.6040	1.4200e-003	0.0000	33.6395
Vendor	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	0.0000	0.0000
Worker	8.4000e-004	5.1000e-004	5.9200e-003	2.0000e-005	2.6200e-003	2.0000e-005	2.6300e-003	7.0000e-004	1.0000e-005	7.1000e-004	0.0000	1.9297	1.9297	4.0000e-005	0.0000	1.9306
Total	**3.2100e-003**	**0.0755**	**0.0307**	**3.7000e-004**	**0.0107**	**1.6000e-004**	**0.0108**	**2.9100e-003**	**1.4000e-004**	**3.0500e-003**	**0.0000**	**35.5337**	**35.5337**	**1.4600e-003**	**0.0000**	**35.5701**

Mitigated Construction On-Site

	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					
Fugitive Dust					0.0464	0.0000	0.0464	8.4900e-003	0.0000	8.4900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0222	0.4411	0.5343	9.1000e-004		2.9400e-003	2.9400e-003		2.9400e-003	2.9400e-003	0.0000	79.5838	79.5838	0.0257	0.0000	80.2273
Total	**0.0222**	**0.4411**	**0.5343**	**9.1000e-004**	**0.0464**	**2.9400e-003**	**0.0493**	**8.4900e-003**	**2.9400e-003**	**0.0114**	**0.0000**	**79.5838**	**79.5838**	**0.0257**	**0.0000**	**80.2273**

Mitigated Construction Off-Site

	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					

Hauling	2.3700e-003	0.0749	0.0248	3.5000e-004	8.0400e-003	1.4000e-004	8.1800e-003	2.2100e-003	1.3000e-004	2.3400e-003	0.0000	33.6040	33.6040	1.4200e-003	0.0000	33.6395
Vendor	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	0.0000	0.0000
Worker	8.4000e-004	5.1000e-004	5.9200e-003	2.0000e-005	2.6200e-003	2.0000e-005	2.6300e-003	7.0000e-004	1.0000e-005	7.1000e-004	0.0000	1.9297	1.9297	4.0000e-005	0.0000	1.9306
Total	**3.2100e-003**	**0.0755**	**0.0307**	**3.7000e-004**	**0.0107**	**1.6000e-004**	**0.0108**	**2.9100e-003**	**1.4000e-004**	**3.0500e-003**	**0.0000**	**35.5337**	**35.5337**	**1.4600e-003**	**0.0000**	**35.5701**

3.4 Trenching - 2024

Unmitigated Construction On-Site

	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					
Off-Road	9.5700e-003	0.0933	0.1691	2.5000e-004		4.0500e-003	4.0500e-003		3.7300e-003	3.7300e-003	0.0000	22.1365	22.1365	7.1600e-003	0.0000	22.3155
Total	**9.5700e-003**	**0.0933**	**0.1691**	**2.5000e-004**		**4.0500e-003**	**4.0500e-003**		**3.7300e-003**	**3.7300e-003**	**0.0000**	**22.1365**	**22.1365**	**7.1600e-003**	**0.0000**	**22.3155**

Unmitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	4.6000e-004	2.8000e-004	3.2300e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.0526	1.0526	2.0000e-005	0.0000	1.0530
Total	**4.6000e-004**	**2.8000e-004**	**3.2300e-003**	**1.0000e-005**	**1.4300e-003**	**1.0000e-005**	**1.4400e-003**	**3.8000e-004**	**1.0000e-005**	**3.9000e-004**	**0.0000**	**1.0526**	**1.0526**	**2.0000e-005**	**0.0000**	**1.0530**

Mitigated Construction On-Site

	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					
Off-Road	6.1800e-003	0.1321	0.1904	2.5000e-004		1.2300e-003	1.2300e-003		1.2300e-003	1.2300e-003	0.0000	22.1365	22.1365	7.1600e-003	0.0000	22.3155
Total	**6.1800e-003**	**0.1321**	**0.1904**	**2.5000e-004**		**1.2300e-003**	**1.2300e-003**		**1.2300e-003**	**1.2300e-003**	**0.0000**	**22.1365**	**22.1365**	**7.1600e-003**	**0.0000**	**22.3155**

Mitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	4.6000e-004	2.8000e-004	3.2300e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.0526	1.0526	2.0000e-005	0.0000	1.0530
Total	**4.6000e-004**	**2.8000e-004**	**3.2300e-003**	**1.0000e-005**	**1.4300e-003**	**1.0000e-005**	**1.4400e-003**	**3.8000e-004**	**1.0000e-005**	**3.9000e-004**	**0.0000**	**1.0526**	**1.0526**	**2.0000e-005**	**0.0000**	**1.0530**

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	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					
Off-Road	0.3321	2.8430	3.5826	5.6600e-003		0.1293	0.1293		0.1216	0.1216	0.0000	479.8372	479.8372	0.1189	0.0000	482.8107
Total	**0.3321**	**2.8430**	**3.5826**	**5.6600e-003**		**0.1293**	**0.1293**		**0.1216**	**0.1216**	**0.0000**	**479.8372**	**479.8372**	**0.1189**	**0.0000**	**482.8107**

Unmitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	0.0133	0.4357	0.1339	1.5400e-003	0.0394	5.1000e-004	0.0400	0.0114	4.9000e-004	0.0119	0.0000	148.4057	148.4057	5.3900e-003	0.0000	148.5404
Worker	0.0388	0.0238	0.2748	9.9000e-004	0.1215	7.2000e-004	0.1222	0.0323	6.6000e-004	0.0330	0.0000	89.5725	89.5725	1.6600e-003	0.0000	89.6139
Total	**0.0521**	**0.4595**	**0.4087**	**2.5300e-003**	**0.1609**	**1.2300e-003**	**0.1622**	**0.0437**	**1.1500e-003**	**0.0449**	**0.0000**	**237.9782**	**237.9782**	**7.0500e-003**	**0.0000**	**238.1543**

Mitigated Construction On-Site

	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					
Off-Road	0.1553	3.0145	3.9248	5.6600e-003		0.0266	0.0266		0.0266	0.0266	0.0000	479.8367	479.8367	0.1189	0.0000	482.8101

Total	**0.1553**	**3.0145**	**3.9248**	**5.6600e-003**		**0.0266**	**0.0266**		**0.0266**	**0.0266**	**0.0000**	**479.8367**	**479.8367**	**0.1189**	**0.0000**	**482.8101**

Mitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	0.0133	0.4357	0.1339	1.5400e-003	0.0394	5.1000e-004	0.0400	0.0114	4.9000e-004	0.0119	0.0000	148.4057	148.4057	5.3900e-003	0.0000	148.5404
Worker	0.0388	0.0238	0.2748	9.9000e-004	0.1215	7.2000e-004	0.1222	0.0323	6.6000e-004	0.0330	0.0000	89.5725	89.5725	1.6600e-003	0.0000	89.6139
Total	**0.0521**	**0.4595**	**0.4087**	**2.5300e-003**	**0.1609**	**1.2300e-003**	**0.1622**	**0.0437**	**1.1500e-003**	**0.0449**	**0.0000**	**237.9782**	**237.9782**	**7.0500e-003**	**0.0000**	**238.1543**

3.5 Building Construction - 2025

Unmitigated Construction On-Site

	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					
Off-Road	0.1076	0.9124	1.2527	1.9900e-003		0.0393	0.0393		0.0369	0.0369	0.0000	168.6424	168.6424	0.0415	0.0000	169.6805
Total	**0.1076**	**0.9124**	**1.2527**	**1.9900e-003**		**0.0393**	**0.0393**		**0.0369**	**0.0369**	**0.0000**	**168.6424**	**168.6424**	**0.0415**	**0.0000**	**169.6805**

Unmitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	4.5500e-003	0.1510	0.0458	5.4000e-004	0.0139	1.8000e-004	0.0140	4.0100e-003	1.7000e-004	4.1700e-003	0.0000	51.8043	51.8043	1.8600e-003	0.0000	51.8507
Worker	0.0129	7.6100e-003	0.0895	3.3000e-004	0.0427	2.5000e-004	0.0429	0.0114	2.3000e-004	0.0116	0.0000	30.1987	30.1987	5.3000e-004	0.0000	30.2118
Total	**0.0175**	**0.1587**	**0.1353**	**8.7000e-004**	**0.0566**	**4.3000e-004**	**0.0570**	**0.0154**	**4.0000e-004**	**0.0158**	**0.0000**	**82.0029**	**82.0029**	**2.3900e-003**	**0.0000**	**82.0625**

Mitigated Construction On-Site

	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					
Off-Road	0.0546	1.0591	1.3790	1.9900e-003		9.3500e-003	9.3500e-003		9.3500e-003	9.3500e-003	0.0000	168.6422	168.6422	0.0415	0.0000	169.6803
Total	**0.0546**	**1.0591**	**1.3790**	**1.9900e-003**		**9.3500e-003**	**9.3500e-003**		**9.3500e-003**	**9.3500e-003**	**0.0000**	**168.6422**	**168.6422**	**0.0415**	**0.0000**	**169.6803**

Mitigated Construction Off-Site

	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					

Hauling	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	0.0000	0.0000
Vendor	4.5500e-003	0.1510	0.0458	5.4000e-004	0.0139	1.8000e-004	0.0140	4.0100e-003	1.7000e-004	4.1700e-003	0.0000	51.8043	51.8043	1.8600e-003	0.0000	51.8507
Worker	0.0129	7.6100e-003	0.0895	3.3000e-004	0.0427	2.5000e-004	0.0429	0.0114	2.3000e-004	0.0116	0.0000	30.1987	30.1987	5.3000e-004	0.0000	30.2118
Total	**0.0175**	**0.1587**	**0.1353**	**8.7000e-004**	**0.0566**	**4.3000e-004**	**0.0570**	**0.0154**	**4.0000e-004**	**0.0158**	**0.0000**	**82.0029**	**82.0029**	**2.3900e-003**	**0.0000**	**82.0625**

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

	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					
Archit. Coating	0.4376					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0140	0.1249	0.1444	2.6000e-004		5.5900e-003	5.5900e-003		5.3100e-003	5.3100e-003	0.0000	22.8564	22.8564	5.0200e-003	0.0000	22.9818
Total	**0.4515**	**0.1249**	**0.1444**	**2.6000e-004**		**5.5900e-003**	**5.5900e-003**		**5.3100e-003**	**5.3100e-003**	**0.0000**	**22.8564**	**22.8564**	**5.0200e-003**	**0.0000**	**22.9818**

Unmitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	3.0900e-003	1.8900e-003	0.0219	8.0000e-005	9.6600e-003	6.0000e-005	9.7200e-003	2.5700e-003	5.0000e-005	2.6200e-003	0.0000	7.1223	7.1223	1.3000e-004	0.0000	7.1256
Total	**3.0900e-003**	**1.8900e-003**	**0.0219**	**8.0000e-005**	**9.6600e-003**	**6.0000e-005**	**9.7200e-003**	**2.5700e-003**	**5.0000e-005**	**2.6200e-003**	**0.0000**	**7.1223**	**7.1223**	**1.3000e-004**	**0.0000**	**7.1256**

Mitigated Construction On-Site

	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					
Archit. Coating	0.4376					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.9800e-003	0.1301	0.1674	2.6000e-004		1.1900e-003	1.1900e-003		1.1900e-003	1.1900e-003	0.0000	22.8563	22.8563	5.0200e-003	0.0000	22.9818
Total	**0.4435**	**0.1301**	**0.1674**	**2.6000e-004**		**1.1900e-003**	**1.1900e-003**		**1.1900e-003**	**1.1900e-003**	**0.0000**	**22.8563**	**22.8563**	**5.0200e-003**	**0.0000**	**22.9818**

Mitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	3.0900e-003	1.8900e-003	0.0219	8.0000e-005	9.6600e-003	6.0000e-005	9.7200e-003	2.5700e-003	5.0000e-005	2.6200e-003	0.0000	7.1223	7.1223	1.3000e-004	0.0000	7.1256
Total	**3.0900e-003**	**1.8900e-003**	**0.0219**	**8.0000e-005**	**9.6600e-003**	**6.0000e-005**	**9.7200e-003**	**2.5700e-003**	**5.0000e-005**	**2.6200e-003**	**0.0000**	**7.1223**	**7.1223**	**1.3000e-004**	**0.0000**	**7.1256**

3.6 Architectural Coating - 2025

Unmitigated Construction On-Site

	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					
Archit. Coating	0.5683					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0171	0.1509	0.1866	3.4000e-004		6.4000e-003	6.4000e-003		6.0700e-003	6.0700e-003	0.0000	29.6873	29.6873	6.5000e-003	0.0000	29.8497
Total	**0.5854**	**0.1509**	**0.1866**	**3.4000e-004**		**6.4000e-003**	**6.4000e-003**		**6.0700e-003**	**6.0700e-003**	**0.0000**	**29.6873**	**29.6873**	**6.5000e-003**	**0.0000**	**29.8497**

Unmitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	3.7900e-003	2.2400e-003	0.0263	1.0000e-004	0.0126	7.0000e-005	0.0126	3.3400e-003	7.0000e-005	3.4000e-003	0.0000	8.8767	8.8767	1.5000e-004	0.0000	8.8806
Total	**3.7900e-003**	**2.2400e-003**	**0.0263**	**1.0000e-004**	**0.0126**	**7.0000e-005**	**0.0126**	**3.3400e-003**	**7.0000e-005**	**3.4000e-003**	**0.0000**	**8.8767**	**8.8767**	**1.5000e-004**	**0.0000**	**8.8806**

Mitigated Construction On-Site

	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					
Archit. Coating	0.5683					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Off-Road	7.7700e-003	0.1690	0.2175	3.4000e-004		1.5500e-003	1.5500e-003		1.5500e-003	1.5500e-003	0.0000	29.6872	29.6872	6.5000e-003	0.0000	29.8497
Total	**0.5761**	**0.1690**	**0.2175**	**3.4000e-004**		**1.5500e-003**	**1.5500e-003**		**1.5500e-003**	**1.5500e-003**	**0.0000**	**29.6872**	**29.6872**	**6.5000e-003**	**0.0000**	**29.8497**

Mitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	3.7900e-003	2.2400e-003	0.0263	1.0000e-004	0.0126	7.0000e-005	0.0126	3.3400e-003	7.0000e-005	3.4000e-003	0.0000	8.8767	8.8767	1.5000e-004	0.0000	8.8806
Total	**3.7900e-003**	**2.2400e-003**	**0.0263**	**1.0000e-004**	**0.0126**	**7.0000e-005**	**0.0126**	**3.3400e-003**	**7.0000e-005**	**3.4000e-003**	**0.0000**	**8.8767**	**8.8767**	**1.5000e-004**	**0.0000**	**8.8806**

3.7 Paving - 2025

Unmitigated Construction On-Site

	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					
Off-Road	0.0283	0.2670	0.4073	6.1000e-004		0.0130	0.0130		0.0120	0.0120	0.0000	53.2386	53.2386	0.0169	0.0000	53.6615
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0283**	**0.2670**	**0.4073**	**6.1000e-004**		**0.0130**	**0.0130**		**0.0120**	**0.0120**	**0.0000**	**53.2386**	**53.2386**	**0.0169**	**0.0000**	**53.6615**

Unmitigated Construction Off-Site

	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					
Hauling	2.5000e-004	7.7300e-003	2.6300e-003	4.0000e-005	8.5000e-004	1.0000e-005	8.6000e-004	2.3000e-004	1.0000e-005	2.5000e-004	0.0000	3.5189	3.5189	1.5000e-004	0.0000	3.5227
Vendor	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	0.0000	0.0000
Worker	1.2900e-003	7.6000e-004	8.9800e-003	3.0000e-005	4.2800e-003	3.0000e-005	4.3100e-003	1.1400e-003	2.0000e-005	1.1600e-003	0.0000	3.0300	3.0300	5.0000e-005	0.0000	3.0313
Total	**1.5400e-003**	**8.4900e-003**	**0.0116**	**7.0000e-005**	**5.1300e-003**	**4.0000e-005**	**5.1700e-003**	**1.3700e-003**	**3.0000e-005**	**1.4100e-003**	**0.0000**	**6.5489**	**6.5489**	**2.0000e-004**	**0.0000**	**6.5540**

Mitigated Construction On-Site

	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					
Off-Road	0.0145	0.3082	0.4469	6.1000e-004		2.8300e-003	2.8300e-003		2.8300e-003	2.8300e-003	0.0000	53.2385	53.2385	0.0169	0.0000	53.6614
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0145**	**0.3082**	**0.4469**	**6.1000e-004**		**2.8300e-003**	**2.8300e-003**		**2.8300e-003**	**2.8300e-003**	**0.0000**	**53.2385**	**53.2385**	**0.0169**	**0.0000**	**53.6614**

Mitigated Construction Off-Site

	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					

Hauling	2.5000e-004	7.7300e-003	2.6300e-003	4.0000e-005	8.5000e-004	1.0000e-005	8.6000e-004	2.3000e-004	1.0000e-005	2.5000e-004	0.0000	3.5189	3.5189	1.5000e-004	0.0000	3.5227
Vendor	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	0.0000	0.0000
Worker	1.2900e-003	7.6000e-004	8.9800e-003	3.0000e-005	4.2800e-003	3.0000e-005	4.3100e-003	1.1400e-003	2.0000e-005	1.1600e-003	0.0000	3.0300	3.0300	5.0000e-005	0.0000	3.0313
Total	**1.5400e-003**	**8.4900e-003**	**0.0116**	**7.0000e-005**	**5.1300e-003**	**4.0000e-005**	**5.1700e-003**	**1.3700e-003**	**3.0000e-005**	**1.4100e-003**	**0.0000**	**6.5489**	**6.5489**	**2.0000e-004**	**0.0000**	**6.5540**

Gateway Crossings, Phase 1, Criteria and Operational

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	261.00	Dwelling Unit	21.36	261,000.00	746
Strip Mall	5.30	1000sqft	0.00	5,300.00	0
Enclosed Parking with Elevator	485.00	Space	0.00	194,000.00	0
Parking Lot	4.00	Space	0.04	1,600.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2019
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 - PG&E rates used to represent SVP CO2 emission factor

Land Use - From applicant provided construction information

Construction Phase - Applicant provided construction schedule

Grading - 23542 cy soil off haul

Demolition - 272840 sf of building demolished

Trips and VMT - 800 cy of paving

Architectural Coating -

Vehicle Trips - trip rates from TIA

Woodstoves - no wood stoves or wood based fireplaces

Area Coating -

Energy Use - title 24, 2013 values used

Energy Mitigation - title 24 2016 values came into effect on 1st January 2017

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	100.00
tblConstructionPhase	NumDays	370.00	100.00
tblConstructionPhase	NumDays	35.00	40.00
tblConstructionPhase	NumDays	20.00	40.00
tblConstructionPhase	NumDays	10.00	20.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	39.15	261.00
tblFireplaces	NumberNoFireplace	10.44	0.00
tblFireplaces	NumberWood	44.37	0.00
tblGrading	MaterialExported	0.00	23,542.00
tblLandUse	LotAcreage	6.87	21.36
tblLandUse	LotAcreage	0.12	0.00
tblLandUse	LotAcreage	4.36	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	UsageHours	6.00	3.20
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	380
tblProjectCharacteristics	OperationalYear	2018	2019
tblTripsAndVMT	HaulingTripNumber	0.00	100.00
tblVehicleTrips	ST_TR	6.39	5.75
tblVehicleTrips	ST_TR	42.04	30.42
tblVehicleTrips	SU_TR	5.86	5.27
tblVehicleTrips	SU_TR	20.43	14.71
tblVehicleTrips	WD_TR	6.65	6.00
tblVehicleTrips	WD_TR	44.32	32.07
tblWoodstoves	NumberCatalytic	5.22	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	1.3066	0.0507	1.9641	2.8000e-004		0.0130	0.0130		0.0130	0.0130	0.0000	35.7575	35.7575	3.7600e-003	6.0000e-004	36.0294
Energy	0.0157	0.1337	0.0572	8.5000e-004		0.0108	0.0108		0.0108	0.0108	0.0000	588.9038	588.9038	0.0361	9.6900e-003	592.6945
Mobile	0.4985	2.0411	5.7415	0.0166	1.4029	0.0191	1.4220	0.3756	0.0179	0.3935	0.0000	1,520.4083	1,520.4083	0.0587	0.0000	1,521.8762

Waste						0.0000	0.0000		0.0000	0.0000	25.5018	0.0000	25.5018	1.5071	0.0000	63.1795
Water						0.0000	0.0000		0.0000	0.0000	5.5195	22.8391	28.3586	0.5687	0.0138	46.6713
Total	**1.8207**	**2.2256**	**7.7628**	**0.0178**	**1.4029**	**0.0428**	**1.4457**	**0.3756**	**0.0417**	**0.4173**	**31.0213**	**2,167.9087**	**2,198.9300**	**2.1743**	**0.0240**	**2,260.4509**

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	1.3066	0.0507	1.9641	2.8000e-004		0.0130	0.0130		0.0130	0.0130	0.0000	35.7575	35.7575	3.7600e-003	6.0000e-004	36.0294
Energy	0.0125	0.1069	0.0457	6.8000e-004		8.6400e-003	8.6400e-003		8.6400e-003	8.6400e-003	0.0000	515.4664	515.4664	0.0323	8.4500e-003	518.7923
Mobile	0.4985	2.0411	5.7415	0.0166	1.4029	0.0191	1.4220	0.3756	0.0179	0.3935	0.0000	1,520.4083	1,520.4083	0.0587	0.0000	1,521.8762
Waste						0.0000	0.0000		0.0000	0.0000	25.5018	0.0000	25.5018	1.5071	0.0000	63.1795
Water						0.0000	0.0000		0.0000	0.0000	5.5195	22.8391	28.3586	0.5687	0.0138	46.6713
Total	**1.8176**	**2.1987**	**7.7513**	**0.0176**	**1.4029**	**0.0407**	**1.4436**	**0.3756**	**0.0395**	**0.4151**	**31.0213**	**2,094.4713**	**2,125.4926**	**2.1705**	**0.0228**	**2,186.5487**

	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	**0.17**	**1.21**	**0.15**	**0.96**	**0.00**	**5.07**	**0.15**	**0.00**	**5.20**	**0.52**	**0.00**	**3.39**	**3.34**	**0.18**	**5.16**	**3.27**

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	0.4985	2.0411	5.7415	0.0166	1.4029	0.0191	1.4220	0.3756	0.0179	0.3935	0.0000	1,520.4083	1,520.4083	0.0587	0.0000	1,521.8762
Unmitigated	0.4985	2.0411	5.7415	0.0166	1.4029	0.0191	1.4220	0.3756	0.0179	0.3935	0.0000	1,520.4083	1,520.4083	0.0587	0.0000	1,521.8762

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,566.00	1,500.75	1375.47	3,532,452	3,532,452
Enclosed Parking with Elevator	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Strip Mall	169.97	161.23	77.96	239,595	239,595
Total	1,735.97	1,661.98	1,453.43	3,772,047	3,772,047

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 with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
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	0.601004	0.039123	0.186461	0.109772	0.016124	0.004965	0.012251	0.019838	0.002045	0.001602	0.005388	0.000616	0.000812
Strip Mall	0.601004	0.039123	0.186461	0.109772	0.016124	0.004965	0.012251	0.019838	0.002045	0.001602	0.005388	0.000616	0.000812

Enclosed Parking with Elevator	0.601004	0.039123	0.186461	0.109772	0.016124	0.004965	0.012251	0.019838	0.002045	0.001602	0.005388	0.000616	0.000812
Parking Lot	0.601004	0.039123	0.186461	0.109772	0.016124	0.004965	0.012251	0.019838	0.002045	0.001602	0.005388	0.000616	0.000812

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	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	391.6758	391.6758	0.0299	6.1800e-003	394.2660
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	434.0612	434.0612	0.0331	6.8500e-003	436.9317
NaturalGas Mitigated	0.0125	0.1069	0.0457	6.8000e-004		8.6400e-003	8.6400e-003		8.6400e-003	8.6400e-003	0.0000	123.7907	123.7907	2.3700e-003	2.2700e-003	124.5263
NaturalGas Unmitigated	0.0157	0.1337	0.0572	8.5000e-004		0.0108	0.0108		0.0108	0.0108	0.0000	154.8426	154.8426	2.9700e-003	2.8400e-003	155.7628

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	2.88903e+006	0.0156	0.1331	0.0567	8.5000e-004		0.0108	0.0108		0.0108	0.0108	0.0000	154.1695	154.1695	2.9500e-003	2.8300e-003	155.0857

Enclosed Parking with Elevator	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
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	12614	7.0000e-005	6.2000e-004	5.2000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.6731	0.6731	1.0000e-005	1.0000e-005	0.6771
Total		**0.0157**	**0.1337**	**0.0572**	**8.5000e-004**		**0.0108**	**0.0108**		**0.0108**	**0.0108**	**0.0000**	**154.8426**	**154.8426**	**2.9600e-003**	**2.8400e-003**	**155.7628**

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	2.31067e+006	0.0125	0.1065	0.0453	6.8000e-004		8.6100e-003	8.6100e-003		8.6100e-003	8.6100e-003	0.0000	123.3060	123.3060	2.3600e-003	2.2600e-003	124.0387
Enclosed Parking with Elevator	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
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	9082.08	5.0000e-005	4.5000e-004	3.7000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.4847	0.4847	1.0000e-005	1.0000e-005	0.4875
Total		**0.0125**	**0.1069**	**0.0457**	**6.8000e-004**		**8.6400e-003**	**8.6400e-003**		**8.6400e-003**	**8.6400e-003**	**0.0000**	**123.7906**	**123.7906**	**2.3700e-003**	**2.2700e-003**	**124.5263**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.15126e+006	198.4376	0.0151	3.1300e-003	199.7499
Enclosed Parking with Elevator	1.30756e+006	225.3777	0.0172	3.5600e-003	226.8682

Parking Lot	1408	0.2427	2.0000e-005	0.0000	0.2443
Strip Mall	58035	10.0032	7.6000e-004	1.6000e-004	10.0694
Total		**434.0612**	**0.0331**	**6.8500e-003**	**436.9317**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.12258e+006	193.4939	0.0148	3.0600e-003	194.7735
Enclosed Parking with Elevator	1.09463e+006	188.6753	0.0144	2.9800e-003	189.9230
Parking Lot	1408	0.2427	2.0000e-005	0.0000	0.2443
Strip Mall	53746.2	9.2640	7.1000e-004	1.5000e-004	9.3252
Total		**391.6758**	**0.0299**	**6.1900e-003**	**394.2660**

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	1.3066	0.0507	1.9641	2.8000e-004		0.0130	0.0130		0.0130	0.0130	0.0000	35.7575	35.7575	3.7600e-003	6.0000e-004	36.0294
Unmitigated	1.3066	0.0507	1.9641	2.8000e-004		0.0130	0.0130		0.0130	0.0130	0.0000	35.7575	35.7575	3.7600e-003	6.0000e-004	36.0294

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	0.1906					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.0527					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	3.2900e-003	0.0281	0.0120	1.8000e-004		2.2700e-003	2.2700e-003		2.2700e-003	2.2700e-003	0.0000	32.5831	32.5831	6.2000e-004	6.0000e-004	32.7767
Landscaping	0.0601	0.0226	1.9521	1.0000e-004		0.0107	0.0107		0.0107	0.0107	0.0000	3.1745	3.1745	3.1300e-003	0.0000	3.2527
Total	**1.3066**	**0.0507**	**1.9641**	**2.8000e-004**		**0.0130**	**0.0130**		**0.0130**	**0.0130**	**0.0000**	**35.7575**	**35.7575**	**3.7500e-003**	**6.0000e-004**	**36.0294**

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	0.1906					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.0527					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	3.2900e-003	0.0281	0.0120	1.8000e-004		2.2700e-003	2.2700e-003		2.2700e-003	2.2700e-003	0.0000	32.5831	32.5831	6.2000e-004	6.0000e-004	32.7767

Landscaping	0.0601	0.0226	1.9521	1.0000e-004		0.0107	0.0107		0.0107	0.0107	0.0000	3.1745	3.1745	3.1300e-003	0.0000	3.2527
Total	**1.3066**	**0.0507**	**1.9641**	**2.8000e-004**		**0.0130**	**0.0130**		**0.0130**	**0.0130**	**0.0000**	**35.7575**	**35.7575**	**3.7500e-003**	**6.0000e-004**	**36.0294**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	28.3586	0.5687	0.0138	46.6713
Unmitigated	28.3586	0.5687	0.0138	46.6713

