

444-450 FIRST STREET AIR QUALITY & GREENHOUSE GAS ASSESSMENT

Los Altos, CA

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Introduction

The purpose of this report is to address the air quality impacts, estimate the health risk impacts, and compute the greenhouse gas (GHG) emissions associated with the proposed residential project located at 444-450 First Street in Los Altos, California. The air quality impacts and GHG emissions would be associated with demolition of the existing uses at the site, construction of the new buildings and infrastructure, and operation of the project. Additionally, the project's construction would be the primary source of toxic air contaminant (TAC) and fine particulate matter (PM_{2.5}) emissions. This could increase health risks at sensitive receptors and lead to community risk impacts. This analysis addresses those issues following the guidance provided by the Bay Area Air Quality Management District (BAAQMD).¹

Project Description

The project would demolish the existing office buildings totaling 10,000 square feet (sf) and construct a 26-unit condominium residential development. The four-story multi-family housing would include two levels of underground parking with 55 parking spaces available. The project also proposes to have a common-area roof deck that would be open for residential use. The proposed floor areas total 34,425-sf.

Setting

The project is located in 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 (PM₁₀), 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 (PM₁₀) and fine particulate matter where particles have a diameter of 2.5 micrometers or less (PM_{2.5}). Elevated concentrations of PM₁₀ 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.

¹ Bay Area Air Quality Management District, *CEQA Air Quality Guidelines*, May 2017.

Toxic Air Contaminants

Toxic air contaminants (TAC) 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.

Regulatory Agencies

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. These regulations include the solid waste collection vehicle (SWCV) rule, in-use public and utility fleets, and the heavy-duty diesel truck and bus regulations. In 2008, CARB approved a new regulation to reduce emissions of DPM and nitrogen oxides from existing on-road heavy-duty diesel fueled vehicles.² The regulation requires affected vehicles to meet specific performance requirements between 2014 and 2023, with all affected diesel vehicles required to have 2010 model-year engines or equivalent by 2023. These requirements are phased in over the compliance period and depend on the model year of the vehicle.

The BAAQMD is the regional agency tasked with managing air quality in the region. At the State level, the CARB (a part of the California Environmental Protection Agency [EPA]) oversees regional air district activities and regulates air quality at the State level. The BAAQMD has published California Environmental Quality Act (CEQA) Air Quality Guidelines that are used in this assessment to evaluate air quality impacts of projects.³ The detailed community risk modeling methodology used in this assessment is contained in *Attachment 1*.

City of Los Altos General Plan

The City of Los Altos General Plan includes goals, policies, and strategies to improve air quality and meet the State and National ambient air quality standards. The following goals, policies, and actions are applicable to the proposed project:

² Available online: <http://www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm>. Accessed: November 21, 2014.

³ Bay Area Air Quality Management District. 2017. *BAAQMD CEQA Air Quality Guidelines*. May.

Goal 8: Maintain or improve air quality in Los Altos

Policy 8.1: Support the principles of reducing air pollutants through land use, transportation, and energy use planning.

Policy 8.3: Interpret and implement the General Plan to be consistent with the regional Bay Area Air Quality Management Plan, as periodically updated.

Policy 8.4: Ensure location and design of development projects so as to conserve air quality and minimize direct and indirect emissions of air contaminants.

Implementation Program

NEH 29: *Minimize Impacts of New Development*

Review development proposals for potential impacts pursuant to CEQA and the BAAQMD Air Quality Handbook. Reduce impacts of new development using available land use and transportation planning techniques such as:

- 1) Incorporation of public transit stops;
- 2) Pedestrian and bicycle linkage to commercial centers, employment centers, schools, and parks;
- 3) Preferential parking for car pools;
- 4) Traffic flow improvements; and
- 5) Employer trip reduction programs.

NEH 30: *Participation in Regional Air Quality Programs*

Work with the BAAQMD and ABAG and to meet federal and State air quality standards for all pollutants. To ensure that new measures can be practically enforced in the region, participate in future amendments and updates of the BAAQMP.

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, and elementary schools. The closest sensitive receptors to the project site are residences of an apartment complex northwest of the northern project boundary. There are additional residences at farther distances from the project site. The project would include new residents.

Significance Thresholds

In June 2010, BAAQMD adopted thresholds of significance to assist in the review of projects under CEQA and these significance thresholds were contained in the District’s 2011 *CEQA Air Quality Guidelines*. These thresholds were designed to establish the level at which BAAQMD believed air pollution emissions would cause significant environmental impacts under CEQA. The thresholds were challenged through a series of court challenges and were mostly upheld. BAAQMD updated the *CEQA Air Quality Guidelines* in 2017 to include the latest significance thresholds that were used in this analysis are summarized in Table 1.

Table 1. Air Quality Significance Thresholds

Criteria Air Pollutant	Construction Thresholds	Operational Thresholds	
	Average Daily Emissions (lbs./day)	Average Daily Emissions (lbs./day)	Annual Average Emissions (tons/year)
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	Single Sources Within 1,000-foot Zone of Influence	Combined Sources (Cumulative from all sources within 1,000-foot zone of influence)	
Excess Cancer Risk	>10.0 per one million	>100 per one million	
Hazard Index	>1.0	>10.0	
Incremental annual PM _{2.5}	>0.3 µg/m ³	>0.8 µg/m ³	
Odors			
Odor	5 confirmed complaints per year averaged over 3 years		
Greenhouse Gas Emissions			
Land Use Projects – direct and indirect emissions	Compliance with a Qualified GHG Reduction Strategy OR 1,100 metric tons annually or 4.6 metric tons per capita (for 2020) and adjusted to 660 metric tons annually or 2.6 metric tons per capita (for 2030)*		
Note: ROG = reactive organic gases, NO _x = 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. GHG = greenhouse gases.			
*BAAQMD does not have a recommended post-2020 GHG threshold.			

Impact 1: Conflict with or obstruct implementation of the applicable air quality plan?
No Impact.

BAAQMD is the regional agency responsible for overseeing compliance with State and federal laws, regulations, and programs within the San Francisco Bay Area Air Basin (SFBAAB). BAAQMD, with assistance from the Association of Bay Area Governments (ABAG) and Metropolitan Transportation Commission (MTC), has prepared and implements specific plans to meet the applicable laws, regulations, and programs. The most recent and comprehensive of which is the *Bay Area 2017 Clean Air Plan*.⁴ The BAAQMD has also developed CEQA guidelines to assist lead agencies in evaluating the significance of air quality impacts. In formulating compliance strategies, BAAQMD relies on planned land uses established by local general plans. Land use planning affects vehicle travel, which in turn affects region-wide emissions of air pollutants and GHGs.

The BAAQMD, with assistance from ABAG and MTC, has prepared and implemented the Clean Air Plan to meet the applicable laws, regulations, and programs. The primary goals of the Clean Air Plan are to attain air quality standards, reduce population exposure and protect public health, and reduce GHG emissions and protect the climate. The BAAQMD has also developed CEQA guidelines to assist lead agencies in evaluating the significance of air quality impacts. In formulating compliance strategies, BAAQMD relies on planned land uses established by local general plans. Land use planning affects vehicle travel, which in turn affects region-wide emissions of air pollutants and GHG. The project proposed land use is consistent with the City of Los Altos General Plan designation for this site.

The 2017 Clean Air Plan includes control measures that are intended to reduce air pollutant emissions in the Bay Area either directly or indirectly. The most recent clean air plan is the *2017 Clean Air Plan* that was adopted by BAAQMD in April 2017. The proposed project would not conflict with the latest Clean Air planning efforts since 1) the project would have emissions below the BAAQMD thresholds (see Impact 2), 2) the project would be considered urban infill, 3) the project would be located near employment centers, and 4) the project would be located near transit with regional connections.

Impact 2: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?
Less-than-significant.

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 PM₁₀ 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 PM₁₀, 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), PM₁₀, and PM_{2.5} and apply to both construction period and operational period impacts.

⁴ Bay Area Air Quality Management District (BAAQMD), 2017. *Final 2017 Clean Air Plan*.

The California Emissions Estimator Model (CalEEMod) Version 2016.3.2 was used to estimate 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. The model output from CalEEMod is included as *Attachment 2*.

Construction Period Emissions

CalEEMod provides annual 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. The construction schedule, equipment quantities, and equipment usage were based on CalEEMod defaults for a project of this type and size.

The following proposed project land uses were inputted into CalEEMod: 26 dwelling units and 34,425-sf entered as “Condo/Townhouse” and 55 parking spaces entered as “Enclosed Parking with Elevator”. In addition, 10,000-sf of building demolition was included in the model.

The construction schedule assumed that the project would be built out over a period of approximately five months, beginning in June 2019. There were an estimated 123 construction workdays. Average daily emissions were computed by dividing the total construction emissions by the number of construction days. Table 2 shows average daily construction emissions of ROG, NO_x, PM₁₀ exhaust, and PM_{2.5} exhaust during construction of the project. As indicated in Table 2, predicted construction period emissions would not exceed the BAAQMD significance thresholds.

Table 2. Construction Period Emissions

Scenario	ROG	NO _x	PM ₁₀ Exhaust	PM _{2.5} Exhaust
Total construction emissions (tons)	0.3 tons	0.6 tons	0.04 tons	0.03 tons
Average daily emissions (pounds)¹	5.1 lbs./day	10.1 lbs./day	0.6 lbs./day	0.5 lbs./day
<i>BAAQMD Thresholds (pounds per day)</i>	54 lbs./day	54 lbs./day	82 lbs./day	54 lbs./day
Exceed Threshold?	No	No	No	No
Notes: ¹ Assumes 123 workdays.				

Additionally, construction activities, particularly during site preparation and grading, would temporarily generate fugitive dust in the form of PM₁₀ 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 AQ-1 would implement BAAQMD-recommended best management practices.*

Mitigation Measure AQ-1: Include 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. Additional measures are identified to reduce construction equipment exhaust emissions. 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.

Effectiveness of Mitigation Measure AQ-1

The measures included above would be consistent with BAAQMD-recommended basic control measures for reducing fugitive particulate matter that are contained in the BAAQMD CEQA Air Quality Guidelines.

Operational Period Emissions

Operational air emissions from the project would be generated primarily from automobiles driven by future residents. 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 same project land uses as described above for the construction period modeling were used.

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 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. The Saturday and Sunday trip rates were assumed to be the weekday rate adjusted by multiplying the ratio of the CalEEMod default rates for Saturday and Sunday trips.

The project applicant provided project trip generation values for the proposed residential project.⁵ The weekday trip rate used for the project was 5.44 trips per day. This changed the Saturday trip rate to 5.31 and the Sunday rate to 4.53 trips per day.

Energy

CalEEMod defaults for energy use were used, which include the 2016 Title 24 Building Standards. Indirect emissions from electricity were computed in CalEEMod. The model has a default rate of 641.3 pounds of CO₂ per megawatt of electricity produced, which is based on PG&E's 2008 emissions rate. The rate was adjusted to account for PG&E's projected 2020 CO₂ intensity rate. This 2020 rate is based, in part, on the requirement of a renewable energy portfolio standard of 33 percent by the year 2020. The derived 2020 rate for PG&E was estimated at 290 pounds of CO₂ per megawatt of electricity delivered.⁶

⁵ Hexagon Transportation Consultants, Inc. 2019. *Trip Generation Analysis for the Proposed Residential Project at 444 First Street in Los Altos, California* Memorandum. January.

⁶ Pacific Gas & Electric, 2015. *Greenhouse Gas Emission Factors: Guidance for PG&E Customers*. November.

Other Inputs

Default model assumptions for emissions associated with solid waste generation and water/wastewater use were applied to the project. Water/wastewater use were changed to 100% aerobic conditions to represent wastewater treatment plant conditions. All hearths were assumed to be powered by gas.

Existing Uses

A CalEEMod model for the existing land use was run for year 2020. The existing land use on the project site included 10,000-sf entered as “General Office Building”. The traffic consultants also provided trip rates for the existing use.

As shown in Table 3, operational emissions would not exceed the BAAQMD significance thresholds. This would be considered a *less-than-significant* impact.

Table 3. Operational Emissions

Scenario	ROG	NOx	PM ₁₀	PM _{2.5}
2020 Project Operational Emissions (tons/year)	0.21 tons	0.18 tons	0.12 tons	0.04 tons
2020 Existing Operational Emissions (tons/years)	0.07 tons	0.09 tons	0.07 tons	0.02 tons
Net Emissions	0.14 tons	0.09 tons	0.06 tons	0.02 tons
<i>BAAQMD Thresholds (tons /year)</i>	<i>10 tons</i>	<i>10 tons</i>	<i>15 tons</i>	<i>10 tons</i>
<i>Exceed Threshold?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
2020 Project Operational Emissions (lbs/day) ¹	0.77 lbs.	0.48 lbs.	0.30 lbs.	0.09 lbs.
<i>BAAQMD Thresholds (pounds/day)</i>	<i>54 lbs.</i>	<i>54 lbs.</i>	<i>82 lbs.</i>	<i>54 lbs.</i>
<i>Exceed Threshold?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>

Notes: ¹ Assumes 365-day operation.

**Impact 3: Expose sensitive receptors to substantial pollutant concentrations?
*Less-than-significant with mitigation.***

Project impacts related to increased community risk can occur either by introducing a new 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 residents that are sensitive receptors. In addition, temporary project construction activity would generate dust and equipment exhaust on a temporary basis that could affect nearby sensitive receptors. Community risk impacts were addressed by increased predicting lifetime cancer risk, the increase in annual PM_{2.5} concentrations, and computing the Hazard Index (HI) for non-cancer health risks. The methodology for computing community risks impacts is contained in *Attachment 1*.

Construction Community Health Risk Impacts

Project Construction Activity

Construction equipment and associated heavy-duty truck traffic generates diesel exhaust are known as a 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 health risks for sensitive receptors such as surrounding 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 health 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}.⁷ Dispersion modeling was conducted to predict the off-site concentrations resulting from project construction, so that lifetime cancer risks and non-cancer health effects could be evaluated.

Construction Emissions

The CalEEMod model provided total annual PM₁₀ exhaust emissions (assumed to be DPM) for the off-road construction equipment and for exhaust emissions from on-road vehicles, with total emissions from all construction stages as 0.0352 tons (70 pounds). The on-road emissions are a result of haul truck travel during demolition and grading activities, worker travel, and vendor deliveries during construction. A trip length of one mile was used to represent vehicle travel while at or near the construction site. It was assumed that these emissions from on-road vehicles traveling at or near the site would occur at the construction site. Fugitive PM_{2.5} dust emissions were calculated by CalEEMod as 0.00158 tons (3 pounds) for the overall construction period.

Dispersion Modeling

The U.S. EPA AERMOD dispersion model was used to predict concentrations of DPM and PM_{2.5} concentrations at sensitive receptors (residences) in the vicinity of the project construction area. The AERMOD dispersion model is a BAAQMD-recommended model for use in modeling analysis of these types of emission activities for CEQA projects.⁸ The modeling utilized two area sources to represent the on-site construction emissions, one for exhaust emissions and one for fugitive dust emissions. 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.

⁷ DPM is identified by California as a toxic air contaminant due to the potential to cause cancer.

⁸ Bay Area Air Quality Management District (BAAQMD), 2012, *Recommended Methods for Screening and Modeling Local Risks and Hazards, Version 3.0*. May.

The modeling used a five-year data set (2009 - 2013) of hourly meteorological data from Moffett Federal Airfield prepared for use with the AERMOD model by the CARB. Annual DPM and PM_{2.5} concentrations from construction activities during the 2019 period were calculated using the model. DPM and PM_{2.5} concentrations were calculated at nearby sensitive receptors. Receptor heights of 1.5 meters (5 feet) and 4.5 meters (15 feet) were used to represent the breathing heights of residents on the first and second floors in nearby single-family residences, apartments, and condominiums.

Community Health Risk Construction Impacts

Figure 1 shows the locations where the maximum-modeled DPM and PM_{2.5} concentrations occurred. The maximum concentrations occurred on the second floor (i.e. 4.5-meter receptor breathing height) of an apartment complex located northwest of the project site. The maximum increased cancer risk at the location of the maximally exposed individual (MEI) was calculated using the BAAQMD recommended methods and the maximum annual modeled DPM concentration. The cancer risk calculations are based on applying the BAAQMD recommended age sensitivity factors to the TAC concentrations. Age-sensitivity factors reflect the greater sensitivity of infants and small children to cancer causing TACs. BAAQMD-recommended exposure parameters were used for the cancer risk calculations, as described in *Attachment 1*. Infant and adult exposures were assumed to occur at all residences through the entire construction period. Note that since the project construction is predicted to occur in less than two years, only infant exposure parameters were used in calculating the maximum cancer risk at the residential receptors due to their higher breathing rate. A higher breathing rate results in a higher cancer risk because the infant would inhale more construction emissions than someone with a lower breathing rate (i.e., 3rd trimester babies, children, and adults). Therefore, using infant exposure parameters results in a higher, more conservative cancer risk prediction. *Attachment 3* includes the construction emission calculations and source information used in the modeling and the cancer risk calculations.

Results of this assessment indicated that the maximum excess residential cancer risks would exceed the BAAQMD significance threshold of greater than 10 in one million. The maximum PM_{2.5} concentrations would not exceed the significance threshold of greater than 0.3 µg/m³ and the maximum computed Hazard Index (HI) based on the DPM concentration would not exceed the significance threshold of greater than 1.0. *Implementation of Mitigation Measures AQ-2 would reduce this impact to a level of less-than-significant* as seen in Table 4, which summarizes the maximum cancer risks, PM_{2.5} concentrations, and health hazard indexes for project related construction activities affecting the residential MEI. Note that *Mitigation Measure AQ-2* is presented after the “Cumulative Impact on the Cumulative MEI” section.