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	17.0052 / 10.7207	27.7227	0.5558	0.0134	45.6222
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.392584 / 0.240616	0.6359	0.0128	3.1000e-004	1.0491

Total		**28.3586**	**0.5687**	**0.0138**	**46.6713**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	17.0052 / 10.7207	27.7227	0.5558	0.0134	45.6222
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.392584 / 0.240616	0.6359	0.0128	3.1000e-004	1.0491
Total		**28.3586**	**0.5687**	**0.0138**	**46.6713**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	25.5018	1.5071	0.0000	63.1795
Unmitigated	25.5018	1.5071	0.0000	63.1795

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	120.06	24.3711	1.4403	0.0000	60.3784
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	5.57	1.1307	0.0668	0.0000	2.8012
Total		**25.5018**	**1.5071**	**0.0000**	**63.1795**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	120.06	24.3711	1.4403	0.0000	60.3784
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	5.57	1.1307	0.0668	0.0000	2.8012
Total		**25.5018**	**1.5071**	**0.0000**	**63.1795**

Gateway Crossings, Phase1 +Phase 2 Operational

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	593.00	Dwelling Unit	21.30	738,000.00	1696
Strip Mall	5.30	1000sqft	0.00	5,300.00	0
Parking Lot	11.00	Space	0.10	4,400.00	0
Enclosed Parking with Elevator	1,110.00	Space	0.00	513,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2021

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 - PG&E used to represent SVP emission rates

Land Use - Applicant provided project information

Construction Phase - only operational emissions modeled

Off-road Equipment - only operational emissions modeled

Grading -

Demolition -

Trips and VMT -

Architectural Coating -

Vehicle Trips - project trip rates from TIA

Woodstoves - no woood based fireplaces or stoves

Energy Use - title 24 2013 values

Energy Mitigation - title 24 2016 came into effect on 1st January 2017

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	1.00
tblConstructionPhase	PhaseEndDate	6/9/2017	5/15/2017
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	88.95	593.00
tblFireplaces	NumberNoFireplace	23.72	0.00
tblFireplaces	NumberWood	100.81	0.00
tblLandUse	BuildingSpaceSquareFeet	593,000.00	738,000.00
tblLandUse	BuildingSpaceSquareFeet	444,000.00	513,800.00
tblLandUse	LandUseSquareFeet	593,000.00	738,000.00
tblLandUse	LandUseSquareFeet	444,000.00	513,800.00
tblLandUse	LotAcreage	15.61	21.30
tblLandUse	LotAcreage	0.12	0.00
tblLandUse	LotAcreage	9.99	0.00
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblProjectCharacteristics	CO2IntensityFactor	641.35	380
tblProjectCharacteristics	OperationalYear	2018	2021
tblVehicleTrips	ST_TR	6.39	5.75
tblVehicleTrips	ST_TR	42.04	30.42
tblVehicleTrips	SU_TR	5.86	5.27
tblVehicleTrips	SU_TR	20.43	14.71
tblVehicleTrips	WD_TR	6.65	6.00
tblVehicleTrips	WD_TR	44.32	32.07
tblWoodstoves	NumberCatalytic	11.86	0.00

tblWoodstoves	NumberNoncatalytic	11.86	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	3.6117	0.1150	4.4503	6.4000e-004		0.0295	0.0295		0.0295	0.0295	0.0000	81.2422	81.2422	8.4400e-003	1.3600e-003	81.8577
Energy	0.0355	0.3031	0.1292	1.9300e-003		0.0245	0.0245		0.0245	0.0245	0.0000	1,409.3803	1,409.3803	0.0875	0.0232	1,418.4654
Mobile	1.0737	4.5075	12.4524	0.0365	3.0739	0.0418	3.1157	0.8229	0.0393	0.8622	0.0000	3,331.3167	3,331.3167	0.1282	0.0000	3,334.5212
Waste						0.0000	0.0000		0.0000	0.0000	56.5025	0.0000	56.5025	3.3392	0.0000	139.9826
Water						0.0000	0.0000		0.0000	0.0000	12.3821	51.2406	63.6227	1.2757	0.0308	104.7041
Total	**4.7209**	**4.9255**	**17.0319**	**0.0390**	**3.0739**	**0.0958**	**3.1697**	**0.8229**	**0.0933**	**0.9162**	**68.8846**	**4,873.1798**	**4,942.0644**	**4.8390**	**0.0554**	**5,079.5311**

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	3.6117	0.1150	4.4503	6.4000e-004		0.0295	0.0295		0.0295	0.0295	0.0000	81.2422	81.2422	8.4400e-003	1.3600e-003	81.8577

Energy	0.0284	0.2424	0.1033	1.5500e-003		0.0196	0.0196		0.0196	0.0196	0.0000	1,229.8927	1,229.8927	0.0778	0.0201	1,237.8379
Mobile	1.0737	4.5075	12.4524	0.0365	3.0739	0.0418	3.1157	0.8229	0.0393	0.8622	0.0000	3,331.3167	3,331.3167	0.1282	0.0000	3,334.5212
Waste						0.0000	0.0000		0.0000	0.0000	56.5025	0.0000	56.5025	3.3392	0.0000	139.9826
Water						0.0000	0.0000		0.0000	0.0000	12.3821	51.2406	63.6227	1.2757	0.0308	104.7041
Total	**4.7138**	**4.8648**	**17.0060**	**0.0387**	**3.0739**	**0.0909**	**3.1648**	**0.8229**	**0.0884**	**0.9113**	**68.8846**	**4,693.6922**	**4,762.5768**	**4.8293**	**0.0523**	**4,898.9036**

	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	**0.15**	**1.23**	**0.15**	**0.97**	**0.00**	**5.13**	**0.15**	**0.00**	**5.26**	**0.54**	**0.00**	**3.68**	**3.63**	**0.20**	**5.46**	**3.56**

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	1.0737	4.5075	12.4524	0.0365	3.0739	0.0418	3.1157	0.8229	0.0393	0.8622	0.0000	3,331.3167	3,331.3167	0.1282	0.0000	3,334.5212
Unmitigated	1.0737	4.5075	12.4524	0.0365	3.0739	0.0418	3.1157	0.8229	0.0393	0.8622	0.0000	3,331.3167	3,331.3167	0.1282	0.0000	3,334.5212

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	3,558.00	3,409.75	3125.11	8,025,839	8,025,839
Enclosed Parking with Elevator	0.00	0.00	0.00		

Parking Lot	0.00	0.00	0.00		
Strip Mall	169.97	161.23	77.96	239,595	239,595
Total	3,727.97	3,570.98	3,203.07	8,265,434	8,265,434

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 with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
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	0.607897	0.037434	0.184004	0.107261	0.014919	0.004991	0.012447	0.020659	0.002115	0.001554	0.005334	0.000623	0.000761
Strip Mall	0.607897	0.037434	0.184004	0.107261	0.014919	0.004991	0.012447	0.020659	0.002115	0.001554	0.005334	0.000623	0.000761
Parking Lot	0.607897	0.037434	0.184004	0.107261	0.014919	0.004991	0.012447	0.020659	0.002115	0.001554	0.005334	0.000623	0.000761
Enclosed Parking with Elevator	0.607897	0.037434	0.184004	0.107261	0.014919	0.004991	0.012447	0.020659	0.002115	0.001554	0.005334	0.000623	0.000761

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	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	949.2530	949.2530	0.0724	0.0150	955.5306

Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,058.4293	1,058.4293	0.0808	0.0167	1,065.4289
NaturalGas Mitigated	0.0284	0.2424	0.1033	1.5500e-003		0.0196	0.0196		0.0196	0.0196	0.0000	280.6397	280.6397	5.3800e-003	5.1500e-003	282.3074
NaturalGas Unmitigated	0.0355	0.3031	0.1292	1.9300e-003		0.0245	0.0245		0.0245	0.0245	0.0000	350.9510	350.9510	6.7300e-003	6.4300e-003	353.0365

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	6.56396e+006	0.0354	0.3025	0.1287	1.9300e-003		0.0245	0.0245		0.0245	0.0245	0.0000	350.2778	350.2778	6.7100e-003	6.4200e-003	352.3594
Enclosed Parking with Elevator	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
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	12614	7.0000e-005	6.2000e-004	5.2000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.6731	0.6731	1.0000e-005	1.0000e-005	0.6771
Total		**0.0355**	**0.3031**	**0.1292**	**1.9300e-003**		**0.0245**	**0.0245**		**0.0245**	**0.0245**	**0.0000**	**350.9510**	**350.9510**	**6.7200e-003**	**6.4300e-003**	**353.0365**

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	5.24991e+006	0.0283	0.2419	0.1029	1.5400e-003		0.0196	0.0196		0.0196	0.0196	0.0000	280.1550	280.1550	5.3700e-003	5.1400e-003	281.8198
Enclosed Parking with Elevator	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
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	9082.08	5.0000e-005	4.5000e-004	3.7000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.4847	0.4847	1.0000e-005	1.0000e-005	0.4875
Total		**0.0284**	**0.2424**	**0.1033**	**1.5400e-003**		**0.0196**	**0.0196**		**0.0196**	**0.0196**	**0.0000**	**280.6396**	**280.6396**	**5.3800e-003**	**5.1500e-003**	**282.3074**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	2.61571e+006	450.8563	0.0344	7.1200e-003	453.8379
Enclosed Parking with Elevator	3.46301e+006	596.9024	0.0456	9.4200e-003	600.8498
Parking Lot	3872	0.6674	5.0000e-005	1.0000e-005	0.6718
Strip Mall	58035	10.0032	7.6000e-004	1.6000e-004	10.0694
Total		**1,058.4293**	**0.0808**	**0.0167**	**1,065.4289**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	2.55054e+006	439.6240	0.0336	6.9400e-003	442.5313
Enclosed Parking with Elevator	2.89907e+006	499.6977	0.0381	7.8900e-003	503.0022
Parking Lot	3872	0.6674	5.0000e-005	1.0000e-005	0.6718
Strip Mall	53746.2	9.2640	7.1000e-004	1.5000e-004	9.3252

Total		**949.2530**	**0.0724**	**0.0150**	**955.5306**

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	3.6117	0.1150	4.4503	6.4000e-004		0.0295	0.0295		0.0295	0.0295	0.0000	81.2422	81.2422	8.4400e-003	1.3600e-003	81.8577
Unmitigated	3.6117	0.1150	4.4503	6.4000e-004		0.0295	0.0295		0.0295	0.0295	0.0000	81.2422	81.2422	8.4400e-003	1.3600e-003	81.8577

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	0.5331					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.9365					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	7.4800e-003	0.0639	0.0272	4.1000e-004		5.1700e-003	5.1700e-003		5.1700e-003	5.1700e-003	0.0000	74.0297	74.0297	1.4200e-003	1.3600e-003	74.4696
Landscaping	0.1347	0.0510	4.4231	2.3000e-004		0.0244	0.0244		0.0244	0.0244	0.0000	7.2125	7.2125	7.0200e-003	0.0000	7.3881

Total	**3.6117**	**0.1150**	**4.4503**	**6.4000e-004**		**0.0295**	**0.0295**		**0.0295**	**0.0295**	**0.0000**	**81.2422**	**81.2422**	**8.4400e-003**	**1.3600e-003**	**81.8577**

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	0.5331					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.9365					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	7.4800e-003	0.0639	0.0272	4.1000e-004		5.1700e-003	5.1700e-003		5.1700e-003	5.1700e-003	0.0000	74.0297	74.0297	1.4200e-003	1.3600e-003	74.4696
Landscaping	0.1347	0.0510	4.4231	2.3000e-004		0.0244	0.0244		0.0244	0.0244	0.0000	7.2125	7.2125	7.0200e-003	0.0000	7.3881
Total	**3.6117**	**0.1150**	**4.4503**	**6.4000e-004**		**0.0295**	**0.0295**		**0.0295**	**0.0295**	**0.0000**	**81.2422**	**81.2422**	**8.4400e-003**	**1.3600e-003**	**81.8577**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	63.6227	1.2757	0.0308	104.7041
Unmitigated	63.6227	1.2757	0.0308	104.7041

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	38.6363 / 24.3577	62.9868	1.2628	0.0305	103.6551
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.392584 / 0.240616	0.6359	0.0128	3.1000e-004	1.0491
Total		**63.6227**	**1.2757**	**0.0308**	**104.7041**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	38.6363 / 24.3577	62.9868	1.2628	0.0305	103.6551
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.392584 / 0.240616	0.6359	0.0128	3.1000e-004	1.0491
Total		**63.6227**	**1.2757**	**0.0308**	**104.7041**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	56.5025	3.3392	0.0000	139.9826
Unmitigated	56.5025	3.3392	0.0000	139.9826

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	272.78	55.3719	3.2724	0.0000	137.1815
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	5.57	1.1307	0.0668	0.0000	2.8012
Total		**56.5025**	**3.3392**	**0.0000**	**139.9826**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	272.78	55.3719	3.2724	0.0000	137.1815
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	5.57	1.1307	0.0668	0.0000	2.8012
Total		**56.5025**	**3.3392**	**0.0000**	**139.9826**

phase1 +phase2+phase3, operational

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	1,025.00	Dwelling Unit	23.94	1,250,000.00	2932
Strip Mall	10.20	1000sqft	0.00	10,200.00	0
Parking Lot	18.00	Space	0.16	7,200.00	0
Enclosed Parking with Elevator	1,870.00	Space	0.00	825,600.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2022
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 - PG&E usd to represent SVP emission rates

Land Use - Applicant provided project descirption

Construction Phase - only operational emissions modeled

Off-road Equipment - only operational emissions modeled

Vehicle Trips - trip rates from project TIA

Woodstoves - no wood burning

Energy Use - title 24 2013 values

Solid Waste -

Energy Mitigation - title 24 2016 values

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Parking	150	0
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	150	0
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	100	0
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	150	0
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	100	0
tblConstructionPhase	NumDays	20.00	1.00
tblConstructionPhase	PhaseEndDate	6/9/2017	5/15/2017
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	153.75	1,025.00
tblFireplaces	NumberNoFireplace	41.00	0.00
tblFireplaces	NumberWood	174.25	0.00
tblLandUse	BuildingSpaceSquareFeet	1,025,000.00	1,250,000.00
tblLandUse	BuildingSpaceSquareFeet	748,000.00	825,600.00
tblLandUse	LandUseSquareFeet	1,025,000.00	1,250,000.00
tblLandUse	LandUseSquareFeet	748,000.00	825,600.00
tblLandUse	LotAcreage	26.97	23.94
tblLandUse	LotAcreage	0.23	0.00
tblLandUse	LotAcreage	16.83	0.00
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblProjectCharacteristics	CO2IntensityFactor	641.35	380
tblProjectCharacteristics	OperationalYear	2018	2022
tblVehicleTrips	ST_TR	6.39	5.75
tblVehicleTrips	ST_TR	42.04	30.42
tblVehicleTrips	SU_TR	5.86	5.27
tblVehicleTrips	SU_TR	20.43	14.71
tblVehicleTrips	WD_TR	6.65	6.00
tblVehicleTrips	WD_TR	44.32	32.07

tblWoodstoves	NumberCatalytic	20.50	0.00
tblWoodstoves	NumberNoncatalytic	20.50	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	6.1055	0.1985	7.6834	1.1100e-003		0.0511	0.0511		0.0511	0.0511	0.0000	140.4262	140.4262	0.0145	2.3500e-003	141.4887
Energy	0.0613	0.5240	0.2235	3.3400e-003		0.0424	0.0424		0.0424	0.0424	0.0000	2,365.5319	2,365.5319	0.1459	0.0389	2,380.7686
Mobile	1.4547	6.1444	16.7950	0.0579	5.3301	0.0492	5.3793	1.4268	0.0460	1.4727	0.0000	5,298.5649	5,298.5649	0.1796	0.0000	5,303.0557
Waste						0.0000	0.0000		0.0000	0.0000	97.8843	0.0000	97.8843	5.7848	0.0000	242.5041
Water						0.0000	0.0000		0.0000	0.0000	21.4268	88.6696	110.0964	2.2075	0.0534	181.1867
Total	**7.6215**	**6.8669**	**24.7019**	**0.0623**	**5.3301**	**0.1426**	**5.4728**	**1.4268**	**0.1394**	**1.5662**	**119.3111**	**7,893.1926**	**8,012.5037**	**8.3323**	**0.0946**	**8,249.0037**

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	6.1055	0.1985	7.6834	1.1100e-003		0.0511	0.0511		0.0511	0.0511	0.0000	140.4262	140.4262	0.0145	2.3500e-003	141.4887

Energy	0.0490	0.4190	0.1787	2.6700e-003		0.0339	0.0339		0.0339	0.0339	0.0000	2,066.9306	2,066.9306	0.1300	0.0339	2,080.2742
Mobile	1.4547	6.1444	16.7950	0.0579	5.3301	0.0492	5.3793	1.4268	0.0460	1.4727	0.0000	5,298.5649	5,298.5649	0.1796	0.0000	5,303.0557
Waste						0.0000	0.0000		0.0000	0.0000	97.8843	0.0000	97.8843	5.7848	0.0000	242.5041
Water						0.0000	0.0000		0.0000	0.0000	21.4268	88.6696	110.0964	2.2075	0.0534	181.1867
Total	**7.6092**	**6.7619**	**24.6571**	**0.0616**	**5.3301**	**0.1342**	**5.4643**	**1.4268**	**0.1309**	**1.5577**	**119.3111**	**7,594.5913**	**7,713.9024**	**8.3165**	**0.0896**	**7,948.5093**

	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	**0.16**	**1.53**	**0.18**	**1.08**	**0.00**	**5.95**	**0.16**	**0.00**	**6.09**	**0.54**	**0.00**	**3.78**	**3.73**	**0.19**	**5.31**	**3.64**

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	1.4547	6.1444	16.7950	0.0579	5.3301	0.0492	5.3793	1.4268	0.0460	1.4727	0.0000	5,298.5649	5,298.5649	0.1796	0.0000	5,303.0557
Unmitigated	1.4547	6.1444	16.7950	0.0579	5.3301	0.0492	5.3793	1.4268	0.0460	1.4727	0.0000	5,298.5649	5,298.5649	0.1796	0.0000	5,303.0557

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT

Apartments Mid Rise	6,150.00	5,893.75	5401.75	13,872,656	13,872,656
Enclosed Parking with Elevator	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Strip Mall	327.11	310.28	150.04	461,107	461,107
Total	6,477.11	6,204.03	5,551.79	14,333,763	14,333,763

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 with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
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	0.610498	0.036775	0.183084	0.106123	0.014413	0.005007	0.012610	0.021118	0.002144	0.001548	0.005312	0.000627	0.000740
Strip Mall	0.610498	0.036775	0.183084	0.106123	0.014413	0.005007	0.012610	0.021118	0.002144	0.001548	0.005312	0.000627	0.000740
Parking Lot	0.610498	0.036775	0.183084	0.106123	0.014413	0.005007	0.012610	0.021118	0.002144	0.001548	0.005312	0.000627	0.000740
Enclosed Parking with Elevator	0.610498	0.036775	0.183084	0.106123	0.014413	0.005007	0.012610	0.021118	0.002144	0.001548	0.005312	0.000627	0.000740

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	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	1,581.7502	1,581.7502	0.1207	0.0250	1,592.2106
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,758.7815	1,758.7815	0.1342	0.0278	1,770.4126
NaturalGas Mitigated	0.0490	0.4190	0.1787	2.6700e-003		0.0339	0.0339		0.0339	0.0339	0.0000	485.1804	485.1804	9.3000e-003	8.8900e-003	488.0636
NaturalGas Unmitigated	0.0613	0.5240	0.2235	3.3400e-003		0.0424	0.0424		0.0424	0.0424	0.0000	606.7504	606.7504	0.0116	0.0111	610.3560

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	1.13458e+007	0.0612	0.5228	0.2225	3.3400e-003		0.0423	0.0423		0.0423	0.0423	0.0000	605.4549	605.4549	0.0116	0.0111	609.0528
Enclosed Parking with Elevator	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
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	24276	1.3000e-004	1.1900e-003	1.0000e-003	1.0000e-005		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	1.2955	1.2955	2.0000e-005	2.0000e-005	1.3032
Total		**0.0613**	**0.5240**	**0.2235**	**3.3500e-003**		**0.0424**	**0.0424**		**0.0424**	**0.0424**	**0.0000**	**606.7504**	**606.7504**	**0.0116**	**0.0111**	**610.3560**

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	9.07446e+006	0.0489	0.4181	0.1779	2.6700e-003		0.0338	0.0338		0.0338	0.0338	0.0000	484.2477	484.2477	9.2800e-003	8.8800e-003	487.1253

Enclosed Parking with Elevator	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
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	17478.7	9.0000e-005	8.6000e-004	7.2000e-004	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.9327	0.9327	2.0000e-005	2.0000e-005	0.9383
Total		**0.0490**	**0.4190**	**0.1787**	**2.6800e-003**		**0.0339**	**0.0339**		**0.0339**	**0.0339**	**0.0000**	**485.1804**	**485.1804**	**9.3000e-003**	**8.9000e-003**	**488.0636**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	4.52124e+006	779.3047	0.0595	0.0123	784.4584
Enclosed Parking with Elevator	5.56454e+006	959.1332	0.0732	0.0151	965.4761
Parking Lot	6336	1.0921	8.0000e-005	2.0000e-005	1.0993
Strip Mall	111690	19.2515	1.4700e-003	3.0000e-004	19.3788
Total		**1,758.7815**	**0.1342**	**0.0278**	**1,770.4126**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	4.40861e+006	759.8897	0.0580	0.0120	764.9150
Enclosed Parking with Elevator	4.65837e+006	802.9396	0.0613	0.0127	808.2496

Parking Lot	6336	1.0921	8.0000e-005	2.0000e-005	1.0993
Strip Mall	103436	17.8288	1.3600e-003	2.8000e-004	17.9467
Total		**1,581.7502**	**0.1207**	**0.0250**	**1,592.2106**

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	6.1055	0.1985	7.6834	1.1100e-003		0.0511	0.0511		0.0511	0.0511	0.0000	140.4262	140.4262	0.0145	2.3500e-003	141.4887
Unmitigated	6.1055	0.1985	7.6834	1.1100e-003		0.0511	0.0511		0.0511	0.0511	0.0000	140.4262	140.4262	0.0145	2.3500e-003	141.4887

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	0.8852					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.9755					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Hearth	0.0129	0.1105	0.0470	7.1000e-004		8.9300e-003	8.9300e-003		8.9300e-003	8.9300e-003	0.0000	127.9603	127.9603	2.4500e-003	2.3500e-003	128.7207
Landscaping	0.2318	0.0880	7.6364	4.0000e-004		0.0422	0.0422		0.0422	0.0422	0.0000	12.4659	12.4659	0.0121	0.0000	12.7680
Total	**6.1055**	**0.1985**	**7.6834**	**1.1100e-003**		**0.0511**	**0.0511**		**0.0511**	**0.0511**	**0.0000**	**140.4262**	**140.4262**	**0.0145**	**2.3500e-003**	**141.4887**

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	0.8852					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.9755					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0129	0.1105	0.0470	7.1000e-004		8.9300e-003	8.9300e-003		8.9300e-003	8.9300e-003	0.0000	127.9603	127.9603	2.4500e-003	2.3500e-003	128.7207
Landscaping	0.2318	0.0880	7.6364	4.0000e-004		0.0422	0.0422		0.0422	0.0422	0.0000	12.4659	12.4659	0.0121	0.0000	12.7680
Total	**6.1055**	**0.1985**	**7.6834**	**1.1100e-003**		**0.0511**	**0.0511**		**0.0511**	**0.0511**	**0.0000**	**140.4262**	**140.4262**	**0.0145**	**2.3500e-003**	**141.4887**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	110.0964	2.2075	0.0534	181.1867

Unmitigated	110.0964	2.2075	0.0534	181.1867

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	66.7829 / 42.1022	108.8727	2.1828	0.0528	179.1677
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.75554 / 0.463073	1.2237	0.0247	6.0000e-004	2.0190
Total		**110.0964**	**2.2075**	**0.0534**	**181.1867**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	66.7829 / 42.1022	108.8727	2.1828	0.0528	179.1677
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.75554 / 0.463073	1.2237	0.0247	6.0000e-004	2.0190

Total		**110.0964**	**2.2075**	**0.0534**	**181.1867**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	97.8843	5.7848	0.0000	242.5041
Unmitigated	97.8843	5.7848	0.0000	242.5041

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	471.5	95.7102	5.6563	0.0000	237.1181
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	10.71	2.1740	0.1285	0.0000	5.3861

Total		**97.8843**	**5.7848**	**0.0000**	**242.5042**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	471.5	95.7102	5.6563	0.0000	237.1181
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	10.71	2.1740	0.1285	0.0000	5.3861
Total		**97.8843**	**5.7848**	**0.0000**	**242.5042**

phase1+Phase2+Phase3+Phase4 operational emissions

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	2,775.00	Space	0.00	1,182,709.00	0
Parking Lot	22.00	Space	0.20	8,800.00	0
Apartments Mid Rise	1,600.00	Dwelling Unit	21.20	1,754,209.00	4576
Strip Mall	10.20	1000sqft	0.00	10,200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2024
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 - PG&E used to represent SVP

Land Use - Summation of applicant provided number of unit gives 1585. Hence, conservative analysis

Construction Phase - only operational emissions modeled

Off-road Equipment - only operational emissions modeled

Vehicle Trips - trip rates provided by TIA

Woodstoves - No wood burning

Energy Use - Title 24, 2013 values

Energy Mitigation - title 24, 2016 values cam into effect on 1st January 2017

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	1.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	240.00	2,775.00
tblFireplaces	NumberNoFireplace	64.00	0.00
tblFireplaces	NumberWood	272.00	0.00
tblLandUse	BuildingSpaceSquareFeet	1,110,000.00	1,182,709.00
tblLandUse	BuildingSpaceSquareFeet	1,600,000.00	1,754,209.00
tblLandUse	LandUseSquareFeet	1,110,000.00	1,182,709.00
tblLandUse	LandUseSquareFeet	1,600,000.00	1,754,209.00
tblLandUse	LotAcreage	24.97	0.00
tblLandUse	LotAcreage	42.11	21.20
tblLandUse	LotAcreage	0.23	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	380
tblProjectCharacteristics	OperationalYear	2018	2024
tblVehicleTrips	ST_TR	6.39	5.75
tblVehicleTrips	ST_TR	42.04	30.42
tblVehicleTrips	SU_TR	5.86	5.27
tblVehicleTrips	SU_TR	20.43	14.71
tblVehicleTrips	WD_TR	6.65	6.00
tblVehicleTrips	WD_TR	44.32	32.07
tblWoodstoves	NumberCatalytic	32.00	0.00
tblWoodstoves	NumberNoncatalytic	32.00	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	8.6274	0.4362	12.0282	2.5400e-003		0.0901	0.0901		0.0901	0.0901	0.0000	365.8853	365.8853	0.0254	6.3500e-003	368.4127
Energy	0.0956	0.8173	0.3483	5.2200e-003		0.0661	0.0661		0.0661	0.0661	0.0000	3,557.4590	3,557.4590	0.2174	0.0586	3,580.3503
Mobile	1.9253	7.4161	22.4523	0.0833	8.2232	0.0650	8.2883	2.2010	0.0605	2.2616	0.0000	7,638.4564	7,638.4564	0.2376	0.0000	7,644.3961
Waste						0.0000	0.0000		0.0000	0.0000	151.5754	0.0000	151.5754	8.9579	0.0000	375.5216
Water						0.0000	0.0000		0.0000	0.0000	33.3123	137.8591	171.1714	3.4320	0.0830	281.6954
Total	**10.6483**	**8.6695**	**34.8288**	**0.0911**	**8.2232**	**0.2212**	**8.4444**	**2.2010**	**0.2167**	**2.4177**	**184.8877**	**11,699.6597**	**11,884.5474**	**12.8702**	**0.1479**	**12,250.3762**

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	8.6274	0.4362	12.0282	2.5400e-003		0.0901	0.0901		0.0901	0.0901	0.0000	365.8853	365.8853	0.0254	6.3500e-003	368.4127
Energy	0.0765	0.6536	0.2785	4.1700e-003		0.0528	0.0528		0.0528	0.0528	0.0000	3,112.4114	3,112.4114	0.1943	0.0511	3,132.4867
Mobile	1.9253	7.4161	22.4523	0.0833	8.2232	0.0650	8.2883	2.2010	0.0605	2.2616	0.0000	7,638.4564	7,638.4564	0.2376	0.0000	7,644.3961