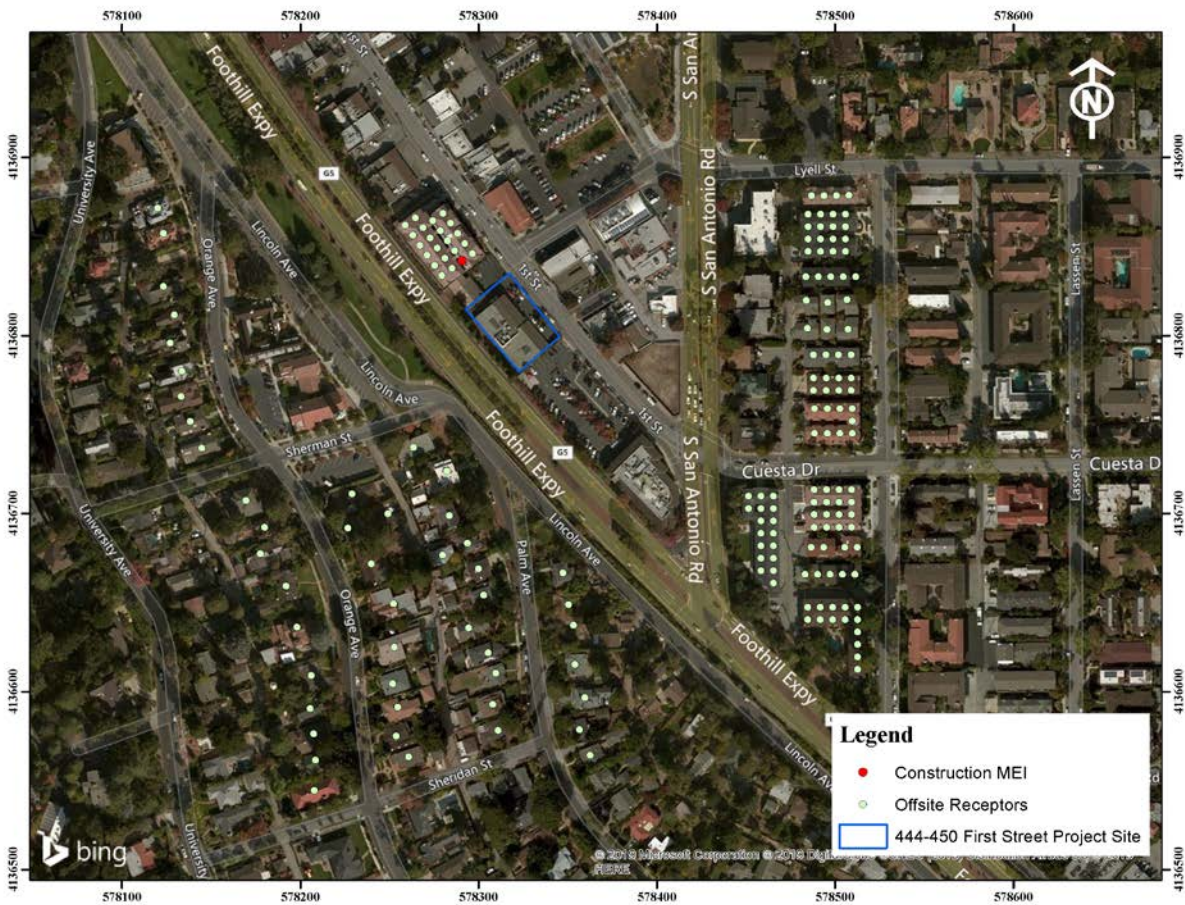
Additionally, modeling was conducted to predict the cancer risks, non-cancer health hazards, and maximum PM_{2.5} concentration impacts at a nearby preschool (i.e. JB Preschool). It was assumed that students’ ages ranged from two-years-old to four-years-old. Results of this assessment indicated that the maximum cancer risks (without any mitigation or construction emission controls) would be 1.4 per million for child exposure. The maximum-modeled annual PM_{2.5} concentration, which is based on combined exhausted and fugitive dust emissions, would be 0.05 µg/m³ and the maximum computed HI would be 0.01. These risk values do not exceed the

BAAQMD single-source significance threshold for annual cancer risk, PM_{2.5} concentration, or HI.

Table 4. Construction Risk Impact to Offsite Residential MEI

Source	Maximum Cancer Risk (per million)	PM _{2.5} concentration (µg/m ³)	Hazard Index
Project Construction	Unmitigated	13.7 (infant)	0.09
	Mitigated	8.9 (infant)	0.06
<i>BAAQMD Single-Source Threshold</i>	<i>>10.0</i>	<i>>0.3</i>	<i>>1.0</i>
<i>Significant?</i>			
Unmitigated	Yes	No	No
Mitigated	No	No	No

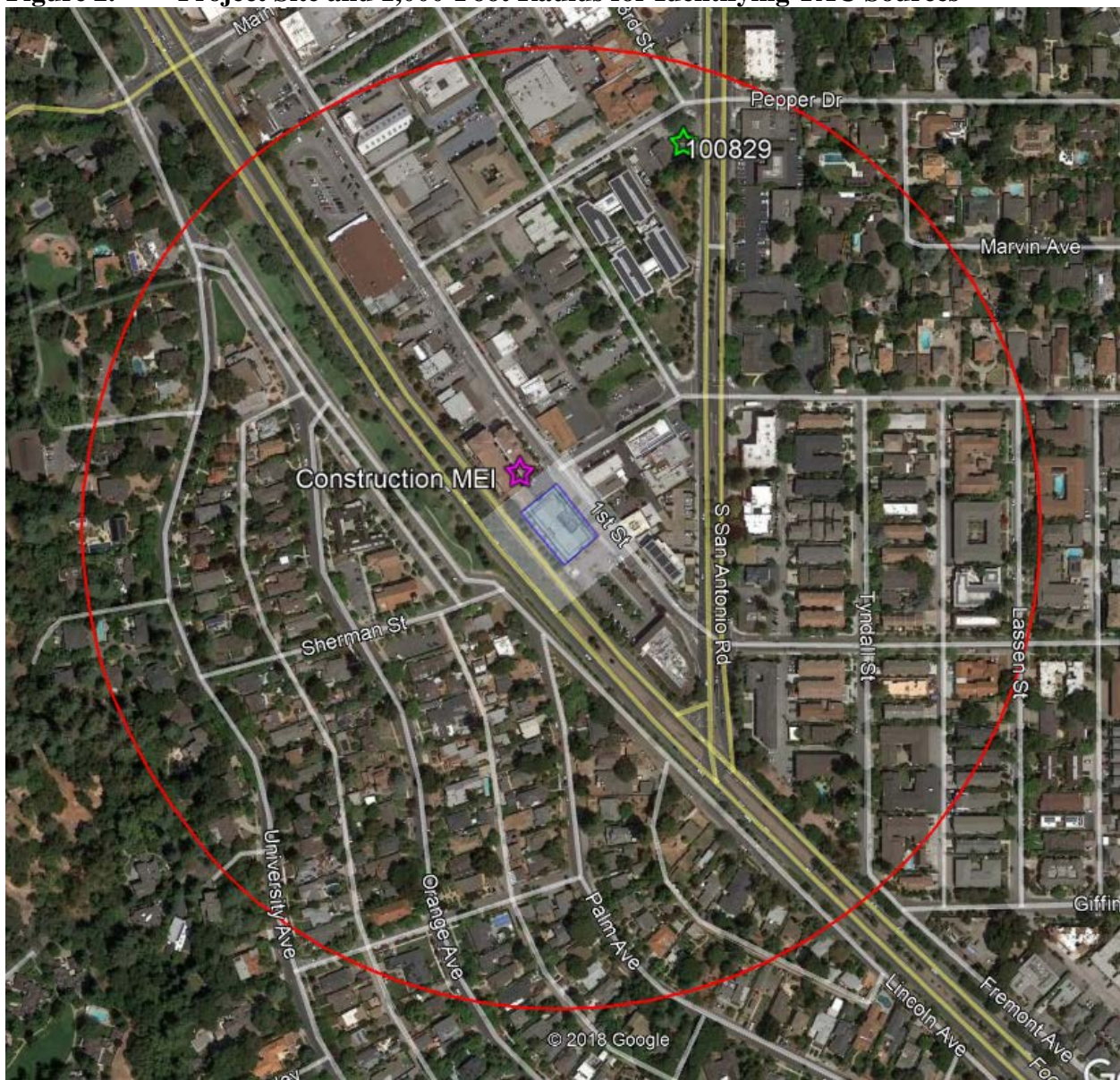
Figure 1. Project Construction Site and Locations of Off-Site Sensitive Receptors and TAC Impacts



Operational Community Health Risk Impacts

Community health risk assessments typically look at all substantial sources of TACs located within 1,000 feet of project sites. These sources include highways, busy surface streets, and stationary sources identified by BAAQMD. A review of the project area indicates that traffic on Foothill Expressway and San Antonio Road are busy roadways with an average daily traffic (ADT) of over 10,000 vehicles, which makes them significant source of TACs. All other roadways within the area are assumed to have an ADT that is less than 10,000 vehicles. A review of BAAQMD's stationary source Google Earth map tool identified one source with the potential to affect the project site. Figure 2 shows the sources affecting the project site. Details of the modeling and community risk calculations are included in *Attachment 4*.

Figure 2. Project Site and 1,000-Foot Radius for Identifying TAC Sources



Local Roadways

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 made by this calculator: (1) adjustment for latest vehicle emissions rates predicted using EMFAC2014 and (2) adjustment of cancer risk to reflect new Office of Environmental Health Hazard Assessment (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. The project would not be occupied prior to at least 2018. In addition, 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 2018.

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.

The ADT on Foothill Expressway was estimated to be 19,830 vehicles and 12,940 vehicles on San Antonio Road. This estimate was based past project traffic volumes for both roadways.⁹ The AM and PM peak-hour volumes were averaged and then multiplied by 10 to estimate the ADT.

The BAAQMD *Roadway Screening Analysis Calculator* for Santa Clara County was used for the roadways. Both Foothill Expressway and San Antonio Road were identified as north-south roadways with the project sensitive receptors being located east of Foothill Expressway and west of San Antonio Road. Estimated risk values for both roadways are listed in Table 5. Note that BAAQMD has found that non-cancer hazards (HI) from all local roadways would be below 0.03.

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 one stationary source and its estimated risk and hazard impacts. A Stationary Source Information Form (SSIF) containing the identified sources was prepared and submitted to BAAQMD. The District provided updated risk levels, emissions and adjustments to account for new OEHHA guidance.¹⁰ The risk values were then adjusted with the appropriate distance multiplier values provided by BAAQMD.

Conoco Phillips (Plant #100829) is a gas dispensing facility. The screening risk levels for these stationary sources were provided by BAAQMD and adjusted for distance based on BAAQMD's

⁹ Iteris, Inc. 2017. *Foothill Expressway Operational Improvements between El Monte and San Antonio Road Project Memorandum*. September.

¹⁰ Correspondence with Arena Flores, BAAQMD. 20 February 2019.

Distance Adjustment Multiplier Tool for Gasoline Dispensing Facilities. Concentrations and community risk impacts from these sources upon the project are reported in Table 5.

Cumulative Community Health Risk at Project Site

Community risk impacts from combined sources upon the project site’s sensitive receptors are reported in Table 5. As shown, the annual cancer risks, annual PM_{2.5} concentrations, and Hazard Indexes are all below their respective single-source and cumulative significance thresholds and would be considered a *less-than significant* impact.

Table 5. Community Risk Impact to New Project Residences

Source	Cancer Risk (per million)	Annual PM _{2.5} (µg/m ³)	Hazard Index
Foothill Expressway (north-south roadway) at 50 feet east ADT 19,830	8.7	0.30*	<0.03
San Antonio Road (north-south roadway) at 250 feet west ADT 12,940	1.3	<0.04	<0.03
Plant #100829 (Gas Dispensing Facility) at 800 feet	0.4	-	<0.01
<i>BAAQMD Single-Source Threshold</i>	>10.0	>0.3	>0.1
Significant?	<i>No</i>	<i>No</i>	<i>No</i>
Cumulative Total	10.4	0.34	<0.07
<i>BAAQMD Cumulative Source Threshold</i>	>100	>0.8	>10.0
<i>Significant?</i>	<i>No</i>	<i>No</i>	<i>No</i>

*Note: To be considered significant, the PM_{2.5} concentration must be greater than 0.3 µg/m³.

Cumulative Impact on Construction MEI

Table 6 reports both the project and cumulative community risk impacts at the construction MEI. The same TAC sources described and analyzed in the Operational Community Health Risk Assessment section above were also included in the Cumulative Community Health Risk assessment with the construction MEI being the analyzed receptor.

Without mitigation, the project would have a *significant* impact with respect to community risk caused by project construction activities, since the maximum cancer risk exceeds the single-source thresholds of 10.0 per million for cancer risk. As shown in Table 6, the combined annual cancer risk, PM_{2.5} concentration and Hazard risk values, which includes unmitigated and mitigated, would not exceed the cumulative threshold.

Table 6. Impacts from Combined Sources at Construction MEI

Source	Maximum Cancer Risk (per million)	PM _{2.5} concentration (µg/m ³)	Hazard Index
Project Construction	Unmitigated	13.7 (infant)	0.09
	Mitigated	8.9 (infant)	0.06
<i>BAAQMD Single-Source Threshold</i>	>10.0	>0.3	>1.0
<i>Significant?</i>			
Unmitigated	<i>Yes</i>	<i>No</i>	<i>No</i>
Mitigated	<i>No</i>	<i>No</i>	<i>No</i>
Foothill Expressway (north-south roadway) at 80 feet east, ADT 19,830	6.8	0.23	<0.03
San Antonio Road (north-south roadway) at 400 feet west, ADT 12,940	0.8	0.02	<0.03
Plant #100829 (Gas Dispensing Facility) at 800 feet	0.4	-	<0.01
<i>Combined Sources</i>			
Unmitigated	21.7 (infant)	0.34	<0.09
Mitigated	16.9 (infant)	0.31	<0.08
<i>BAAQMD Cumulative Source Threshold</i>	>100	>0.8	>10.0
<i>Significant?</i>			
Unmitigated	<i>No</i>	<i>No</i>	<i>No</i>
Mitigated	<i>No</i>	<i>No</i>	<i>No</i>

Mitigation Measure AQ-2: Selection of equipment during construction to minimize emissions. Such equipment selection would include the following:

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 27-percent reduction in DPM exhaust emissions or greater. One feasible plan to achieve this reduction would include the following:

1. All diesel-powered off-road equipment, larger than 25 horsepower, operating on the site for more than two days continuously shall, at a minimum, meet U.S. EPA particulate matter emissions standards for Tier 3 engines. Equipment that meets U.S. EPA Tier 4 interim standards or use of equipment that is electrically powered or uses non-diesel fuels would meet this requirement.

Effectiveness of Mitigation AQ-2

With mitigation, the computed maximum increased lifetime residential cancer risk from construction, assuming infant exposure, would be 8.9 in one million or less, the maximum annual PM_{2.5} concentration would be 0.06 µg/m³, and the HI would be 0.01. As a result, impacts would be reduced to *less-than-significant* with respect to community risk caused by construction activities.

Impact 4: Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

No Impact

Emissions of air pollutants or TACs are addressed under Impacts 2 and 3. Emission of greenhouse gases are addressed separately. In terms of odor emissions, the proposed project would construct multi-family residences that is categorized as a residential land use. The proposed project does not fall under any of the land uses BAAQMD identified within their odor screening table of the *CEQA Air Quality Guidelines*.¹¹ Therefore, odors that could cause complaints from the general public and affect a substantial number of people are not expected.

¹¹ Bay Area Air Quality Management District. 2017. "Table 3-3 Odor Screening Distances", BAAQMD CEQA Air Quality Guidelines. May.

Greenhouse Gases

Setting

Gases that trap heat in the atmosphere, GHGs, regulate the earth's temperature. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate. The most common GHGs are carbon dioxide (CO₂) and water vapor but there are also several others, most importantly methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆). These are released into the earth's atmosphere through a variety of natural processes and human activities. Sources of GHGs are generally as follows:

- CO₂ and N₂O are byproducts of fossil fuel combustion.
- N₂O is associated with agricultural operations such as fertilization of crops.
- CH₄ is commonly created by off-gassing from agricultural practices (e.g., keeping livestock) and landfill operations.
- Chlorofluorocarbons (CFCs) were widely used as refrigerants, propellants, and cleaning solvents but their production has been stopped by international treaty.
- HFCs are now used as a substitute for CFCs in refrigeration and cooling.
- PFCs and sulfur hexafluoride emissions are commonly created by industries such as aluminum production and semi-conductor manufacturing.

Each GHG has its own potency and effect upon the earth's energy balance. This is expressed in terms of a global warming potential (GWP), with CO₂ being assigned a value of 1 and sulfur hexafluoride being several orders of magnitude stronger. In GHG emission inventories, the weight of each gas is multiplied by its GWP and is measured in units of CO₂ equivalents (CO₂e).

An expanding body of scientific research supports the theory that global climate change is currently affecting changes in weather patterns, average sea level, ocean acidification, chemical reaction rates, and precipitation rates, and that it will increasingly do so in the future. The climate and several naturally occurring resources within California are adversely affected by the global warming trend. Increased precipitation and sea level rise will increase coastal flooding, saltwater intrusion, and degradation of wetlands. Mass migration and/or loss of plant and animal species could also occur. Potential effects of global climate change that could adversely affect human health include more extreme heat waves and heat-related stress; an increase in climate-sensitive diseases; more frequent and intense natural disasters such as flooding, hurricanes and drought; and increased levels of air pollution.

Recent Regulatory Actions

Assembly Bill 32 (AB 32), California Global Warming Solutions Act (2006)

AB 32, the Global Warming Solutions Act of 2006, codified the State's GHG emissions target by directing CARB to reduce the State's global warming emissions to 1990 levels by 2020. AB 32 was signed and passed into law by Governor Schwarzenegger on September 27, 2006. Since that time, the CARB, CEC, California Public Utilities Commission (CPUC), and Building

Standards Commission have all been developing regulations that will help meet the goals of AB 32 and Executive Order S-3-05.

A Scoping Plan for AB 32 was adopted by CARB in December 2008. It contains the State's main strategies to reduce GHGs from business-as-usual emissions projected in 2020 back down to 1990 levels. Business-as-usual (BAU) is the projected emissions in 2020, including increases in emissions caused by growth, without any GHG reduction measures. The Scoping Plan has a range of GHG reduction actions, including direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, and market-based mechanisms such as a cap-and-trade system.

Senate Bill 375, California's Regional Transportation and Land Use Planning Efforts (2008)

California enacted legislation (SB 375) to expand the efforts of AB 32 by controlling indirect GHG emissions caused by urban sprawl. SB 375 provides incentives for local governments and applicants to implement new conscientiously planned growth patterns. This includes incentives for creating attractive, walkable, and sustainable communities and revitalizing existing communities. The legislation also allows applicants to bypass certain environmental reviews under CEQA if they build projects consistent with the new sustainable community strategies. Development of more alternative transportation options that would reduce vehicle trips and miles traveled, along with traffic congestion, would be encouraged. SB 375 enhances CARB's ability to reach the AB 32 goals by directing the agency in developing regional GHG emission reduction targets to be achieved from the transportation sector for 2020 and 2035. CARB works with the metropolitan planning organizations (e.g. Association of Bay Area Governments [ABAG] and Metropolitan Transportation Commission [MTC]) to align their regional transportation, housing, and land use plans to reduce vehicle miles traveled and demonstrate the region's ability to attain its GHG reduction targets. A similar process is used to reduce transportation emissions of ozone precursor pollutants in the Bay Area.

SB 350 Renewable Portfolio Standards

In September 2015, the California Legislature passed SB 350, which increases the states Renewables Portfolio Standard (RPS) for content of electrical generation from the 33 percent target for 2020 to 50 percent renewables target by 2030.

Executive Order EO-B-30-15 (2015) and SB 32 GHG Reduction Targets

In April 2015, Governor Brown signed Executive Order which extended the goals of AB 32, setting a greenhouse gas emissions target at 40 percent of 1990 levels by 2030. On September 8, 2016, Governor Brown signed SB 32, which legislatively established the GHG reduction target of 40 percent of 1990 levels by 2030. In November 2017, CARB issued *California's 2017 Climate Change Scoping Plan*. While the State is on track to exceed the AB 32 scoping plan 2020 targets, this plan is an update to reflect the enacted SB 32 reduction target.

The new Scoping Plan establishes a strategy that will reduce GHG emissions in California to meet the 2030 target (note that the AB 32 Scoping Plan only addressed 2020 targets and a long-

term goal). Key features of this plan are:

- Cap and Trade program places a firm limit on 80 percent of the State’s emissions;
- Achieving a 50-percent Renewable Portfolio Standard by 2030 (currently at about 29 percent statewide);
- Increase energy efficiency in existing buildings;
- Develop fuels with an 18-percent reduction in carbon intensity;
- Develop more high-density, transit-oriented housing;
- Develop walkable and bikeable communities;
- Greatly increase the number of electric vehicles on the road and reduce oil demand in half;
- Increase zero-emissions transit so that 100 percent of new buses are zero emissions;
- Reduce freight-related emissions by transitioning to zero emissions where feasible and near-zero emissions with renewable fuels everywhere else; and
- Reduce “super pollutants” by reducing methane and hydrofluorocarbons or HFCs by 40 percent.

In the updated Scoping Plan, CARB recommends statewide targets of no more than 6 metric tons CO_{2e} per capita (statewide) by 2030 and no more than 2 metric tons CO_{2e} per capita by 2050. The statewide per capita targets account for all emissions sectors in the State, statewide population forecasts, and the statewide reductions necessary to achieve the 2030 statewide target under SB 32 and the longer-term State emissions reduction goal of 80 percent below 1990 levels by 2050.

Significance Thresholds

The BAAQMD’s CEQA Air Quality Guidelines recommended a GHG threshold of 1,100 metric tons or 4.6 metric tons (MT) per capita. These thresholds were developed based on meeting the 2020 GHG targets set in the scoping plan that addressed AB 32. Development of the project would occur in 2020.

Although BAAQMD has not published a quantified threshold for 2030 yet, this assessment uses a “Substantial Progress” efficiency metric of 2.6 MT CO_{2e}/year/service population and a bright-line threshold of 660 MT CO_{2e}/year based on the GHG reduction goals of EO B-30-15. The service population metric of 2.6 is calculated for 2030 based on the 1990 inventory and the projected 2030 statewide population and employment levels.¹² The 2030 bright-line threshold is a 40 percent reduction of the 2020 1,100 MT CO_{2e}/year threshold.

¹² Association of Environmental Professionals, 2016. *Beyond 2020 and Newhall: A Field Guide to New CEQA Greenhouse Gas Thresholds and Climate Action Plan Targets for California*. April.

Impact 1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
Less-than-significant.

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

CalEEMod Modeling

CalEEMod was used to predict GHG emissions from operation of the site assuming full build-out of the project. The project land use types and size and other project-specific information were input to the model, as described above in the operational period emissions section. CalEEMod outputs are included in *Attachment 2*.

Service Population Emissions

The project service population efficiency rate is based on the number of future residents. For this project, the number of future residents was estimated by multiplying the total number of units (e.g. 26 dwelling units) by a 2.2 persons per unit rate provided by the project applicant. The future service population would be 57 residents.

Construction Emissions

GHG emissions associated with construction were computed to be 82 MT of CO_{2e} for the total construction period. These are the emissions from on-site operation of construction equipment, vendor and hauling truck trips, and worker trips. Neither the City nor BAAQMD have an adopted threshold of significance for construction-related GHG emissions, though BAAQMD recommends quantifying emissions and disclosing that GHG emissions would occur during construction. BAAQMD also encourages the incorporation of best management practices to reduce GHG emissions during construction where feasible and applicable.

Operational Emissions

The CalEEMod model, along with the project vehicle trip generation rates, was used to estimate daily emissions associated with operation of the fully-developed site under the proposed project. As shown in Table 7, annual net emissions resulting from operation of the proposed project are predicted to be 87 MT of CO_{2e} for the year 2020 and 57 MT of CO_{2e} for the year 2030. The Service Population Emissions would be 3.4 and 2.9 MT CO_{2e}/year/service population for the years 2020 and 2030, respectively.

To be considered significant, the project must exceed both the GHG significance threshold in metric tons per year and the service population significance threshold. This project only exceeds

the 2030 Service Population Emissions threshold. Therefore, the project would have a *less-than-significant* impact regarding GHG emissions.

Table 7. Annual Project GHG Emissions (CO₂e) in Metric Tons

Source Category	Existing Land Use in 2020	Proposed Project in 2020	Proposed Project in 2030
Area	<1	1	1
Energy Consumption	32	61	61
Mobile	69	124	94
Solid Waste Generation	4	6	6
Water Usage	3	4	4
Total (MT CO ₂ e/year)	109	196	166
Net Emissions		87 MT CO₂e/year	57 MT CO₂e/year
<i>Significance Threshold</i>		<i>1,100 MT CO₂e/year</i>	<i>660 MT CO₂e/year</i>
Service Population Emissions (MT CO ₂ e/year/service population)		3.4	2.9
<i>Significance Threshold</i>		<i>4.6 in 2020</i>	<i>2.6 in 2030</i>
<i>Significant (Exceeds both thresholds)?</i>		<i>No</i>	<i>No</i>

Impact 2: Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?
No Impact.

Assembly Bill (AB) 32, the Global Warming Solutions Act of 2006, codifies the State of California’s GHG emissions target by directing CARB to reduce the State’s global warming emissions to 1990 levels by 2020. AB 32 was signed and passed into law by Governor Schwarzenegger on September 27, 2006. Since that time, CARB, California Energy Commission (CEC), the California Public Utilities Commission (CPUC), and the Building Standards Commission have all been developing regulations that will help meet the goals of AB 32 and Executive Order S-3-05.

A Scoping Plan for AB 32 was adopted by CARB in December 2008. It contains the State of California’s main strategies to reduce GHGs from business-as-usual (BAU) emissions projected in 2020 back down to 1990 levels. BAU is the projected emissions in 2020, including increases in emissions caused by growth, without any GHG reduction measures. The Scoping Plan has a range of GHG reduction actions, including direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, and market-based mechanisms such as a cap-and-trade system. It required CARB and other state agencies to develop and adopt regulations and other initiatives reducing GHGs by 2012.

As directed by AB 32, CARB has also approved a statewide GHG emissions limit. On December 6, 2007, CARB staff resolved an amount of 427 million metric tons (MMT) of CO₂e as the total statewide GHG 1990 emissions level and 2020 emissions limit. The limit is a cumulative statewide limit, not a sector- or facility-specific limit. CARB updated the future 2020 BAU annual emissions forecast, in light of the economic downturn, to 545 MMT of CO₂e. Two GHG emissions reduction measures currently enacted that were not previously included in the 2008

Scoping Plan baseline inventory were included, further reducing the baseline inventory to 507 MMT of CO_{2e}. Thus, an estimated reduction of 80 MMT of CO_{2e} is necessary to reduce statewide emissions to meet the AB 32 target by 2020.

SB 32 was passed in 2016, which codified a 2030 GHG emissions reduction target of 40 percent below 1990 levels. CARB is currently working on a second update to the Scoping Plan to reflect the 2030 target set by Executive Order B-30-15 and codified by SB 32. The proposed Scoping Plan Update was published on January 20, 2017 as directed by SB 32 companion legislation AB 197. The mid-term 2030 target is considered critical by CARB on the path to obtaining an even deeper GHG emissions target of 80 percent below 1990 levels by 2050, as directed in Executive Order S-3-05. The Scoping Plan outlines the suite of policy measures, regulations, planning efforts, and investments in clean technologies and infrastructure, providing a blueprint to continue driving down GHG emissions and obtain the statewide goals.

The proposed project would not conflict or otherwise interfere with the statewide GHG reduction measures identified in CARB's Scoping Plan. For example, proposed buildings would be constructed in conformance with CALGreen and the Title 24 Building Code, which requires high-efficiency water fixtures and water-efficient irrigation systems.

City of Los Altos Climate Action Plan

The City of Los Altos Climate Action Plan (CAP), adopted December 2013, is a document that the City has designed in order to identify activities that contribute to GHG emissions and to create strategies that will help the City achieve its GHG reduction goals. The City adopted an GHG emissions reduction target of 15% below the 2005 baseline level by 2020. Additionally, to implement and monitor the success of the CAP, the City of Los Altos requires all new projects to comply with their CAP checklist. This document helps city planners ensure that the new project would be consistent with the City's GHG reduction goals. A project must incorporate all the Best management Practices (BMPs) identified in the checklist.

An evaluation of the project data was done to determine if this proposed project does comply with the CAP. After reviewing the project data within the plans, the project will comply with the City of Los Altos' CAP Checklist. The checklist with the project compliance descriptions is in *Attachment 5*.

Supporting Documentation

Attachment 1 is the methodology used to compute community risk impacts, including the methods to compute lifetime cancer risk from exposure to project emissions.

Attachment 2 includes the CalEEMod output for project construction TAC emissions and GHG emissions. Also included are any modeling assumptions, like the Trojan Weighted Average Distance Table.

Attachment 3 is the construction health risk assessment. AERMOD dispersion modeling files for this assessment, which are quite voluminous, are available upon request and would be provided in digital format.

Attachment 4 includes the screening community risk calculations from sources affecting the construction MEI.

Attachment 5 includes the completed Los Altos CAP Checklist and the project's compliance with it.

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 2015.¹³ 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.¹⁴ 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.¹⁵ 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).

¹³ 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.

¹⁴ CARB, 2015. *Risk Management Guidance for Stationary Sources of Air Toxics*. July 23.

¹⁵ BAAQMD, 2016. *BAAQMD Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines*. December 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:

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

Where:

CPF = Cancer potency factor (mg/kg-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)

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

Where:

C_{air} = concentration in air (µg/m³)

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 →	3 rd Trimester	0<2	2 < 9	2 < 16	16 - 30
DPM Cancer Potency Factor (mg/kg-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.

Non-Cancer Hazards

Potential non-cancer health hazards from TAC exposure are expressed in terms of a hazard index (HI), which is the ratio of the TAC concentration to a reference exposure level (REL). OEHHA has defined acceptable concentration levels for contaminants that pose non-cancer health hazards. TAC concentrations below the REL are not expected to cause adverse health impacts, even for sensitive individuals. The total HI is calculated as the sum of the HIs for each TAC evaluated and the total HI is compared to the BAAQMD significance thresholds to determine whether a significant non-cancer health impact from a project would occur.

Typically, for residential projects located near roadways with substantial TAC emissions, the primary TAC of concern with non-cancer health effects is diesel particulate matter (DPM). For DPM, the chronic inhalation REL is 5 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$).

Annual PM_{2.5} Concentrations

While not a TAC, fine particulate matter (PM_{2.5}) has been identified by the BAAQMD as a pollutant with potential non-cancer health effects that should be included when evaluating potential community health impacts under the California Environmental Quality Act (CEQA). The thresholds of significance for PM_{2.5} (project level and cumulative) are in terms of an increase in the annual average concentration. When considering PM_{2.5} impacts, the contribution from all sources of PM_{2.5} emissions should be included. For projects with potential impacts from nearby local roadways, the PM_{2.5} impacts should include those from vehicle exhaust emissions, PM_{2.5} generated from vehicle tire and brake wear, and fugitive emissions from re-suspended dust on the roads.

Attachment 2: CalEEMod Modeling Output

19-014 444-450 1st Street Los Altos - Santa Clara County, Annual

**19-014 444-450 1st Street Los Altos
Santa Clara County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Condo/Townhouse	26.00	Dwelling Unit	0.35	34,425.00	74
Enclosed Parking with Elevator	55.00	Space	0.49	22,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	4			Operational Year	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	290	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E
 Land Use - 26 residential units, 15,000-sf lot size, 55 spaces in underground (2-level) garage
 Construction Phase - Default construction schedule
 Off-road Equipment - Default equipment and usage
 Off-road Equipment -
 Vehicle Trips - weekday rate: 5.44, saturday: 5.31, sunday: 4.53
 Woodstoves - all gas
 Water And Wastewater - 100% aerobic
 Demolition - existing office building 10,000-sqft

Table Name	Column Name	Default Value	New Value
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	3.90	8.32
tblFireplaces	NumberWood	4.42	0.00
tblLandUse	LandUseSquareFeet	26,000.00	34,425.00
tblLandUse	LotAcreage	1.63	0.35
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblVehicleTrips	ST_TR	5.67	5.31
tblVehicleTrips	SU_TR	4.84	4.53
tblVehicleTrips	WD_TR	5.81	5.44
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	0.3108	0.6203	0.5019	9.0000e-004	0.0204	0.0355	0.0559	5.0700e-003	0.0328	0.0379	0.0000	81.2463	81.2463	0.0190	0.0000	81.7220
Maximum	0.3108	0.6203	0.5019	9.0000e-004	0.0204	0.0355	0.0559	5.0700e-003	0.0328	0.0379	0.0000	81.2463	81.2463	0.0190	0.0000	81.7220

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	0.3108	0.6203	0.5019	9.0000e-004	0.0204	0.0355	0.0559	5.0700e-003	0.0328	0.0379	0.0000	81.2462	81.2462	0.0190	0.0000	81.7219
Maximum	0.3108	0.6203	0.5019	9.0000e-004	0.0204	0.0355	0.0559	5.0700e-003	0.0328	0.0379	0.0000	81.2462	81.2462	0.0190	0.0000	81.7219

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-1-2019	8-31-2019	0.3782	0.3782
2	9-1-2019	9-30-2019	0.1257	0.1257
		Highest	0.3782	0.3782

2.2 Overall Operational Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1666	3.1400e-003	0.1946	2.0000e-005		1.1400e-003	1.1400e-003		1.1400e-003	1.1400e-003	0.0000	1.3550	1.3550	3.3000e-004	2.0000e-005	1.3689
Energy	2.6200e-003	0.0224	9.5500e-003	1.4000e-004		1.8100e-003	1.8100e-003		1.8100e-003	1.8100e-003	0.0000	60.1916	60.1916	3.9200e-003	1.1800e-003	60.6424
Mobile	0.0375	0.1557	0.4374	1.3600e-003	0.1182	1.3700e-003	0.1195	0.0316	1.2800e-003	0.0329	0.0000	124.3842	124.3842	4.5200e-003	0.0000	124.4972
Waste						0.0000	0.0000		0.0000	0.0000	2.4278	0.0000	2.4278	0.1435	0.0000	6.0147
Water						0.0000	0.0000		0.0000	0.0000	0.5374	1.6974	2.2349	0.0554	1.3400e-003	4.0180

Total	0.2067	0.1812	0.6415	1.5200e-003	0.1182	4.3200e-003	0.1225	0.0316	4.2300e-003	0.0359	2.9652	187.6282	190.5934	0.2076	2.5400e-003	196.5412
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Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1666	3.1400e-003	0.1946	2.0000e-005		1.1400e-003	1.1400e-003		1.1400e-003	1.1400e-003	0.0000	1.3550	1.3550	3.3000e-004	2.0000e-005	1.3689
Energy	2.6200e-003	0.0224	9.5500e-003	1.4000e-004		1.8100e-003	1.8100e-003		1.8100e-003	1.8100e-003	0.0000	60.1916	60.1916	3.9200e-003	1.1800e-003	60.6424
Mobile	0.0375	0.1557	0.4374	1.3600e-003	0.1182	1.3700e-003	0.1195	0.0316	1.2800e-003	0.0329	0.0000	124.3842	124.3842	4.5200e-003	0.0000	124.4972
Waste						0.0000	0.0000		0.0000	0.0000	2.4278	0.0000	2.4278	0.1435	0.0000	6.0147
Water						0.0000	0.0000		0.0000	0.0000	0.5374	1.6974	2.2349	0.0554	1.3400e-003	4.0180
Total	0.2067	0.1812	0.6415	1.5200e-003	0.1182	4.3200e-003	0.1225	0.0316	4.2300e-003	0.0359	2.9652	187.6282	190.5934	0.2076	2.5400e-003	196.5412

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	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

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	6/1/2019	6/14/2019	5	10	
2	Site Preparation	Site Preparation	6/15/2019	6/17/2019	5	1	
3	Grading	Grading	6/18/2019	6/19/2019	5	2	
4	Building Construction	Building Construction	6/20/2019	11/6/2019	5	100	
5	Paving	Paving	11/7/2019	11/13/2019	5	5	

6	Architectural Coating	Architectural Coating	11/14/2019	11/20/2019	5	5
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Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.49

Residential Indoor: 69,711; Residential Outdoor: 23,237; 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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

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	4	10.00	0.00	45.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

Worker	1.8000e-004	1.4000e-004	1.4000e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3510	0.3510	1.0000e-005	0.0000	0.3513
Total	3.8000e-004	7.1500e-003	2.7800e-003	2.0000e-005	7.8000e-004	3.0000e-005	8.1000e-004	2.1000e-004	3.0000e-005	2.4000e-004	0.0000	2.0850	2.0850	9.0000e-005	0.0000	2.0873

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					4.9200e-003	0.0000	4.9200e-003	7.5000e-004	0.0000	7.5000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.7700e-003	0.0430	0.0385	6.0000e-005		2.6900e-003	2.6900e-003		2.5600e-003	2.5600e-003	0.0000	5.2601	5.2601	1.0000e-003	0.0000	5.2852
Total	4.7700e-003	0.0430	0.0385	6.0000e-005	4.9200e-003	2.6900e-003	7.6100e-003	7.5000e-004	2.5600e-003	3.3100e-003	0.0000	5.2601	5.2601	1.0000e-003	0.0000	5.2852