Waste						0.0000	0.0000		0.0000	0.0000	151.5754	0.0000	151.5754	8.9579	0.0000	375.5216
Water						0.0000	0.0000		0.0000	0.0000	33.3123	137.8591	171.1714	3.4320	0.0830	281.6954
Total	**10.6291**	**8.5058**	**34.7590**	**0.0900**	**8.2232**	**0.2080**	**8.4312**	**2.2010**	**0.2035**	**2.4045**	**184.8877**	**11,254.6121**	**11,439.4998**	**12.8471**	**0.1404**	**11,802.5125**

	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	**0.18**	**1.89**	**0.20**	**1.15**	**0.00**	**5.98**	**0.16**	**0.00**	**6.11**	**0.55**	**0.00**	**3.80**	**3.74**	**0.18**	**5.08**	**3.66**

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	1.9253	7.4161	22.4523	0.0833	8.2232	0.0650	8.2883	2.2010	0.0605	2.2616	0.0000	7,638.4564	7,638.4564	0.2376	0.0000	7,644.3961
Unmitigated	1.9253	7.4161	22.4523	0.0833	8.2232	0.0650	8.2883	2.2010	0.0605	2.2616	0.0000	7,638.4564	7,638.4564	0.2376	0.0000	7,644.3961

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 with Elevator	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Strip Mall	327.11	310.28	150.04	461,107	461,107
Total	9,927.11	9,510.28	8,582.04	22,115,985	22,115,985

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 with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
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
Enclosed Parking with Elevator	0.614951	0.035734	0.181842	0.104158	0.013506	0.005015	0.012793	0.021727	0.002177	0.001514	0.005249	0.000632	0.000704
Parking Lot	0.614951	0.035734	0.181842	0.104158	0.013506	0.005015	0.012793	0.021727	0.002177	0.001514	0.005249	0.000632	0.000704
Apartments Mid Rise	0.614951	0.035734	0.181842	0.104158	0.013506	0.005015	0.012793	0.021727	0.002177	0.001514	0.005249	0.000632	0.000704
Strip Mall	0.614951	0.035734	0.181842	0.104158	0.013506	0.005015	0.012793	0.021727	0.002177	0.001514	0.005249	0.000632	0.000704

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	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	2,355.5799	2,355.5799	0.1798	0.0372	2,371.1577
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	2,611.0632	2,611.0632	0.1993	0.0412	2,628.3306

NaturalGas Mitigated	0.0765	0.6536	0.2785	4.1700e-003		0.0528	0.0528		0.0528	0.0528	0.0000	756.8315	756.8315	0.0145	0.0139	761.3290
NaturalGas Unmitigated	0.0956	0.8173	0.3483	5.2200e-003		0.0661	0.0661		0.0661	0.0661	0.0000	946.3958	946.3958	0.0181	0.0174	952.0198

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	1.77105e+007	0.0955	0.8161	0.3473	5.2100e-003		0.0660	0.0660		0.0660	0.0660	0.0000	945.1004	945.1004	0.0181	0.0173	950.7166
Enclosed Parking with Elevator	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
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	24276	1.3000e-004	1.1900e-003	1.0000e-003	1.0000e-005		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	1.2955	1.2955	2.0000e-005	2.0000e-005	1.3032
Total		**0.0956**	**0.8173**	**0.3483**	**5.2200e-003**		**0.0661**	**0.0661**		**0.0661**	**0.0661**	**0.0000**	**946.3958**	**946.3958**	**0.0181**	**0.0174**	**952.0198**

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	1.4165e+007	0.0764	0.6527	0.2778	4.1700e-003		0.0528	0.0528		0.0528	0.0528	0.0000	755.8988	755.8988	0.0145	0.0139	760.3907
Enclosed Parking with Elevator	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
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	17478.7	9.0000e-005	8.6000e-004	7.2000e-004	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.9327	0.9327	2.0000e-005	2.0000e-005	0.9383

Total		**0.0765**	**0.6536**	**0.2785**	**4.1800e-003**		**0.0528**	**0.0528**		**0.0528**	**0.0528**	**0.0000**	**756.8315**	**756.8315**	**0.0145**	**0.0139**	**761.3290**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	7.05755e+006	1,216.4757	0.0928	0.0192	1,224.5204
Enclosed Parking with Elevator	7.97146e+006	1,374.0013	0.1049	0.0217	1,383.0878
Parking Lot	7744	1.3348	1.0000e-004	2.0000e-005	1.3436
Strip Mall	111690	19.2515	1.4700e-003	3.0000e-004	19.3788
Total		**2,611.0632**	**0.1993**	**0.0412**	**2,628.3306**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	6.88173e+006	1,186.1693	0.0905	0.0187	1,194.0136
Enclosed Parking with Elevator	6.67332e+006	1,150.2470	0.0878	0.0182	1,157.8538
Parking Lot	7744	1.3348	1.0000e-004	2.0000e-005	1.3436
Strip Mall	103436	17.8288	1.3600e-003	2.8000e-004	17.9467
Total		**2,355.5799**	**0.1798**	**0.0372**	**2,371.1577**

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	8.6274	0.4362	12.0282	2.5400e-003		0.0901	0.0901		0.0901	0.0901	0.0000	365.8853	365.8853	0.0254	6.3500e-003	368.4127
Unmitigated	8.6274	0.4362	12.0282	2.5400e-003		0.0901	0.0901		0.0901	0.0901	0.0000	365.8853	365.8853	0.0254	6.3500e-003	368.4127

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	1.2650					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	6.9679					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0350	0.2991	0.1273	1.9100e-003		0.0242	0.0242		0.0242	0.0242	0.0000	346.4290	346.4290	6.6400e-003	6.3500e-003	348.4877
Landscaping	0.3594	0.1371	11.9009	6.3000e-004		0.0659	0.0659		0.0659	0.0659	0.0000	19.4562	19.4562	0.0188	0.0000	19.9250
Total	**8.6274**	**0.4362**	**12.0282**	**2.5400e-003**		**0.0901**	**0.0901**		**0.0901**	**0.0901**	**0.0000**	**365.8853**	**365.8853**	**0.0254**	**6.3500e-003**	**368.4127**

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	1.2650					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	6.9679					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0350	0.2991	0.1273	1.9100e-003		0.0242	0.0242		0.0242	0.0242	0.0000	346.4290	346.4290	6.6400e-003	6.3500e-003	348.4877
Landscaping	0.3594	0.1371	11.9009	6.3000e-004		0.0659	0.0659		0.0659	0.0659	0.0000	19.4562	19.4562	0.0188	0.0000	19.9250
Total	**8.6274**	**0.4362**	**12.0282**	**2.5400e-003**		**0.0901**	**0.0901**		**0.0901**	**0.0901**	**0.0000**	**365.8853**	**365.8853**	**0.0254**	**6.3500e-003**	**368.4127**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	171.1714	3.4320	0.0830	281.6954
Unmitigated	171.1714	3.4320	0.0830	281.6954

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	169.9476	3.4073	0.0824	279.6764
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.75554 / 0.463073	1.2237	0.0247	6.0000e-004	2.0190
Total		**171.1714**	**3.4320**	**0.0830**	**281.6954**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	104.246 / 65.7206	169.9476	3.4073	0.0824	279.6764
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.75554 / 0.463073	1.2237	0.0247	6.0000e-004	2.0190
Total		**171.1714**	**3.4320**	**0.0830**	**281.6954**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	151.5754	8.9579	0.0000	375.5216
Unmitigated	151.5754	8.9579	0.0000	375.5216

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 with Elevator	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	10.71	2.1740	0.1285	0.0000	5.3861
Total		**151.5754**	**8.9579**	**0.0000**	**375.5216**

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 with Elevator	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	10.71	2.1740	0.1285	0.0000	5.3861
Total		**151.5754**	**8.9579**	**0.0000**	**375.5216**

Coleman Browkaw Gateway Crossings Full Build Out

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	1,600.00	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 -

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

Off-road Equipment -

Energy Use - Titlw 24, 2013 values

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

Energy Mitigation - title 24, 2016 values came into effect on January 1st, 2017

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	1.00
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
tblProjectCharacteristics	OperationalYear	2018	2026
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

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	0.1828	1.6098	1.0140	9.9700e-003		0.1263	0.1263		0.1263	0.1263	0.0000	4,948.3271	4,948.3271	0.2742	0.0827	4,979.8378
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	35.4370	144.6619	180.0989	3.6508	0.0882	297.6593
Total	**11.7859**	**10.0904**	**36.5669**	**0.1029**	**9.6498**	**0.2697**	**9.9194**	**2.5827**	**0.2646**	**2.8473**	**215.8209**	**13,621.1203**	**13,836.9411**	**14.8623**	**0.1721**	**14,259.7948**

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	0.1419	1.2479	0.7777	7.7400e-003		0.0980	0.0980		0.0980	0.0980	0.0000	4,237.2206	4,237.2206	0.2431	0.0705	4,264.3006
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	35.4370	144.6619	180.0989	3.6508	0.0882	297.6593
Total	**11.7450**	**9.7284**	**36.3306**	**0.1007**	**9.6498**	**0.2414**	**9.8911**	**2.5827**	**0.2363**	**2.8190**	**215.8209**	**12,910.0138**	**13,125.8347**	**14.8312**	**0.1599**	**13,544.2576**

	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	**0.35**	**3.59**	**0.65**	**2.17**	**0.00**	**10.49**	**0.29**	**0.00**	**10.69**	**0.99**	**0.00**	**5.22**	**5.14**	**0.21**	**7.12**	**5.02**

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-	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
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
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
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
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
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

Exceed Title 24

	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	2,833.3984	2,833.3984	0.2162	0.0447	2,852.1361
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	3,139.1156	3,139.1156	0.2396	0.0496	3,159.8751
NaturalGas Mitigated	0.1419	1.2479	0.7777	7.7400e-003		0.0980	0.0980		0.0980	0.0980	0.0000	1,403.8223	1,403.8223	0.0269	0.0257	1,412.1645
NaturalGas Unmitigated	0.1828	1.6098	1.0140	9.9700e-003		0.1263	0.1263		0.1263	0.1263	0.0000	1,809.2114	1,809.2114	0.0347	0.0332	1,819.9627

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	1.77105e+007	0.0955	0.8161	0.3473	5.2100e-003		0.0660	0.0660		0.0660	0.0660	0.0000	945.1004	945.1004	0.0181	0.0173	950.7166
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		**0.1828**	**1.6098**	**1.0140**	**9.9700e-003**		**0.1263**	**0.1263**		**0.1263**	**0.1263**	**0.0000**	**1,809.2115**	**1,809.2115**	**0.0347**	**0.0332**	**1,819.9627**

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	1.4165e+007	0.0764	0.6527	0.2778	4.1700e-003		0.0528	0.0528		0.0528	0.0528	0.0000	755.8988	755.8988	0.0145	0.0139	760.3907
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	1.21159e+007	0.0653	0.5939	0.4989	3.5600e-003		0.0451	0.0451		0.0451	0.0451	0.0000	646.5518	646.5518	0.0124	0.0119	650.3940
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	25704	1.4000e-004	1.2600e-003	1.0600e-003	1.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	1.3717	1.3717	3.0000e-005	3.0000e-005	1.3798
Total		**0.1419**	**1.2479**	**0.7777**	**7.7400e-003**		**0.0980**	**0.0980**		**0.0980**	**0.0980**	**0.0000**	**1,403.8223**	**1,403.8223**	**0.0269**	**0.0257**	**1,412.1645**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	7.05755e+006	1,216.4757	0.0928	0.0192	1,224.5204
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		**3,139.1156**	**0.2396**	**0.0496**	**3,159.8751**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	6.88173e+006	1,186.1693	0.0905	0.0187	1,194.0136
Enclosed Parking Structure	6.79151e+006	1,170.6192	0.0893	0.0185	1,178.3607
Hotel	2.60561e+006	449.1169	0.0343	7.0900e-003	452.0870
Parking Lot	7392	1.2741	1.0000e-004	2.0000e-005	1.2826
Strip Mall	152112	26.2188	2.0000e-003	4.1000e-004	26.3922
Total		**2,833.3984**	**0.2162**	**0.0447**	**2,852.1361**

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

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	180.0989	3.6508	0.0882	297.6593
Unmitigated	180.0989	3.6508	0.0882	297.6593

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	169.9476	3.4073	0.0824	279.6764
Enclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
Hotel	6.34169 / 0.704632	8.3517	0.2071	4.9800e-003	15.0138
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	1.11109 / 0.680989	1.7996	0.0363	8.8000e-004	2.9690
Total		**180.0989**	**3.6508**	**0.0882**	**297.6593**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	104.246 / 65.7206	169.9476	3.4073	0.0824	279.6764
Enclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
Hotel	6.34169 / 0.704632	8.3517	0.2071	4.9800e-003	15.0138
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	1.11109 / 0.680989	1.7996	0.0363	8.8000e-004	2.9690
Total		**180.0989**	**3.6508**	**0.0882**	**297.6593**

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**

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 -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	1.00
tblConstructionPhase	PhaseEndDate	5/11/2017	5/12/2017

tblLandUse	LotAcreage	6.26	24.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	380
tblProjectCharacteristics	OperationalYear	2018	2026

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	0.0390	0.3542	0.2975	2.1200e-003		0.0269	0.0269		0.0269	0.0269	0.0000	781.5196	781.5196	0.0376	0.0133	786.4293
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	**1.5611**	**1.6236**	**4.0545**	**0.0171**	**1.5821**	**0.0386**	**1.6206**	**0.4234**	**0.0377**	**0.4612**	**46.7688**	**2,278.3165**	**2,325.0853**	**4.7081**	**0.1185**	**2,478.1052**

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	0.0390	0.3542	0.2975	2.1200e-003		0.0269	0.0269		0.0269	0.0269	0.0000	781.5196	781.5196	0.0376	0.0133	786.4293
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	**1.5611**	**1.6236**	**4.0545**	**0.0171**	**1.5821**	**0.0386**	**1.6206**	**0.4234**	**0.0377**	**0.4612**	**46.7688**	**2,278.3165**	**2,325.0853**	**4.7081**	**0.1185**	**2,478.1052**

	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: 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	395.9766	395.9766	0.0302	6.2500e-003	398.5952
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	395.9766	395.9766	0.0302	6.2500e-003	398.5952
NaturalGas Mitigated	0.0390	0.3542	0.2975	2.1200e-003		0.0269	0.0269		0.0269	0.0269	0.0000	385.5430	385.5430	7.3900e-003	7.0700e-003	387.8341
NaturalGas Unmitigated	0.0390	0.3542	0.2975	2.1200e-003		0.0269	0.0269		0.0269	0.0269	0.0000	385.5430	385.5430	7.3900e-003	7.0700e-003	387.8341

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	7.2248e+006	0.0390	0.3542	0.2975	2.1200e-003		0.0269	0.0269		0.0269	0.0269	0.0000	385.5430	385.5430	7.3900e-003	7.0700e-003	387.8341
Total		**0.0390**	**0.3542**	**0.2975**	**2.1200e-003**		**0.0269**	**0.0269**		**0.0269**	**0.0269**	**0.0000**	**385.5430**	**385.5430**	**7.3900e-003**	**7.0700e-003**	**387.8341**

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	7.2248e+006	0.0390	0.3542	0.2975	2.1200e-003		0.0269	0.0269		0.0269	0.0269	0.0000	385.5430	385.5430	7.3900e-003	7.0700e-003	387.8341
Total		**0.0390**	**0.3542**	**0.2975**	**2.1200e-003**		**0.0269**	**0.0269**		**0.0269**	**0.0269**	**0.0000**	**385.5430**	**385.5430**	**7.3900e-003**	**7.0700e-003**	**387.8341**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Research & Development	2.29731e+006	395.9766	0.0302	6.2500e-003	398.5952

Total		**395.9766**	**0.0302**	**6.2500e-003**	**398.5952**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Research & Development	2.29731e+006	395.9766	0.0302	6.2500e-003	398.5952
Total		**395.9766**	**0.0302**	**6.2500e-003**	**398.5952**

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**

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

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

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

Table Name	Column Name	Default Value	New Value
tblProjectCharacteristics	CO2IntensityFactor	641.35	380
tblProjectCharacteristics	OperationalYear	2018	2026
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

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	0.1672	1.4784	0.9717	9.1200e-003		0.1155	0.1155		0.1155	0.1155	0.0000	5,845.5045	5,845.5045	0.3515	0.0965	5,883.0520

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	84.2154	346.6090	430.8244	8.6762	0.2097	710.2229
Total	**16.5818**	**12.6966**	**46.5850**	**0.1439**	**13.3050**	**0.8472**	**14.1522**	**3.5610**	**0.8403**	**4.4013**	**455.3226**	**17,819.2834**	**18,274.6060**	**27.9735**	**0.3100**	**19,066.3339**

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	0.1266	1.1173	0.7225	6.9000e-003		0.0875	0.0875		0.0875	0.0875	0.0000	5,102.5306	5,102.5306	0.3178	0.0838	5,135.4344
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	84.2154	346.6090	430.8244	8.6762	0.2097	710.2229
Total	**16.5411**	**12.3356**	**46.3357**	**0.1417**	**13.3050**	**0.8192**	**14.1241**	**3.5610**	**0.8123**	**4.3732**	**455.3226**	**17,076.3095**	**17,531.6321**	**27.9397**	**0.2973**	**18,318.7162**

	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	**0.25**	**2.84**	**0.54**	**1.54**	**0.00**	**3.31**	**0.20**	**0.00**	**3.34**	**0.64**	**0.00**	**4.17**	**4.07**	**0.12**	**4.12**	**3.92**

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-	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
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
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

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	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	3,849.9702	3,849.9702	0.2938	0.0608	3,875.4307
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	4,190.7900	4,190.7900	0.3198	0.0662	4,218.5044
NaturalGas Mitigated	0.1266	1.1173	0.7225	6.9000e-003		0.0875	0.0875		0.0875	0.0875	0.0000	1,252.5604	1,252.5604	0.0240	0.0230	1,260.0037
NaturalGas Unmitigated	0.1672	1.4784	0.9717	9.1200e-003		0.1155	0.1155		0.1155	0.1155	0.0000	1,654.7145	1,654.7145	0.0317	0.0303	1,664.5477

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	1.41463e+007	0.0763	0.6518	0.2774	4.1600e-003		0.0527	0.0527		0.0527	0.0527	0.0000	754.8989	754.8989	0.0145	0.0138	759.3849
General Office Building	1.68619e+007	0.0909	0.8266	0.6943	4.9600e-003		0.0628	0.0628		0.0628	0.0628	0.0000	899.8156	899.8156	0.0173	0.0165	905.1628
Total		**0.1672**	**1.4784**	**0.9717**	**9.1200e-003**		**0.1155**	**0.1155**		**0.1155**	**0.1155**	**0.0000**	**1,654.7145**	**1,654.7145**	**0.0317**	**0.0303**	**1,664.5477**

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	1.13143e+007	0.0610	0.5214	0.2219	3.3300e-003		0.0422	0.0422		0.0422	0.0422	0.0000	603.7742	603.7742	0.0116	0.0111	607.3621
General Office Building	1.21578e+007	0.0656	0.5960	0.5006	3.5800e-003		0.0453	0.0453		0.0453	0.0453	0.0000	648.7862	648.7862	0.0124	0.0119	652.6416
Total		**0.1266**	**1.1173**	**0.7225**	**6.9100e-003**		**0.0874**	**0.0874**		**0.0874**	**0.0874**	**0.0000**	**1,252.5604**	**1,252.5604**	**0.0240**	**0.0230**	**1,260.0037**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	5.63722e+006	971.6599	0.0742	0.0153	978.0857
General Office Building	1.86762e+007	3,219.1301	0.2457	0.0508	3,240.4187
Total		**4,190.7900**	**0.3198**	**0.0662**	**4,218.5043**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	5.49678e+006	947.4527	0.0723	0.0150	953.7184
General Office Building	1.68394e+007	2,902.5175	0.2215	0.0458	2,921.7123
Total		**3,849.9702**	**0.2938**	**0.0608**	**3,875.4307**

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	430.8244	8.6762	0.2097	710.2229
Unmitigated	430.8244	8.6762	0.2097	710.2229

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	135.7457	2.7216	0.0658	223.3916
General Office Building	182.184 / 111.661	295.0787	5.9546	0.1439	486.8313
Total		**430.8244**	**8.6762**	**0.2097**	**710.2229**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			

Apartments Mid Rise	83.2668 / 52.4943	135.7457	2.7216	0.0658	223.3916
General Office Building	182.184 / 111.661	295.0787	5.9546	0.1439	486.8313
Total		**430.8244**	**8.6762**	**0.2097**	**710.2229**

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 Phase 2, TAC Emissions

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	625.00	Space	0.00	256,900.00	0
Parking Lot	7.00	Space	0.06	2,800.00	0
Apartments Mid Rise	332.00	Dwelling Unit	21.34	414,000.00	950

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2021
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 - Utility company is silicon valley power-CO2 factor from climate action plan 2020

Land Use - Applicant provided land use sizes

Construction Phase - Applicant provided construction schedule

Off-road Equipment - Applicant provided construction infromation

Off-road Equipment - Applicant provided construction infromation

Off-road Equipment - Applicant provided infromation

Off-road Equipment - Applicant provided construction infromation

Off-road Equipment - Applicant provided infromation

Off-road Equipment - Applicant provided information

Trips and VMT - Default trip numbers used
800 cy pf paving
800/16*2=100

Demolition -

Grading - Soil export during grading: 19,496 cy

Vehicle Trips - From project traffic report

Woodstoves - No wood based fireplaces or woodstoves

Energy Use - title 24, 2013

Construction Off-road Equipment Mitigation - Best Management Practices
Tier 4

Energy Mitigation - title 24 106 values came into effect on 1st January, 2017

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	49.80	332.00
tblFireplaces	NumberNoFireplace	13.28	0.00
tblFireplaces	NumberWood	56.44	0.00
tblGrading	MaterialExported	0.00	19,496.00
tblLandUse	BuildingSpaceSquareFeet	250,000.00	256,900.00
tblLandUse	BuildingSpaceSquareFeet	332,000.00	414,000.00

tblLandUse	LandUseSquareFeet	250,000.00	256,900.00
tblLandUse	LandUseSquareFeet	332,000.00	414,000.00
tblLandUse	LotAcreage	5.63	0.00
tblLandUse	LotAcreage	8.74	21.34
tblProjectCharacteristics	CO2IntensityFactor	641.35	380
tblProjectCharacteristics	OperationalYear	2018	2021
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripNumber	0.00	100.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblVehicleTrips	ST_TR	6.39	5.83
tblVehicleTrips	SU_TR	5.86	5.35
tblVehicleTrips	WD_TR	6.65	6.07
tblWoodstoves	NumberCatalytic	6.64	0.00
tblWoodstoves	NumberNoncatalytic	6.64	0.00

tblWoodstoves	WoodstoveWoodMass	582.40	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	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
Year	tons/yr										MT/yr					
2019	0.4275	4.4395	3.0129	5.3900e-003	0.3830	0.1996	0.5826	0.1501	0.1855	0.3355	0.0000	479.8885	479.8885	0.1317	0.0000	483.1816
2020	3.1041	1.2192	1.0902	1.7800e-003	7.5400e-003	0.0628	0.0704	2.0400e-003	0.0589	0.0610	0.0000	155.0913	155.0913	0.0386	0.0000	156.0571
Maximum	**3.1041**	**4.4395**	**3.0129**	**5.3900e-003**	**0.3830**	**0.1996**	**0.5826**	**0.1501**	**0.1855**	**0.3355**	**0.0000**	**479.8885**	**479.8885**	**0.1317**	**0.0000**	**483.1816**

Mitigated Construction

	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
Year	tons/yr										MT/yr					
2019	0.0907	0.8781	3.0619	5.3900e-003	0.1799	7.0200e-003	0.1869	0.0367	6.9900e-003	0.0437	0.0000	479.8880	479.8880	0.1317	0.0000	483.1811
2020	3.0027	0.3184	1.1637	1.7800e-003	7.5400e-003	2.3300e-003	9.8700e-003	2.0400e-003	2.3100e-003	4.3600e-003	0.0000	155.0912	155.0912	0.0386	0.0000	156.0570
Maximum	**3.0027**	**0.8781**	**3.0619**	**5.3900e-003**	**0.1799**	**7.0200e-003**	**0.1869**	**0.0367**	**6.9900e-003**	**0.0437**	**0.0000**	**479.8880**	**479.8880**	**0.1317**	**0.0000**	**483.1811**

	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	**12.41**	**78.86**	**-2.99**	**0.00**	**52.00**	**96.44**	**69.86**	**74.55**	**96.19**	**87.89**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**7-1-2019**	**9-30-2019**	2.9165	0.4231
2	**10-1-2019**	**12-31-2019**	1.7947	0.5240
3	**1-1-2020**	**3-31-2020**	2.0658	1.4736
4	**4-1-2020**	**6-30-2020**	2.1882	1.7973
		Highest	2.9165	1.7973

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	7/1/2019	7/26/2019	5	20	
2	Grading	Grading	7/29/2019	9/20/2019	5	40	
3	Trenching	Trenching	9/2/2019	9/27/2019	5	20	
4	Building Construction	Building Construction	9/23/2019	2/7/2020	5	100	
5	Architectural Coating	Architectural Coating	2/3/2020	6/19/2020	5	100	
6	Paving	Paving	4/1/2020	5/26/2020	5	40	

Acres of Grading (Site Preparation Phase): 80

Acres of Grading (Grading Phase): 160

Acres of Paving: 0.06

Residential Indoor: 838,350; Residential Outdoor: 279,450; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	2	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Scrapers	3	8.00	367	0.48
Site Preparation	Skid Steer Loaders	1	8.00	65	0.37

Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	2	8.00	187	0.41
Grading	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	3	8.00	367	0.48
Grading	Skid Steer Loaders	1	8.00	65	0.37
Grading	Sweepers/Scrubbers	1	8.00	64	0.46
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Trenching	Excavators	2	8.00	158	0.38
Trenching	Rough Terrain Forklifts	1	8.00	100	0.40
Trenching	Skid Steer Loaders	1	8.00	65	0.37
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Trenching	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Aerial Lifts	3	8.00	63	0.31
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	4	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Other Construction Equipment	3	8.00	172	0.42
Building Construction	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Welders	4	8.00	46	0.45
Architectural Coating	Aerial Lifts	1	8.00	63	0.31
Architectural Coating	Air Compressors	2	3.20	78	0.48
Architectural Coating	Cranes	1	4.00	231	0.29
Architectural Coating	Forklifts	1	8.00	89	0.20
Paving	Cement and Mortar Mixers	1	4.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Sweepers/Scrubbers	1	8.00	64	0.46

Paving	Tractors/Loaders/Backhoes	1	4.00	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
Site Preparation	9	23.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Grading	13	33.00	0.00	2,437.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Trenching	7	18.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Building Construction	17	348.00	78.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	5	70.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	100.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Site Preparation - 2019

Unmitigated Construction On-Site

	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					
Fugitive Dust					0.1629	0.0000	0.1629	0.0708	0.0000	0.0708	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0676	0.7951	0.4012	8.1000e-004		0.0333	0.0333		0.0306	0.0306	0.0000	72.7354	72.7354	0.0230	0.0000	73.3108

Total	**0.0676**	**0.7951**	**0.4012**	**8.1000e-004**	**0.1629**	**0.0333**	**0.1961**	**0.0708**	**0.0306**	**0.1014**	**0.0000**	**72.7354**	**72.7354**	**0.0230**	**0.0000**	**73.3108**

Unmitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	2.8000e-004	1.3000e-004	1.7000e-003	0.0000	1.7000e-004	0.0000	1.7000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1929	0.1929	1.0000e-005	0.0000	0.1932
Total	**2.8000e-004**	**1.3000e-004**	**1.7000e-003**	**0.0000**	**1.7000e-004**	**0.0000**	**1.7000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.1929**	**0.1929**	**1.0000e-005**	**0.0000**	**0.1932**

Mitigated Construction On-Site

	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					
Fugitive Dust					0.0733	0.0000	0.0733	0.0159	0.0000	0.0159	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0102	0.0536	0.3803	8.1000e-004		1.1400e-003	1.1400e-003		1.1400e-003	1.1400e-003	0.0000	72.7354	72.7354	0.0230	0.0000	73.3107
Total	**0.0102**	**0.0536**	**0.3803**	**8.1000e-004**	**0.0733**	**1.1400e-003**	**0.0744**	**0.0159**	**1.1400e-003**	**0.0171**	**0.0000**	**72.7354**	**72.7354**	**0.0230**	**0.0000**	**73.3107**

Mitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	2.8000e-004	1.3000e-004	1.7000e-003	0.0000	1.7000e-004	0.0000	1.7000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1929	0.1929	1.0000e-005	0.0000	0.1932
Total	**2.8000e-004**	**1.3000e-004**	**1.7000e-003**	**0.0000**	**1.7000e-004**	**0.0000**	**1.7000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.1929**	**0.1929**	**1.0000e-005**	**0.0000**	**0.1932**

3.3 Grading - 2019

Unmitigated Construction On-Site

	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					
Fugitive Dust					0.2064	0.0000	0.2064	0.0755	0.0000	0.0755	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1376	1.5953	0.9635	1.8100e-003		0.0698	0.0698		0.0642	0.0642	0.0000	162.6681	162.6681	0.0515	0.0000	163.9548
Total	**0.1376**	**1.5953**	**0.9635**	**1.8100e-003**	**0.2064**	**0.0698**	**0.2762**	**0.0755**	**0.0642**	**0.1398**	**0.0000**	**162.6681**	**162.6681**	**0.0515**	**0.0000**	**163.9548**

Unmitigated Construction Off-Site

	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					

Hauling	2.9600e-003	0.1305	0.0218	1.6000e-004	1.0600e-003	1.7000e-004	1.2200e-003	2.9000e-004	1.6000e-004	4.5000e-004	0.0000	15.7860	15.7860	1.8400e-003	0.0000	15.8321
Vendor	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	0.0000	0.0000
Worker	8.1000e-004	3.8000e-004	4.8800e-003	1.0000e-005	4.9000e-004	1.0000e-005	5.0000e-004	1.3000e-004	1.0000e-005	1.4000e-004	0.0000	0.5536	0.5536	3.0000e-005	0.0000	0.5543
Total	**3.7700e-003**	**0.1309**	**0.0267**	**1.7000e-004**	**1.5500e-003**	**1.8000e-004**	**1.7200e-003**	**4.2000e-004**	**1.7000e-004**	**5.9000e-004**	**0.0000**	**16.3396**	**16.3396**	**1.8700e-003**	**0.0000**	**16.3864**

Mitigated Construction On-Site

	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					
Fugitive Dust					0.0929	0.0000	0.0929	0.0170	0.0000	0.0170	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0234	0.1432	0.9585	1.8100e-003		2.6000e-003	2.6000e-003		2.6000e-003	2.6000e-003	0.0000	162.6680	162.6680	0.0515	0.0000	163.9546
Total	**0.0234**	**0.1432**	**0.9585**	**1.8100e-003**	**0.0929**	**2.6000e-003**	**0.0955**	**0.0170**	**2.6000e-003**	**0.0196**	**0.0000**	**162.6680**	**162.6680**	**0.0515**	**0.0000**	**163.9546**

Mitigated Construction Off-Site

	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					
Hauling	2.9600e-003	0.1305	0.0218	1.6000e-004	1.0600e-003	1.7000e-004	1.2200e-003	2.9000e-004	1.6000e-004	4.5000e-004	0.0000	15.7860	15.7860	1.8400e-003	0.0000	15.8321
Vendor	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	0.0000	0.0000
Worker	8.1000e-004	3.8000e-004	4.8800e-003	1.0000e-005	4.9000e-004	1.0000e-005	5.0000e-004	1.3000e-004	1.0000e-005	1.4000e-004	0.0000	0.5536	0.5536	3.0000e-005	0.0000	0.5543
Total	**3.7700e-003**	**0.1309**	**0.0267**	**1.7000e-004**	**1.5500e-003**	**1.8000e-004**	**1.7200e-003**	**4.2000e-004**	**1.7000e-004**	**5.9000e-004**	**0.0000**	**16.3396**	**16.3396**	**1.8700e-003**	**0.0000**	**16.3864**

3.4 Trenching - 2019

Unmitigated Construction On-Site

	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					
Off-Road	0.0145	0.1535	0.1712	2.5000e-004		8.6100e-003	8.6100e-003		7.9200e-003	7.9200e-003	0.0000	22.5930	22.5930	7.1500e-003	0.0000	22.7717
Total	**0.0145**	**0.1535**	**0.1712**	**2.5000e-004**		**8.6100e-003**	**8.6100e-003**		**7.9200e-003**	**7.9200e-003**	**0.0000**	**22.5930**	**22.5930**	**7.1500e-003**	**0.0000**	**22.7717**

Unmitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	2.2000e-004	1.0000e-004	1.3300e-003	0.0000	1.3000e-004	0.0000	1.4000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1510	0.1510	1.0000e-005	0.0000	0.1512
Total	**2.2000e-004**	**1.0000e-004**	**1.3300e-003**	**0.0000**	**1.3000e-004**	**0.0000**	**1.4000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1510**	**0.1510**	**1.0000e-005**	**0.0000**	**0.1512**

Mitigated Construction On-Site

	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					
Off-Road	3.3400e-003	0.0239	0.1904	2.5000e-004		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	22.5930	22.5930	7.1500e-003	0.0000	22.7717
Total	**3.3400e-003**	**0.0239**	**0.1904**	**2.5000e-004**		**4.1000e-004**	**4.1000e-004**		**4.1000e-004**	**4.1000e-004**	**0.0000**	**22.5930**	**22.5930**	**7.1500e-003**	**0.0000**	**22.7717**

Mitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	2.2000e-004	1.0000e-004	1.3300e-003	0.0000	1.3000e-004	0.0000	1.4000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1510	0.1510	1.0000e-005	0.0000	0.1512
Total	**2.2000e-004**	**1.0000e-004**	**1.3300e-003**	**0.0000**	**1.3000e-004**	**0.0000**	**1.4000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1510**	**0.1510**	**1.0000e-005**	**0.0000**	**0.1512**

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	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					
Off-Road	0.1821	1.5595	1.2978	1.9900e-003		0.0871	0.0871		0.0820	0.0820	0.0000	172.1798	172.1798	0.0453	0.0000	173.3119

Total	**0.1821**	**1.5595**	**1.2978**	**1.9900e-003**		**0.0871**	**0.0871**		**0.0820**	**0.0820**	**0.0000**	**172.1798**	**172.1798**	**0.0453**	**0.0000**	**173.3119**

Unmitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	6.1200e-003	0.1977	0.0569	2.3000e-004	2.5900e-003	4.8000e-004	3.0800e-003	7.6000e-004	4.6000e-004	1.2200e-003	0.0000	22.5198	22.5198	2.4200e-003	0.0000	22.5803
Worker	0.0154	7.2700e-003	0.0925	1.2000e-004	9.3100e-003	1.3000e-004	9.4400e-003	2.4900e-003	1.2000e-004	2.6100e-003	0.0000	10.5088	10.5088	5.1000e-004	0.0000	10.5215
Total	**0.0215**	**0.2050**	**0.1495**	**3.5000e-004**	**0.0119**	**6.1000e-004**	**0.0125**	**3.2500e-003**	**5.8000e-004**	**3.8300e-003**	**0.0000**	**33.0286**	**33.0286**	**2.9300e-003**	**0.0000**	**33.1018**

Mitigated Construction On-Site

	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					
Off-Road	0.0280	0.3213	1.3535	1.9900e-003		2.0800e-003	2.0800e-003		2.0800e-003	2.0800e-003	0.0000	172.1796	172.1796	0.0453	0.0000	173.3117
Total	**0.0280**	**0.3213**	**1.3535**	**1.9900e-003**		**2.0800e-003**	**2.0800e-003**		**2.0800e-003**	**2.0800e-003**	**0.0000**	**172.1796**	**172.1796**	**0.0453**	**0.0000**	**173.3117**

Mitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	6.1200e-003	0.1977	0.0569	2.3000e-004	2.5900e-003	4.8000e-004	3.0800e-003	7.6000e-004	4.6000e-004	1.2200e-003	0.0000	22.5198	22.5198	2.4200e-003	0.0000	22.5803
Worker	0.0154	7.2700e-003	0.0925	1.2000e-004	9.3100e-003	1.3000e-004	9.4400e-003	2.4900e-003	1.2000e-004	2.6100e-003	0.0000	10.5088	10.5088	5.1000e-004	0.0000	10.5215
Total	**0.0215**	**0.2050**	**0.1495**	**3.5000e-004**	**0.0119**	**6.1000e-004**	**0.0125**	**3.2500e-003**	**5.8000e-004**	**3.8300e-003**	**0.0000**	**33.0286**	**33.0286**	**2.9300e-003**	**0.0000**	**33.1018**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	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					
Off-Road	0.0645	0.5614	0.4975	7.8000e-004		0.0302	0.0302		0.0284	0.0284	0.0000	65.9021	65.9021	0.0174	0.0000	66.3358
Total	**0.0645**	**0.5614**	**0.4975**	**7.8000e-004**		**0.0302**	**0.0302**		**0.0284**	**0.0284**	**0.0000**	**65.9021**	**65.9021**	**0.0174**	**0.0000**	**66.3358**

Unmitigated Construction Off-Site

	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					

Hauling	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	0.0000	0.0000
Vendor	2.0600e-003	0.0730	0.0203	9.0000e-005	1.0100e-003	1.2000e-004	1.1300e-003	2.9000e-004	1.1000e-004	4.1000e-004	0.0000	8.7663	8.7663	8.6000e-004	0.0000	8.7877
Worker	5.4000e-003	2.4700e-003	0.0320	4.0000e-005	3.6200e-003	5.0000e-005	3.6700e-003	9.7000e-004	5.0000e-005	1.0100e-003	0.0000	3.9619	3.9619	1.7000e-004	0.0000	3.9662
Total	**7.4600e-003**	**0.0755**	**0.0522**	**1.3000e-004**	**4.6300e-003**	**1.7000e-004**	**4.8000e-003**	**1.2600e-003**	**1.6000e-004**	**1.4200e-003**	**0.0000**	**12.7283**	**12.7283**	**1.0300e-003**	**0.0000**	**12.7539**

Mitigated Construction On-Site

	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					
Off-Road	0.0109	0.1249	0.5264	7.8000e-004		8.1000e-004	8.1000e-004		8.1000e-004	8.1000e-004	0.0000	65.9020	65.9020	0.0174	0.0000	66.3357
Total	**0.0109**	**0.1249**	**0.5264**	**7.8000e-004**		**8.1000e-004**	**8.1000e-004**		**8.1000e-004**	**8.1000e-004**	**0.0000**	**65.9020**	**65.9020**	**0.0174**	**0.0000**	**66.3357**

Mitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	2.0600e-003	0.0730	0.0203	9.0000e-005	1.0100e-003	1.2000e-004	1.1300e-003	2.9000e-004	1.1000e-004	4.1000e-004	0.0000	8.7663	8.7663	8.6000e-004	0.0000	8.7877
Worker	5.4000e-003	2.4700e-003	0.0320	4.0000e-005	3.6200e-003	5.0000e-005	3.6700e-003	9.7000e-004	5.0000e-005	1.0100e-003	0.0000	3.9619	3.9619	1.7000e-004	0.0000	3.9662
Total	**7.4600e-003**	**0.0755**	**0.0522**	**1.3000e-004**	**4.6300e-003**	**1.7000e-004**	**4.8000e-003**	**1.2600e-003**	**1.6000e-004**	**1.4200e-003**	**0.0000**	**12.7283**	**12.7283**	**1.0300e-003**	**0.0000**	**12.7539**

3.6 Architectural Coating - 2020

Unmitigated Construction On-Site

	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					
Archit. Coating	2.9685					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0334	0.3217	0.2643	4.6000e-004		0.0170	0.0170		0.0161	0.0161	0.0000	40.3814	40.3814	9.7100e-003	0.0000	40.6241
Total	**3.0019**	**0.3217**	**0.2643**	**4.6000e-004**		**0.0170**	**0.0170**		**0.0161**	**0.0161**	**0.0000**	**40.3814**	**40.3814**	**9.7100e-003**	**0.0000**	**40.6241**

Unmitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	3.8800e-003	1.7800e-003	0.0230	3.0000e-005	2.6000e-003	4.0000e-005	2.6400e-003	7.0000e-004	3.0000e-005	7.3000e-004	0.0000	2.8462	2.8462	1.2000e-004	0.0000	2.8493
Total	**3.8800e-003**	**1.7800e-003**	**0.0230**	**3.0000e-005**	**2.6000e-003**	**4.0000e-005**	**2.6400e-003**	**7.0000e-004**	**3.0000e-005**	**7.3000e-004**	**0.0000**	**2.8462**	**2.8462**	**1.2000e-004**	**0.0000**	**2.8493**

Mitigated Construction On-Site

	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					
Archit. Coating	2.9685					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.3700e-003	0.0658	0.2845	4.6000e-004		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	40.3813	40.3813	9.7100e-003	0.0000	40.6241
Total	**2.9749**	**0.0658**	**0.2845**	**4.6000e-004**		**7.1000e-004**	**7.1000e-004**		**7.1000e-004**	**7.1000e-004**	**0.0000**	**40.3813**	**40.3813**	**9.7100e-003**	**0.0000**	**40.6241**

Mitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	3.8800e-003	1.7800e-003	0.0230	3.0000e-005	2.6000e-003	4.0000e-005	2.6400e-003	7.0000e-004	3.0000e-005	7.3000e-004	0.0000	2.8462	2.8462	1.2000e-004	0.0000	2.8493
Total	**3.8800e-003**	**1.7800e-003**	**0.0230**	**3.0000e-005**	**2.6000e-003**	**4.0000e-005**	**2.6400e-003**	**7.0000e-004**	**3.0000e-005**	**7.3000e-004**	**0.0000**	**2.8462**	**2.8462**	**1.2000e-004**	**0.0000**	**2.8493**

3.7 Paving - 2020

Unmitigated Construction On-Site

	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					
Off-Road	0.0258	0.2536	0.2500	3.7000e-004		0.0154	0.0154		0.0142	0.0142	0.0000	32.2913	32.2913	0.0103	0.0000	32.5499

Paving	8.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0259**	**0.2536**	**0.2500**	**3.7000e-004**		**0.0154**	**0.0154**		**0.0142**	**0.0142**	**0.0000**	**32.2913**	**32.2913**	**0.0103**	**0.0000**	**32.5499**

Unmitigated Construction Off-Site

	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					
Hauling	1.1000e-004	5.1600e-003	8.4000e-004	1.0000e-005	4.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	2.0000e-005	0.0000	0.6494	0.6494	7.0000e-005	0.0000	0.6511
Vendor	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	0.0000	0.0000
Worker	4.0000e-004	1.8000e-004	2.3600e-003	0.0000	2.7000e-004	0.0000	2.7000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2928	0.2928	1.0000e-005	0.0000	0.2931
Total	**5.1000e-004**	**5.3400e-003**	**3.2000e-003**	**1.0000e-005**	**3.1000e-004**	**0.0000**	**3.2000e-004**	**8.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.9422**	**0.9422**	**8.0000e-005**	**0.0000**	**0.9442**

Mitigated Construction On-Site

	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					
Off-Road	5.0700e-003	0.0450	0.2745	3.7000e-004		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	32.2912	32.2912	0.0103	0.0000	32.5498
Paving	8.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.1500e-003**	**0.0450**	**0.2745**	**3.7000e-004**		**5.9000e-004**	**5.9000e-004**		**5.9000e-004**	**5.9000e-004**	**0.0000**	**32.2912**	**32.2912**	**0.0103**	**0.0000**	**32.5498**

Mitigated Construction Off-Site

	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					
Hauling	1.1000e-004	5.1600e-003	8.4000e-004	1.0000e-005	4.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	2.0000e-005	0.0000	0.6494	0.6494	7.0000e-005	0.0000	0.6511
Vendor	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	0.0000	0.0000
Worker	4.0000e-004	1.8000e-004	2.3600e-003	0.0000	2.7000e-004	0.0000	2.7000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2928	0.2928	1.0000e-005	0.0000	0.2931
Total	**5.1000e-004**	**5.3400e-003**	**3.2000e-003**	**1.0000e-005**	**3.1000e-004**	**0.0000**	**3.2000e-004**	**8.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.9422**	**0.9422**	**8.0000e-005**	**0.0000**	**0.9442**

Phase 3, TAC Emissions

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	760.00	Space	0.00	311,800.00	0
Parking Lot	6.00	Space	0.05	2,400.00	0
Apartments Mid Rise	432.00	Dwelling Unit	21.35	522,000.00	1236
Strip Mall	4.90	1000sqft	0.00	4,900.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2022
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 - PG&E used to reprsent SVP. Current CO2 emisison factor from Santa Clara CLimate Action Plan 2020

Land Use - Applicant provided information on construction spreadsheet

Construction Phase - Applicant provided construction schedule

Off-road Equipment -

Off-road Equipment - Applicant provided infromation

Off-road Equipment - Applicant provided infromation

Off-road Equipment - Applicant provided information

Off-road Equipment - Applicant provided infromation

Off-road Equipment - Applicant provided infromation

Off-road Equipment - Applicant provided infromation

Trips and VMT - Paving trips= 800/16*2

Grading - 20919 cy of soil hauled

Vehicle Trips - Project traffic report

Woodstoves - no woodstoves or wood based firplaces

Energy Use - Title 24, 2013 values

Construction Off-road Equipment Mitigation - Best Management Practices
tier 4
Energy Mitigation - title 24,2016 came into effect on 1st january, 2017

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	64.80	432.00
tblFireplaces	NumberNoFireplace	17.28	0.00
tblFireplaces	NumberWood	73.44	0.00
tblGrading	MaterialExported	0.00	20,919.00
tblLandUse	BuildingSpaceSquareFeet	304,000.00	311,800.00
tblLandUse	BuildingSpaceSquareFeet	432,000.00	522,000.00
tblLandUse	LandUseSquareFeet	304,000.00	311,800.00

tblLandUse	LandUseSquareFeet	432,000.00	522,000.00
tblLandUse	LotAcreage	6.84	0.00
tblLandUse	LotAcreage	11.37	21.35
tblLandUse	LotAcreage	0.11	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	380
tblProjectCharacteristics	OperationalYear	2018	2022
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripNumber	0.00	100.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblVehicleTrips	ST_TR	6.39	5.83
tblVehicleTrips	ST_TR	42.04	28.95
tblVehicleTrips	SU_TR	5.86	5.35
tblVehicleTrips	SU_TR	20.43	14.07
tblVehicleTrips	WD_TR	6.65	6.07

tblVehicleTrips	WD_TR	44.32	30.52
tblWoodstoves	NumberCatalytic	8.64	0.00
tblWoodstoves	NumberNoncatalytic	8.64	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	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
Year	tons/yr										MT/yr					
2020	2.1046	4.7385	3.4186	6.2300e-003	0.3938	0.2119	0.6057	0.1530	0.1963	0.3493	0.0000	550.2118	550.2118	0.1489	0.0000	553.9354
2021	2.1559	0.4168	0.4435	6.5000e-004	2.1600e-003	0.0247	0.0269	5.8000e-004	0.0230	0.0236	0.0000	56.9115	56.9115	0.0156	0.0000	57.3011
Maximum	**2.1559**	**4.7385**	**3.4186**	**6.2300e-003**	**0.3938**	**0.2119**	**0.6057**	**0.1530**	**0.1963**	**0.3493**	**0.0000**	**550.2118**	**550.2118**	**0.1489**	**0.0000**	**553.9354**

Mitigated Construction

	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
Year	tons/yr										MT/yr					
2020	1.7685	1.0184	3.5960	6.2300e-003	0.1907	9.6100e-003	0.2003	0.0396	9.5600e-003	0.0492	0.0000	550.2113	550.2113	0.1489	0.0000	553.9348
2021	2.1203	0.0876	0.4691	6.5000e-004	2.1600e-003	1.0100e-003	3.1700e-003	5.8000e-004	1.0100e-003	1.5900e-003	0.0000	56.9115	56.9115	0.0156	0.0000	57.3011
Maximum	**2.1203**	**1.0184**	**3.5960**	**6.2300e-003**	**0.1907**	**9.6100e-003**	**0.2003**	**0.0396**	**9.5600e-003**	**0.0492**	**0.0000**	**550.2113**	**550.2113**	**0.1489**	**0.0000**	**553.9348**

	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	**8.72**	**78.55**	**-5.26**	**0.00**	**51.30**	**95.51**	**67.84**	**73.84**	**95.18**	**86.39**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**4-1-2020**	**6-30-2020**	2.7121	0.4043
2	**7-1-2020**	**9-30-2020**	1.5292	0.4644
3	**10-1-2020**	**12-31-2020**	2.5146	1.8668
4	**1-1-2021**	**3-31-2021**	2.5609	2.1970
		Highest	2.7121	2.1970

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	4/1/2020	4/28/2020	5	20	
2	Grading	Grading	4/29/2020	6/23/2020	5	40	
3	Trenching	Trenching	6/1/2020	6/26/2020	5	20	
4	Building Construction	Building Construction	6/29/2020	11/13/2020	5	100	
5	Architectural Coating	Architectural Coating	11/2/2020	3/19/2021	5	100	
6	Paving	Paving	1/1/2021	2/25/2021	5	40	

Acres of Grading (Site Preparation Phase): 80

Acres of Grading (Grading Phase): 160

Acres of Paving: 0.05

Residential Indoor: 1,057,050; Residential Outdoor: 352,350; Non-Residential Indoor: 7,350; Non-Residential Outdoor: 2,450; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	2	8.00	97	0.37

Site Preparation	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Scrapers	3	8.00	367	0.48
Site Preparation	Skid Steer Loaders	1	8.00	65	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	187	0.41
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	2	8.00	187	0.41
Grading	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	3	8.00	367	0.48
Grading	Skid Steer Loaders	1	8.00	65	0.37
Grading	Sweepers/Scrubbers	1	8.00	64	0.46
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Trenching	Excavators	2	8.00	158	0.38
Trenching	Rough Terrain Forklifts	1	8.00	100	0.40
Trenching	Skid Steer Loaders	1	8.00	65	0.37
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Trenching	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Aerial Lifts	3	8.00	63	0.31
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	4	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Other Construction Equipment	3	8.00	172	0.42
Building Construction	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Aerial Lifts	1	8.00	63	0.31
Architectural Coating	Air Compressors	2	3.20	78	0.48
Architectural Coating	Cranes	1	4.00	81	0.73
Architectural Coating	Forklifts	1	8.00	89	0.20
Paving	Cement and Mortar Mixers	1	4.00	9	0.56
Paving	Pavers	1	8.00	130	0.42

Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Sweepers/Scrubbers	1	8.00	64	0.46
Paving	Tractors/Loaders/Backhoes	1	4.00	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
Site Preparation	9	23.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Grading	13	33.00	0.00	2,615.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Trenching	7	18.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Building Construction	14	445.00	98.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	5	89.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	100.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Site Preparation - 2020

Unmitigated Construction On-Site

	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					
Fugitive Dust					0.1629	0.0000	0.1629	0.0708	0.0000	0.0708	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Off-Road	0.0676	0.7247	0.3942	7.7000e-004		0.0344	0.0344		0.0317	0.0317	0.0000	67.9145	67.9145	0.0220	0.0000	68.4636
Total	**0.0676**	**0.7247**	**0.3942**	**7.7000e-004**	**0.1629**	**0.0344**	**0.1973**	**0.0708**	**0.0317**	**0.1024**	**0.0000**	**67.9145**	**67.9145**	**0.0220**	**0.0000**	**68.4636**

Unmitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	2.5000e-004	1.2000e-004	1.5100e-003	0.0000	1.7000e-004	0.0000	1.7000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1870	0.1870	1.0000e-005	0.0000	0.1872
Total	**2.5000e-004**	**1.2000e-004**	**1.5100e-003**	**0.0000**	**1.7000e-004**	**0.0000**	**1.7000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.1870**	**0.1870**	**1.0000e-005**	**0.0000**	**0.1872**

Mitigated Construction On-Site

	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					
Fugitive Dust					0.0733	0.0000	0.0733	0.0159	0.0000	0.0159	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.7600e-003	0.0517	0.3740	7.7000e-004		1.2700e-003	1.2700e-003		1.2700e-003	1.2700e-003	0.0000	67.9144	67.9144	0.0220	0.0000	68.4636
Total	**9.7600e-003**	**0.0517**	**0.3740**	**7.7000e-004**	**0.0733**	**1.2700e-003**	**0.0746**	**0.0159**	**1.2700e-003**	**0.0172**	**0.0000**	**67.9144**	**67.9144**	**0.0220**	**0.0000**	**68.4636**

Mitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	2.5000e-004	1.2000e-004	1.5100e-003	0.0000	1.7000e-004	0.0000	1.7000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1870	0.1870	1.0000e-005	0.0000	0.1872
Total	**2.5000e-004**	**1.2000e-004**	**1.5100e-003**	**0.0000**	**1.7000e-004**	**0.0000**	**1.7000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.1870**	**0.1870**	**1.0000e-005**	**0.0000**	**0.1872**

3.3 Grading - 2020

Unmitigated Construction On-Site

	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					
Fugitive Dust					0.2065	0.0000	0.2065	0.0755	0.0000	0.0755	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1295	1.4744	0.9223	1.8100e-003		0.0640	0.0640		0.0589	0.0589	0.0000	159.1077	159.1077	0.0515	0.0000	160.3941
Total	**0.1295**	**1.4744**	**0.9223**	**1.8100e-003**	**0.2065**	**0.0640**	**0.2705**	**0.0755**	**0.0589**	**0.1344**	**0.0000**	**159.1077**	**159.1077**	**0.0515**	**0.0000**	**160.3941**

Unmitigated Construction Off-Site

	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					

Hauling	2.8400e-003	0.1349	0.0220	1.8000e-004	1.1300e-003	1.3000e-004	1.2600e-003	3.1000e-004	1.2000e-004	4.4000e-004	0.0000	16.9818	16.9818	1.8100e-003	0.0000	17.0270
Vendor	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	0.0000	0.0000
Worker	7.3000e-004	3.3000e-004	4.3300e-003	1.0000e-005	4.9000e-004	1.0000e-005	5.0000e-004	1.3000e-004	1.0000e-005	1.4000e-004	0.0000	0.5367	0.5367	2.0000e-005	0.0000	0.5373
Total	**3.5700e-003**	**0.1352**	**0.0263**	**1.9000e-004**	**1.6200e-003**	**1.4000e-004**	**1.7600e-003**	**4.4000e-004**	**1.3000e-004**	**5.8000e-004**	**0.0000**	**17.5185**	**17.5185**	**1.8300e-003**	**0.0000**	**17.5643**

Mitigated Construction On-Site

	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					
Fugitive Dust					0.0929	0.0000	0.0929	0.0170	0.0000	0.0170	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0234	0.1432	0.9585	1.8100e-003		2.9700e-003	2.9700e-003		2.9700e-003	2.9700e-003	0.0000	159.1075	159.1075	0.0515	0.0000	160.3939
Total	**0.0234**	**0.1432**	**0.9585**	**1.8100e-003**	**0.0929**	**2.9700e-003**	**0.0959**	**0.0170**	**2.9700e-003**	**0.0200**	**0.0000**	**159.1075**	**159.1075**	**0.0515**	**0.0000**	**160.3939**

Mitigated Construction Off-Site

	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					
Hauling	2.8400e-003	0.1349	0.0220	1.8000e-004	1.1300e-003	1.3000e-004	1.2600e-003	3.1000e-004	1.2000e-004	4.4000e-004	0.0000	16.9818	16.9818	1.8100e-003	0.0000	17.0270
Vendor	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	0.0000	0.0000
Worker	7.3000e-004	3.3000e-004	4.3300e-003	1.0000e-005	4.9000e-004	1.0000e-005	5.0000e-004	1.3000e-004	1.0000e-005	1.4000e-004	0.0000	0.5367	0.5367	2.0000e-005	0.0000	0.5373
Total	**3.5700e-003**	**0.1352**	**0.0263**	**1.9000e-004**	**1.6200e-003**	**1.4000e-004**	**1.7600e-003**	**4.4000e-004**	**1.3000e-004**	**5.8000e-004**	**0.0000**	**17.5185**	**17.5185**	**1.8300e-003**	**0.0000**	**17.5643**