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	2.0000e-004	7.0100e-003	1.3800e-003	2.0000e-005	3.8000e-004	3.0000e-005	4.1000e-004	1.0000e-004	3.0000e-005	1.3000e-004	0.0000	1.7340	1.7340	8.0000e-005	0.0000	1.7360
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	1.8000e-004	1.4000e-004	1.4000e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3510	0.3510	1.0000e-005	0.0000	0.3513
Total	3.8000e-004	7.1500e-003	2.7800e-003	2.0000e-005	7.8000e-004	3.0000e-005	8.1000e-004	2.1000e-004	3.0000e-005	2.4000e-004	0.0000	2.0850	2.0850	9.0000e-005	0.0000	2.0873

3.3 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					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.6000e-004	4.4600e-003	2.0700e-003	0.0000		1.8000e-004	1.8000e-004		1.7000e-004	1.7000e-004	0.0000	0.4378	0.4378	1.4000e-004	0.0000	0.4413
Total	3.6000e-004	4.4600e-003	2.0700e-003	0.0000	2.7000e-004	1.8000e-004	4.5000e-004	3.0000e-005	1.7000e-004	2.0000e-004	0.0000	0.4378	0.4378	1.4000e-004	0.0000	0.4413

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	1.0000e-005	1.0000e-005	7.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0176	0.0176	0.0000	0.0000	0.0176
Total	1.0000e-005	1.0000e-005	7.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0176	0.0176	0.0000	0.0000	0.0176

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					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.6000e-004	4.4600e-003	2.0700e-003	0.0000		1.8000e-004	1.8000e-004		1.7000e-004	1.7000e-004	0.0000	0.4378	0.4378	1.4000e-004	0.0000	0.4413
Total	3.6000e-004	4.4600e-003	2.0700e-003	0.0000	2.7000e-004	1.8000e-004	4.5000e-004	3.0000e-005	1.7000e-004	2.0000e-004	0.0000	0.4378	0.4378	1.4000e-004	0.0000	0.4413

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	1.0000e-005	1.0000e-005	7.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0176	0.0176	0.0000	0.0000	0.0176
Total	1.0000e-005	1.0000e-005	7.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0176	0.0176	0.0000	0.0000	0.0176

3.4 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					7.5000e-004	0.0000	7.5000e-004	4.1000e-004	0.0000	4.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.5000e-004	8.6000e-003	7.6900e-003	1.0000e-005		5.4000e-004	5.4000e-004		5.1000e-004	5.1000e-004	0.0000	1.0520	1.0520	2.0000e-004	0.0000	1.0570
Total	9.5000e-004	8.6000e-003	7.6900e-003	1.0000e-005	7.5000e-004	5.4000e-004	1.2900e-003	4.1000e-004	5.1000e-004	9.2000e-004	0.0000	1.0520	1.0520	2.0000e-004	0.0000	1.0570

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	4.0000e-005	3.0000e-005	2.8000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0702	0.0702	0.0000	0.0000	0.0703
Total	4.0000e-005	3.0000e-005	2.8000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0702	0.0702	0.0000	0.0000	0.0703

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					7.5000e-004	0.0000	7.5000e-004	4.1000e-004	0.0000	4.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.5000e-004	8.6000e-003	7.6900e-003	1.0000e-005		5.4000e-004	5.4000e-004		5.1000e-004	5.1000e-004	0.0000	1.0520	1.0520	2.0000e-004	0.0000	1.0570
Total	9.5000e-004	8.6000e-003	7.6900e-003	1.0000e-005	7.5000e-004	5.4000e-004	1.2900e-003	4.1000e-004	5.1000e-004	9.2000e-004	0.0000	1.0520	1.0520	2.0000e-004	0.0000	1.0570

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
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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	4.0000e-005	3.0000e-005	2.8000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0702	0.0702	0.0000	0.0000	0.0703
Total	4.0000e-005	3.0000e-005	2.8000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0702	0.0702	0.0000	0.0000	0.0703

3.5 Building Construction - 2019

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Off-Road	0.0479	0.4910	0.3772	5.7000e-004		0.0303	0.0303		0.0279	0.0279	0.0000	51.1502	51.1502	0.0162	0.0000	51.5548
Total	0.0479	0.4910	0.3772	5.7000e-004		0.0303	0.0303		0.0279	0.0279	0.0000	51.1502	51.1502	0.0162	0.0000	51.5548

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	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	1.4700e-003	0.0379	0.0102	8.0000e-005	1.9700e-003	2.7000e-004	2.2500e-003	5.7000e-004	2.6000e-004	8.3000e-004	0.0000	7.8916	7.8916	3.9000e-004	0.0000	7.9013
Worker	5.0800e-003	3.7900e-003	0.0391	1.1000e-004	0.0111	7.0000e-005	0.0112	2.9500e-003	7.0000e-005	3.0200e-003	0.0000	9.8292	9.8292	2.7000e-004	0.0000	9.8359

Total	6.5500e-003	0.0417	0.0493	1.9000e-004	0.0131	3.4000e-004	0.0134	3.5200e-003	3.3000e-004	3.8500e-003	0.0000	17.7207	17.7207	6.6000e-004	0.0000	17.7372
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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	0.0479	0.4910	0.3772	5.7000e-004		0.0303	0.0303		0.0279	0.0279	0.0000	51.1502	51.1502	0.0162	0.0000	51.5548
Total	0.0479	0.4910	0.3772	5.7000e-004		0.0303	0.0303		0.0279	0.0279	0.0000	51.1502	51.1502	0.0162	0.0000	51.5548

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	1.4700e-003	0.0379	0.0102	8.0000e-005	1.9700e-003	2.7000e-004	2.2500e-003	5.7000e-004	2.6000e-004	8.3000e-004	0.0000	7.8916	7.8916	3.9000e-004	0.0000	7.9013
Worker	5.0800e-003	3.7900e-003	0.0391	1.1000e-004	0.0111	7.0000e-005	0.0112	2.9500e-003	7.0000e-005	3.0200e-003	0.0000	9.8292	9.8292	2.7000e-004	0.0000	9.8359
Total	6.5500e-003	0.0417	0.0493	1.9000e-004	0.0131	3.4000e-004	0.0134	3.5200e-003	3.3000e-004	3.8500e-003	0.0000	17.7207	17.7207	6.6000e-004	0.0000	17.7372

3.6 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	2.0700e-003	0.0196	0.0179	3.0000e-005		1.1100e-003	1.1100e-003		1.0300e-003	1.0300e-003	0.0000	2.3931	2.3931	6.8000e-004	0.0000	2.4102
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.0700e-003	0.0196	0.0179	3.0000e-005		1.1100e-003	1.1100e-003		1.0300e-003	1.0300e-003	0.0000	2.3931	2.3931	6.8000e-004	0.0000	2.4102

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	1.6000e-004	1.2000e-004	1.2600e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.3159	0.3159	1.0000e-005	0.0000	0.3162
Total	1.6000e-004	1.2000e-004	1.2600e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.3159	0.3159	1.0000e-005	0.0000	0.3162

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	2.0700e-003	0.0196	0.0179	3.0000e-005		1.1100e-003	1.1100e-003		1.0300e-003	1.0300e-003	0.0000	2.3931	2.3931	6.8000e-004	0.0000	2.4102
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.0700e-003	0.0196	0.0179	3.0000e-005		1.1100e-003	1.1100e-003		1.0300e-003	1.0300e-003	0.0000	2.3931	2.3931	6.8000e-004	0.0000	2.4102

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	1.6000e-004	1.2000e-004	1.2600e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.3159	0.3159	1.0000e-005	0.0000	0.3162
Total	1.6000e-004	1.2000e-004	1.2600e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.3159	0.3159	1.0000e-005	0.0000	0.3162

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	0.2469					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.7000e-004	4.5900e-003	4.6000e-003	1.0000e-005		3.2000e-004	3.2000e-004		3.2000e-004	3.2000e-004	0.0000	0.6383	0.6383	5.0000e-005	0.0000	0.6397
Total	0.2476	4.5900e-003	4.6000e-003	1.0000e-005		3.2000e-004	3.2000e-004		3.2000e-004	3.2000e-004	0.0000	0.6383	0.6383	5.0000e-005	0.0000	0.6397

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	5.0000e-005	4.0000e-005	4.2000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1053	0.1053	0.0000	0.0000	0.1054
Total	5.0000e-005	4.0000e-005	4.2000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1053	0.1053	0.0000	0.0000	0.1054

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	0.2469					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.7000e-004	4.5900e-003	4.6000e-003	1.0000e-005		3.2000e-004	3.2000e-004		3.2000e-004	3.2000e-004	0.0000	0.6383	0.6383	5.0000e-005	0.0000	0.6397
Total	0.2476	4.5900e-003	4.6000e-003	1.0000e-005		3.2000e-004	3.2000e-004		3.2000e-004	3.2000e-004	0.0000	0.6383	0.6383	5.0000e-005	0.0000	0.6397

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
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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
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	5.0000e-005	4.0000e-005	4.2000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1053	0.1053	0.0000	0.0000	0.1054
Total	5.0000e-005	4.0000e-005	4.2000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1053	0.1053	0.0000	0.0000	0.1054

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Category	tons/yr										MT/yr					
	Mitigated	0.0375	0.1557	0.4374	1.3600e-003	0.1182	1.3700e-003	0.1195	0.0316	1.2800e-003	0.0329	0.0000	124.3842	124.3842	4.5200e-003	0.0000
Unmitigated	0.0375	0.1557	0.4374	1.3600e-003	0.1182	1.3700e-003	0.1195	0.0316	1.2800e-003	0.0329	0.0000	124.3842	124.3842	4.5200e-003	0.0000	124.4972

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	141.44	138.06	117.78	317,749	317,749
Enclosed Parking with Elevator	0.00	0.00	0.00		
Total	141.44	138.06	117.78	317,749	317,749

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse	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

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Condo/Townhouse	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785
Enclosed Parking with Elevator	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	34.2142	34.2142	3.4200e-003	7.1000e-004	34.5107
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	34.2142	34.2142	3.4200e-003	7.1000e-004	34.5107
NaturalGas Mitigated	2.6200e-003	0.0224	9.5500e-003	1.4000e-004		1.8100e-003	1.8100e-003		1.8100e-003	1.8100e-003	0.0000	25.9774	25.9774	5.0000e-004	4.8000e-004	26.1318
NaturalGas Unmitigated	2.6200e-003	0.0224	9.5500e-003	1.4000e-004		1.8100e-003	1.8100e-003		1.8100e-003	1.8100e-003	0.0000	25.9774	25.9774	5.0000e-004	4.8000e-004	26.1318

5.2 Energy by Land Use - NaturalGas

Unmitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Condo/Townhouse	486798	2.6200e-003	0.0224	9.5500e-003	1.4000e-004		1.8100e-003	1.8100e-003		1.8100e-003	1.8100e-003	0.0000	25.9774	25.9774	5.0000e-004	4.8000e-004	26.1318
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
Total		2.6200e-003	0.0224	9.5500e-003	1.4000e-004		1.8100e-003	1.8100e-003		1.8100e-003	1.8100e-003	0.0000	25.9774	25.9774	5.0000e-004	4.8000e-004	26.1318

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Condo/Townhouse	486798	2.6200e-003	0.0224	9.5500e-003	1.4000e-004		1.8100e-003	1.8100e-003		1.8100e-003	1.8100e-003	0.0000	25.9774	25.9774	5.0000e-004	4.8000e-004	26.1318
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
Total		2.6200e-003	0.0224	9.5500e-003	1.4000e-004		1.8100e-003	1.8100e-003		1.8100e-003	1.8100e-003	0.0000	25.9774	25.9774	5.0000e-004	4.8000e-004	26.1318

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	131181	17.2558	1.7300e-003	3.6000e-004	17.4053
Enclosed Parking with Elevator	128920	16.9584	1.7000e-003	3.5000e-004	17.1053

Total		34.2142	3.4300e-003	7.1000e-004	34.5107
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Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	131181	17.2558	1.7300e-003	3.6000e-004	17.4053
Enclosed Parking with Elevator	128920	16.9584	1.7000e-003	3.5000e-004	17.1053
Total		34.2142	3.4300e-003	7.1000e-004	34.5107

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	0.1666	3.1400e-003	0.1946	2.0000e-005		1.1400e-003	1.1400e-003		1.1400e-003	1.1400e-003	0.0000	1.3550	1.3550	3.3000e-004	2.0000e-005	1.3689
Unmitigated	0.1666	3.1400e-003	0.1946	2.0000e-005		1.1400e-003	1.1400e-003		1.1400e-003	1.1400e-003	0.0000	1.3550	1.3550	3.3000e-004	2.0000e-005	1.3689

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	0.0247					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1359					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.0000e-004	9.0000e-004	3.8000e-004	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	1.0387	1.0387	2.0000e-005	2.0000e-005	1.0448
Landscaping	5.9500e-003	2.2400e-003	0.1942	1.0000e-005		1.0700e-003	1.0700e-003		1.0700e-003	1.0700e-003	0.0000	0.3163	0.3163	3.1000e-004	0.0000	0.3241
Total	0.1666	3.1400e-003	0.1946	2.0000e-005		1.1400e-003	1.1400e-003		1.1400e-003	1.1400e-003	0.0000	1.3550	1.3550	3.3000e-004	2.0000e-005	1.3689

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	0.0247					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1359					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.0000e-004	9.0000e-004	3.8000e-004	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	1.0387	1.0387	2.0000e-005	2.0000e-005	1.0448
Landscaping	5.9500e-003	2.2400e-003	0.1942	1.0000e-005		1.0700e-003	1.0700e-003		1.0700e-003	1.0700e-003	0.0000	0.3163	0.3163	3.1000e-004	0.0000	0.3241
Total	0.1666	3.1400e-003	0.1946	2.0000e-005		1.1400e-003	1.1400e-003		1.1400e-003	1.1400e-003	0.0000	1.3550	1.3550	3.3000e-004	2.0000e-005	1.3689

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	2.2349	0.0554	1.3400e-003	4.0180
Unmitigated	2.2349	0.0554	1.3400e-003	4.0180

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	1.694 / 1.06796	2.2349	0.0554	1.3400e-003	4.0180
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		2.2349	0.0554	1.3400e-003	4.0180

Mitigated

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

Condo/Townhouse	1.694 / 1.06796	2.2349	0.0554	1.3400e- 003	4.0180
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		2.2349	0.0554	1.3400e- 003	4.0180

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	2.4278	0.1435	0.0000	6.0147
Unmitigated	2.4278	0.1435	0.0000	6.0147

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	11.96	2.4278	0.1435	0.0000	6.0147
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000

Total		2.4278	0.1435	0.0000	6.0147
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Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	11.96	2.4278	0.1435	0.0000	6.0147
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		2.4278	0.1435	0.0000	6.0147

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

19-014 444-450 1st Street Los Altos - Santa Clara County, Annual

**19-014 444-450 1st Street Los Altos
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	55.00	Space	0.49	22,000.00	0
Condo/Townhouse	26.00	Dwelling Unit	0.35	34,425.00	74

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	4			Operational Year	2030
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	290	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

19-014 444-450 1st Street Los Altos - Santa Clara County, Annual

Project Characteristics - PG&E

Land Use - 26 residential units, 15,000-sf lot size, 55 spaces in underground (2-level) garage

Construction Phase - Default construction schedule

Off-road Equipment - Default equipment and usage

Off-road Equipment -

Demolition - existing office building 10,000-sqft

Vehicle Trips - weekday rate: 5.44, saturday: 5.31, sunday: 4.53

Woodstoves - all gas

Water And Wastewater - 100% aerobic

Table Name	Column Name	Default Value	New Value
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	3.90	8.32
tblFireplaces	NumberWood	4.42	0.00
tblLandUse	LandUseSquareFeet	26,000.00	34,425.00
tblLandUse	LotAcreage	1.63	0.35
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblVehicleTrips	ST_TR	5.67	5.31
tblVehicleTrips	SU_TR	4.84	4.53
tblVehicleTrips	WD_TR	5.81	5.44
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

2.0 Emissions Summary

19-014 444-450 1st Street Los Altos - Santa Clara County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-1-2019	8-31-2019	0.3782	0.3782
2	9-1-2019	9-30-2019	0.1257	0.1257
		Highest	0.3782	0.3782

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1665	3.1200e-003	0.1934	2.0000e-005		1.1400e-003	1.1400e-003		1.1400e-003	1.1400e-003	0.0000	1.3550	1.3550	3.2000e-004	2.0000e-005	1.3687
Energy	2.6200e-003	0.0224	9.5500e-003	1.4000e-004		1.8100e-003	1.8100e-003		1.8100e-003	1.8100e-003	0.0000	60.1916	60.1916	3.9200e-003	1.1800e-003	60.6424
Mobile	0.0206	0.0889	0.2369	1.0200e-003	0.1181	6.8000e-004	0.1188	0.0316	6.4000e-004	0.0323	0.0000	93.9479	93.9479	2.7000e-003	0.0000	94.0155
Waste						0.0000	0.0000		0.0000	0.0000	2.4278	0.0000	2.4278	0.1435	0.0000	6.0147
Water						0.0000	0.0000		0.0000	0.0000	0.5374	1.6974	2.2349	0.0554	1.3400e-003	4.0180
Total	0.1897	0.1144	0.4399	1.1800e-003	0.1181	3.6300e-003	0.1218	0.0316	3.5900e-003	0.0352	2.9652	157.1919	160.1571	0.2058	2.5400e-003	166.0593

19-014 444-450 1st Street Los Altos - Santa Clara County, Annual

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1665	3.1200e-003	0.1934	2.0000e-005		1.1400e-003	1.1400e-003		1.1400e-003	1.1400e-003	0.0000	1.3550	1.3550	3.2000e-004	2.0000e-005	1.3687
Energy	2.6200e-003	0.0224	9.5500e-003	1.4000e-004		1.8100e-003	1.8100e-003		1.8100e-003	1.8100e-003	0.0000	60.1916	60.1916	3.9200e-003	1.1800e-003	60.6424
Mobile	0.0206	0.0889	0.2369	1.0200e-003	0.1181	6.8000e-004	0.1188	0.0316	6.4000e-004	0.0323	0.0000	93.9479	93.9479	2.7000e-003	0.0000	94.0155
Waste						0.0000	0.0000		0.0000	0.0000	2.4278	0.0000	2.4278	0.1435	0.0000	6.0147
Water						0.0000	0.0000		0.0000	0.0000	0.5374	1.6974	2.2349	0.0554	1.3400e-003	4.0180
Total	0.1897	0.1144	0.4399	1.1800e-003	0.1181	3.6300e-003	0.1218	0.0316	3.5900e-003	0.0352	2.9652	157.1919	160.1571	0.2058	2.5400e-003	166.0593

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	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

3.0 Construction Detail

Construction Phase

19-014 444-450 1st Street Los Altos - Santa Clara County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2019	6/14/2019	5	10	
2	Site Preparation	Site Preparation	6/15/2019	6/17/2019	5	1	
3	Grading	Grading	6/18/2019	6/19/2019	5	2	
4	Building Construction	Building Construction	6/20/2019	11/6/2019	5	100	
5	Paving	Paving	11/7/2019	11/13/2019	5	5	
6	Architectural Coating	Architectural Coating	11/14/2019	11/20/2019	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.49

Residential Indoor: 69,711; Residential Outdoor: 23,237; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 1,320 (Architectural Coating – sqft)

OffRoad Equipment

19-014 444-450 1st Street Los Altos - Santa Clara County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

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	4	10.00	0.00	45.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	28.00	6.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	6.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

19-014 444-450 1st Street Los Altos - Santa Clara County, Annual

3.1 Mitigation Measures Construction

3.2 Demolition - 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					4.9200e-003	0.0000	4.9200e-003	7.5000e-004	0.0000	7.5000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.7700e-003	0.0430	0.0385	6.0000e-005		2.6900e-003	2.6900e-003		2.5600e-003	2.5600e-003	0.0000	5.2601	5.2601	1.0000e-003	0.0000	5.2852
Total	4.7700e-003	0.0430	0.0385	6.0000e-005	4.9200e-003	2.6900e-003	7.6100e-003	7.5000e-004	2.5600e-003	3.3100e-003	0.0000	5.2601	5.2601	1.0000e-003	0.0000	5.2852

19-014 444-450 1st Street Los Altos - Santa Clara County, Annual

3.2 Demolition - 2019

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	2.0000e-004	7.0100e-003	1.3800e-003	2.0000e-005	3.8000e-004	3.0000e-005	4.1000e-004	1.0000e-004	3.0000e-005	1.3000e-004	0.0000	1.7340	1.7340	8.0000e-005	0.0000	1.7360
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	1.8000e-004	1.4000e-004	1.4000e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3510	0.3510	1.0000e-005	0.0000	0.3513
Total	3.8000e-004	7.1500e-003	2.7800e-003	2.0000e-005	7.8000e-004	3.0000e-005	8.1000e-004	2.1000e-004	3.0000e-005	2.4000e-004	0.0000	2.0850	2.0850	9.0000e-005	0.0000	2.0873

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					4.9200e-003	0.0000	4.9200e-003	7.5000e-004	0.0000	7.5000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.7700e-003	0.0430	0.0385	6.0000e-005		2.6900e-003	2.6900e-003		2.5600e-003	2.5600e-003	0.0000	5.2601	5.2601	1.0000e-003	0.0000	5.2852
Total	4.7700e-003	0.0430	0.0385	6.0000e-005	4.9200e-003	2.6900e-003	7.6100e-003	7.5000e-004	2.5600e-003	3.3100e-003	0.0000	5.2601	5.2601	1.0000e-003	0.0000	5.2852

19-014 444-450 1st Street Los Altos - Santa Clara County, Annual

3.2 Demolition - 2019

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	2.0000e-004	7.0100e-003	1.3800e-003	2.0000e-005	3.8000e-004	3.0000e-005	4.1000e-004	1.0000e-004	3.0000e-005	1.3000e-004	0.0000	1.7340	1.7340	8.0000e-005	0.0000	1.7360
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	1.8000e-004	1.4000e-004	1.4000e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3510	0.3510	1.0000e-005	0.0000	0.3513
Total	3.8000e-004	7.1500e-003	2.7800e-003	2.0000e-005	7.8000e-004	3.0000e-005	8.1000e-004	2.1000e-004	3.0000e-005	2.4000e-004	0.0000	2.0850	2.0850	9.0000e-005	0.0000	2.0873

3.3 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					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.6000e-004	4.4600e-003	2.0700e-003	0.0000		1.8000e-004	1.8000e-004		1.7000e-004	1.7000e-004	0.0000	0.4378	0.4378	1.4000e-004	0.0000	0.4413
Total	3.6000e-004	4.4600e-003	2.0700e-003	0.0000	2.7000e-004	1.8000e-004	4.5000e-004	3.0000e-005	1.7000e-004	2.0000e-004	0.0000	0.4378	0.4378	1.4000e-004	0.0000	0.4413

19-014 444-450 1st Street Los Altos - Santa Clara County, Annual

3.3 Site Preparation - 2019

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	1.0000e-005	1.0000e-005	7.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0176	0.0176	0.0000	0.0000	0.0176
Total	1.0000e-005	1.0000e-005	7.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0176	0.0176	0.0000	0.0000	0.0176

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					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.6000e-004	4.4600e-003	2.0700e-003	0.0000		1.8000e-004	1.8000e-004		1.7000e-004	1.7000e-004	0.0000	0.4378	0.4378	1.4000e-004	0.0000	0.4413
Total	3.6000e-004	4.4600e-003	2.0700e-003	0.0000	2.7000e-004	1.8000e-004	4.5000e-004	3.0000e-005	1.7000e-004	2.0000e-004	0.0000	0.4378	0.4378	1.4000e-004	0.0000	0.4413

19-014 444-450 1st Street Los Altos - Santa Clara County, Annual

3.3 Site Preparation - 2019

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	1.0000e-005	1.0000e-005	7.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0176	0.0176	0.0000	0.0000	0.0176
Total	1.0000e-005	1.0000e-005	7.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0176	0.0176	0.0000	0.0000	0.0176

3.4 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					7.5000e-004	0.0000	7.5000e-004	4.1000e-004	0.0000	4.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.5000e-004	8.6000e-003	7.6900e-003	1.0000e-005		5.4000e-004	5.4000e-004		5.1000e-004	5.1000e-004	0.0000	1.0520	1.0520	2.0000e-004	0.0000	1.0570
Total	9.5000e-004	8.6000e-003	7.6900e-003	1.0000e-005	7.5000e-004	5.4000e-004	1.2900e-003	4.1000e-004	5.1000e-004	9.2000e-004	0.0000	1.0520	1.0520	2.0000e-004	0.0000	1.0570

19-014 444-450 1st Street Los Altos - Santa Clara County, Annual

3.4 Grading - 2019

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	4.0000e-005	3.0000e-005	2.8000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0702	0.0702	0.0000	0.0000	0.0703
Total	4.0000e-005	3.0000e-005	2.8000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0702	0.0702	0.0000	0.0000	0.0703

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					7.5000e-004	0.0000	7.5000e-004	4.1000e-004	0.0000	4.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.5000e-004	8.6000e-003	7.6900e-003	1.0000e-005		5.4000e-004	5.4000e-004		5.1000e-004	5.1000e-004	0.0000	1.0520	1.0520	2.0000e-004	0.0000	1.0570
Total	9.5000e-004	8.6000e-003	7.6900e-003	1.0000e-005	7.5000e-004	5.4000e-004	1.2900e-003	4.1000e-004	5.1000e-004	9.2000e-004	0.0000	1.0520	1.0520	2.0000e-004	0.0000	1.0570

19-014 444-450 1st Street Los Altos - Santa Clara County, Annual

3.4 Grading - 2019

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	4.0000e-005	3.0000e-005	2.8000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0702	0.0702	0.0000	0.0000	0.0703
Total	4.0000e-005	3.0000e-005	2.8000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0702	0.0702	0.0000	0.0000	0.0703

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	0.0479	0.4910	0.3772	5.7000e-004		0.0303	0.0303		0.0279	0.0279	0.0000	51.1502	51.1502	0.0162	0.0000	51.5548
Total	0.0479	0.4910	0.3772	5.7000e-004		0.0303	0.0303		0.0279	0.0279	0.0000	51.1502	51.1502	0.0162	0.0000	51.5548

19-014 444-450 1st Street Los Altos - Santa Clara County, Annual

3.5 Building Construction - 2019

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	1.4700e-003	0.0379	0.0102	8.0000e-005	1.9700e-003	2.7000e-004	2.2500e-003	5.7000e-004	2.6000e-004	8.3000e-004	0.0000	7.8916	7.8916	3.9000e-004	0.0000	7.9013
Worker	5.0800e-003	3.7900e-003	0.0391	1.1000e-004	0.0111	7.0000e-005	0.0112	2.9500e-003	7.0000e-005	3.0200e-003	0.0000	9.8292	9.8292	2.7000e-004	0.0000	9.8359
Total	6.5500e-003	0.0417	0.0493	1.9000e-004	0.0131	3.4000e-004	0.0134	3.5200e-003	3.3000e-004	3.8500e-003	0.0000	17.7207	17.7207	6.6000e-004	0.0000	17.7372

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	0.0479	0.4910	0.3772	5.7000e-004		0.0303	0.0303		0.0279	0.0279	0.0000	51.1502	51.1502	0.0162	0.0000	51.5548
Total	0.0479	0.4910	0.3772	5.7000e-004		0.0303	0.0303		0.0279	0.0279	0.0000	51.1502	51.1502	0.0162	0.0000	51.5548

19-014 444-450 1st Street Los Altos - Santa Clara County, Annual

3.5 Building Construction - 2019

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	1.4700e-003	0.0379	0.0102	8.0000e-005	1.9700e-003	2.7000e-004	2.2500e-003	5.7000e-004	2.6000e-004	8.3000e-004	0.0000	7.8916	7.8916	3.9000e-004	0.0000	7.9013
Worker	5.0800e-003	3.7900e-003	0.0391	1.1000e-004	0.0111	7.0000e-005	0.0112	2.9500e-003	7.0000e-005	3.0200e-003	0.0000	9.8292	9.8292	2.7000e-004	0.0000	9.8359
Total	6.5500e-003	0.0417	0.0493	1.9000e-004	0.0131	3.4000e-004	0.0134	3.5200e-003	3.3000e-004	3.8500e-003	0.0000	17.7207	17.7207	6.6000e-004	0.0000	17.7372

3.6 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	2.0700e-003	0.0196	0.0179	3.0000e-005		1.1100e-003	1.1100e-003		1.0300e-003	1.0300e-003	0.0000	2.3931	2.3931	6.8000e-004	0.0000	2.4102
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.0700e-003	0.0196	0.0179	3.0000e-005		1.1100e-003	1.1100e-003		1.0300e-003	1.0300e-003	0.0000	2.3931	2.3931	6.8000e-004	0.0000	2.4102

19-014 444-450 1st Street Los Altos - Santa Clara County, Annual

3.6 Paving - 2019

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	1.6000e-004	1.2000e-004	1.2600e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.3159	0.3159	1.0000e-005	0.0000	0.3162
Total	1.6000e-004	1.2000e-004	1.2600e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.3159	0.3159	1.0000e-005	0.0000	0.3162

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	2.0700e-003	0.0196	0.0179	3.0000e-005		1.1100e-003	1.1100e-003		1.0300e-003	1.0300e-003	0.0000	2.3931	2.3931	6.8000e-004	0.0000	2.4102
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.0700e-003	0.0196	0.0179	3.0000e-005		1.1100e-003	1.1100e-003		1.0300e-003	1.0300e-003	0.0000	2.3931	2.3931	6.8000e-004	0.0000	2.4102

19-014 444-450 1st Street Los Altos - Santa Clara County, Annual

3.6 Paving - 2019

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	1.6000e-004	1.2000e-004	1.2600e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.3159	0.3159	1.0000e-005	0.0000	0.3162
Total	1.6000e-004	1.2000e-004	1.2600e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.3159	0.3159	1.0000e-005	0.0000	0.3162

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	0.2469					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.7000e-004	4.5900e-003	4.6000e-003	1.0000e-005		3.2000e-004	3.2000e-004		3.2000e-004	3.2000e-004	0.0000	0.6383	0.6383	5.0000e-005	0.0000	0.6397
Total	0.2476	4.5900e-003	4.6000e-003	1.0000e-005		3.2000e-004	3.2000e-004		3.2000e-004	3.2000e-004	0.0000	0.6383	0.6383	5.0000e-005	0.0000	0.6397

19-014 444-450 1st Street Los Altos - Santa Clara County, Annual

3.7 Architectural Coating - 2019

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	5.0000e-005	4.0000e-005	4.2000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1053	0.1053	0.0000	0.0000	0.1054
Total	5.0000e-005	4.0000e-005	4.2000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1053	0.1053	0.0000	0.0000	0.1054

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	0.2469					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.7000e-004	4.5900e-003	4.6000e-003	1.0000e-005		3.2000e-004	3.2000e-004		3.2000e-004	3.2000e-004	0.0000	0.6383	0.6383	5.0000e-005	0.0000	0.6397
Total	0.2476	4.5900e-003	4.6000e-003	1.0000e-005		3.2000e-004	3.2000e-004		3.2000e-004	3.2000e-004	0.0000	0.6383	0.6383	5.0000e-005	0.0000	0.6397

19-014 444-450 1st Street Los Altos - Santa Clara County, Annual

3.7 Architectural Coating - 2019

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	5.0000e-005	4.0000e-005	4.2000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1053	0.1053	0.0000	0.0000	0.1054
Total	5.0000e-005	4.0000e-005	4.2000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1053	0.1053	0.0000	0.0000	0.1054

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

19-014 444-450 1st Street Los Altos - Santa Clara County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0206	0.0889	0.2369	1.0200e-003	0.1181	6.8000e-004	0.1188	0.0316	6.4000e-004	0.0323	0.0000	93.9479	93.9479	2.7000e-003	0.0000	94.0155
Unmitigated	0.0206	0.0889	0.2369	1.0200e-003	0.1181	6.8000e-004	0.1188	0.0316	6.4000e-004	0.0323	0.0000	93.9479	93.9479	2.7000e-003	0.0000	94.0155

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	141.44	138.06	117.78	317,749	317,749
Enclosed Parking with Elevator	0.00	0.00	0.00		
Total	141.44	138.06	117.78	317,749	317,749

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse	10.80	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

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Condo/Townhouse	0.621541	0.034056	0.180136	0.101248	0.011859	0.005060	0.013110	0.022881	0.002221	0.001470	0.005122	0.000646	0.000651
Enclosed Parking with Elevator	0.621541	0.034056	0.180136	0.101248	0.011859	0.005060	0.013110	0.022881	0.002221	0.001470	0.005122	0.000646	0.000651

19-014 444-450 1st Street Los Altos - Santa Clara County, Annual

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	34.2142	34.2142	3.4200e-003	7.1000e-004	34.5107
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	34.2142	34.2142	3.4200e-003	7.1000e-004	34.5107
NaturalGas Mitigated	2.6200e-003	0.0224	9.5500e-003	1.4000e-004		1.8100e-003	1.8100e-003		1.8100e-003	1.8100e-003	0.0000	25.9774	25.9774	5.0000e-004	4.8000e-004	26.1318
NaturalGas Unmitigated	2.6200e-003	0.0224	9.5500e-003	1.4000e-004		1.8100e-003	1.8100e-003		1.8100e-003	1.8100e-003	0.0000	25.9774	25.9774	5.0000e-004	4.8000e-004	26.1318

19-014 444-450 1st Street Los Altos - Santa Clara County, Annual

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					
Condo/Townhouse	486798	2.6200e-003	0.0224	9.5500e-003	1.4000e-004		1.8100e-003	1.8100e-003		1.8100e-003	1.8100e-003	0.0000	25.9774	25.9774	5.0000e-004	4.8000e-004	26.1318
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
Total		2.6200e-003	0.0224	9.5500e-003	1.4000e-004		1.8100e-003	1.8100e-003		1.8100e-003	1.8100e-003	0.0000	25.9774	25.9774	5.0000e-004	4.8000e-004	26.1318

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Condo/Townhouse	486798	2.6200e-003	0.0224	9.5500e-003	1.4000e-004		1.8100e-003	1.8100e-003		1.8100e-003	1.8100e-003	0.0000	25.9774	25.9774	5.0000e-004	4.8000e-004	26.1318
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
Total		2.6200e-003	0.0224	9.5500e-003	1.4000e-004		1.8100e-003	1.8100e-003		1.8100e-003	1.8100e-003	0.0000	25.9774	25.9774	5.0000e-004	4.8000e-004	26.1318

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	131181	17.2558	1.7300e-003	3.6000e-004	17.4053
Enclosed Parking with Elevator	128920	16.9584	1.7000e-003	3.5000e-004	17.1053
Total		34.2142	3.4300e-003	7.1000e-004	34.5107

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	131181	17.2558	1.7300e-003	3.6000e-004	17.4053
Enclosed Parking with Elevator	128920	16.9584	1.7000e-003	3.5000e-004	17.1053
Total		34.2142	3.4300e-003	7.1000e-004	34.5107

6.0 Area Detail

6.1 Mitigation Measures Area

19-014 444-450 1st Street Los Altos - Santa Clara County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.1665	3.1200e-003	0.1934	2.0000e-005		1.1400e-003	1.1400e-003		1.1400e-003	1.1400e-003	0.0000	1.3550	1.3550	3.2000e-004	2.0000e-005	1.3687
Unmitigated	0.1665	3.1200e-003	0.1934	2.0000e-005		1.1400e-003	1.1400e-003		1.1400e-003	1.1400e-003	0.0000	1.3550	1.3550	3.2000e-004	2.0000e-005	1.3687

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	0.0247					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1359					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.0000e-004	9.0000e-004	3.8000e-004	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	1.0387	1.0387	2.0000e-005	2.0000e-005	1.0448
Landscaping	5.8100e-003	2.2200e-003	0.1931	1.0000e-005		1.0700e-003	1.0700e-003		1.0700e-003	1.0700e-003	0.0000	0.3163	0.3163	3.0000e-004	0.0000	0.3239
Total	0.1665	3.1200e-003	0.1934	2.0000e-005		1.1400e-003	1.1400e-003		1.1400e-003	1.1400e-003	0.0000	1.3550	1.3550	3.2000e-004	2.0000e-005	1.3688