3.4 Trenching - 2020

Unmitigated Construction On-Site

	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					
Off-Road	0.0133	0.1393	0.1706	2.5000e-004		7.5100e-003	7.5100e-003		6.9100e-003	6.9100e-003	0.0000	22.1026	22.1026	7.1500e-003	0.0000	22.2813
Total	**0.0133**	**0.1393**	**0.1706**	**2.5000e-004**		**7.5100e-003**	**7.5100e-003**		**6.9100e-003**	**6.9100e-003**	**0.0000**	**22.1026**	**22.1026**	**7.1500e-003**	**0.0000**	**22.2813**

Unmitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	2.0000e-004	9.0000e-005	1.1800e-003	0.0000	1.3000e-004	0.0000	1.4000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1464	0.1464	1.0000e-005	0.0000	0.1465
Total	**2.0000e-004**	**9.0000e-005**	**1.1800e-003**	**0.0000**	**1.3000e-004**	**0.0000**	**1.4000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1464**	**0.1464**	**1.0000e-005**	**0.0000**	**0.1465**

Mitigated Construction On-Site

	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					
Off-Road	3.3400e-003	0.0239	0.1904	2.5000e-004		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	22.1026	22.1026	7.1500e-003	0.0000	22.2813
Total	**3.3400e-003**	**0.0239**	**0.1904**	**2.5000e-004**		**4.1000e-004**	**4.1000e-004**		**4.1000e-004**	**4.1000e-004**	**0.0000**	**22.1026**	**22.1026**	**7.1500e-003**	**0.0000**	**22.2813**

Mitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	2.0000e-004	9.0000e-005	1.1800e-003	0.0000	1.3000e-004	0.0000	1.4000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1464	0.1464	1.0000e-005	0.0000	0.1465
Total	**2.0000e-004**	**9.0000e-005**	**1.1800e-003**	**0.0000**	**1.3000e-004**	**0.0000**	**1.4000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1464**	**0.1464**	**1.0000e-005**	**0.0000**	**0.1465**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	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					
Off-Road	0.1791	1.7692	1.5119	2.3800e-003		0.0949	0.0949		0.0884	0.0884	0.0000	207.1314	207.1314	0.0578	0.0000	208.5761

Total	**0.1791**	**1.7692**	**1.5119**	**2.3800e-003**		**0.0949**	**0.0949**		**0.0884**	**0.0884**	**0.0000**	**207.1314**	**207.1314**	**0.0578**	**0.0000**	**208.5761**

Unmitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	9.2500e-003	0.3277	0.0910	4.1000e-004	4.5300e-003	5.3000e-004	5.0600e-003	1.3200e-003	5.1000e-004	1.8300e-003	0.0000	39.3361	39.3361	3.8400e-003	0.0000	39.4320
Worker	0.0247	0.0113	0.1459	2.0000e-004	0.0165	2.3000e-004	0.0168	4.4200e-003	2.1000e-004	4.6300e-003	0.0000	18.0938	18.0938	7.8000e-004	0.0000	18.1133
Total	**0.0339**	**0.3390**	**0.2369**	**6.1000e-004**	**0.0211**	**7.6000e-004**	**0.0218**	**5.7400e-003**	**7.2000e-004**	**6.4600e-003**	**0.0000**	**57.4299**	**57.4299**	**4.6200e-003**	**0.0000**	**57.5453**

Mitigated Construction On-Site

	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					
Off-Road	0.0324	0.2956	1.6553	2.3800e-003		3.7500e-003	3.7500e-003		3.7500e-003	3.7500e-003	0.0000	207.1312	207.1312	0.0578	0.0000	208.5759
Total	**0.0324**	**0.2956**	**1.6553**	**2.3800e-003**		**3.7500e-003**	**3.7500e-003**		**3.7500e-003**	**3.7500e-003**	**0.0000**	**207.1312**	**207.1312**	**0.0578**	**0.0000**	**208.5759**

Mitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	9.2500e-003	0.3277	0.0910	4.1000e-004	4.5300e-003	5.3000e-004	5.0600e-003	1.3200e-003	5.1000e-004	1.8300e-003	0.0000	39.3361	39.3361	3.8400e-003	0.0000	39.4320
Worker	0.0247	0.0113	0.1459	2.0000e-004	0.0165	2.3000e-004	0.0168	4.4200e-003	2.1000e-004	4.6300e-003	0.0000	18.0938	18.0938	7.8000e-004	0.0000	18.1133
Total	**0.0339**	**0.3390**	**0.2369**	**6.1000e-004**	**0.0211**	**7.6000e-004**	**0.0218**	**5.7400e-003**	**7.2000e-004**	**6.4600e-003**	**0.0000**	**57.4299**	**57.4299**	**4.6200e-003**	**0.0000**	**57.5453**

3.6 Architectural Coating - 2020

Unmitigated Construction On-Site

	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					
Archit. Coating	1.6569					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0181	0.1554	0.1409	2.0000e-004		0.0102	0.0102		9.6300e-003	9.6300e-003	0.0000	17.0816	17.0816	4.0500e-003	0.0000	17.1829
Total	**1.6750**	**0.1554**	**0.1409**	**2.0000e-004**		**0.0102**	**0.0102**		**9.6300e-003**	**9.6300e-003**	**0.0000**	**17.0816**	**17.0816**	**4.0500e-003**	**0.0000**	**17.1829**

Unmitigated Construction Off-Site

	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					

Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	2.1700e-003	9.9000e-004	0.0128	2.0000e-005	1.4600e-003	2.0000e-005	1.4800e-003	3.9000e-004	2.0000e-005	4.1000e-004	0.0000	1.5923	1.5923	7.0000e-005	0.0000	1.5940
Total	**2.1700e-003**	**9.9000e-004**	**0.0128**	**2.0000e-005**	**1.4600e-003**	**2.0000e-005**	**1.4800e-003**	**3.9000e-004**	**2.0000e-005**	**4.1000e-004**	**0.0000**	**1.5923**	**1.5923**	**7.0000e-005**	**0.0000**	**1.5940**

Mitigated Construction On-Site

	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					
Archit. Coating	1.6569					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.7100e-003	0.0286	0.1390	2.0000e-004		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	17.0816	17.0816	4.0500e-003	0.0000	17.1829
Total	**1.6596**	**0.0286**	**0.1390**	**2.0000e-004**		**3.0000e-004**	**3.0000e-004**		**3.0000e-004**	**3.0000e-004**	**0.0000**	**17.0816**	**17.0816**	**4.0500e-003**	**0.0000**	**17.1829**

Mitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	2.1700e-003	9.9000e-004	0.0128	2.0000e-005	1.4600e-003	2.0000e-005	1.4800e-003	3.9000e-004	2.0000e-005	4.1000e-004	0.0000	1.5923	1.5923	7.0000e-005	0.0000	1.5940
Total	**2.1700e-003**	**9.9000e-004**	**0.0128**	**2.0000e-005**	**1.4600e-003**	**2.0000e-005**	**1.4800e-003**	**3.9000e-004**	**2.0000e-005**	**4.1000e-004**	**0.0000**	**1.5923**	**1.5923**	**7.0000e-005**	**0.0000**	**1.5940**

3.6 Architectural Coating - 2021

Unmitigated Construction On-Site

	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					
Archit. Coating	2.1088					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0207	0.1791	0.1770	2.5000e-004		0.0113	0.0113		0.0106	0.0106	0.0000	21.7403	21.7403	5.0900e-003	0.0000	21.8675
Total	**2.1295**	**0.1791**	**0.1770**	**2.5000e-004**		**0.0113**	**0.0113**		**0.0106**	**0.0106**	**0.0000**	**21.7403**	**21.7403**	**5.0900e-003**	**0.0000**	**21.8675**

Unmitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	2.5200e-003	1.1100e-003	0.0147	2.0000e-005	1.8500e-003	2.0000e-005	1.8800e-003	5.0000e-004	2.0000e-005	5.2000e-004	0.0000	1.9577	1.9577	8.0000e-005	0.0000	1.9596
Total	**2.5200e-003**	**1.1100e-003**	**0.0147**	**2.0000e-005**	**1.8500e-003**	**2.0000e-005**	**1.8800e-003**	**5.0000e-004**	**2.0000e-005**	**5.2000e-004**	**0.0000**	**1.9577**	**1.9577**	**8.0000e-005**	**0.0000**	**1.9596**

Mitigated Construction On-Site

	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					
Archit. Coating	2.1088					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.4500e-003	0.0364	0.1770	2.5000e-004		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004	0.0000	21.7403	21.7403	5.0900e-003	0.0000	21.8675
Total	**2.1122**	**0.0364**	**0.1770**	**2.5000e-004**		**3.8000e-004**	**3.8000e-004**		**3.8000e-004**	**3.8000e-004**	**0.0000**	**21.7403**	**21.7403**	**5.0900e-003**	**0.0000**	**21.8675**

Mitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	2.5200e-003	1.1100e-003	0.0147	2.0000e-005	1.8500e-003	2.0000e-005	1.8800e-003	5.0000e-004	2.0000e-005	5.2000e-004	0.0000	1.9577	1.9577	8.0000e-005	0.0000	1.9596
Total	**2.5200e-003**	**1.1100e-003**	**0.0147**	**2.0000e-005**	**1.8500e-003**	**2.0000e-005**	**1.8800e-003**	**5.0000e-004**	**2.0000e-005**	**5.2000e-004**	**0.0000**	**1.9577**	**1.9577**	**8.0000e-005**	**0.0000**	**1.9596**

3.7 Paving - 2021

Unmitigated Construction On-Site

	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					
Off-Road	0.0234	0.2315	0.2489	3.7000e-004		0.0134	0.0134		0.0124	0.0124	0.0000	32.2881	32.2881	0.0103	0.0000	32.5467

Paving	7.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0235**	**0.2315**	**0.2489**	**3.7000e-004**		**0.0134**	**0.0134**		**0.0124**	**0.0124**	**0.0000**	**32.2881**	**32.2881**	**0.0103**	**0.0000**	**32.5467**

Unmitigated Construction Off-Site

	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					
Hauling	1.0000e-004	4.9600e-003	8.1000e-004	1.0000e-005	4.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	2.0000e-005	0.0000	0.6426	0.6426	7.0000e-005	0.0000	0.6442
Vendor	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	0.0000	0.0000
Worker	3.6000e-004	1.6000e-004	2.1300e-003	0.0000	2.7000e-004	0.0000	2.7000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2828	0.2828	1.0000e-005	0.0000	0.2831
Total	**4.6000e-004**	**5.1200e-003**	**2.9400e-003**	**1.0000e-005**	**3.1000e-004**	**0.0000**	**3.2000e-004**	**8.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.9254**	**0.9254**	**8.0000e-005**	**0.0000**	**0.9273**

Mitigated Construction On-Site

	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					
Off-Road	5.0700e-003	0.0450	0.2745	3.7000e-004		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	32.2881	32.2881	0.0103	0.0000	32.5467
Paving	7.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.1400e-003**	**0.0450**	**0.2745**	**3.7000e-004**		**5.9000e-004**	**5.9000e-004**		**5.9000e-004**	**5.9000e-004**	**0.0000**	**32.2881**	**32.2881**	**0.0103**	**0.0000**	**32.5467**

Mitigated Construction Off-Site

	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					
Hauling	1.0000e-004	4.9600e-003	8.1000e-004	1.0000e-005	4.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	2.0000e-005	0.0000	0.6426	0.6426	7.0000e-005	0.0000	0.6442
Vendor	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	0.0000	0.0000
Worker	3.6000e-004	1.6000e-004	2.1300e-003	0.0000	2.7000e-004	0.0000	2.7000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2828	0.2828	1.0000e-005	0.0000	0.2831
Total	**4.6000e-004**	**5.1200e-003**	**2.9400e-003**	**1.0000e-005**	**3.1000e-004**	**0.0000**	**3.2000e-004**	**8.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.9254**	**0.9254**	**8.0000e-005**	**0.0000**	**0.9273**

Gateway Crossings, Phase 4 TAC Emissions

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	905.00	Space	0.00	362,000.00	0
Parking Lot	4.00	Space	0.04	1,600.00	0
Apartments Mid Rise	556.00	Dwelling Unit	21.36	556,885.00	1590

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2024
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 - PG&E used to represent SVP (Silicon Valley Power. Current CO2 emission factor from City of Santa Clara 2020 Climate Action Plan

Land Use - Applicant provided project description

Construction Phase - Applicant provided construction schedule

Off-road Equipment -

Off-road Equipment - Applicant provided equipment information

Off-road Equipment - Applicant provided equipment information

Off-road Equipment - Applicant provided equipment information

Off-road Equipment - Applicant provided equipment information

Off-road Equipment - Applicant provided equipment infromation

Off-road Equipment - Applicant provided equipment information

Trips and VMT - Paving trips= 800 cy= 100 trips

Grading - 18459 cy of soil export

Vehicle Trips - From Project Traffic Report

Woodstoves - No woodstoves or wood based fireplaces

Energy Use - Title 24,2013 values used

Construction Off-road Equipment Mitigation - Tier 2 Mitigation and Best Management practices

Energy Mitigation - Title 24, 2016 came into effect on 1st January, 2017

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	83.40	556.00
tblFireplaces	NumberNoFireplace	22.24	0.00
tblFireplaces	NumberWood	94.52	0.00
tblGrading	MaterialExported	0.00	18,459.00
tblLandUse	BuildingSpaceSquareFeet	556,000.00	556,885.00
tblLandUse	LandUseSquareFeet	556,000.00	556,885.00
tblLandUse	LotAcreage	8.14	0.00
tblLandUse	LotAcreage	14.63	21.36
tblProjectCharacteristics	CO2IntensityFactor	641.35	380

tblProjectCharacteristics	OperationalYear	2018	2024
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripNumber	0.00	100.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblVehicleTrips	ST_TR	6.39	5.83
tblVehicleTrips	SU_TR	5.86	5.35
tblVehicleTrips	WD_TR	6.65	6.07
tblWoodstoves	NumberCatalytic	11.12	0.00
tblWoodstoves	NumberNoncatalytic	11.12	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	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
Year	tons/yr										MT/yr					
2022	2.4409	5.7614	5.1310	9.7800e-003	0.5165	0.2335	0.7500	0.1962	0.2175	0.4137	0.0000	855.3373	855.3373	0.2199	0.0000	860.8354
2023	2.2094	0.6134	0.7425	1.2300e-003	5.3600e-003	0.0293	0.0346	1.4400e-003	0.0273	0.0287	0.0000	107.3268	107.3268	0.0281	0.0000	108.0293
Maximum	**2.4409**	**5.7614**	**5.1310**	**9.7800e-003**	**0.5165**	**0.2335**	**0.7500**	**0.1962**	**0.2175**	**0.4137**	**0.0000**	**855.3373**	**855.3373**	**0.2199**	**0.0000**	**860.8354**

Mitigated Construction

	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
Year	tons/yr										MT/yr					
2022	2.0304	1.7257	5.6404	9.7800e-003	0.2570	0.0143	0.2713	0.0536	0.0142	0.0678	0.0000	855.3364	855.3364	0.2199	0.0000	860.8345
2023	2.1626	0.1780	0.8190	1.2300e-003	5.3600e-003	1.8500e-003	7.2100e-003	1.4400e-003	1.8400e-003	3.2900e-003	0.0000	107.3267	107.3267	0.0281	0.0000	108.0292
Maximum	**2.1626**	**1.7257**	**5.6404**	**9.7800e-003**	**0.2570**	**0.0143**	**0.2713**	**0.0536**	**0.0142**	**0.0678**	**0.0000**	**855.3364**	**855.3364**	**0.2199**	**0.0000**	**860.8345**

	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	**9.84**	**70.14**	**-9.98**	**0.00**	**49.72**	**93.85**	**64.50**	**72.16**	**93.43**	**83.93**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**3-1-2022**	**5-31-2022**	2.2810	0.3713
2	**6-1-2022**	**8-31-2022**	1.9888	0.7011
3	**9-1-2022**	**11-30-2022**	2.7273	1.8172
4	**12-1-2022**	**2-28-2023**	2.7497	2.1702

5	**3-1-2023**	**5-31-2023**	1.2289	0.9975
		Highest	2.7497	2.1702

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	3/1/2022	3/28/2022	5	20	
2	Grading	Grading	3/29/2022	6/20/2022	5	60	
3	Trenching	Trenching	5/2/2022	6/24/2022	5	40	
4	Building Construction	Building Construction	6/1/2022	1/10/2023	5	160	
5	Architectural Coating	Architectural Coating	10/3/2022	4/14/2023	5	140	
6	Paving	Paving	2/1/2023	4/25/2023	5	60	

Acres of Grading (Site Preparation Phase): 80

Acres of Grading (Grading Phase): 240

Acres of Paving: 0.04

Residential Indoor: 1,127,692; Residential Outdoor: 375,897; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	2	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Scrapers	3	8.00	367	0.48
Site Preparation	Skid Steer Loaders	1	8.00	65	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	2	8.00	187	0.41
Grading	Rollers	2	8.00	80	0.38

Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	3	8.00	367	0.48
Grading	Skid Steer Loaders	1	8.00	65	0.37
Grading	Sweepers/Scrubbers	1	8.00	64	0.46
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Trenching	Excavators	2	8.00	158	0.38
Trenching	Rough Terrain Forklifts	1	8.00	100	0.40
Trenching	Skid Steer Loaders	1	8.00	65	0.37
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Trenching	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Aerial Lifts	3	8.00	63	0.31
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	4	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Other Construction Equipment	3	8.00	172	0.42
Building Construction	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Welders	4	8.00	46	0.45
Architectural Coating	Aerial Lifts	1	8.00	63	0.31
Architectural Coating	Air Compressors	2	3.50	78	0.48
Architectural Coating	Cranes	1	4.60	231	0.29
Architectural Coating	Forklifts	1	8.00	89	0.20
Paving	Cement and Mortar Mixers	1	5.30	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Sweepers/Scrubbers	1	8.00	64	0.46
Paving	Tractors/Loaders/Backhoes	1	5.30	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
Site Preparation	9	23.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Grading	13	33.00	0.00	2,307.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Trenching	7	18.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Building Construction	17	553.00	119.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	5	111.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	100.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

	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					
Fugitive Dust					0.1629	0.0000	0.1629	0.0708	0.0000	0.0708	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0520	0.5754	0.3336	8.1000e-004		0.0234	0.0234		0.0215	0.0215	0.0000	71.2062	71.2062	0.0230	0.0000	71.7819
Total	**0.0520**	**0.5754**	**0.3336**	**8.1000e-004**	**0.1629**	**0.0234**	**0.1863**	**0.0708**	**0.0215**	**0.0923**	**0.0000**	**71.2062**	**71.2062**	**0.0230**	**0.0000**	**71.7819**

Unmitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	2.1000e-004	9.0000e-005	1.2300e-003	0.0000	1.7000e-004	0.0000	1.7000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1742	0.1742	1.0000e-005	0.0000	0.1744
Total	**2.1000e-004**	**9.0000e-005**	**1.2300e-003**	**0.0000**	**1.7000e-004**	**0.0000**	**1.7000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.1742**	**0.1742**	**1.0000e-005**	**0.0000**	**0.1744**

Mitigated Construction On-Site

	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					
Fugitive Dust					0.0733	0.0000	0.0733	0.0159	0.0000	0.0159	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0102	0.0536	0.3803	8.1000e-004		1.3300e-003	1.3300e-003		1.3300e-003	1.3300e-003	0.0000	71.2061	71.2061	0.0230	0.0000	71.7819
Total	**0.0102**	**0.0536**	**0.3803**	**8.1000e-004**	**0.0733**	**1.3300e-003**	**0.0746**	**0.0159**	**1.3300e-003**	**0.0173**	**0.0000**	**71.2061**	**71.2061**	**0.0230**	**0.0000**	**71.7819**

Mitigated Construction Off-Site

	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					

Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	2.1000e-004	9.0000e-005	1.2300e-003	0.0000	1.7000e-004	0.0000	1.7000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1742	0.1742	1.0000e-005	0.0000	0.1744
Total	**2.1000e-004**	**9.0000e-005**	**1.2300e-003**	**0.0000**	**1.7000e-004**	**0.0000**	**1.7000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.1742**	**0.1742**	**1.0000e-005**	**0.0000**	**0.1744**

3.3 Grading - 2022

Unmitigated Construction On-Site

	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					
Fugitive Dust					0.3090	0.0000	0.3090	0.1132	0.0000	0.1132	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1587	1.7266	1.2578	2.7200e-003		0.0725	0.0725		0.0667	0.0667	0.0000	238.8577	238.8577	0.0773	0.0000	240.7890
Total	**0.1587**	**1.7266**	**1.2578**	**2.7200e-003**	**0.3090**	**0.0725**	**0.3814**	**0.1132**	**0.0667**	**0.1799**	**0.0000**	**238.8577**	**238.8577**	**0.0773**	**0.0000**	**240.7890**

Unmitigated Construction Off-Site

	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					
Hauling	2.2100e-003	0.1100	0.0182	1.5000e-004	1.0000e-003	8.0000e-005	1.0800e-003	2.8000e-004	8.0000e-005	3.6000e-004	0.0000	14.6708	14.6708	1.4300e-003	0.0000	14.7065
Vendor	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	0.0000	0.0000
Worker	9.2000e-004	3.9000e-004	5.3000e-003	1.0000e-005	7.4000e-004	1.0000e-005	7.5000e-004	2.0000e-004	1.0000e-005	2.1000e-004	0.0000	0.7500	0.7500	3.0000e-005	0.0000	0.7507
Total	**3.1300e-003**	**0.1104**	**0.0235**	**1.6000e-004**	**1.7400e-003**	**9.0000e-005**	**1.8300e-003**	**4.8000e-004**	**9.0000e-005**	**5.7000e-004**	**0.0000**	**15.4208**	**15.4208**	**1.4600e-003**	**0.0000**	**15.4571**

Mitigated Construction On-Site

	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					
Fugitive Dust					0.1390	0.0000	0.1390	0.0255	0.0000	0.0255	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0351	0.2148	1.4378	2.7200e-003		4.4500e-003	4.4500e-003		4.4500e-003	4.4500e-003	0.0000	238.8575	238.8575	0.0773	0.0000	240.7887
Total	**0.0351**	**0.2148**	**1.4378**	**2.7200e-003**	**0.1390**	**4.4500e-003**	**0.1435**	**0.0255**	**4.4500e-003**	**0.0299**	**0.0000**	**238.8575**	**238.8575**	**0.0773**	**0.0000**	**240.7887**

Mitigated Construction Off-Site

	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					
Hauling	2.2100e-003	0.1100	0.0182	1.5000e-004	1.0000e-003	8.0000e-005	1.0800e-003	2.8000e-004	8.0000e-005	3.6000e-004	0.0000	14.6708	14.6708	1.4300e-003	0.0000	14.7065
Vendor	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	0.0000	0.0000
Worker	9.2000e-004	3.9000e-004	5.3000e-003	1.0000e-005	7.4000e-004	1.0000e-005	7.5000e-004	2.0000e-004	1.0000e-005	2.1000e-004	0.0000	0.7500	0.7500	3.0000e-005	0.0000	0.7507
Total	**3.1300e-003**	**0.1104**	**0.0235**	**1.6000e-004**	**1.7400e-003**	**9.0000e-005**	**1.8300e-003**	**4.8000e-004**	**9.0000e-005**	**5.7000e-004**	**0.0000**	**15.4208**	**15.4208**	**1.4600e-003**	**0.0000**	**15.4571**

3.4 Trenching - 2022

Unmitigated Construction On-Site

	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					
Off-Road	0.0216	0.2198	0.3380	5.0000e-004		0.0106	0.0106		9.7200e-003	9.7200e-003	0.0000	44.2324	44.2324	0.0143	0.0000	44.5900
Total	**0.0216**	**0.2198**	**0.3380**	**5.0000e-004**		**0.0106**	**0.0106**		**9.7200e-003**	**9.7200e-003**	**0.0000**	**44.2324**	**44.2324**	**0.0143**	**0.0000**	**44.5900**

Unmitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	3.3000e-004	1.4000e-004	1.9300e-003	0.0000	2.7000e-004	0.0000	2.7000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2727	0.2727	1.0000e-005	0.0000	0.2730
Total	**3.3000e-004**	**1.4000e-004**	**1.9300e-003**	**0.0000**	**2.7000e-004**	**0.0000**	**2.7000e-004**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.2727**	**0.2727**	**1.0000e-005**	**0.0000**	**0.2730**

Mitigated Construction On-Site

	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					
Off-Road	6.6800e-003	0.0478	0.3808	5.0000e-004		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	44.2323	44.2323	0.0143	0.0000	44.5900

Total	**6.6800e-003**	**0.0478**	**0.3808**	**5.0000e-004**		**8.2000e-004**	**8.2000e-004**		**8.2000e-004**	**8.2000e-004**	**0.0000**	**44.2323**	**44.2323**	**0.0143**	**0.0000**	**44.5900**

Mitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	3.3000e-004	1.4000e-004	1.9300e-003	0.0000	2.7000e-004	0.0000	2.7000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2727	0.2727	1.0000e-005	0.0000	0.2730
Total	**3.3000e-004**	**1.4000e-004**	**1.9300e-003**	**0.0000**	**2.7000e-004**	**0.0000**	**2.7000e-004**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.2727**	**0.2727**	**1.0000e-005**	**0.0000**	**0.2730**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	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					
Off-Road	0.2733	2.3669	2.6067	4.1300e-003		0.1171	0.1171		0.1102	0.1102	0.0000	350.3490	350.3490	0.0896	0.0000	352.5902
Total	**0.2733**	**2.3669**	**2.6067**	**4.1300e-003**		**0.1171**	**0.1171**		**0.1102**	**0.1102**	**0.0000**	**350.3490**	**350.3490**	**0.0896**	**0.0000**	**352.5902**

Unmitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	0.0142	0.5599	0.1453	7.5000e-004	8.4100e-003	4.2000e-004	8.8300e-003	2.4500e-003	4.0000e-004	2.8500e-003	0.0000	71.7290	71.7290	6.3100e-003	0.0000	71.8867
Worker	0.0393	0.0168	0.2265	3.6000e-004	0.0315	4.1000e-004	0.0319	8.4100e-003	3.8000e-004	8.7900e-003	0.0000	32.0483	32.0483	1.1600e-003	0.0000	32.0772
Total	**0.0535**	**0.5767**	**0.3718**	**1.1100e-003**	**0.0399**	**8.3000e-004**	**0.0407**	**0.0109**	**7.8000e-004**	**0.0116**	**0.0000**	**103.7773**	**103.7773**	**7.4700e-003**	**0.0000**	**103.9639**

Mitigated Construction On-Site

	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					
Off-Road	0.0582	0.6768	2.8265	4.1300e-003		6.2300e-003	6.2300e-003		6.2300e-003	6.2300e-003	0.0000	350.3486	350.3486	0.0896	0.0000	352.5897
Total	**0.0582**	**0.6768**	**2.8265**	**4.1300e-003**		**6.2300e-003**	**6.2300e-003**		**6.2300e-003**	**6.2300e-003**	**0.0000**	**350.3486**	**350.3486**	**0.0896**	**0.0000**	**352.5897**

Mitigated Construction Off-Site

	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					

Hauling	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	0.0000	0.0000
Vendor	0.0142	0.5599	0.1453	7.5000e-004	8.4100e-003	4.2000e-004	8.8300e-003	2.4500e-003	4.0000e-004	2.8500e-003	0.0000	71.7290	71.7290	6.3100e-003	0.0000	71.8867
Worker	0.0393	0.0168	0.2265	3.6000e-004	0.0315	4.1000e-004	0.0319	8.4100e-003	3.8000e-004	8.7900e-003	0.0000	32.0483	32.0483	1.1600e-003	0.0000	32.0772
Total	**0.0535**	**0.5767**	**0.3718**	**1.1100e-003**	**0.0399**	**8.3000e-004**	**0.0407**	**0.0109**	**7.8000e-004**	**0.0116**	**0.0000**	**103.7773**	**103.7773**	**7.4700e-003**	**0.0000**	**103.9639**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	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					
Off-Road	0.0115	0.0999	0.1185	1.9000e-004		4.7100e-003	4.7100e-003		4.4300e-003	4.4300e-003	0.0000	16.0294	16.0294	4.0700e-003	0.0000	16.1311
Total	**0.0115**	**0.0999**	**0.1185**	**1.9000e-004**		**4.7100e-003**	**4.7100e-003**		**4.4300e-003**	**4.4300e-003**	**0.0000**	**16.0294**	**16.0294**	**4.0700e-003**	**0.0000**	**16.1311**

Unmitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	5.1000e-004	0.0217	5.9700e-003	3.0000e-005	3.8000e-004	1.0000e-005	3.9000e-004	1.1000e-004	1.0000e-005	1.2000e-004	0.0000	3.1716	3.1716	2.3000e-004	0.0000	3.1774
Worker	1.6500e-003	6.8000e-004	9.4100e-003	2.0000e-005	1.4400e-003	2.0000e-005	1.4600e-003	3.8000e-004	2.0000e-005	4.0000e-004	0.0000	1.4114	1.4114	5.0000e-005	0.0000	1.4126
Total	**2.1600e-003**	**0.0224**	**0.0154**	**5.0000e-005**	**1.8200e-003**	**3.0000e-005**	**1.8500e-003**	**4.9000e-004**	**3.0000e-005**	**5.2000e-004**	**0.0000**	**4.5831**	**4.5831**	**2.8000e-004**	**0.0000**	**4.5900**

Mitigated Construction On-Site

	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					
Off-Road	2.6600e-003	0.0310	0.1293	1.9000e-004		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004	0.0000	16.0294	16.0294	4.0700e-003	0.0000	16.1311
Total	**2.6600e-003**	**0.0310**	**0.1293**	**1.9000e-004**		**2.9000e-004**	**2.9000e-004**		**2.9000e-004**	**2.9000e-004**	**0.0000**	**16.0294**	**16.0294**	**4.0700e-003**	**0.0000**	**16.1311**

Mitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	5.1000e-004	0.0217	5.9700e-003	3.0000e-005	3.8000e-004	1.0000e-005	3.9000e-004	1.1000e-004	1.0000e-005	1.2000e-004	0.0000	3.1716	3.1716	2.3000e-004	0.0000	3.1774
Worker	1.6500e-003	6.8000e-004	9.4100e-003	2.0000e-005	1.4400e-003	2.0000e-005	1.4600e-003	3.8000e-004	2.0000e-005	4.0000e-004	0.0000	1.4114	1.4114	5.0000e-005	0.0000	1.4126
Total	**2.1600e-003**	**0.0224**	**0.0154**	**5.0000e-005**	**1.8200e-003**	**3.0000e-005**	**1.8500e-003**	**4.9000e-004**	**3.0000e-005**	**5.2000e-004**	**0.0000**	**4.5831**	**4.5831**	**2.8000e-004**	**0.0000**	**4.5900**

3.6 Architectural Coating - 2022

Unmitigated Construction On-Site

	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					
Archit. Coating	1.8553					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0196	0.1841	0.1772	3.2000e-004		8.9500e-003	8.9500e-003		8.4900e-003	8.4900e-003	0.0000	28.3140	28.3140	6.6600e-003	0.0000	28.4804
Total	**1.8749**	**0.1841**	**0.1772**	**3.2000e-004**		**8.9500e-003**	**8.9500e-003**		**8.4900e-003**	**8.4900e-003**	**0.0000**	**28.3140**	**28.3140**	**6.6600e-003**	**0.0000**	**28.4804**

Unmitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	3.3500e-003	1.4300e-003	0.0193	3.0000e-005	2.6800e-003	4.0000e-005	2.7200e-003	7.2000e-004	3.0000e-005	7.5000e-004	0.0000	2.7329	2.7329	1.0000e-004	0.0000	2.7354
Total	**3.3500e-003**	**1.4300e-003**	**0.0193**	**3.0000e-005**	**2.6800e-003**	**4.0000e-005**	**2.7200e-003**	**7.2000e-004**	**3.0000e-005**	**7.5000e-004**	**0.0000**	**2.7329**	**2.7329**	**1.0000e-004**	**0.0000**	**2.7354**

Mitigated Construction On-Site

	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					
Archit. Coating	1.8553					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Off-Road	4.4100e-003	0.0440	0.1972	3.2000e-004		5.0000e-004	5.0000e-004		5.0000e-004	5.0000e-004	0.0000	28.3140	28.3140	6.6600e-003	0.0000	28.4804
Total	**1.8597**	**0.0440**	**0.1972**	**3.2000e-004**		**5.0000e-004**	**5.0000e-004**		**5.0000e-004**	**5.0000e-004**	**0.0000**	**28.3140**	**28.3140**	**6.6600e-003**	**0.0000**	**28.4804**

Mitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	3.3500e-003	1.4300e-003	0.0193	3.0000e-005	2.6800e-003	4.0000e-005	2.7200e-003	7.2000e-004	3.0000e-005	7.5000e-004	0.0000	2.7329	2.7329	1.0000e-004	0.0000	2.7354
Total	**3.3500e-003**	**1.4300e-003**	**0.0193**	**3.0000e-005**	**2.6800e-003**	**4.0000e-005**	**2.7200e-003**	**7.2000e-004**	**3.0000e-005**	**7.5000e-004**	**0.0000**	**2.7329**	**2.7329**	**1.0000e-004**	**0.0000**	**2.7354**

3.6 Architectural Coating - 2023

Unmitigated Construction On-Site

	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					
Archit. Coating	2.1407					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0211	0.1953	0.2027	3.7000e-004		9.1000e-003	9.1000e-003		8.6200e-003	8.6200e-003	0.0000	32.6698	32.6698	7.6200e-003	0.0000	32.8603
Total	**2.1618**	**0.1953**	**0.2027**	**3.7000e-004**		**9.1000e-003**	**9.1000e-003**		**8.6200e-003**	**8.6200e-003**	**0.0000**	**32.6698**	**32.6698**	**7.6200e-003**	**0.0000**	**32.8603**

Unmitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	3.5600e-003	1.4600e-003	0.0202	3.0000e-005	3.0900e-003	4.0000e-005	3.1300e-003	8.3000e-004	4.0000e-005	8.6000e-004	0.0000	3.0354	3.0354	1.0000e-004	0.0000	3.0380
Total	**3.5600e-003**	**1.4600e-003**	**0.0202**	**3.0000e-005**	**3.0900e-003**	**4.0000e-005**	**3.1300e-003**	**8.3000e-004**	**4.0000e-005**	**8.6000e-004**	**0.0000**	**3.0354**	**3.0354**	**1.0000e-004**	**0.0000**	**3.0380**

Mitigated Construction On-Site

	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					
Archit. Coating	2.1407					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.0800e-003	0.0507	0.2276	3.7000e-004		5.7000e-004	5.7000e-004		5.7000e-004	5.7000e-004	0.0000	32.6698	32.6698	7.6200e-003	0.0000	32.8603
Total	**2.1458**	**0.0507**	**0.2276**	**3.7000e-004**		**5.7000e-004**	**5.7000e-004**		**5.7000e-004**	**5.7000e-004**	**0.0000**	**32.6698**	**32.6698**	**7.6200e-003**	**0.0000**	**32.8603**

Mitigated Construction Off-Site

	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					

Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	3.5600e-003	1.4600e-003	0.0202	3.0000e-005	3.0900e-003	4.0000e-005	3.1300e-003	8.3000e-004	4.0000e-005	8.6000e-004	0.0000	3.0354	3.0354	1.0000e-004	0.0000	3.0380
Total	**3.5600e-003**	**1.4600e-003**	**0.0202**	**3.0000e-005**	**3.0900e-003**	**4.0000e-005**	**3.1300e-003**	**8.3000e-004**	**4.0000e-005**	**8.6000e-004**	**0.0000**	**3.0354**	**3.0354**	**1.0000e-004**	**0.0000**	**3.0380**

3.7 Paving - 2023

Unmitigated Construction On-Site

	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					
Off-Road	0.0297	0.2902	0.3824	5.7000e-004		0.0154	0.0154		0.0142	0.0142	0.0000	50.0041	50.0041	0.0160	0.0000	50.4035
Paving	5.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0298**	**0.2902**	**0.3824**	**5.7000e-004**		**0.0154**	**0.0154**		**0.0142**	**0.0142**	**0.0000**	**50.0041**	**50.0041**	**0.0160**	**0.0000**	**50.4035**

Unmitigated Construction Off-Site

	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					
Hauling	7.0000e-005	3.9200e-003	6.9000e-004	1.0000e-005	4.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.6112	0.6112	5.0000e-005	0.0000	0.6124
Vendor	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	0.0000	0.0000
Worker	4.6000e-004	1.9000e-004	2.6300e-003	0.0000	4.0000e-004	1.0000e-005	4.1000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3938	0.3938	1.0000e-005	0.0000	0.3941
Total	**5.3000e-004**	**4.1100e-003**	**3.3200e-003**	**1.0000e-005**	**4.4000e-004**	**1.0000e-005**	**4.6000e-004**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**1.0050**	**1.0050**	**6.0000e-005**	**0.0000**	**1.0065**

Mitigated Construction On-Site

	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					
Off-Road	7.8000e-003	0.0684	0.4231	5.7000e-004		9.1000e-004	9.1000e-004		9.1000e-004	9.1000e-004	0.0000	50.0041	50.0041	0.0160	0.0000	50.4034
Paving	5.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.8500e-003**	**0.0684**	**0.4231**	**5.7000e-004**		**9.1000e-004**	**9.1000e-004**		**9.1000e-004**	**9.1000e-004**	**0.0000**	**50.0041**	**50.0041**	**0.0160**	**0.0000**	**50.4034**

Mitigated Construction Off-Site

	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					
Hauling	7.0000e-005	3.9200e-003	6.9000e-004	1.0000e-005	4.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.6112	0.6112	5.0000e-005	0.0000	0.6124
Vendor	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	0.0000	0.0000
Worker	4.6000e-004	1.9000e-004	2.6300e-003	0.0000	4.0000e-004	1.0000e-005	4.1000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3938	0.3938	1.0000e-005	0.0000	0.3941
Total	**5.3000e-004**	**4.1100e-003**	**3.3200e-003**	**1.0000e-005**	**4.4000e-004**	**1.0000e-005**	**4.6000e-004**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**1.0050**	**1.0050**	**6.0000e-005**	**0.0000**	**1.0065**

Gateway Crossings, Phase 5,TAC Emissions

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	339.00	Space	0.00	142,500.00	0
Hotel	225.00	Room	21.40	182,000.00	0
Strip Mall	5.20	1000sqft	0.00	5,200.00	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 - PG&E used to represent SVP (Silicon Valley Power).CO2 emission factor from City of Santa Clara 2020 Climate Action Plan

Land Use - Land Use Sizes frim construction infromation provided by project applicant

Construction Phase - Applicant provided construction schedule

Off-road Equipment -

Off-road Equipment - Aoolicant provided information

Off-road Equipment - applicant provided information

Off-road Equipment - Applicant provided euqipment information

Off-road Equipment - Applicant provided information

Off-road Equipment - Applicant provided construction information

Off-road Equipment - Applicant provided equipment information

Trips and VMT - 100 paving trips based on 800 cy of asphalt hauled

Grading - 7585 cy of soil off haul

Architectural Coating -

Vehicle Trips - trip rates from TIA

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves -

Area Coating -

Landscape Equipment -

Energy Use - default 2013, title 24 values used

Construction Off-road Equipment Mitigation - Best Management Practices, tier 3 DPF Level 3

Area Mitigation -

Energy Mitigation - title 24, 2016 values became effective on 1st January ,2017

Stationary Sources - Emergency Generators and Fire Pumps - 100 kw generator in the garage

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	100	150
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	150	100
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblGrading	MaterialExported	0.00	7,585.00

tblLandUse	BuildingSpaceSquareFeet	135,600.00	142,500.00
tblLandUse	BuildingSpaceSquareFeet	326,700.00	182,000.00
tblLandUse	LandUseSquareFeet	135,600.00	142,500.00
tblLandUse	LandUseSquareFeet	326,700.00	182,000.00
tblLandUse	LotAcreage	3.05	0.00
tblLandUse	LotAcreage	7.50	21.40
tblLandUse	LotAcreage	0.12	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	380
tblProjectCharacteristics	OperationalYear	2018	2026
tblTripsAndVMT	HaulingTripNumber	0.00	100.00
tblVehicleTrips	ST_TR	8.19	8.82
tblVehicleTrips	ST_TR	42.04	28.95
tblVehicleTrips	SU_TR	5.95	6.40
tblVehicleTrips	SU_TR	20.43	14.83
tblVehicleTrips	WD_TR	8.17	8.79
tblVehicleTrips	WD_TR	44.32	30.52

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	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
Year	tons/yr										MT/yr					
2024	0.9457	4.5606	5.0768	0.0109	0.4504	0.1795	0.6299	0.1586	0.1680	0.3266	0.0000	958.6107	958.6107	0.1886	0.0000	963.3245
2025	0.7441	1.4996	2.0198	3.9800e-003	0.0742	0.0592	0.1334	0.0201	0.0555	0.0756	0.0000	348.9968	348.9968	0.0677	0.0000	350.6887
Maximum	**0.9457**	**4.5606**	**5.0768**	**0.0109**	**0.4504**	**0.1795**	**0.6299**	**0.1586**	**0.1680**	**0.3266**	**0.0000**	**958.6107**	**958.6107**	**0.1886**	**0.0000**	**963.3245**

Mitigated Construction

	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
Year	tons/yr										MT/yr					
2024	0.6039	1.5906	5.5765	0.0109	0.3042	0.0136	0.3178	0.0745	0.0135	0.0880	0.0000	958.6099	958.6099	0.1886	0.0000	963.3236
2025	0.6313	0.5904	2.1986	3.9800e-003	0.0742	5.0100e-003	0.0792	0.0201	4.9800e-003	0.0251	0.0000	348.9965	348.9965	0.0677	0.0000	350.6884
Maximum	**0.6313**	**1.5906**	**5.5765**	**0.0109**	**0.3042**	**0.0136**	**0.3178**	**0.0745**	**0.0135**	**0.0880**	**0.0000**	**958.6099**	**958.6099**	**0.1886**	**0.0000**	**963.3236**

	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	**26.90**	**64.01**	**-9.56**	**0.00**	**27.88**	**92.21**	**47.99**	**47.08**	**91.73**	**71.90**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	**Start Date**	**End Date**	**Maximum Unmitigated ROG + NOX (tons/quarter)**	**Maximum Mitigated ROG + NOX (tons/quarter)**
1	**1-1-2024**	**3-31-2024**	1.6168	0.4154
2	**4-1-2024**	**6-30-2024**	1.0781	0.4257
3	**7-1-2024**	**9-30-2024**	1.2284	0.5450
4	**10-1-2024**	**12-31-2024**	1.5327	0.7975
5	**1-1-2025**	**3-31-2025**	1.4101	0.7768
6	**4-1-2025**	**6-30-2025**	0.7438	0.4153
7	**7-1-2025**	**9-30-2025**	0.0654	0.0189
		Highest	1.6168	0.7975

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description

1	Site Preparation	Site Preparation	1/1/2024	1/26/2024	5	20	
2	Grading	Grading	1/27/2024	2/23/2024	5	20	
3	Trenching	Trenching	1/27/2024	2/23/2024	5	20	
4	Building Construction	Building Construction	2/26/2024	4/18/2025	5	300	
5	Architectural Coating	Architectural Coating	9/2/2024	6/6/2025	5	200	
6	Paving	Paving	4/28/2025	7/18/2025	5	60	

Acres of Grading (Site Preparation Phase): 80

Acres of Grading (Grading Phase): 80

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 280,800; Non-Residential Outdoor: 93,600; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	2	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Scrapers	3	8.00	367	0.48
Site Preparation	Skid Steer Loaders	1	8.00	65	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	2	8.00	187	0.41
Grading	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	3	8.00	367	0.48
Grading	Skid Steer Loaders	1	8.00	65	0.37
Grading	Sweepers/Scrubbers	1	8.00	64	0.46
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Trenching	Excavators	2	8.00	158	0.38
Trenching	Rough Terrain Forklifts	1	8.00	100	0.40
Trenching	Skid Steer Loaders	1	8.00	65	0.37

Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Trenching	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Aerial Lifts	3	5.30	63	0.31
Building Construction	Cranes	1	4.30	231	0.29
Building Construction	Forklifts	4	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Other Construction Equipment	3	8.00	172	0.42
Building Construction	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Welders	4	8.00	46	0.45
Architectural Coating	Aerial Lifts	1	4.80	63	0.31
Architectural Coating	Air Compressors	2	2.40	78	0.48
Architectural Coating	Cranes	1	2.40	231	0.29
Architectural Coating	Forklifts	1	4.80	89	0.20
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Sweepers/Scrubbers	1	8.00	64	0.46
Paving	Tractors/Loaders/Backhoes	1	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
Site Preparation	9	23.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	13	33.00	0.00	948.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	17	138.00	54.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	5	28.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	100.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Site Preparation - 2024

Unmitigated Construction On-Site

	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					
Fugitive Dust					0.1629	0.0000	0.1629	0.0708	0.0000	0.0708	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0459	0.4793	0.3110	8.1000e-004		0.0192	0.0192		0.0176	0.0176	0.0000	71.1651	71.1651	0.0230	0.0000	71.7405
Total	**0.0459**	**0.4793**	**0.3110**	**8.1000e-004**	**0.1629**	**0.0192**	**0.1820**	**0.0708**	**0.0176**	**0.0884**	**0.0000**	**71.1651**	**71.1651**	**0.0230**	**0.0000**	**71.7405**

Unmitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	5.8000e-004	3.6000e-004	4.1300e-003	1.0000e-005	1.8200e-003	1.0000e-005	1.8300e-003	4.9000e-004	1.0000e-005	5.0000e-004	0.0000	1.3449	1.3449	2.0000e-005	0.0000	1.3456

Total	**5.8000e-004**	**3.6000e-004**	**4.1300e-003**	**1.0000e-005**	**1.8200e-003**	**1.0000e-005**	**1.8300e-003**	**4.9000e-004**	**1.0000e-005**	**5.0000e-004**	**0.0000**	**1.3449**	**1.3449**	**2.0000e-005**	**0.0000**	**1.3456**

Mitigated Construction On-Site

	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					
Fugitive Dust					0.0733	0.0000	0.0733	0.0159	0.0000	0.0159	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0102	0.0536	0.3803	8.1000e-004		1.3300e-003	1.3300e-003		1.3300e-003	1.3300e-003	0.0000	71.1650	71.1650	0.0230	0.0000	71.7404
Total	**0.0102**	**0.0536**	**0.3803**	**8.1000e-004**	**0.0733**	**1.3300e-003**	**0.0746**	**0.0159**	**1.3300e-003**	**0.0173**	**0.0000**	**71.1650**	**71.1650**	**0.0230**	**0.0000**	**71.7404**

Mitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	5.8000e-004	3.6000e-004	4.1300e-003	1.0000e-005	1.8200e-003	1.0000e-005	1.8300e-003	4.9000e-004	1.0000e-005	5.0000e-004	0.0000	1.3449	1.3449	2.0000e-005	0.0000	1.3456
Total	**5.8000e-004**	**3.6000e-004**	**4.1300e-003**	**1.0000e-005**	**1.8200e-003**	**1.0000e-005**	**1.8300e-003**	**4.9000e-004**	**1.0000e-005**	**5.0000e-004**	**0.0000**	**1.3449**	**1.3449**	**2.0000e-005**	**0.0000**	**1.3456**

3.3 Grading - 2024

Unmitigated Construction On-Site

	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					
Fugitive Dust					0.1031	0.0000	0.1031	0.0378	0.0000	0.0378	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0472	0.4826	0.4011	9.1000e-004		0.0199	0.0199		0.0183	0.0183	0.0000	79.5839	79.5839	0.0257	0.0000	80.2274
Total	**0.0472**	**0.4826**	**0.4011**	**9.1000e-004**	**0.1031**	**0.0199**	**0.1230**	**0.0378**	**0.0183**	**0.0561**	**0.0000**	**79.5839**	**79.5839**	**0.0257**	**0.0000**	**80.2274**

Unmitigated Construction Off-Site

	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					
Hauling	2.3700e-003	0.0749	0.0248	3.5000e-004	8.0400e-003	1.4000e-004	8.1800e-003	2.2100e-003	1.3000e-004	2.3400e-003	0.0000	33.6040	33.6040	1.4200e-003	0.0000	33.6395
Vendor	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	0.0000	0.0000
Worker	8.4000e-004	5.1000e-004	5.9200e-003	2.0000e-005	2.6200e-003	2.0000e-005	2.6300e-003	7.0000e-004	1.0000e-005	7.1000e-004	0.0000	1.9297	1.9297	4.0000e-005	0.0000	1.9306
Total	**3.2100e-003**	**0.0755**	**0.0307**	**3.7000e-004**	**0.0107**	**1.6000e-004**	**0.0108**	**2.9100e-003**	**1.4000e-004**	**3.0500e-003**	**0.0000**	**35.5337**	**35.5337**	**1.4600e-003**	**0.0000**	**35.5701**

Mitigated Construction On-Site

	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					

Fugitive Dust					0.0464	0.0000	0.0464	8.4900e-003	0.0000	8.4900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0117	0.0716	0.4793	9.1000e-004		1.4800e-003	1.4800e-003		1.4800e-003	1.4800e-003	0.0000	79.5838	79.5838	0.0257	0.0000	80.2273
Total	**0.0117**	**0.0716**	**0.4793**	**9.1000e-004**	**0.0464**	**1.4800e-003**	**0.0479**	**8.4900e-003**	**1.4800e-003**	**9.9700e-003**	**0.0000**	**79.5838**	**79.5838**	**0.0257**	**0.0000**	**80.2273**

Mitigated Construction Off-Site

	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					
Hauling	2.3700e-003	0.0749	0.0248	3.5000e-004	8.0400e-003	1.4000e-004	8.1800e-003	2.2100e-003	1.3000e-004	2.3400e-003	0.0000	33.6040	33.6040	1.4200e-003	0.0000	33.6395
Vendor	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	0.0000	0.0000
Worker	8.4000e-004	5.1000e-004	5.9200e-003	2.0000e-005	2.6200e-003	2.0000e-005	2.6300e-003	7.0000e-004	1.0000e-005	7.1000e-004	0.0000	1.9297	1.9297	4.0000e-005	0.0000	1.9306
Total	**3.2100e-003**	**0.0755**	**0.0307**	**3.7000e-004**	**0.0107**	**1.6000e-004**	**0.0108**	**2.9100e-003**	**1.4000e-004**	**3.0500e-003**	**0.0000**	**35.5337**	**35.5337**	**1.4600e-003**	**0.0000**	**35.5701**

3.4 Trenching - 2024

Unmitigated Construction On-Site

	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					
Off-Road	9.5700e-003	0.0933	0.1691	2.5000e-004		4.0500e-003	4.0500e-003		3.7300e-003	3.7300e-003	0.0000	22.1365	22.1365	7.1600e-003	0.0000	22.3155
Total	**9.5700e-003**	**0.0933**	**0.1691**	**2.5000e-004**		**4.0500e-003**	**4.0500e-003**		**3.7300e-003**	**3.7300e-003**	**0.0000**	**22.1365**	**22.1365**	**7.1600e-003**	**0.0000**	**22.3155**

Unmitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	4.6000e-004	2.8000e-004	3.2300e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.0526	1.0526	2.0000e-005	0.0000	1.0530
Total	**4.6000e-004**	**2.8000e-004**	**3.2300e-003**	**1.0000e-005**	**1.4300e-003**	**1.0000e-005**	**1.4400e-003**	**3.8000e-004**	**1.0000e-005**	**3.9000e-004**	**0.0000**	**1.0526**	**1.0526**	**2.0000e-005**	**0.0000**	**1.0530**

Mitigated Construction On-Site

	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					
Off-Road	3.3400e-003	0.0239	0.1904	2.5000e-004		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	22.1365	22.1365	7.1600e-003	0.0000	22.3155
Total	**3.3400e-003**	**0.0239**	**0.1904**	**2.5000e-004**		**4.1000e-004**	**4.1000e-004**		**4.1000e-004**	**4.1000e-004**	**0.0000**	**22.1365**	**22.1365**	**7.1600e-003**	**0.0000**	**22.3155**

Mitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	4.6000e-004	2.8000e-004	3.2300e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.0526	1.0526	2.0000e-005	0.0000	1.0530
Total	**4.6000e-004**	**2.8000e-004**	**3.2300e-003**	**1.0000e-005**	**1.4300e-003**	**1.0000e-005**	**1.4400e-003**	**3.8000e-004**	**1.0000e-005**	**3.9000e-004**	**0.0000**	**1.0526**	**1.0526**	**2.0000e-005**	**0.0000**	**1.0530**

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	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					
Off-Road	0.3321	2.8430	3.5826	5.6600e-003		0.1293	0.1293		0.1216	0.1216	0.0000	479.8372	479.8372	0.1189	0.0000	482.8107
Total	**0.3321**	**2.8430**	**3.5826**	**5.6600e-003**		**0.1293**	**0.1293**		**0.1216**	**0.1216**	**0.0000**	**479.8372**	**479.8372**	**0.1189**	**0.0000**	**482.8107**

Unmitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	0.0133	0.4357	0.1339	1.5400e-003	0.0394	5.1000e-004	0.0400	0.0114	4.9000e-004	0.0119	0.0000	148.4057	148.4057	5.3900e-003	0.0000	148.5404
Worker	0.0388	0.0238	0.2748	9.9000e-004	0.1215	7.2000e-004	0.1222	0.0323	6.6000e-004	0.0330	0.0000	89.5725	89.5725	1.6600e-003	0.0000	89.6139

Total	**0.0521**	**0.4595**	**0.4087**	**2.5300e-003**	**0.1609**	**1.2300e-003**	**0.1622**	**0.0437**	**1.1500e-003**	**0.0449**	**0.0000**	**237.9782**	**237.9782**	**7.0500e-003**	**0.0000**	**238.1543**

Mitigated Construction On-Site

	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					
Off-Road	0.0781	0.8688	3.8966	5.6600e-003		8.5100e-003	8.5100e-003		8.5100e-003	8.5100e-003	0.0000	479.8367	479.8367	0.1189	0.0000	482.8101
Total	**0.0781**	**0.8688**	**3.8966**	**5.6600e-003**		**8.5100e-003**	**8.5100e-003**		**8.5100e-003**	**8.5100e-003**	**0.0000**	**479.8367**	**479.8367**	**0.1189**	**0.0000**	**482.8101**

Mitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	0.0133	0.4357	0.1339	1.5400e-003	0.0394	5.1000e-004	0.0400	0.0114	4.9000e-004	0.0119	0.0000	148.4057	148.4057	5.3900e-003	0.0000	148.5404
Worker	0.0388	0.0238	0.2748	9.9000e-004	0.1215	7.2000e-004	0.1222	0.0323	6.6000e-004	0.0330	0.0000	89.5725	89.5725	1.6600e-003	0.0000	89.6139
Total	**0.0521**	**0.4595**	**0.4087**	**2.5300e-003**	**0.1609**	**1.2300e-003**	**0.1622**	**0.0437**	**1.1500e-003**	**0.0449**	**0.0000**	**237.9782**	**237.9782**	**7.0500e-003**	**0.0000**	**238.1543**

3.5 Building Construction - 2025

Unmitigated Construction On-Site

	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					
Off-Road	0.1076	0.9124	1.2527	1.9900e-003		0.0393	0.0393		0.0369	0.0369	0.0000	168.6424	168.6424	0.0415	0.0000	169.6805
Total	**0.1076**	**0.9124**	**1.2527**	**1.9900e-003**		**0.0393**	**0.0393**		**0.0369**	**0.0369**	**0.0000**	**168.6424**	**168.6424**	**0.0415**	**0.0000**	**169.6805**

Unmitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	4.5500e-003	0.1510	0.0458	5.4000e-004	0.0139	1.8000e-004	0.0140	4.0100e-003	1.7000e-004	4.1700e-003	0.0000	51.8043	51.8043	1.8600e-003	0.0000	51.8507
Worker	0.0129	7.6100e-003	0.0895	3.3000e-004	0.0427	2.5000e-004	0.0429	0.0114	2.3000e-004	0.0116	0.0000	30.1987	30.1987	5.3000e-004	0.0000	30.2118
Total	**0.0175**	**0.1587**	**0.1353**	**8.7000e-004**	**0.0566**	**4.3000e-004**	**0.0570**	**0.0154**	**4.0000e-004**	**0.0158**	**0.0000**	**82.0029**	**82.0029**	**2.3900e-003**	**0.0000**	**82.0625**

Mitigated Construction On-Site

	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					

Off-Road	0.0275	0.3052	1.3691	1.9900e-003		2.9900e-003	2.9900e-003		2.9900e-003	2.9900e-003	0.0000	168.6422	168.6422	0.0415	0.0000	169.6803
Total	**0.0275**	**0.3052**	**1.3691**	**1.9900e-003**		**2.9900e-003**	**2.9900e-003**		**2.9900e-003**	**2.9900e-003**	**0.0000**	**168.6422**	**168.6422**	**0.0415**	**0.0000**	**169.6803**

Mitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	4.5500e-003	0.1510	0.0458	5.4000e-004	0.0139	1.8000e-004	0.0140	4.0100e-003	1.7000e-004	4.1700e-003	0.0000	51.8043	51.8043	1.8600e-003	0.0000	51.8507
Worker	0.0129	7.6100e-003	0.0895	3.3000e-004	0.0427	2.5000e-004	0.0429	0.0114	2.3000e-004	0.0116	0.0000	30.1987	30.1987	5.3000e-004	0.0000	30.2118
Total	**0.0175**	**0.1587**	**0.1353**	**8.7000e-004**	**0.0566**	**4.3000e-004**	**0.0570**	**0.0154**	**4.0000e-004**	**0.0158**	**0.0000**	**82.0029**	**82.0029**	**2.3900e-003**	**0.0000**	**82.0625**

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

	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					
Archit. Coating	0.4376					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0140	0.1249	0.1444	2.6000e-004		5.5900e-003	5.5900e-003		5.3100e-003	5.3100e-003	0.0000	22.8564	22.8564	5.0200e-003	0.0000	22.9818
Total	**0.4515**	**0.1249**	**0.1444**	**2.6000e-004**		**5.5900e-003**	**5.5900e-003**		**5.3100e-003**	**5.3100e-003**	**0.0000**	**22.8564**	**22.8564**	**5.0200e-003**	**0.0000**	**22.9818**

Unmitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	3.0900e-003	1.8900e-003	0.0219	8.0000e-005	9.6600e-003	6.0000e-005	9.7200e-003	2.5700e-003	5.0000e-005	2.6200e-003	0.0000	7.1223	7.1223	1.3000e-004	0.0000	7.1256
Total	**3.0900e-003**	**1.8900e-003**	**0.0219**	**8.0000e-005**	**9.6600e-003**	**6.0000e-005**	**9.7200e-003**	**2.5700e-003**	**5.0000e-005**	**2.6200e-003**	**0.0000**	**7.1223**	**7.1223**	**1.3000e-004**	**0.0000**	**7.1256**

Mitigated Construction On-Site

	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					
Archit. Coating	0.4376					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.5300e-003	0.0353	0.1613	2.6000e-004		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004	0.0000	22.8563	22.8563	5.0200e-003	0.0000	22.9818
Total	**0.4411**	**0.0353**	**0.1613**	**2.6000e-004**		**4.0000e-004**	**4.0000e-004**		**4.0000e-004**	**4.0000e-004**	**0.0000**	**22.8563**	**22.8563**	**5.0200e-003**	**0.0000**	**22.9818**

Mitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	3.0900e-003	1.8900e-003	0.0219	8.0000e-005	9.6600e-003	6.0000e-005	9.7200e-003	2.5700e-003	5.0000e-005	2.6200e-003	0.0000	7.1223	7.1223	1.3000e-004	0.0000	7.1256
Total	**3.0900e-003**	**1.8900e-003**	**0.0219**	**8.0000e-005**	**9.6600e-003**	**6.0000e-005**	**9.7200e-003**	**2.5700e-003**	**5.0000e-005**	**2.6200e-003**	**0.0000**	**7.1223**	**7.1223**	**1.3000e-004**	**0.0000**	**7.1256**

3.6 Architectural Coating - 2025

Unmitigated Construction On-Site

	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					
Archit. Coating	0.5683					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0171	0.1509	0.1866	3.4000e-004		6.4000e-003	6.4000e-003		6.0700e-003	6.0700e-003	0.0000	29.6873	29.6873	6.5000e-003	0.0000	29.8497
Total	**0.5854**	**0.1509**	**0.1866**	**3.4000e-004**		**6.4000e-003**	**6.4000e-003**		**6.0700e-003**	**6.0700e-003**	**0.0000**	**29.6873**	**29.6873**	**6.5000e-003**	**0.0000**	**29.8497**

Unmitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	3.7900e-003	2.2400e-003	0.0263	1.0000e-004	0.0126	7.0000e-005	0.0126	3.3400e-003	7.0000e-005	3.4000e-003	0.0000	8.8767	8.8767	1.5000e-004	0.0000	8.8806

Total	**3.7900e-003**	**2.2400e-003**	**0.0263**	**1.0000e-004**	**0.0126**	**7.0000e-005**	**0.0126**	**3.3400e-003**	**7.0000e-005**	**3.4000e-003**	**0.0000**	**8.8767**	**8.8767**	**1.5000e-004**	**0.0000**	**8.8806**

Mitigated Construction On-Site

	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					
Archit. Coating	0.5683					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.5800e-003	0.0458	0.2095	3.4000e-004		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	29.6872	29.6872	6.5000e-003	0.0000	29.8497
Total	**0.5729**	**0.0458**	**0.2095**	**3.4000e-004**		**5.2000e-004**	**5.2000e-004**		**5.2000e-004**	**5.2000e-004**	**0.0000**	**29.6872**	**29.6872**	**6.5000e-003**	**0.0000**	**29.8497**

Mitigated Construction Off-Site

	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					
Hauling	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	0.0000	0.0000
Vendor	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	0.0000	0.0000
Worker	3.7900e-003	2.2400e-003	0.0263	1.0000e-004	0.0126	7.0000e-005	0.0126	3.3400e-003	7.0000e-005	3.4000e-003	0.0000	8.8767	8.8767	1.5000e-004	0.0000	8.8806
Total	**3.7900e-003**	**2.2400e-003**	**0.0263**	**1.0000e-004**	**0.0126**	**7.0000e-005**	**0.0126**	**3.3400e-003**	**7.0000e-005**	**3.4000e-003**	**0.0000**	**8.8767**	**8.8767**	**1.5000e-004**	**0.0000**	**8.8806**

3.7 Paving - 2025

Unmitigated Construction On-Site

	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					
Off-Road	0.0283	0.2670	0.4073	6.1000e-004		0.0130	0.0130		0.0120	0.0120	0.0000	53.2386	53.2386	0.0169	0.0000	53.6615
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0283**	**0.2670**	**0.4073**	**6.1000e-004**		**0.0130**	**0.0130**		**0.0120**	**0.0120**	**0.0000**	**53.2386**	**53.2386**	**0.0169**	**0.0000**	**53.6615**

Unmitigated Construction Off-Site

	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					
Hauling	2.5000e-004	7.7300e-003	2.6300e-003	4.0000e-005	8.5000e-004	1.0000e-005	8.6000e-004	2.3000e-004	1.0000e-005	2.5000e-004	0.0000	3.5189	3.5189	1.5000e-004	0.0000	3.5227
Vendor	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	0.0000	0.0000
Worker	1.2900e-003	7.6000e-004	8.9800e-003	3.0000e-005	4.2800e-003	3.0000e-005	4.3100e-003	1.1400e-003	2.0000e-005	1.1600e-003	0.0000	3.0300	3.0300	5.0000e-005	0.0000	3.0313
Total	**1.5400e-003**	**8.4900e-003**	**0.0116**	**7.0000e-005**	**5.1300e-003**	**4.0000e-005**	**5.1700e-003**	**1.3700e-003**	**3.0000e-005**	**1.4100e-003**	**0.0000**	**6.5489**	**6.5489**	**2.0000e-004**	**0.0000**	**6.5540**

Mitigated Construction On-Site

	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					

Off-Road	8.1800e-003	0.0700	0.4469	6.1000e-004		9.7000e-004	9.7000e-004		9.7000e-004	9.7000e-004	0.0000	53.2385	53.2385	0.0169	0.0000	53.6614
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**8.1800e-003**	**0.0700**	**0.4469**	**6.1000e-004**		**9.7000e-004**	**9.7000e-004**		**9.7000e-004**	**9.7000e-004**	**0.0000**	**53.2385**	**53.2385**	**0.0169**	**0.0000**	**53.6614**

Mitigated Construction Off-Site

	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					
Hauling	2.5000e-004	7.7300e-003	2.6300e-003	4.0000e-005	8.5000e-004	1.0000e-005	8.6000e-004	2.3000e-004	1.0000e-005	2.5000e-004	0.0000	3.5189	3.5189	1.5000e-004	0.0000	3.5227
Vendor	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	0.0000	0.0000
Worker	1.2900e-003	7.6000e-004	8.9800e-003	3.0000e-005	4.2800e-003	3.0000e-005	4.3100e-003	1.1400e-003	2.0000e-005	1.1600e-003	0.0000	3.0300	3.0300	5.0000e-005	0.0000	3.0313
Total	**1.5400e-003**	**8.4900e-003**	**0.0116**	**7.0000e-005**	**5.1300e-003**	**4.0000e-005**	**5.1700e-003**	**1.3700e-003**	**3.0000e-005**	**1.4100e-003**	**0.0000**	**6.5489**	**6.5489**	**2.0000e-004**	**0.0000**	**6.5540**

Gateway Crossing, Santa Clara, California

DPM Emissions and Modeling Emission Rates

Emissions Model Year	Activity	DPM (ton/year)	Area Source	DPM Emissions (lb/yr)	(lb/hr)	(g/s)	Modeled Area (m^2)	DPM Emission Rate ($g/s/m^2$)
2020	Phase2+Phase 3	0.2747	DPM	549.4	0.16725	2.11E-02	23,666	8.90E-07
2021	Phase 3	0.0241	DPM	48.2	0.01467	1.85E-03	11,834	1.56E-07
2022	Phase 4	0.2335	DPM	467.0	0.14216	1.79E-02	13,409	1.34E-06
2023	Phase 4	0.0293	DPM	58.6	0.01784	2.25E-03	13,409	1.68E-07
2024	Phase 5	0.1795	DPM	359.0	0.10928	1.38E-02	5,388	2.56E-06
2025	Phase 5	0.0592	DPM	118.4	0.03604	4.54E-03	5,388	8.43E-07
		0.5015		***1003.0***	***0.3053***	***0.0385***		

Operation Hours

hr/day =	9	(7am - 4pm)
days/yr =	365	
hours/year =	3285	

Gateway Crossing, Santa Clara, California

PM2.5 Fugitive Dust Emissions for Modeling

Construction Year	Activity	Area Source	PM2.5 Emissions (ton/year)	(lb/yr)	(lb/hr)	(g/s)	Modeled Area (m^2)	PM2.5 Emission Rate $g/s/m^2$
2020	Phase2+Phase 3	FUG	0.1550	310.1	0.09439	1.19E-02	23,666	5.03E-07
2021	Phase 3	FUG	0.0003	0.6	0.00018	2.30E-05	11,834	1.94E-09
2022	Phase 4	FUG	0.1962	392.4	0.11945	1.51E-02	13,409	1.12E-06
2023	Phase 4	FUG	0.0014	2.9	0.00088	1.10E-04	13,409	8.24E-09
2024	Phase 5	FUG	0.1586	317.2	0.09656	1.22E-02	5,388	2.26E-06
2025	Phase 5	FUG	0.0201	40.2	0.01224	1.54E-03	5,388	2.86E-07
Total			***0.3763***	***752.7***	***0.2291***	***0.0289***		

Operation Hours

hr/day =	9	(7am - 4pm)
days/yr =	365	
hours/year =	3285	

Gateway Crossing, Santa Clara, California
Maximum DPM Cancer Risk Calculations From Construction
Impacts at Building 3 Receptors-1.5 meter

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air ($\mu g/m^3$)
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

	Infant/Child				Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 9**	**2 - 16**	**16 - 30**
Parameter					
ASF =	10	10	3	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	631	572	261
A =	1	1	1	1	1
EF =	350	350	350	350	350
AT =	70	70	70	70	70
FAH =	1.00	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information			Infant/Child	Adult - Exposure Information			Adult		
							Modeled					
Exposure Year	**Exposure Duration (years)**	**Age**	**DPM Conc (ug/m3) Year**	**DPM Conc (ug/m3) Annual**	**Age Sensitivity Factor**	**Cancer Risk (per million)**	**DPM Conc (ug/m3) Year**	**DPM Conc (ug/m3) Annual**	**Age Sensitivity Factor**	**Cancer Risk (per million)**	**Fugitive PM2.5**	**Total PM2.5**
0	0.25	-0.25 - 0*	2022	0.6169	10	8.39	2022	-	-	-		
1	1	0 - 1	2022	0.6169	10	101.33	2022	0.6169	1	1.77	0.7602	1.377
2	1	1 - 2	2023	0.0774	10	12.70	2023	0.0774	1	0.22	0.0056	0.083
3	1	2 - 3	2024	0.0058	3	0.17	2024	0.0058	1	0.02	0.0050	0.011
4	1	3 - 4	2025	0.0019	3	0.05	2025	0.0006	1	0.00	0.0000	0.001
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00		
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00		
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00		
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00		
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00		
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00		
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00		
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00		
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00		
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00		
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00		
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00		
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00		
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00		
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00		
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00		
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00		
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00		
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00		
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00		
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00		
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00		
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00		
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00		
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00		
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00		
Total Increased Cancer Risk						**122.64**				**2.01**		

* Third trimester of pregnancy

Gateway Crossing, Santa Clara, California

Maximum Impacts at Building 3 MEI location

Emissions Year	Maximum Concentrations Exhaust PM10/DPM ($\mu g/m^3$)	Maximum Concentrations Fugitive PM2.5 ($\mu g/m^3$)	Cancer Risk (per million) Child	Cancer Risk (per million) Adult	Hazard Index (-)	Maximum Annual PM2.5 Concentration ($\mu g/m^3$)
2022	0.6169	0.7602	109.7	1.8	0.123	1.38
2023	0.0774	0.0056	12.7	0.2	0.015	0.08
2024	0.0058	0.0050	0.2	0.0	0.001	0.01
2025	0.0019	0.0000	0.0	0.0	0.000	0.00
Total			122.6	2.0		
Maximum	**0.6169**	**0.7602**			**0.123**	**1.38**

Attachment 3: Rail Impacts Evaluation Methodology

Gateway Crossings, Santa Clara, CA
DPM Modeling - Rail Line Information and DPM and PM2.5 Emission Rates
Caltrain Without Electrification - Diesel-Powered Passenger and Freight Trains

Year	Description	Model No. Lines	Link Width (ft)	Link Width (m)	Link Length (ft)	Link Length (miles)	Link Length (m)	Release Height (m)	No. Trains per Day	Train Travel Speed (mph)	DPM Emission Rates: Average Daily Emission Rate (g/mi/day)	Average Daily Emission Rate (g/day)	Link Emission Rate (g/s)	Link Emission Rate (lb/hr)
2020	Caltrain - Stop at Station	1	12	3.7	2,858	0.54	871	5.0	50	10	117.3	63.5	7.35E-04	5.83E-03
	Caltrain - Bypass Station	1	12	3.7	2,858	0.54	871	5.0	25	40	74.5	40.3	4.67E-04	3.71E-03
	Amtrak - Stop at Station	1	12	3.7	2,858	0.54	871	5.0	8	10	17.6	9.5	1.10E-04	8.76E-04
	Amtrak - Bypass Station	1	12	3.7	2,858	0.54	871	5.0	2	40	5.7	3.1	3.58E-05	2.84E-04
	Freight Trains	1	12	3.7	2,858	0.54	871	5.0	10	40	53.4	28.9	3.35E-04	2.66E-03
	Total	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**95**	**-**	**268.5**	**145.4**	**1.68E-03**	**1.34E-02**
2021-2025	Caltrain - Stop at Station	1	12	3.7	2,858	0.54	871	5.0	76	10	142.0	76.9	8.90E-04	7.06E-03
	Caltrain - Bypass Station	1	12	3.7	2,858	0.54	871	5.0	15	40	36.2	19.6	2.27E-04	1.80E-03
	Amtrak - Stop at Station	1	12	3.7	2,858	0.54	871	5.0	8	10	14.1	7.6	8.83E-05	7.01E-04
	Amtrak - Bypass Station	1	12	3.7	2,858	0.54	871	5.0	2	40	4.6	2.5	2.86E-05	2.27E-04
	Freight Trains	1	12	3.7	2,858	0.54	871	5.0	10	40	43.7	23.6	2.73E-04	2.17E-03
	Total	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**111**	**-**	**240.5**	**130.2**	**1.51E-03**	**1.20E-02**
2026-2049	Caltrain - Stop at Station	1	12	3.7	2,858	0.54	871	5.0	76	10	44.3	24.0	2.78E-04	2.20E-03
	Caltrain - Bypass Station	1	12	3.7	2,858	0.54	871	5.0	15	40	11.3	6.1	7.07E-05	5.61E-04
	Amtrak - Stop at Station	1	12	3.7	2,858	0.54	871	5.0	8	10	4.4	2.4	2.75E-05	2.19E-04
	Amtrak - Bypass Station	1	12	3.7	2,858	0.54	871	5.0	2	40	1.4	0.8	8.93E-06	7.09E-05
	Freight Trains	1	12	3.7	2,858	0.54	871	5.0	10	40	15.8	8.5	9.89E-05	7.85E-04
	Total	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**111**	**-**	**77.2**	**41.8**	**4.84E-04**	**3.84E-03**

Notes: Emission based on Emission Factors for Locomotives, USEPA 2009 (EPA-420-F-09-025)
Average emissions calculated for 2020 and periods 2021-2025, 2026-2049.
Fuel correction factors from Offroad Modeling Change Technical memo, Changes to the Locomotive Inventory, CARB July 2006.
PM2.5 calculated as 92% of PM emissions (CARB CEIDERS PM2.5 fractions)
Passenger trains assumed to operate fo: 24 hours per day
Freight trains assumed to operate for 24 hours per day

Caltrain Diesel Trains- without electrification									
	2020			**2021 - 2025**			**2026 - 2049**		
Arrive/Depart Station	***Stop at Station***	***Skip Station***	***Total***	***Stop at Station***	***Skip Station***	***Total***	***Stop at Station***	***Skip Station***	***Total***
Passenger trains - weekday	58	34	92	94	20	114	94	20	114
Passenger trains - weekend	28	4	32	28	4	32	28	4	32
Passenger trains - Sat only	4	0	4	4	0	4	4	0	4
Total Trains	90	38	128	126	24	150	126	24	150
Annual average daily trains	50	25	75	76	15	91	76	15	91
Locomotive horsepower			3285			3285			3285
Locomotive engine load =	0.1	0.5		0.1	0.5		0.1	0.5	
Other Diesel Passenger Trains (Amtrak Capitol Corridor & Coast Starlight)									
Arrive/Depart Station	***Stop at Station***	***Skip Station***	***Total***	***Stop at Station***	***Skip Station***	***Total***	***Stop at Station***	***Skip Station***	***Total***
Passenger trains - weekday =	8	2	10	8	2	10	8	2	10
Passenger trains - weekend =	7	2	9	7	2	9	7	2	9
Passenger trains - Sat only =	0	0	0	0	0	0	0	0	0
Total Trains =	15	4	19	15	4	19	15	4	19
Annual average daily trains =	8	2	10	8	2	10	8	2	10
Locomotive horsepower =			3200			3200			3200
Locomotives per train =			1			1			1
Locomotive engine load =	0.1	0.5		0.1	0.5		0.1	0.5	
Freight Trains - All Diesel & Bypass Station									
Freight trains per day		10			10			10	
Locomotive horsepower		2300			2300			2300	
Locomotives per train		2			2			2	
Total horsepower		4600			4600			4600	
Locomotive engine load		0.5			0.5			0.5	

Locomotive DPM Emission Factors (g/hp-hr)

Train Type	2020	2021-2025	2026-2049
Passenger	0.101	0.0808	0.025
Freight	0.111	0.0904	0.033

* average emissions for period.

PM2.5 to PM ratio = 0.92
DPM to PM ratio = 1

	CARB Fuel Adj Factor 2010	2011+
Passenger	0.717	0.709
Freight	0.851	0.840

Gateway Crossings, Santa Clara, CA -1st Floor Rail Line DPM & PM2.5 Concentrations
AERMOD Risk Modeling Parameters and Maximum Concentrations
Caltrain Without Electrification - Diesel-Powered Passenger and Freight Trains

Receptor Information	1st Floor Receptors
Number of Receptors	395
Receptor Height =	1.5 meters
Receptor distances =	Various, receptors at residential units

Meteorological Conditions	
BAAQMD San Jose Arpt Hourly Data	2006-2010
Land Use Classification	urban
Wind speed =	variable
Wind direction =	variable

MEI Maximum Concentrations - Receptor Height = 1.5 m

Meteorological Data Years	Period Average DPM Concentration ($\mu g/m^3$)		
	2020	**2021-2025**	**2026-2049**
2006-2010	0.02902	0.0259	0.0083

Meteorological Data Years	Period Average PM2.5 Concentration ($\mu g/m^3$)		
	2020	**2021-2025**	**2026-2049**
2006-2010	0.0267	0.0239	0.0077

Gateway Crossings, Santa Clara, CA - 1st Floor Receptors (1.5 meter receptor height)
AERMOD Railroad DPM Risk Modeling Parameters and Maximum Cancer Risk at Project Site
Caltrain Without Electrification - Diesel-Powered Passenger and Freight Trains

Cancer Risk Calculation Method

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air ($\mu g/m^3$)
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

Cancer Potency Factors $(mg/kg\text{-}day)^{-1}$

TAC	CPF
DPM	1.10E+00

	Infant/Child			Adult
Age -->	**3rd Trimester**	**0 - <2**	**2 - <16**	**16 - 30**
Parameter				
ASF	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
ED =	0.25	2	14	14
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Rail Locomotive Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	Year	Exposure Duration (years)	Age	Age Sensitivity Factor	DPM Annual Conc (ug/m3)	DPM Cancer Risk (per million)
0	2020	0.25	-0.25 - 0*	10	0.0290	0.395
1	2020	1	1	10	0.0290	4.766
2	2021	1	2	10	0.0259	4.259
3	2022	1	3	3	0.0259	0.670
4	2023	1	4	3	0.0259	0.670
5	2024	1	5	3	0.0259	0.670
6	2025	1	6	3	0.0259	0.670
7	2026	1	7	3	0.0083	0.216
8	2027	1	8	3	0.0083	0.216
9	2028	1	9	3	0.0083	0.216
10	2029	1	10	3	0.0083	0.216
11	2030	1	11	3	0.0083	0.216
12	2031	1	12	3	0.0083	0.216
13	2032	1	13	3	0.0083	0.216
14	2033	1	14	3	0.0083	0.216
15	2034	1	15	3	0.0083	0.216
16	2035	1	16	3	0.0083	0.216
17	2036	1	17	1	0.0083	0.024
18	2037	1	18	1	0.0083	0.024
19	2038	1	19	1	0.0083	0.024
20	2039	1	20	1	0.0083	0.024
21	2040	1	21	1	0.0083	0.024
22	2041	1	22	1	0.0083	0.024
23	2042	1	23	1	0.0083	0.024
24	2043	1	24	1	0.0083	0.024
25	2044	1	25	1	0.0083	0.024
26	2045	1	26	1	0.0083	0.024
27	2046	1	27	1	0.0083	0.024
28	2047	1	28	1	0.0083	0.024
29	2048	1	29	1	0.0083	0.024
30	2049	1	30	1	0.0083	0.024
Total Increased Cancer Risk						**14.6**

* Third trimester of pregnancy

Gateway Crossings, Santa Clara, CA
DPM Modeling - Rail Line Information and DPM and PM2.5 Emission Rates
Caltrain Electrification and Diesel-Powered Freight Trains

Year	Description	Model No. Lines	Link Width (ft)	Link Width (m)	Link Length (ft)	Link Length (miles)	Link Length (m)	Release Height (m)	No. Trains per Day	Train Travel Speed (mph)	DPM Emission Rates: Average Daily Emission Rate (g/mi/day)	Average Daily Emission Rate (g/day)	Link Emission Rate (g/s)	Link Emission Rate (lb/hr)
2020	Caltrain - Stop at Station	1	12	3.7	2,858	0.54	871	5.0	50	10	117.3	63.5	7.35E-04	5.83E-03
	Caltrain - Bypass Station	1	12	3.7	2,858	0.54	871	5.0	25	40	74.5	40.3	4.67E-04	3.71E-03
	Amtrak - Stop at Station	1	12	3.7	2,858	0.54	871	5.0	8	10	17.6	9.5	1.10E-04	8.76E-04
	Amtrak - Bypass Station	1	12	3.7	2,858	0.54	871	5.0	2	40	5.7	3.1	3.58E-05	2.84E-04
	Freight Trains	1	12	3.7	2,858	0.54	871	5.0	10	40	53.4	28.9	3.35E-04	2.66E-03
	Total	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**95**	**-**	**268.5**	**145.4**	**1.68E-03**	**1.34E-02**
2021-2025	Caltrain - Stop at Station	1	12	3.7	2,858	0.54	871	5.0	1	10	1.1	0.6	7.09E-06	5.63E-05
	Caltrain - Bypass Station	1	12	3.7	2,858	0.54	871	5.0	18	40	45.3	24.5	2.83E-04	2.25E-03
	Amtrak - Stop at Station	1	12	3.7	2,858	0.54	871	5.0	8	10	14.1	7.6	8.83E-05	7.01E-04
	Amtrak - Bypass Station	1	12	3.7	2,858	0.54	871	5.0	2	40	4.6	2.5	2.86E-05	2.27E-04
	Freight Trains	1	12	3.7	2,858	0.54	871	5.0	10	40	43.7	23.6	2.73E-04	2.17E-03
	Total	**1**	**12**	**3.7**	**2,858**	**0.54**	**871**	**5.0**	**38**	**-**	**108.7**	**58.8**	**6.81E-04**	**5.41E-03**
2026-2049	Caltrain - Stop at Station	1	12	3.7	2,858	0.54	871	5.0	0	10	0.0	0.0	0.00E+00	0.00E+00
	Caltrain - Bypass Station	1	12	3.7	2,858	0.54	871	5.0	3	40	2.2	1.2	1.38E-05	1.10E-04
	Amtrak - Stop at Station	1	12	3.7	2,858	0.54	871	5.0	8	10	4.4	2.4	2.75E-05	2.19E-04
	Amtrak - Bypass Station	1	12	3.7	2,858	0.54	871	5.0	2	40	1.4	0.8	8.93E-06	7.09E-05
	Freight Trains	1	12	3.7	2,858	0.54	871	5.0	10	40	15.8	8.5	9.89E-05	7.85E-04
	Total	**1**	**12**	**3.7**	**2,858**	**0.54**	**871**	**5.0**	**23**	**-**	**23.8**	**12.9**	**1.49E-04**	**1.18E-03**

Notes: Emission based on Emission Factors for Locomotives, USEPA 2009 (EPA-420-F-09-025)
Average emissions calculated for 2020 and periods 2021-2025, 2026-2049.
Fuel correction factors from Offroad Modeling Change Technical memo, Changes to the Locomotive Inventory, CARB July 2006.
PM2.5 calculated as 92% of PM emissions (CARB CEIDERS PM2.5 fractions)
Passenger trains assumed to operate for 24 hours per day
Freight trains assumed to operate for 24 hours per day

Caltrain Diesel Trains- with electrification	**2020**			**2021 - 2025**			**2026 - 2049**		
Arrive/Depart Station	***Stop at Station***	***Skip Station***	***Total***	***Stop at Station***	***Skip Station***	***Total***	***Stop at Station***	***Skip Station***	***Total***
Passenger trains - weekday =	58	34	92	0	24	24	0	4	4
Passenger trains - weekend =	28	4	32	0	4	4	0	0	0
Passenger trains - Sat only =	4	0	4	4	0	4	0	0	0
Total Trains =	90	38	128	4	28	32	0	4	4
Annual average daily trains =	50	25	75	1	18	19	0	3	3
Locomotive horsepower =		(before 2021)	3285		(before 2021)	3285		(before 2021)	3285
		(2021 and later)	3467		(2021 and later)	3467		(2021 and later)	3467
Locomotive engine load =	0.1	0.5		0.1	0.5		0.1	0.5	
Other Passenger Trains (Amtrak Capitol Corridor & Coast Starlight)									
Arrive/Depart Station	***Stop at Station***	***Skip Station***	***Total***	***Stop at Station***	***Skip Station***	***Total***	***Stop at Station***	***Skip Station***	***Total***
Passenger trains - weekday =	8	2	10	8	2	10	8	2	10
Passenger trains - weekend =	7	2	9	7	2	9	7	2	9
Passenger trains - Sat only =	0	0	0	0	0	0	0	0	0
Total Trains =	15	4	19	15	4	19	15	4	19
Annual average daily trains =	8	2	10	8	2	10	8	2	10
Locomotive horsepower =			3200			3200			3200
Locomotives per train =			1			1			1
Locomotive engine load =	0.1	0.5		0.1	0.5		0.1	0.5	
Freight									
Freight trains per day =		10			10			10	
Locomotive horsepower =		2300			2300			2300	
Locomotives per train =		2			2			2	
Total horsepower =		4600			4600			4600	
Locomotive engine load =		0.5			0.5			0.5	

Locomotive DPM Emission Factors (g/hp-hr)

Train Type	2019-2020	2021-2025	2026-2049
Passenger	0.101	0.0808	0.025
Freight	0.111	0.0904	0.033

* average emissions for period.