19-014 444-450 1st Street Los Altos - Santa Clara County, Annual

6.2 Area by SubCategory**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0247					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1359					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.0000e-004	9.0000e-004	3.8000e-004	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	1.0387	1.0387	2.0000e-005	2.0000e-005	1.0448
Landscaping	5.8100e-003	2.2200e-003	0.1931	1.0000e-005		1.0700e-003	1.0700e-003		1.0700e-003	1.0700e-003	0.0000	0.3163	0.3163	3.0000e-004	0.0000	0.3239
Total	0.1665	3.1200e-003	0.1934	2.0000e-005		1.1400e-003	1.1400e-003		1.1400e-003	1.1400e-003	0.0000	1.3550	1.3550	3.2000e-004	2.0000e-005	1.3688

7.0 Water Detail**7.1 Mitigation Measures Water**

19-014 444-450 1st Street Los Altos - Santa Clara County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	2.2349	0.0554	1.3400e-003	4.0180
Unmitigated	2.2349	0.0554	1.3400e-003	4.0180

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	1.694 / 1.06796	2.2349	0.0554	1.3400e-003	4.0180
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		2.2349	0.0554	1.3400e-003	4.0180

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	1.694 / 1.06796	2.2349	0.0554	1.3400e-003	4.0180
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		2.2349	0.0554	1.3400e-003	4.0180

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	2.4278	0.1435	0.0000	6.0147
Unmitigated	2.4278	0.1435	0.0000	6.0147

19-014 444-450 1st Street Los Altos - Santa Clara County, Annual

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	11.96	2.4278	0.1435	0.0000	6.0147
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		2.4278	0.1435	0.0000	6.0147

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	11.96	2.4278	0.1435	0.0000	6.0147
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		2.4278	0.1435	0.0000	6.0147

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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19-014 444-450 1st Street Los Altos - Santa Clara County, Annual

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

444-450 Existing Site - Santa Clara County, Annual

444-450 Existing Site
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	10.00	1000sqft	0.35	10,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	4			Operational Year	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	290	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E 2020 290 rate
 Land Use - Existing use
 Construction Phase - no construction
 Off-road Equipment - no equipment
 Vehicle Trips - weekday: 9.74, 2.17, 0.93
 Water And Wastewater - 100% aerobic

Table Name	Column Name	Default Value	New Value
tblGrading	AcresOfGrading	0.00	0.50
tblLandUse	LotAcreage	0.23	0.35

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblTripsAndVMT	WorkerTripNumber	0.00	5.00
tblVehicleTrips	ST_TR	2.46	2.17
tblVehicleTrips	SU_TR	1.05	0.93
tblVehicleTrips	WD_TR	11.03	9.74
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	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	1.0000e-005	1.0000e-005	7.0000e-005	0.0000	2.8000e-004	0.0000	2.9000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0176	0.0176	0.0000	0.0000	0.0176
Maximum	1.0000e-005	1.0000e-005	7.0000e-005	0.0000	2.8000e-004	0.0000	2.9000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0176	0.0176	0.0000	0.0000	0.0176

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
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Year	tons/yr										MT/yr					
2019	1.0000e-005	1.0000e-005	7.0000e-005	0.0000	2.8000e-004	0.0000	2.9000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0176	0.0176	0.0000	0.0000	0.0176
Maximum	1.0000e-005	1.0000e-005	7.0000e-005	0.0000	2.8000e-004	0.0000	2.9000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0176	0.0176	0.0000	0.0000	0.0176

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-1-2019	8-31-2019	0.0000	0.0000
		Highest	0.0000	0.0000

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0443	0.0000	9.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.8000e-004	1.8000e-004	0.0000	0.0000	1.9000e-004
Energy	8.8000e-004	8.0200e-003	6.7400e-003	5.0000e-005		6.1000e-004	6.1000e-004		6.1000e-004	6.1000e-004	0.0000	32.1896	32.1896	2.5100e-003	6.5000e-004	32.4447
Mobile	0.0204	0.0854	0.2412	7.6000e-004	0.0658	7.6000e-004	0.0665	0.0176	7.1000e-004	0.0183	0.0000	69.0699	69.0699	2.4900e-003	0.0000	69.1321
Waste						0.0000	0.0000		0.0000	0.0000	1.8878	0.0000	1.8878	0.1116	0.0000	4.6770
Water						0.0000	0.0000		0.0000	0.0000	0.6288	1.7666	2.3954	2.3400e-003	1.4000e-003	2.8723
Total	0.0655	0.0934	0.2481	8.1000e-004	0.0658	1.3700e-003	0.0671	0.0176	1.3200e-003	0.0189	2.5166	103.0262	105.5429	0.1189	2.0500e-003	109.1264

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0443	0.0000	9.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.8000e-004	1.8000e-004	0.0000	0.0000	1.9000e-004
Energy	8.8000e-004	8.0200e-003	6.7400e-003	5.0000e-005		6.1000e-004	6.1000e-004		6.1000e-004	6.1000e-004	0.0000	32.1896	32.1896	2.5100e-003	6.5000e-004	32.4447
Mobile	0.0204	0.0854	0.2412	7.6000e-004	0.0658	7.6000e-004	0.0665	0.0176	7.1000e-004	0.0183	0.0000	69.0699	69.0699	2.4900e-003	0.0000	69.1321
Waste						0.0000	0.0000		0.0000	0.0000	1.8878	0.0000	1.8878	0.1116	0.0000	4.6770
Water						0.0000	0.0000		0.0000	0.0000	0.6288	1.7666	2.3954	2.3400e-003	1.4000e-003	2.8723
Total	0.0655	0.0934	0.2481	8.1000e-004	0.0658	1.3700e-003	0.0671	0.0176	1.3200e-003	0.0189	2.5166	103.0262	105.5429	0.1189	2.0500e-003	109.1264

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	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

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	6/15/2019	6/17/2019	5	1	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	0	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	0	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	0	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

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					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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	1.0000e-005	1.0000e-005	7.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0176	0.0176	0.0000	0.0000	0.0176
Total	1.0000e-005	1.0000e-005	7.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0176	0.0176	0.0000	0.0000	0.0176

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					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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	1.0000e-005	1.0000e-005	7.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0176	0.0176	0.0000	0.0000	0.0176
Total	1.0000e-005	1.0000e-005	7.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0176	0.0176	0.0000	0.0000	0.0176

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	0.0204	0.0854	0.2412	7.6000e-004	0.0658	7.6000e-004	0.0665	0.0176	7.1000e-004	0.0183	0.0000	69.0699	69.0699	2.4900e-003	0.0000	69.1321
Unmitigated	0.0204	0.0854	0.2412	7.6000e-004	0.0658	7.6000e-004	0.0665	0.0176	7.1000e-004	0.0183	0.0000	69.0699	69.0699	2.4900e-003	0.0000	69.1321

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	97.40	21.70	9.30	176,842	176,842
Total	97.40	21.70	9.30	176,842	176,842

4.3 Trip Type Information

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

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785

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	23.4539	23.4539	2.3500e-003	4.9000e-004	23.6571
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	23.4539	23.4539	2.3500e-003	4.9000e-004	23.6571
NaturalGas Mitigated	8.8000e-004	8.0200e-003	6.7400e-003	5.0000e-005		6.1000e-004	6.1000e-004		6.1000e-004	6.1000e-004	0.0000	8.7357	8.7357	1.7000e-004	1.6000e-004	8.7876
NaturalGas Unmitigated	8.8000e-004	8.0200e-003	6.7400e-003	5.0000e-005		6.1000e-004	6.1000e-004		6.1000e-004	6.1000e-004	0.0000	8.7357	8.7357	1.7000e-004	1.6000e-004	8.7876

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					
General Office Building	163700	8.8000e-004	8.0200e-003	6.7400e-003	5.0000e-005		6.1000e-004	6.1000e-004		6.1000e-004	6.1000e-004	0.0000	8.7357	8.7357	1.7000e-004	1.6000e-004	8.7876
Total		8.8000e-004	8.0200e-003	6.7400e-003	5.0000e-005		6.1000e-004	6.1000e-004		6.1000e-004	6.1000e-004	0.0000	8.7357	8.7357	1.7000e-004	1.6000e-004	8.7876

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	163700	8.8000e-004	8.0200e-003	6.7400e-003	5.0000e-005		6.1000e-004	6.1000e-004		6.1000e-004	6.1000e-004	0.0000	8.7357	8.7357	1.7000e-004	1.6000e-004	8.7876
Total		8.8000e-004	8.0200e-003	6.7400e-003	5.0000e-005		6.1000e-004	6.1000e-004		6.1000e-004	6.1000e-004	0.0000	8.7357	8.7357	1.7000e-004	1.6000e-004	8.7876

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	178300	23.4539	2.3500e-003	4.9000e-004	23.6571
Total		23.4539	2.3500e-003	4.9000e-004	23.6571

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
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Consumer Products	0.0391				0.0000	0.0000			0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	9.0000e-005	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	1.8000e-004	1.8000e-004	0.0000	0.0000	1.9000e-004
Total	0.0443	0.0000	9.0000e-005	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	1.8000e-004	1.8000e-004	0.0000	0.0000	1.9000e-004

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	5.2100e-003						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0391						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	9.0000e-005	0.0000			0.0000	0.0000		0.0000	0.0000	1.8000e-004	1.8000e-004	0.0000	0.0000	1.9000e-004
Total	0.0443	0.0000	9.0000e-005	0.0000			0.0000	0.0000		0.0000	0.0000	1.8000e-004	1.8000e-004	0.0000	0.0000	1.9000e-004

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	2.3954	2.3400e-003	1.4000e-003	2.8723
Unmitigated	2.3954	2.3400e-003	1.4000e-003	2.8723

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	1.77734 / 1.08934	2.3954	2.3400e-003	1.4000e-003	2.8723
Total		2.3954	2.3400e-003	1.4000e-003	2.8723

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	1.77734 / 1.08934	2.3954	2.3400e-003	1.4000e-003	2.8723
Total		2.3954	2.3400e-003	1.4000e-003	2.8723

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	1.8878	0.1116	0.0000	4.6770
Unmitigated	1.8878	0.1116	0.0000	4.6770

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	9.3	1.8878	0.1116	0.0000	4.6770
Total		1.8878	0.1116	0.0000	4.6770

Mitigated

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

General Office Building	9.3	1.8878	0.1116	0.0000	4.6770
Total		1.8878	0.1116	0.0000	4.6770

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

19-014 444-450 1st Street Los Altos TAC - Santa Clara County, Annual

**19-014 444-450 1st Street Los Altos TAC
Santa Clara County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Condo/Townhouse	26.00	Dwelling Unit	0.35	34,425.00	74
Enclosed Parking with Elevator	55.00	Space	0.49	22,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	4			Operational Year	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	290	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E
 Land Use - 26 residential units, 15,000-sf lot size, 55 spaces in underground (2-level) garage
 Construction Phase - Default construction schedule
 Off-road Equipment - Default equipment and usage
 Off-road Equipment -
 Vehicle Trips - weekday rate: 5.44, saturday: 5.31, sunday: 4.53
 Woodstoves - all gas
 Water And Wastewater - 100% aerobic
 Demolition - existing office building 10,000-sqft

Trips and VMT - TAC trip length of 1 mile

Construction Off-road Equipment Mitigation - BMPs, tier 3 mitigation

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
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	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
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
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	3.90	8.32
tblFireplaces	NumberWood	4.42	0.00
tblLandUse	LandUseSquareFeet	26,000.00	34,425.00
tblLandUse	LotAcreage	1.63	0.35
tblProjectCharacteristics	CO2IntensityFactor	641.35	290

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	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	5.67	5.31
tblVehicleTrips	SU_TR	4.84	4.53
tblVehicleTrips	WD_TR	5.81	5.44
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
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Year	tons/yr										MT/yr					
2019	0.3062	0.5957	0.4656	7.2000e-004	7.3700e-003	0.0352	0.0425	1.5800e-003	0.0325	0.0341	0.0000	64.9062	64.9062	0.0186	0.0000	65.3716
Maximum	0.3062	0.5957	0.4656	7.2000e-004	7.3700e-003	0.0352	0.0425	1.5800e-003	0.0325	0.0341	0.0000	64.9062	64.9062	0.0186	0.0000	65.3716

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	0.2659	0.3844	0.4883	7.2000e-004	4.1000e-003	0.0228	0.0269	6.6000e-004	0.0228	0.0235	0.0000	64.9061	64.9061	0.0186	0.0000	65.3715
Maximum	0.2659	0.3844	0.4883	7.2000e-004	4.1000e-003	0.0228	0.0269	6.6000e-004	0.0228	0.0235	0.0000	64.9061	64.9061	0.0186	0.0000	65.3715

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	13.17	35.47	-4.87	0.00	44.37	35.06	36.67	58.23	29.74	31.07	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	6-1-2019	8-31-2019	0.3614	0.2236
2	9-1-2019	9-30-2019	0.1208	0.0740
		Highest	0.3614	0.2236

2.2 Overall Operational

Unmitigated Operational

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	6/1/2019	6/14/2019	5	10	
2	Site Preparation	Site Preparation	6/15/2019	6/17/2019	5	1	
3	Grading	Grading	6/18/2019	6/19/2019	5	2	
4	Building Construction	Building Construction	6/20/2019	11/6/2019	5	100	
5	Paving	Paving	11/7/2019	11/13/2019	5	5	
6	Architectural Coating	Architectural Coating	11/14/2019	11/20/2019	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.49

Residential Indoor: 69,711; Residential Outdoor: 23,237; 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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37

Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

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	4	10.00	0.00	45.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	28.00	6.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	6.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

- Use Cleaner Engines for Construction Equipment
- Use Soil Stabilizer
- Replace Ground Cover
- Water Exposed Area
- Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2019

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					

Fugitive Dust					4.9200e-003	0.0000	4.9200e-003	7.5000e-004	0.0000	7.5000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.7700e-003	0.0430	0.0385	6.0000e-005		2.6900e-003	2.6900e-003		2.5600e-003	2.5600e-003	0.0000	5.2601	5.2601	1.0000e-003	0.0000	5.2852
Total	4.7700e-003	0.0430	0.0385	6.0000e-005	4.9200e-003	2.6900e-003	7.6100e-003	7.5000e-004	2.5600e-003	3.3100e-003	0.0000	5.2601	5.2601	1.0000e-003	0.0000	5.2852

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	5.0000e-005	2.4100e-003	4.0000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.2915	0.2915	3.0000e-005	0.0000	0.2923
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-005	3.0000e-005	3.7000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0419	0.0419	0.0000	0.0000	0.0420
Total	1.1000e-004	2.4400e-003	7.7000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.3334	0.3334	3.0000e-005	0.0000	0.3343

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					2.2100e-003	0.0000	2.2100e-003	1.7000e-004	0.0000	1.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.3300e-003	0.0298	0.0397	6.0000e-005		2.0100e-003	2.0100e-003		2.0100e-003	2.0100e-003	0.0000	5.2601	5.2601	1.0000e-003	0.0000	5.2852
Total	1.3300e-003	0.0298	0.0397	6.0000e-005	2.2100e-003	2.0100e-003	4.2200e-003	1.7000e-004	2.0100e-003	2.1800e-003	0.0000	5.2601	5.2601	1.0000e-003	0.0000	5.2852

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	5.0000e-005	2.4100e-003	4.0000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.2915	0.2915	3.0000e-005	0.0000	0.2923
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-005	3.0000e-005	3.7000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0419	0.0419	0.0000	0.0000	0.0420
Total	1.1000e-004	2.4400e-003	7.7000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.3334	0.3334	3.0000e-005	0.0000	0.3343

3.3 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					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.6000e-004	4.4600e-003	2.0700e-003	0.0000		1.8000e-004	1.8000e-004		1.7000e-004	1.7000e-004	0.0000	0.4378	0.4378	1.4000e-004	0.0000	0.4413
Total	3.6000e-004	4.4600e-003	2.0700e-003	0.0000	2.7000e-004	1.8000e-004	4.5000e-004	3.0000e-005	1.7000e-004	2.0000e-004	0.0000	0.4378	0.4378	1.4000e-004	0.0000	0.4413

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
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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	0.0000	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.1000e-003	2.1000e-003	0.0000	0.0000	2.1000e-003
Total	0.0000	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.1000e-003	2.1000e-003	0.0000	0.0000	2.1000e-003

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					1.2000e-004	0.0000	1.2000e-004	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.2000e-004	2.4400e-003	2.9300e-003	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	0.4378	0.4378	1.4000e-004	0.0000	0.4413
Total	1.2000e-004	2.4400e-003	2.9300e-003	0.0000	1.2000e-004	1.2000e-004	2.4000e-004	1.0000e-005	1.2000e-004	1.3000e-004	0.0000	0.4378	0.4378	1.4000e-004	0.0000	0.4413

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	0.0000	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.1000e-003	2.1000e-003	0.0000	0.0000	2.1000e-003

Total	0.0000	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.1000e-003	2.1000e-003	0.0000	0.0000	2.1000e-003
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3.4 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					7.5000e-004	0.0000	7.5000e-004	4.1000e-004	0.0000	4.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.5000e-004	8.6000e-003	7.6900e-003	1.0000e-005		5.4000e-004	5.4000e-004		5.1000e-004	5.1000e-004	0.0000	1.0520	1.0520	2.0000e-004	0.0000	1.0570
Total	9.5000e-004	8.6000e-003	7.6900e-003	1.0000e-005	7.5000e-004	5.4000e-004	1.2900e-003	4.1000e-004	5.1000e-004	9.2000e-004	0.0000	1.0520	1.0520	2.0000e-004	0.0000	1.0570

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	1.0000e-005	1.0000e-005	7.0000e-005	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	8.3900e-003	8.3900e-003	0.0000	0.0000	8.4000e-003
Total	1.0000e-005	1.0000e-005	7.0000e-005	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	8.3900e-003	8.3900e-003	0.0000	0.0000	8.4000e-003

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					3.4000e-004	0.0000	3.4000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.7000e-004	5.9600e-003	7.9400e-003	1.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004	0.0000	1.0520	1.0520	2.0000e-004	0.0000	1.0570
Total	2.7000e-004	5.9600e-003	7.9400e-003	1.0000e-005	3.4000e-004	4.0000e-004	7.4000e-004	9.0000e-005	4.0000e-004	4.9000e-004	0.0000	1.0520	1.0520	2.0000e-004	0.0000	1.0570

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	1.0000e-005	1.0000e-005	7.0000e-005	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	8.3900e-003	8.3900e-003	0.0000	0.0000	8.4000e-003
Total	1.0000e-005	1.0000e-005	7.0000e-005	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	8.3900e-003	8.3900e-003	0.0000	0.0000	8.4000e-003

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	0.0479	0.4910	0.3772	5.7000e-004		0.0303	0.0303		0.0279	0.0279	0.0000	51.1502	51.1502	0.0162	0.0000	51.5548
Total	0.0479	0.4910	0.3772	5.7000e-004		0.0303	0.0303		0.0279	0.0279	0.0000	51.1502	51.1502	0.0162	0.0000	51.5548

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	6.5000e-004	0.0211	6.0800e-003	3.0000e-005	2.8000e-004	5.0000e-005	3.3000e-004	8.0000e-005	5.0000e-005	1.3000e-004	0.0000	2.4060	2.4060	2.6000e-004	0.0000	2.4124
Worker	1.7200e-003	8.1000e-004	0.0103	1.0000e-005	1.0400e-003	1.0000e-005	1.0600e-003	2.8000e-004	1.0000e-005	2.9000e-004	0.0000	1.1744	1.1744	6.0000e-005	0.0000	1.1758
Total	2.3700e-003	0.0219	0.0164	4.0000e-005	1.3200e-003	6.0000e-005	1.3900e-003	3.6000e-004	6.0000e-005	4.2000e-004	0.0000	3.5803	3.5803	3.2000e-004	0.0000	3.5882

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	0.0140	0.3065	0.3981	5.7000e-004		0.0193	0.0193		0.0193	0.0193	0.0000	51.1502	51.1502	0.0162	0.0000	51.5548
Total	0.0140	0.3065	0.3981	5.7000e-004		0.0193	0.0193		0.0193	0.0193	0.0000	51.1502	51.1502	0.0162	0.0000	51.5548

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	6.5000e-004	0.0211	6.0800e-003	3.0000e-005	2.8000e-004	5.0000e-005	3.3000e-004	8.0000e-005	5.0000e-005	1.3000e-004	0.0000	2.4060	2.4060	2.6000e-004	0.0000	2.4124
Worker	1.7200e-003	8.1000e-004	0.0103	1.0000e-005	1.0400e-003	1.0000e-005	1.0600e-003	2.8000e-004	1.0000e-005	2.9000e-004	0.0000	1.1744	1.1744	6.0000e-005	0.0000	1.1758
Total	2.3700e-003	0.0219	0.0164	4.0000e-005	1.3200e-003	6.0000e-005	1.3900e-003	3.6000e-004	6.0000e-005	4.2000e-004	0.0000	3.5803	3.5803	3.2000e-004	0.0000	3.5882

3.6 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	2.0700e-003	0.0196	0.0179	3.0000e-005		1.1100e-003	1.1100e-003		1.0300e-003	1.0300e-003	0.0000	2.3931	2.3931	6.8000e-004	0.0000	2.4102
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.0700e-003	0.0196	0.0179	3.0000e-005		1.1100e-003	1.1100e-003		1.0300e-003	1.0300e-003	0.0000	2.3931	2.3931	6.8000e-004	0.0000	2.4102

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
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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-005	3.0000e-005	3.3000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0378	0.0378	0.0000	0.0000	0.0378
Total	6.0000e-005	3.0000e-005	3.3000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0378	0.0378	0.0000	0.0000	0.0378

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	5.6000e-004	0.0119	0.0173	3.0000e-005		7.3000e-004	7.3000e-004		7.3000e-004	7.3000e-004	0.0000	2.3931	2.3931	6.8000e-004	0.0000	2.4102
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	5.6000e-004	0.0119	0.0173	3.0000e-005		7.3000e-004	7.3000e-004		7.3000e-004	7.3000e-004	0.0000	2.3931	2.3931	6.8000e-004	0.0000	2.4102

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-005	3.0000e-005	3.3000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0378	0.0378	0.0000	0.0000	0.0378

Total	6.000e-005	3.000e-005	3.300e-004	0.0000	3.000e-005	0.0000	3.000e-005	1.000e-005	0.0000	1.000e-005	0.0000	0.0378	0.0378	0.0000	0.0000	0.0378
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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	0.2469					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.7000e-004	4.5900e-003	4.6000e-003	1.0000e-005		3.2000e-004	3.2000e-004		3.2000e-004	3.2000e-004	0.0000	0.6383	0.6383	5.0000e-005	0.0000	0.6397
Total	0.2476	4.5900e-003	4.6000e-003	1.0000e-005		3.2000e-004	3.2000e-004		3.2000e-004	3.2000e-004	0.0000	0.6383	0.6383	5.0000e-005	0.0000	0.6397

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-005	1.0000e-005	1.1000e-004	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0126	0.0126	0.0000	0.0000	0.0126
Total	2.0000e-005	1.0000e-005	1.1000e-004	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0126	0.0126	0.0000	0.0000	0.0126

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	0.2469					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5000e-004	3.3900e-003	4.5800e-003	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	0.6383	0.6383	5.0000e-005	0.0000	0.6397
Total	0.2471	3.3900e-003	4.5800e-003	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	0.6383	0.6383	5.0000e-005	0.0000	0.6397

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-005	1.0000e-005	1.1000e-004	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0126	0.0126	0.0000	0.0000	0.0126
Total	2.0000e-005	1.0000e-005	1.1000e-004	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0126	0.0126	0.0000	0.0000	0.0126

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	0.0375	0.1557	0.4374	1.3600e-003	0.1182	1.3700e-003	0.1195	0.0316	1.2800e-003	0.0329	0.0000	124.3842	124.3842	4.5200e-003	0.0000	124.4972
Unmitigated	0.0375	0.1557	0.4374	1.3600e-003	0.1182	1.3700e-003	0.1195	0.0316	1.2800e-003	0.0329	0.0000	124.3842	124.3842	4.5200e-003	0.0000	124.4972

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated Annual VMT	Mitigated Annual VMT
	Weekday	Saturday	Sunday		
Condo/Townhouse	141.44	138.06	117.78	317,749	317,749
Enclosed Parking with Elevator	0.00	0.00	0.00		
Total	141.44	138.06	117.78	317,749	317,749

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse	10.80	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

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Condo/Townhouse	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785
Enclosed Parking with Elevator	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785

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	34.2142	34.2142	3.4200e-003	7.1000e-004	34.5107
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	34.2142	34.2142	3.4200e-003	7.1000e-004	34.5107
NaturalGas Mitigated	2.6200e-003	0.0224	9.5500e-003	1.4000e-004		1.8100e-003	1.8100e-003		1.8100e-003	1.8100e-003	0.0000	25.9774	25.9774	5.0000e-004	4.8000e-004	26.1318
NaturalGas Unmitigated	2.6200e-003	0.0224	9.5500e-003	1.4000e-004		1.8100e-003	1.8100e-003		1.8100e-003	1.8100e-003	0.0000	25.9774	25.9774	5.0000e-004	4.8000e-004	26.1318

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					
Condo/Townhouse	486798	2.6200e-003	0.0224	9.5500e-003	1.4000e-004		1.8100e-003	1.8100e-003		1.8100e-003	1.8100e-003	0.0000	25.9774	25.9774	5.0000e-004	4.8000e-004	26.1318
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
Total		2.6200e-003	0.0224	9.5500e-003	1.4000e-004		1.8100e-003	1.8100e-003		1.8100e-003	1.8100e-003	0.0000	25.9774	25.9774	5.0000e-004	4.8000e-004	26.1318

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Condo/Townhouse	486798	2.6200e-003	0.0224	9.5500e-003	1.4000e-004		1.8100e-003	1.8100e-003		1.8100e-003	1.8100e-003	0.0000	25.9774	25.9774	5.0000e-004	4.8000e-004	26.1318
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
Total		2.6200e-003	0.0224	9.5500e-003	1.4000e-004		1.8100e-003	1.8100e-003		1.8100e-003	1.8100e-003	0.0000	25.9774	25.9774	5.0000e-004	4.8000e-004	26.1318

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	131181	17.2558	1.7300e-003	3.6000e-004	17.4053
Enclosed Parking with Elevator	128920	16.9584	1.7000e-003	3.5000e-004	17.1053
Total		34.2142	3.4300e-003	7.1000e-004	34.5107

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	131181	17.2558	1.7300e-003	3.6000e-004	17.4053
Enclosed Parking with Elevator	128920	16.9584	1.7000e-003	3.5000e-004	17.1053

Total		34.2142	3.4300e-003	7.1000e-004	34.5107
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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	0.1666	3.1400e-003	0.1946	2.0000e-005		1.1400e-003	1.1400e-003		1.1400e-003	1.1400e-003	0.0000	1.3550	1.3550	3.3000e-004	2.0000e-005	1.3689
Unmitigated	0.1666	3.1400e-003	0.1946	2.0000e-005		1.1400e-003	1.1400e-003		1.1400e-003	1.1400e-003	0.0000	1.3550	1.3550	3.3000e-004	2.0000e-005	1.3689

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	0.0247					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1359					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.0000e-004	9.0000e-004	3.8000e-004	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	1.0387	1.0387	2.0000e-005	2.0000e-005	1.0448
Landscaping	5.9500e-003	2.2400e-003	0.1942	1.0000e-005		1.0700e-003	1.0700e-003		1.0700e-003	1.0700e-003	0.0000	0.3163	0.3163	3.1000e-004	0.0000	0.3241

Total	0.1666	3.1400e-003	0.1946	2.0000e-005		1.1400e-003	1.1400e-003		1.1400e-003	1.1400e-003	0.0000	1.3550	1.3550	3.3000e-004	2.0000e-005	1.3689
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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	0.0247					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1359					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.0000e-004	9.0000e-004	3.8000e-004	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	1.0387	1.0387	2.0000e-005	2.0000e-005	1.0448	
Landscaping	5.9500e-003	2.2400e-003	0.1942	1.0000e-005		1.0700e-003	1.0700e-003		1.0700e-003	1.0700e-003	0.0000	0.3163	0.3163	3.1000e-004	0.0000	0.3241	
Total	0.1666	3.1400e-003	0.1946	2.0000e-005		1.1400e-003	1.1400e-003		1.1400e-003	1.1400e-003	0.0000	1.3550	1.3550	3.3000e-004	2.0000e-005	1.3689	

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	2.2349	0.0554	1.3400e-003	4.0180
Unmitigated	2.2349	0.0554	1.3400e-003	4.0180

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	1.694 / 1.06796	2.2349	0.0554	1.3400e-003	4.0180
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		2.2349	0.0554	1.3400e-003	4.0180

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	1.694 / 1.06796	2.2349	0.0554	1.3400e-003	4.0180
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		2.2349	0.0554	1.3400e-003	4.0180

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	2.4278	0.1435	0.0000	6.0147
Unmitigated	2.4278	0.1435	0.0000	6.0147

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	11.96	2.4278	0.1435	0.0000	6.0147
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		2.4278	0.1435	0.0000	6.0147

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	11.96	2.4278	0.1435	0.0000	6.0147

Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		2.4278	0.1435	0.0000	6.0147

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Attachment 3: Construction Health Risk Calculations

444-450 First Street Residential Project, Los Altos, CA

DPM Emissions and Modeling Emission Rates

Construction Year	Activity	DPM (ton/year)	Area Source	DPM Emissions			Modeled Area (m ²)	DPM Emission Rate (g/s/m ²)
				(lb/yr)	(lb/hr)	(g/s)		
2019-2020	Construction	0.0352	CON_DPM	70.4	0.02143	2.70E-03	1,413	1.91E-06

Construction Hours
 hr/day = 9 (7am - 4pm)
 days/yr = 365
 hours/year = 3285

PM2.5 Fugitive Dust Emissions for Modeling

Construction Year	Activity	Area Source	Area (ton/year)	PM2.5 Emissions			Modeled Area (m ²)	PM2.5 Emission Rate g/s/m ²
				(lb/yr)	(lb/hr)	(g/s)		
2019-2020	Construction	CON_FUG	0.00158	3.2	0.00096	1.21E-04	1,413	8.58E-08

Construction Hours
 hr/day = 9 (7am - 4pm)
 days/yr = 365
 hours/year = 3285

DPM Construction Emissions and Modeling Emission Rates - With Mitigation

Construction Year	Activity	DPM (ton/year)	Area Source	DPM Emissions			Modeled Area (m ²)	DPM Emission Rate (g/s/m ²)
				(lb/yr)	(lb/hr)	(g/s)		
2019-2020	Construction	0.0228	CON_DPM	45.6	0.01388	1.75E-03	1,413	1.24E-06

Construction Hours
 hr/day = 9 (7am - 4pm)
 days/yr = 365
 hours/year = 3285

PM2.5 Fugitive Dust Construction Emissions for Modeling - With Mitigation

Construction Year	Activity	Area Source	Area (ton/year)	PM2.5 Emissions			Modeled Area (m ²)	PM2.5 Emission Rate g/s/m ²
				(lb/yr)	(lb/hr)	(g/s)		
2019-2020	Construction	CON_FUG	0.00066	1.3	0.00040	5.06E-05	1,413	3.58E-08

Construction Hours
 hr/day = 9 (7am - 4pm)
 days/yr = 365
 hours/year = 3285

444-450 First Street Residential Project, Los Altos, CA - Construction Health Impact Summary

Maximum Impacts at MEI Location - Unmitigated

Emissions Year	Maximum Concentrations		Cancer Risk (per million)		Hazard Index (-)	Maximum Annual PM2.5 Concentration ($\mu\text{g}/\text{m}^3$)
	Exhaust PM10/DPM ($\mu\text{g}/\text{m}^3$)	Fugitive PM2.5 ($\mu\text{g}/\text{m}^3$)	Infant/Child	Adult		
	2019-2020	0.0833	0.0051	13.7	0.2	0.017

Maximum Impacts at MEI Location - With Mitigation

Emissions Year	Maximum Concentrations		Cancer Risk (per million)		Hazard Index (-)	Maximum Annual PM2.5 Concentration ($\mu\text{g}/\text{m}^3$)
	Exhaust PM10/DPM ($\mu\text{g}/\text{m}^3$)	Fugitive PM2.5 ($\mu\text{g}/\text{m}^3$)	Infant/Child	Adult		
	2019-2020	0.0541	0.0021	8.9	0.2	0.011

Maximum Impacts at JB Preschool, Los Altos, CA

Construction Year	Unmitigated Emissions				
	Maximum Concentrations		Child Cancer Risk (per million)	Hazard Index (-)	Maximum Annual PM2.5 Concentration ($\mu\text{g}/\text{m}^3$)
	Exhaust PM2.5/DPM ($\mu\text{g}/\text{m}^3$)	Fugitive PM2.5 ($\mu\text{g}/\text{m}^3$)			
2019	0.0503	0.0024	1.4	0.01	0.05

**444-450 First Street Residential Project, Los Altos, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction
Impacts at Off-Site MEI Location - 4.5 meter receptor height**

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-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 (µg/m³)
 DBR = daily breathing rate (L/kg body weight-day)
 A = Inhalation absorption factor
 EF = Exposure frequency (days/year)
 10⁻⁶ = Conversion factor

Values

Age --> Parameter	Infant/Child				Adult
	3rd Trimester	0 - 2	2 - 9	2 - 16	16 - 30
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

Exposure Year	Exposure Duration (years)	Age	Infant/Child - Exposure Information			Infant/Child Cancer Risk (per million)	Adult - Exposure Information			Adult Cancer Risk (per million)	Maximum	
			DPM Conc (ug/m3)		Age Sensitivity		Modeled		Age Sensitivity		Fugitive PM2.5	Total PM2.5
			Year	Annual	Factor		Year	Annual	Factor			
0	0.25	-0.25 - 0*	-	-	10	-	-	-	-	-	-	-
1	1	0 - 1	2019	0.0833	10	13.69	2019	0.0833	1	0.24	0.0051	0.088
2	1	1 - 2			10	0.00			1	0.00		
3	1	2 - 3			3	0.00			1	0.00		
4	1	3 - 4			3	0.00			1	0.00		
5	1	4 - 5			3	0.00			1	0.00		
6	1	5 - 6			3	0.00			1	0.00		
7	1	6 - 7			3	0.00			1	0.00		
8	1	7 - 8			3	0.00			1	0.00		
9	1	8 - 9			3	0.00			1	0.00		
10	1	9 - 10			3	0.00			1	0.00		
11	1	10 - 11			3	0.00			1	0.00		
12	1	11 - 12			3	0.00			1	0.00		
13	1	12 - 13			3	0.00			1	0.00		
14	1	13 - 14			3	0.00			1	0.00		
15	1	14 - 15			3	0.00			1	0.00		
16	1	15 - 16			3	0.00			1	0.00		
17	1	16-17			1	0.00			1	0.00		
18	1	17-18			1	0.00			1	0.00		
19	1	18-19			1	0.00			1	0.00		
20	1	19-20			1	0.00			1	0.00		
21	1	20-21			1	0.00			1	0.00		
22	1	21-22			1	0.00			1	0.00		
23	1	22-23			1	0.00			1	0.00		
24	1	23-24			1	0.00			1	0.00		
25	1	24-25			1	0.00			1	0.00		
26	1	25-26			1	0.00			1	0.00		
27	1	26-27			1	0.00			1	0.00		
28	1	27-28			1	0.00			1	0.00		
29	1	28-29			1	0.00			1	0.00		
30	1	29-30			1	0.00			1	0.00		
Total Increased Cancer Risk						13.7				0.24		

* Third trimester of pregnancy

**444-450 First Street Residential Project, Los Altos, CA - Construction Impacts - With Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction
Impacts at Off-Site MEI Location - 4.5 meter receptor height**

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-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 (µg/m³)
 DBR = daily breathing rate (L/kg body weight-day)
 A = Inhalation absorption factor
 EF = Exposure frequency (days/year)
 10⁻⁶ = Conversion factor

Values

Age --> Parameter	Infant/Child				Adult
	3rd Trimester	0 - 2	2 - 9	2 - 16	16 - 30
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