PM2.5 to PM ratio = 0.92
DPM to PM ratio = 1

	CARB Fuel Adj Factor 2010	2011+
Passenger	0.717	0.709
Freight	0.851	0.840

Gateway Crossings, Santa Clara, CA -1st Floor Rail Line DPM & PM2.5 Concentrations
AERMOD Risk Modeling Parameters and Maximum Concentrations
Caltrain Electrification and Diesel-Powered Amtrak and Freight Trains

Receptor Information	1st Floor Receptors
Number of Receptors	395
Receptor Height =	1.5 meters
Receptor distances =	Various, receptors at residential units

Meteorological Conditions	
BAAQMD San Jose Arpt Hourly Data	2006-2010
Land Use Classification	urban
Wind speed =	variable
Wind direction =	variable

MEI Maximum Concentrations - Receptor Height = 1.5 m

Meteorological Data Years	Period Average DPM Concentration ($\mu g/m^3$)		
	2020	**2021-2025**	**2026-2049**
2006-2010	0.02902	0.0121	0.0027

Meteorological Data Years	Period Average PM2.5 Concentration ($\mu g/m^3$)		
	2020	**2021-2025**	**2026-2049**
2006-2010	0.0267	0.0111	0.0025

Gateway Crossings, Santa Clara, CA - 1st Floor Receptors (1.5 meter receptor height)
AERMOD Railroad DPM Risk Modeling Parameters and Maximum Cancer Risk at Project Site
Caltrain Electrification and Diesel-Powered Amtrak and Freight Trains

Cancer Risk Calculation Method

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air ($\mu g/m^3$)
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

Cancer Potency Factors $(mg/kg\text{-}day)^{-1}$

TAC	CPF
DPM	1.10E+00

	Infant/Child			Adult
Age -->	**3rd Trimester**	**0 - <2**	**2 - <16**	**16 - 30**
Parameter				
ASF	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
ED =	0.25	2	14	14
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Rail Locomotive Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	Year	Exposure Duration (years)	Age	Age Sensitivity Factor	DPM Annual Conc (ug/m3)	DPM Cancer Risk (per million)
0	2020	0.25	-0.25 - 0*	10	0.0290	0.395
1	2020	1	1	10	0.0290	4.766
2	2021	1	2	10	0.0121	1.984
3	2022	1	3	3	0.0121	0.312
4	2023	1	4	3	0.0121	0.312
5	2024	1	5	3	0.0121	0.312
6	2025	1	6	3	0.0121	0.312
7	2026	1	7	3	0.0027	0.070
8	2027	1	8	3	0.0027	0.070
9	2028	1	9	3	0.0027	0.070
10	2029	1	10	3	0.0027	0.070
11	2030	1	11	3	0.0027	0.070
12	2031	1	12	3	0.0027	0.070
13	2032	1	13	3	0.0027	0.070
14	2033	1	14	3	0.0027	0.070
15	2034	1	15	3	0.0027	0.070
16	2035	1	16	3	0.0027	0.070
17	2036	1	17	1	0.0027	0.008
18	2037	1	18	1	0.0027	0.008
19	2038	1	19	1	0.0027	0.008
20	2039	1	20	1	0.0027	0.008
21	2040	1	21	1	0.0027	0.008
22	2041	1	22	1	0.0027	0.008
23	2042	1	23	1	0.0027	0.008
24	2043	1	24	1	0.0027	0.008
25	2044	1	25	1	0.0027	0.008
26	2045	1	26	1	0.0027	0.008
27	2046	1	27	1	0.0027	0.008
28	2047	1	28	1	0.0027	0.008
29	2048	1	29	1	0.0027	0.008
30	2049	1	30	1	0.0027	0.008
Total Increased Cancer Risk						**9.2**

* Third trimester of pregnancy

Attachment 4: Generator Risk Modeling

Gateway Crossings

Standby Emergency Generator Impacts

Rating:	100	kW
	134	HP
Operating Hours per Unit:	1	hours/day
	50	hours/year
Load	0.74	from CARB OFFROAD

Standby Emergency Generator Emissions **(PER UNIT)**

Units — Criteria Pollutants

	ROG	NOX	CO	SOX	PM10	PM2.5	CO2e
tons/yr (from CalEEMod)	**0.01**	**0.02**	**0.02**	**0.00**	**0.0008**	**0.0008**	
metric tons/yr	—	—	—	—	—	—	8
g/HP-hr	*0.75*	*2.10*	*2.72*	*0.00*	*0.110*	*0.110*	
lbs/hr	0.22	0.62	0.80	0.00	0.032	0.032	
lbs/yr	11.08	31.00	40.20	0.06	1.620	1.620	
Average annual lbs/day	0.03	0.08	0.11	0.00	0.004	0.004	

Community Risk

	Worst Location		Construction MEI	
Cancer Risk at Source =				single unit with OEHHA Adj.
at closest unit and constr. MEI	2.74E+00	~160	0,33	~800
Annual PM2.5 at Source				
at closest unit and constr. MEI	0.005		<0.001	

Attachment 5: Roadway Modeling

Bay Area Air Quality Management District

Roadway Screening Analysis Calculator

County specific tables containing estimates of risk and hazard impacts from roadways in the Bay Area.

INSTRUCTIONS:

Input the site-specific characteristics of your project by using the drop down menu in the "Search Parameter" box. We recommend that this analysis be used for roadways with 10,000 AADT and above.

• County: Select the County where the project is located. The calculator is only applicable for projects within the nine Bay Area counties.

• Roadway Direction: Select the orientation that best matches the roadway. If the roadway orientation is neither clearly north-south nor east-west, use the highest values predicted from either orientation.

• Side of the Roadway: Identify on which side of the roadway the project is located.

• Distance from Roadway: Enter the distance in feet from the nearest edge of the roadway to the project site. The calculator estimates values for distances greater than 10 feet and less than 1000 feet. For distances greater than 1000 feet, the user can choose to extrapolate values using a distribution curve or apply 1000 feet values for greater distances.

• Annual Average Daily Traffic (ADT): Enter the annual average daily traffic on the roadway. These data may be collected from the city or the county (if the area is unincorporated).

When the user has completed the data entries, the screening level PM2.5 annual average concentration and the cancer risk results will appear in the Results Box on the right. Please note that the roadway tool is not applicable for California State Highways and the District refers the user to the Highway Screening Analysis Tool at: http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx.

Notes and References listed below the Search Boxes

Search Parameters

County	Santa Clara	
Roadway Direction	North-South	
Side of the Roadway	East	
Distance from Roadway	900	feet
Annual Average Daily Traffic (ADT)	48,370	

Results

Santa Clara County

NORTH-SOUTH DIRECTIONAL ROADWAY

PM2.5 annual average

0.070 ($\mu g/m^3$)

Cancer Risk

3.08 (per million)

Coleman

Data for Santa Clara County based on meteorological data collected from San Jose Airport in 1997

Adjusted for EMFAC2014 for 2018

2.12

(per million)

Note that EMFAC2014 predicts DSL PM2.5 aggragate rates in 2018 that are 46% of EMFAC2011 for 2014. TOG gasoline rates are 56% of EMFAC2011 year 2014 rates. This is for light- and medium-duty vehciles traveling at 30 mph for Bay Area

Notes and References:

1. Emissions were developed using EMFAC2011 for fleet mix in 2014 assuming 10,000 AADT and includes impacts from diesel and gasoline vehicle exhaust, brake and tire wear, and resuspended dust.
2. Roadways were modeled using ~~CALINE4~~ Cal3qhcr air dispersion model assuming a source length of one kilometer. Meteorological data used to estimate the screening values are noted at the bottom of the "Results" box.
3. Cancer risks were estimated for 70 year lifetime exposure starting in 2014 that includes sensitivity values for early life exposures and OEHHA toxicity values adopted in 2013.

Bay Area Air Quality Management District

Roadway Screening Analysis Calculator

County specific tables containing estimates of risk and hazard impacts from roadways in the Bay Area.

INSTRUCTIONS:

Input the site-specific characteristics of your project by using the drop down menu in the "Search Parameter" box. We recommend that this analysis be used for roadways with 10,000 AADT and above.

• County: Select the County where the project is located. The calculator is only applicable for projects within the nine Bay Area counties.

• Roadway Direction: Select the orientation that best matches the roadway. If the roadway orientation is neither clearly north-south nor east-west, use the highest values predicted from either orientation.

• Side of the Roadway: Identify on which side of the roadway the project is located.

• Distance from Roadway: Enter the distance in feet from the nearest edge of the roadway to the project site. The calculator estimates values for distances greater than 10 feet and less than 1000 feet. For distances greater than 1000 feet, the user can choose to extrapolate values using a distribution curve or apply 1000 feet values for greater distances.

• Annual Average Daily Traffic (ADT): Enter the annual average daily traffic on the roadway. These data may be collected from the city or the county (if the area is unincorporated).

When the user has completed the data entries, the screening level PM2.5 annual average concentration and the cancer risk results will appear in the Results Box on the right. Please note that the roadway tool is not applicable for California State Highways and the District refers the user to the Highway Screening Analysis Tool at: http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx.

Notes and References listed below the Search Boxes

Search Parameters

County	Santa Clara	
Roadway Direction	East-West	
Side of the Roadway	South	
Distance from Roadway	50	feet
Annual Average Daily Traffic (ADT)	4,780	

Results

Santa Clara County

EAST-WEST DIRECTIONAL ROADWAY

PM2.5 annual average

0.059 ($\mu g/m^3$)

Cancer Risk

2.33 (per million)

Brokaw Rd

Data for Santa Clara County based on meteorological data collected from San Jose Airport in 1997

Adjusted for EMFAC2014 for 2018

1.60

(per million)

Note that EMFAC2014 predicts DSL PM2.5 aggragate rates in 2018 that are 46% of EMFAC2011 for 2014. TOG gasoline rates are 56% of EMFAC2011 year 2014 rates. This is for light- and medium-duty vehciles traveling at 30 mph for Bay Area

Notes and References:

1. Emissions were developed using EMFAC2011 for fleet mix in 2014 assuming 10,000 AADT and includes impacts from diesel and gasoline vehicle exhaust, brake and tire wear, and resuspended dust.
2. Roadways were modeled using ~~CALINE4~~ Cal3qhcr air dispersion model assuming a source length of one kilometer. Meteorological data used to estimate the screening values are noted at the bottom of the "Results" box.
3. Cancer risks were estimated for 70 year lifetime exposure starting in 2014 that includes sensitivity values for early life exposures and OEHHA toxicity values adopted in 2013.

Attachment 6: Stationary Source Modeling

Bay Area Air Quality Management District

Risk & Hazard Stationary Source Inquiry Form

This form is required when users request stationary source data from BAAQMD. This form is to be used with the BAAQMD's Google Earth stationary source screening tables.

For guidance on conducting a risk & hazard screening, including for roadways & freeways, refer to the District's Risk & Hazard Analysis flow chart.

Table A: Requestor Contact Information	
Contact Name:	Tanushree Ganguly
Affiliation:	Illingworth & Rodkin, Inc.
Phone:	707-794-0400
Email:	tganguly@illingworthrodkin.com
Date of Request	5/5/2017
Project Name:	Gateway Crossings
Address:	Coleman Avenue and Brokaw Road
City:	Santa Clara
County:	Santa Clara
Type (residential, commercial, mixed use, industrial, etc.):	Mixed Use-Residential
Project size (# of units, or building square feet):	24 acres
Comments:	

For Air District assistance, the following steps must be completed:

Complete all the contact and project information requested in Table A. Incomplete forms will not be processed. Please include a project site map.

Download and install the free program Google Earth, http://www.google.com/earth/download/ge/, and then download the county specific Google Earth stationary source application files from the District's website, http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx. The small points on the map represent stationary sources permitted by the District (Map A on right). These permitted sources include diesel back-up generators, gas stations, dry cleaners, boilers, printers, auto spray booths, etc. Click on a point to view the source's Information Table, including the name, location, and preliminary estimated cancer risk, hazard index, and PM2.5 concentration.

Find the project site in Google Earth by inputting the site's address in the Google Earth search box.

Using the Google Earth ruler function, measure the distance in feet between the project's fenceline and the stationary source's fenceline for all the sources that are within 1,000 feet of the project's fenceline. Verify that the location of the source on the map matches with the source's address in the Information Table, by using the Google Earth address search box to confirm that the source is within 1,000 feet of the project. Please report any mapping errors to the District (District contact information in Step 9).

If the stationary source is within 1,000 feet of the project's fenceline and the stationary source's information table does not list the cancer risk, hazard index, and PM2.5 concentration, and instead says to "Contact District Staff", list the stationary source information in Table B Section 1 below.

Note that a small percentage of the stationary sources have Health Risk Screening Assessment (HRSA) data INSTEAD of screening level data. These sources will be noted by an asterisk next to the Plant Name (Map B on right). If HRSA values are presented, these values have already been modeled and cannot be adjusted further.

Email this completed form to District staff (Step 9). District staff will provide the most recent risk, hazard, and PM2.5 data that are available for the source(s). If this information or data are not available, source emissions data will be provided. Staff will respond to inquiries within three weeks.

Note that a public records request received for the same stationary source information will cancel the processing of your SSIF request.

Submit forms, maps, and questions to Alison Kirk at 415-749-5169, or akirk@baaqmd.gov .

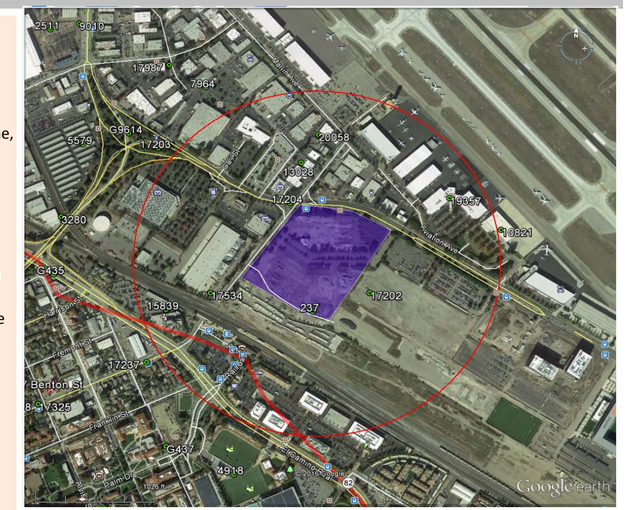

Table B: Stationary Sources within 1,000 feet of Receptor that say "Contact District Staff"

Table B Section 1: Requestor fills out these columns based on Google Earth data				Table B Section 2: BAAQMD returns form with additional information in these columns as needed									
Distance from Receptor (feet)	**Receptor**	**Plant # or Gas Dispensary #**	**Facility Name**	**Street Address**	**2012 Screening Level Cancer Risk (1)**	**2012 Screening Level Hazard Index (1)**	**2012 Screening Level PM2.5 (1)**	**Adjusted Risk**	**Adjusted HI**	**Adjusted PM**	**Distance to Threshold Cancer Risk**	**Multiplier**	**Distance Adjusted PM2.5 Level**
685 NW	On-Site	19357	Atlantic-San Jose	1250 Aviation Avenue	17	0.010	0.000	See attached emissions					
730 N	On-Site	20058	Cal West Automative. Inc	276 Martin Avenue	0	0.000	0.000	closed 5.27.11					
900 N	On-Site	13028	Bob's Screen and Graphics, Inc.	290 Martin Avenue	0.000	0.000	0.00	silkscreen operation					
210 E	On-Site	17534	FedEx	335 Brokaw Road	97.860	0.035	0.17	closed 2/25/15					
650 SW	On-Site	15839	Santa Clara Police Facility	601 El Camino Real	83.060	0.029	0.02	See attached emissions					
700 S	On-Site	17237	Benton and Sherman	500 Benton St	92.180	0.033	0.02	generator					
725 NW	On-Site	17203	BAE Systems Land and Armaments L P	1450 Coleman Avenue	58.750	0.021	0.01	closed 11/3/11					
715 NW	On-Site	G9614	Costco Wholesale #129	1601 Coleman Avenue	160.753	0.266	Na	also # 109614	All I have on this gas station is benzene 57.82 lbs/year				
900 NE	On-Site	10821	Hewlett Packard	1210 Aviation Avenue	22.220	0.008	0.01	#23329	See attached emissions				

Cancer Risk and Chronic Hazard Index Distance Adjustment Multiplier for Diesel IC Engines

Meters	Feet	Multiplier
25	83	0.85
30	99	0.73
35	116	0.64
40	132	0.58
50	165	0.5
60	198	0.41
70	231	0.31
80	264	0.28
90	297	0.25
100	330	0.22
110	363	0.18
120	396	0.16
130	429	0.15
131.718	435	0.140827
140	462	0.14
150	495	0.12
160	528	0.1
180	594	0.09
200	661	0.08
220	727	0.07
240	793	0.06
260	859	0.05
280	925	0.04

Cancer Risk and Chronic Hazard Index Distance Adjustment Multiplier for Gasoline Dispensing Facilities

Meters	Feet	Multiplier	Meters	Feet	Multiplier
20	66	1	140	459	0.052
25	82	0.728	145	476	0.049
30	98	0.559	150	492	0.046
35	115	0.445	155	509	0.044
40	131	0.365	160	525	0.042
45	148	0.305	165	541	0.04
50	164	0.26	170	558	0.038
55	180	0.225	175	574	0.036
60	197	0.197	180	591	0.034
65	213	0.174	185	607	0.033
70	230	0.155	190	623	0.031
75	246	0.139	195	640	0.03
80	262	0.126	200	656	0.029
85	279	0.114	205	673	0.028
90	295	0.104	210	689	0.027
95	312	0.096	220	722	0.025
100	328	0.088	230	755	0.023
110	361	0.076	250	820	0.02
120	394	0.066	270	886	0.018
130	427	0.058	290	951	0.016

Plant# 19357 Atlantic - San Jose
1250 Aviation Avenue
San Jose, CA 95110

[C]urrent, [A]rchive, or [F]uture? c
[P]lant, [S]ource, [A]bate. device, or [E]mis. Point? p

CURRENT Sources:

1 Fireguard Insulate AST, AVGAS
Fixed roof tank, 15K gal, White, Avgas, 10 ft diam
T43??662 no train

2 AVGAS (Tank Fill) - Loading Arm
Aircraft/Marine Servicing, 1 gasoline filler, Avgas
TD5?2662 no train

`

DETAIL POLLUTANTS - ABATED
MOST RECENT P/O APPROVED (2017)

Atlantic - San Jose (P# 19357)

S# SOURCE NAME / MATERIAL	SOURCE CODE / THROUGHPUT	DATE	POLLUTANT	CODE	LBS/DAY
1 Fireguard Insulate AST, AVGAS					
	T43??662				
			Benzene	41	1.14E-01
			Cyclohexane	91	5.59E-02
			Hexane	148	1.16E-01
			Toluene	293	3.26E-01
			Xylene	307	4.05E-01
			Ethylbenzene	333	9.31E-02
			Tetra-Ethyl Lead (TEL)	422	4.66E-02
			Avgas	662	1.17E+00
2 AVGAS (Tank Fill) - Loading Arm					
	TD5?2662				
			Benzene	41	1.40E-02
			Cyclohexane	91	6.86E-03
			Hexane	148	1.43E-02
			Toluene	293	4.00E-02
			Xylene	307	4.97E-02
			Ethylbenzene	333	1.14E-02
			Tetra-Ethyl Lead (TEL)	422	5.72E-03
			Avgas	662	1.44E-01

PLANT TOTAL:

lbs/day	Pollutant
1.32E+00	Avgas (662)
1.28E-01	Benzene (41)
6.27E-02	Cyclohexane (91)
1.05E-01	Ethylbenzene (333)
1.31E-01	Hexane (148)
5.23E-02	Tetra-Ethyl Lead (TEL) (422)
3.66E-01	Toluene (293)
4.55E-01	Xylene (307)

Plant# 15839 Santa Clara Police Facility
601 El Camino Real
Santa Clara, CA 95050

[C]urrent, [A]rchive, or [F]uture? c
[P]lant, [S]ource, [A]bate. device, or [E]mis. Point? p

CURRENT Sources:

1 Emergency Standby Generator: 750 KW/ 1006 HP, 601 ECR, San
Standby Diesel engine, 1114 hp, Caterpillar S/N BLG00565, 1649 cu in
C22BG098 /,P1,

3 Police Department #1, 601 ECR (Benton, Santa Clara, #2474)
Standby Diesel engine, 404 hp, Detroit Diesel S/N 06VF221536, 549 cu in
C22AG098 /,P3,

No CURRENT Abatement Devices

CURRENT Emission Points:

1 train: ,S1,/
3 train: ,S3,/

BAY AREA AIR QUALITY MANAGEMENT DISTRICT Printed: MAY 10, 2017
DETAIL POLLUTANTS - ABATED
MOST RECENT P/O APPROVED (2017)

Santa Clara Police Facility (P# 15839)

S# SOURCE NAME
MATERIAL SOURCE CODE
THROUGHPUT DATE POLLUTANT CODE LBS/DAY
---

1 Emergency Standby Generator: 750 KW/ 1006 HP, 601 ECR, Sant
C22BG098
Benzene 41 3.37E-04
Formaldehyde 124 2.79E-05
Organics (other, including 990 1.63E-02
Arsenic (all) 1030 2.93E-07
Beryllium (all) pollutant 1040 1.72E-07
Cadmium 1070 7.33E-07
Chromium (hexavalent) 1095 1.52E-08
Lead (all) pollutant 1140 6.22E-07
Manganese 1160 9.76E-07
Nickel pollutant 1180 1.19E-05
Mercury (all) pollutant 1190 2.07E-07
Diesel Engine Exhaust Part 1350 2.24E-03
PAH's (non-speciated) 1840 1.55E-06
Nitrous Oxide (N2O) 2030 9.02E-05
Nitrogen Oxides (part not 2990 1.41E-01
Sulfur Dioxide (SO2) 3990 1.10E-04
Carbon Monoxide (CO) pollu 4990 6.23E-02
Carbon Dioxide, non-biogen 6960 1.13E+01
Methane (CH4) 6970 4.51E-04

3 Police Department #1, 601 ECR
C22AG098
Benzene 41 1.00E-03
Formaldehyde 124 8.27E-05
Organics (other, including 990 1.17E-02
Arsenic (all) 1030 8.71E-07
Beryllium (all) pollutant 1040 5.10E-07
Cadmium 1070 2.18E-06
Chromium (hexavalent) 1095 4.50E-08
Lead (all) pollutant 1140 1.85E-06
Manganese 1160 2.90E-06
Nickel pollutant 1180 3.52E-05
Mercury (all) pollutant 1190 6.16E-07
Diesel Engine Exhaust Part 1350 8.00E-03
PAH's (non-speciated) 1840 4.59E-06
Nitrous Oxide (N2O) 2030 2.68E-04
Nitrogen Oxides (part not 2990 2.43E-01
Sulfur Dioxide (SO2) 3990 3.27E-04
Carbon Monoxide (CO) pollu 4990 1.39E-01
Carbon Dioxide, non-biogen 6960 3.35E+01
Methane (CH4) 6970 1.34E-03

PLANT TOTAL:
lbs/day Pollutant

1.16E-06 Arsenic (all) (1030)
1.34E-03 Benzene (41)
6.82E-07 Beryllium (all) pollutant (1040)
2.91E-06 Cadmium (1070)
4.48E+01 Carbon Dioxide, non-biogenic CO2 (6960)
2.01E-01 Carbon Monoxide (CO) pollutant (4990)
6.02E-08 Chromium (hexavalent) (1095)
1.02E-02 Diesel Engine Exhaust Particulate Matter (1350)
1.11E-04 Formaldehyde (124)
2.47E-06 Lead (all) pollutant (1140)
3.87E-06 Manganese (1160)
8.23E-07 Mercury (all) pollutant (1190)
1.79E-03 Methane (CH4) (6970)
4.71E-05 Nickel pollutant (1180)
3.84E-01 Nitrogen Oxides (part not spec elsewhere) (2990)
3.58E-04 Nitrous Oxide (N2O) (2030)
2.80E-02 Organics (other, including CH4) (990)
6.14E-06 PAH's (non-speciated) (1840)
4.36E-04 Sulfur Dioxide (SO2) (3990)

Plant# 10821 Hewlett-Packard Aviation
1210 Aviation Avenue
San Jose, CA 95110
Plant Closed: 02/05/16
Transfer to New Plant# 23329
List ARCHIVED devices (Y/N)? n

Plant# 23329 Hewlett Packard Enterprise Company
1210 Aviation Avenue
San Jose, CA 95110

[C]urrent, [A]rchive, or [F]uture? c
[P]lant, [S]ource, [A]bate. device, or [E]mis. Point? p

CURRENT Sources:

1 HP Airport Olympian D200P4
Standby Diesel engine, 300 hp, Caterpillar, 531 cu in
C22AG098 /,P1,

2 Sk Parts Washer
Degreaser, Methylated siloxane solvent, 59 deg F
SD01A810 no train

No CURRENT Abatement Devices

CURRENT Emission Points:

1 train: ,S1,/

BAY AREA AIR QUALITY MANAGEMENT DISTRICT Printed: MAY 10, 2017
DETAIL POLLUTANTS - ABATED
MOST RECENT P/O APPROVED (2016)

Hewlett-Packard Aviation (P# 10821)

S# SOURCE NAME
MATERIAL SOURCE CODE
THROUGHPUT DATE POLLUTANT CODE LBS/DAY
---

1 HP Airport Olympian D200P4
C22AG098
Benzene 41 2.19E-05
Formaldehyde 124 1.81E-06
Organics (other, including 990 1.06E-03
Arsenic (all) 1030 1.91E-08
Beryllium (all) pollutant 1040 1.12E-08
Cadmium 1070 4.77E-08
Chromium (hexavalent) 1095 9.86E-10
Lead (all) pollutant 1140 4.04E-08
Manganese 1160 6.35E-08
Nickel pollutant 1180 7.71E-07
Mercury (all) pollutant 1190 1.35E-08
Diesel Engine Exhaust Part 1350 2.10E-04
PAH's (non-speciated) 1840 1.01E-07
Nitrous Oxide (N2O) 2030 5.87E-06
Nitrogen Oxides (part not 2990 1.54E-02
Sulfur Dioxide (SO2) 3990 7.15E-06
Carbon Monoxide (CO) pollu 4990 3.35E-03
Carbon Dioxide, non-biogen 6960 7.33E-01
Methane (CH4) 6970 2.93E-05

2 Sk Parts Washer
SD01A810
Methylated siloxane solven 810 0.00E+00

PLANT TOTAL:
lbs/day Pollutant

1.91E-08 Arsenic (all) (1030)
2.19E-05 Benzene (41)
1.12E-08 Beryllium (all) pollutant (1040)
4.77E-08 Cadmium (1070)
7.33E-01 Carbon Dioxide, non-biogenic CO2 (6960)
3.35E-03 Carbon Monoxide (CO) pollutant (4990)
9.86E-10 Chromium (hexavalent) (1095)
2.10E-04 Diesel Engine Exhaust Particulate Matter (1350)
1.81E-06 Formaldehyde (124)
4.04E-08 Lead (all) pollutant (1140)
6.35E-08 Manganese (1160)
1.35E-08 Mercury (all) pollutant (1190)
2.93E-05 Methane (CH4) (6970)
0.00E+00 Methylated siloxane solvent (810)
7.71E-07 Nickel pollutant (1180)
1.54E-02 Nitrogen Oxides (part not spec elsewhere) (2990)
5.87E-06 Nitrous Oxide (N2O) (2030)
1.06E-03 Organics (other, including CH4) (990)
1.01E-07 PAH's (non-speciated) (1840)
7.15E-06 Sulfur Dioxide (SO2) (3990)