Exposure Year	Exposure Duration (years)	Age	Infant/Child - Exposure Information			Infant/Child Cancer Risk (per million)	Adult - Exposure Information			Adult Cancer Risk (per million)	Maximum	
			DPM Conc (ug/m3)		Age Sensitivity Factor		Modeled		Age Sensitivity Factor		Fugitive PM2.5	Total PM2.5
			Year	Annual			Year	Annual				
0	0.25	-0.25 - 0*	-	-	10	-	-	-	-	-	-	-
1	1	0 - 1	2019	0.0541	10	8.89	2019	0.0541	1	0.16	0.0021	0.056
2	1	1 - 2			10	0.00			1	0.00		
3	1	2 - 3			3	0.00			1	0.00		
4	1	3 - 4			3	0.00			1	0.00		
5	1	4 - 5			3	0.00			1	0.00		
6	1	5 - 6			3	0.00			1	0.00		
7	1	6 - 7			3	0.00			1	0.00		
8	1	7 - 8			3	0.00			1	0.00		
9	1	8 - 9			3	0.00			1	0.00		
10	1	9 - 10			3	0.00			1	0.00		
11	1	10 - 11			3	0.00			1	0.00		
12	1	11 - 12			3	0.00			1	0.00		
13	1	12 - 13			3	0.00			1	0.00		
14	1	13 - 14			3	0.00			1	0.00		
15	1	14 - 15			3	0.00			1	0.00		
16	1	15 - 16			3	0.00			1	0.00		
17	1	16-17			1	0.00			1	0.00		
18	1	17-18			1	0.00			1	0.00		
19	1	18-19			1	0.00			1	0.00		
20	1	19-20			1	0.00			1	0.00		
21	1	20-21			1	0.00			1	0.00		
22	1	21-22			1	0.00			1	0.00		
23	1	22-23			1	0.00			1	0.00		
24	1	23-24			1	0.00			1	0.00		
25	1	24-25			1	0.00			1	0.00		
26	1	25-26			1	0.00			1	0.00		
27	1	26-27			1	0.00			1	0.00		
28	1	27-28			1	0.00			1	0.00		
29	1	28-29			1	0.00			1	0.00		
30	1	29-30			1	0.00			1	0.00		
Total Increased Cancer Risk						8.9				0.16		

* Third trimester of pregnancy

**444-450 First Street Residential Project, Los Altos, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction
Impacts at Off-Site MEI Location - 1.5 meter receptor height**

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-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 (µg/m³)
 DBR = daily breathing rate (L/kg body weight-day)
 A = Inhalation absorption factor
 EF = Exposure frequency (days/year)
 10⁻⁶ = Conversion factor

Values

Age --> Parameter	Infant/Child				Adult
	3rd Trimester	0 - 2	2 - 9	2 - 16	16 - 30
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

Exposure Year	Exposure Duration (years)	Age	Infant/Child - Exposure Information			Infant/Child Cancer Risk (per million)	Adult - Exposure Information			Adult Cancer Risk (per million)	Maximum	
			DPM Conc (ug/m3)		Age Sensitivity Factor		Modeled		Age Sensitivity Factor		Fugitive PM2.5	Total PM2.5
			Year	Annual	Factor		Year	Annual	Factor			
0	0.25	-0.25 - 0*	-	-	10	-	-	-	-	-	-	
1	1	0 - 1	2019	0.0791	10	13.00	2019	0.0791	1	0.23	0.0064	0.085
2	1	1 - 2			10	0.00			1	0.00		
3	1	2 - 3			3	0.00			1	0.00		
4	1	3 - 4			3	0.00			1	0.00		
5	1	4 - 5			3	0.00			1	0.00		
6	1	5 - 6			3	0.00			1	0.00		
7	1	6 - 7			3	0.00			1	0.00		
8	1	7 - 8			3	0.00			1	0.00		
9	1	8 - 9			3	0.00			1	0.00		
10	1	9 - 10			3	0.00			1	0.00		
11	1	10 - 11			3	0.00			1	0.00		
12	1	11 - 12			3	0.00			1	0.00		
13	1	12 - 13			3	0.00			1	0.00		
14	1	13 - 14			3	0.00			1	0.00		
15	1	14 - 15			3	0.00			1	0.00		
16	1	15 - 16			3	0.00			1	0.00		
17	1	16-17			1	0.00			1	0.00		
18	1	17-18			1	0.00			1	0.00		
19	1	18-19			1	0.00			1	0.00		
20	1	19-20			1	0.00			1	0.00		
21	1	20-21			1	0.00			1	0.00		
22	1	21-22			1	0.00			1	0.00		
23	1	22-23			1	0.00			1	0.00		
24	1	23-24			1	0.00			1	0.00		
25	1	24-25			1	0.00			1	0.00		
26	1	25-26			1	0.00			1	0.00		
27	1	26-27			1	0.00			1	0.00		
28	1	27-28			1	0.00			1	0.00		
29	1	28-29			1	0.00			1	0.00		
30	1	29-30			1	0.00			1	0.00		
Total Increased Cancer Risk						13.0				0.23		

* Third trimester of pregnancy

**JB Preschool, Los Altos, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk Calculations From Construction
Daycare - 1.0 meters - Child Exposure**

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-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 (µg/m³)
- DBR = daily breathing rate (L/kg body weight-day)
- A = Inhalation absorption factor
- EF = Exposure frequency (days/year)
- 10⁻⁶ = Conversion factor

Values

Age --> Parameter	Infant/Child				Adult
	3rd Trimester	0 - 2	2 - 9	2 - 16	16 - 30
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

Exposure Year	Exposure Duration (years)	Child - Exposure Information			Child Cancer Risk (per million)	Maximum	
		DPM Conc (ug/m3)		Age* Sensitivity Factor		Fugitive PM2.5	Total PM2.5
		Year	Annual				
1	1	2019	0.0503	3	0.0024	0.053	

* Students assumed to be from 2 to 9 years of age

Attachment 4: Screening Community Risk Calculations

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:

Roadway Direction:

Side of the Roadway:

Distance from Roadway: feet

Annual Average Daily Traffic (ADT):

Results

Santa Clara County

NORTH-SOUTH DIRECTIONAL ROADWAY

PM2.5 annual average

0.298 ($\mu\text{g}/\text{m}^3$)

Cancer Risk

12.66 (per million)

Foothill Expressway, Project

Cumulative plus project volumes from traffic report
Data for Santa Clara County based on meteorological data collected from San Jose Airport in 1997

Adjusted for 2015 OEHHA
and EMFAC2014 for 2018

8.70

(per million)

Note that EMFAC2014 predicts DSL PM2.5 aggregate 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 vehicles 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 Cal3qchr 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.

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:

Roadway Direction:

Side of the Roadway:

Distance from Roadway: feet

Annual Average Daily Traffic (ADT):

Results

Santa Clara County

NORTH-SOUTH DIRECTIONAL ROADWAY

PM2.5 annual average

0.232 ($\mu\text{g}/\text{m}^3$)

Cancer Risk

9.86 (per million)

Foothill Expressway, Project

Cumulative plus project volumes from traffic report
Data for Santa Clara County based on meteorological data collected from San Jose Airport in 1997

Adjusted for 2015 OEHHA
and EMFAC2014 for 2018

6.77

(per million)

Note that EMFAC2014 predicts DSL PM2.5 aggregate 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 vehicles 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 Cal3qchr 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.

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:

Roadway Direction:

Side of the Roadway:

Distance from Roadway: feet

Annual Average Daily Traffic (ADT):

Results

Santa Clara County

NORTH-SOUTH DIRECTIONAL ROADWAY

PM2.5 annual average

0.038 ($\mu\text{g}/\text{m}^3$)

Cancer Risk

1.90 (per million)

Foothill Expressway, Project

Cumulative plus project volumes from traffic report
Data for Santa Clara County based on meteorological data collected from San Jose Airport in 1997

Adjusted for 2015 OEHA
and EMFAC2014 for 2018

1.31

(per million)

Note that EMFAC2014 predicts DSL PM2.5 aggregate 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 vehicles 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 Cal3qhc 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 OEHA toxicity values adopted in 2013.

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:

Roadway Direction:

Side of the Roadway:

Distance from Roadway: feet

Annual Average Daily Traffic (ADT):

Results

Santa Clara County

NORTH-SOUTH DIRECTIONAL ROADWAY

PM2.5 annual average

0.023 ($\mu\text{g}/\text{m}^3$)

Cancer Risk

1.18 (per million)

Foothill Expressway, Project

Cumulative plus project volumes from traffic report
Data for Santa Clara County based on meteorological data collected from San Jose Airport in 1997

Adjusted for 2015 OEHHA
and EMFAC2014 for 2018

0.81

(per million)

Note that EMFAC2014 predicts DSL PM2.5 aggregate 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 vehicles 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 Cal3qchr 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.

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.

[Click here for guidance on conducting risk & hazard screening, including roadways & freeways, refer to the District's Risk & Hazard Analysis flow chart.](#)

[Click here for District's Recommended Methods for Screening and Modeling Local Risks and Hazards document.](#)

Table A: Requester Contact Information

Date of Request	2/12/2019
Contact Name	Mimi McNamara
Affiliation	Hillingworth & Rodkin, Inc.
Phone	707-794-040 X111
Email	mimcnamara@hillingworthrodkin.com
Project Name	J-80 Central
Address	444-450 First St
City	Los Altos
County	Santa Clara
Type (residential, commercial, mixed use, industrial, etc.)	Roadway
Project Size (# of units or building square feet)	
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.
- Identify stationary sources within at least a 1000ft radius of project site. 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 the source's address location. Please report any mapping errors to the District.
- List the stationary source information in **Table B** section only.
- 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. 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 Areana Flores at 415-749-4616, or aflores@baaqmd.gov

Table B: Google Earth data

Distance from Receptor (feet) or ME ¹	Facility Name	Address	Plant No.	Cancer Risk ²	Hazard Risk ²	PM _{2.5} ²	Source No. ³	Type of Source ⁴	Fuel Code ⁵	Status/Comments
840	Conoco Phillips #255957	330 S San Antonio Road	100829	18.592846	0.0918			Gas Dispensing Facility		Use GDF Multiplier

Footnotes:

- Maximally exposed individual
- These Cancer Risk, Hazard Index, and PM2.5 columns represent the values in the Google Earth Plant Information Table.
- Each plant may have multiple permits and sources.
- Permitted sources include diesel back-up generators, gas stations, dry cleaners, boilers, printers, auto spray booths, etc.
- Fuel codes: 98 = diesel, 189 = Natural Gas.
- If a Health Risk Screening Assessment (HRSA) was completed for the source, the application number will be listed here.
- The date that the HRSA was completed.
- Engineer who completed the HRSA. For District purposes only.
- All HRSA completed before 1/5/2010 need to be multiplied by an age sensitivity factor of 1.7.
- The HRSA "Chronic Health" number represents the Hazard Index.
- Further information about common sources:
 - Sources that only include diesel internal combustion engines can be adjusted using the BAAQMD's Diesel Multiplier worksheet.
 - The risk from natural gas boilers used for space heating when <25 MM BTU/hr would have an estimated cancer risk of one in a million or less, and a chronic hazard
 - BAAQMD Reg 11 Rule 16 required that all co-residential (sharing a wall, floor, ceiling or is in the same building as a residential unit) dry cleaners cease use of perc on July 1, 2010. Therefore, there is no cancer risk, hazard or PM2.5 concentrations from co-residential dry cleaning businesses in the BAAQMD.
 - Non co-residential dry cleaners must phase out use of perc by Jan. 1, 2023. Therefore, the risk from these dry cleaners does not need to be factored in over a 70-year period.
 - Gas stations can be adjusted using BAAQMD's Gas Station Distance Multiplier worksheet.
 - Unless otherwise noted, exempt sources are considered insignificant. See BAAQMD Reg 2 Rule 1 for a list of exempt sources.
 - This spray booth is considered to be insignificant.

ADJUSTED RISK

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.

[Click here for guidance on conducting risk & hazard screening, including roadways & freeways, refer to the District's Risk & Hazard Analysis flow chart.](#)

[Click here for District's Recommended Methods for Screening and Modeling Local Risks and Hazards document.](#)

Table A: Requester Contact Information

Date of Request	7/16/2018
Contact Name	Casey Zaglin
Affiliation	Illingworth & Rodkin, Inc.
Phone	707-794-0400 x23
Email	czaglin@illingworthrodkin.com
Project Name	
Address	
City	
County	
Type (residential, commercial, mixed use, industrial, etc.)	
Project Size (# of units or building square feet)	
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.
- Identify stationary sources within at least a 1000ft radius of project site. 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 the source's address location. Please report any mapping errors to the District.
- List the stationary source information in **Table B** section only.
- 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. 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 Areana Flores at 415-749-4616, or aflores@baaqmd.gov

Table B: Google Earth data

Table B: Google Earth data										Project Site				Construction MEI					
Distance from Receptor (feet) or MEI ¹	Facility Name	Address	Plant No.	Cancer Risk ²	Hazard Risk ²	PM _{2.5} ²	Source No. ³	Type of Source ⁴	Fuel Code ⁵	Status/Comments	Distance Adjustment Multiplier	Adjusted Cancer Risk Estimate	Adjusted Hazard Risk	Adjusted PM2.5	Distance from Receptor (feet) or MEI ¹	Distance Adjustment Multiplier	Adjusted Cancer Risk Estimate	Adjusted Hazard Risk	Adjusted PM2.5
800	Conoco Phillips #255957	330 S San Antonio Road	100829	18.593	0.0918			Gas Dispensing Facility			0.02	0.39	0.00191		810	0.02	0.39	0.00	0.00

Footnotes:

- Maximally exposed individual
- These Cancer Risk, Hazard Index, and PM2.5 columns represent the values in the Google Earth Plant Information Table.
- Each plant may have multiple permits and sources.
- Permitted sources include diesel back-up generators, gas stations, dry cleaners, boilers, printers, auto spray booths, etc.
- Fuel codes: 98 = diesel, 189 = Natural Gas.
- If a Health Risk Screening Assessment (HRSa) was completed for the source, the application number will be listed here.
- The date that the HRSa was completed.
- Engineer who completed the HRSa. For District purposes only.
- All HRSa completed before 1/5/2010 need to be multiplied by an age sensitivity factor of 1.7.
- The HRSa "Chronic Health" number represents the Hazard Index.
- Further information about common sources:
 - Sources that only include diesel internal combustion engines can be adjusted using the BAAQMD's Diesel Multiplier worksheet.
 - The risk from natural gas boilers used for space heating when <25 MM BTU/hr would have an estimated cancer risk of one in a million or less, and a chronic
 - BAAQMD Reg 11 Rule 16 required that all co-residential (sharing a wall, floor, ceiling or is in the same building as a residential unit) dry cleaners cease use of perc on July 1, 2010. Therefore, there is no cancer risk, hazard or PM2.5 concentrations from co-residential dry cleaning businesses in the BAAQMD.
 - Non co-residential dry cleaners must phase out use of perc by Jan. 1, 2023. Therefore, the risk from these dry cleaners does not need to be factored in over a 70-year period.
 - Gas stations can be adjusted using BAAQMD's Gas Station Distance Multiplier worksheet.
 - Unless otherwise noted, exempt sources are considered insignificant. See BAAQMD Reg 2 Rule 1 for a list of exempt sources.
 - This spray booth is considered to be insignificant.

How to Use the Distance Adjustment Multiplier Tool for Gasoline Dispensing Facilities (GDF)

This distance multiplier tool refines the screening values for cancer risk and chronic hazard index found in the District's Stationary Source Screening Analysis Tool to represent adjusted risk and hazard impacts that can be expected with farther distances from the source of emissions (GDF's).

1. Obtain the GDF cancer risk and/or chronic hazard index from the District's Stationary Source Screening Analysis tool for facilities where the Plant No. is preceded with a 'G'. If the distance to the nearest receptor is less than 20 meters, the distance adjustment multiplier table cannot be used and an air dispersion modeling analysis using site-specific information is needed to refine the cancer risk and/or chronic hazard index estimate.

2. Determine the shortest distance from the GDF to the nearest receptor.

3. In the table below, enter the cancer risk and/or chronic hazard index found in step 1 for the GDF in the row which aligns with the shortest distance from each GDF to the nearest receptor (found in step 2). If the shortest distance to the receptor falls between two distance values, select the multiplier corresponding to the smaller distance. For distances beyond 300 meters, use the multiplier 0.015. The resulting product is the adjusted cancer risk in a million or the adjusted chronic hazard index for the GDF.

Note: These distance adjustment multipliers may be used only for the screening level health risk values indicated in the District's Stationary Source Screening Analysis tool for gasoline dispensing facilities. This distance multiplier tool may not be used to adjust values from an HRA if an HRA for the facility was conducted.

Distance meters	Distance feet	Distance adjustment multiplier	Enter Cancer Risk	Adjusted Cancer Risk	Enter Chronic Hazard Index	Adjusted Chronic Hazard Index
20	66	1.000		0		0
25	82	0.728		0		0
30	98	0.559		0		0
35	115	0.445		0		0
40	131	0.365		0		0
45	148	0.305		0		0
50	164	0.260		0		0
55	180	0.225		0		0
60	197	0.197		0		0
65	213	0.174		0		0
70	230	0.155		0		0
75	246	0.139		0		0
80	262	0.126		0		0
85	279	0.114		0		0
90	295	0.104		0		0
95	312	0.096		0		0
100	328	0.088		0		0
105	344	0.082		0		0
110	361	0.076		0		0
115	377	0.071		0		0
120	394	0.066		0		0
125	410	0.062		0		0
130	426	0.058		0		0
135	443	0.055		0		0
140	459	0.052		0		0
145	476	0.049		0		0
150	492	0.046		0		0
155	508	0.044		0		0
160	525	0.042		0		0
165	541	0.040		0		0
170	558	0.038		0		0
175	574	0.036		0		0
180	590	0.034		0		0
185	607	0.033		0		0
190	623	0.031		0		0
195	640	0.030		0		0
200	656	0.029		0		0
205	672	0.028		0		0
210	689	0.027		0		0
215	705	0.026		0		0
220	722	0.025		0		0
225	738	0.024		0		0
230	754	0.023		0		0
235	771	0.022		0		0
240	787	0.022		0		0
245	804	0.021		0		0
250	820	0.020		0		0
255	836	0.020		0		0
260	853	0.019		0		0
265	869	0.018		0		0
270	886	0.018		0		0
275	902	0.017		0		0
280	918	0.017		0		0
285	935	0.016		0		0
290	951	0.016		0		0
295	968	0.015		0		0
300	984	0.015		0		0

How to Use the Distance Adjustment Multiplier Tool for Diesel Internal Combustion (IC) Engines

This distance multiplier tool refines the screening values for cancer risk and PM2.5 concentrations found in the District's Stationary Source Screening Analysis Tool for permitted facilities which contain only diesel IC engines, to represent adjusted risk and hazard impacts that can be expected with farther distances from the source of emissions.

1. Obtain the facility diesel IC engine(s) cancer risk and/or PM2.5 concentration from the District's Stationary Source Screening Analysis tool only for facilities where the source is listed as "generator." If the distance to the nearest receptor is less than 25 meters, the distance adjustment multiplier table cannot be used and an air dispersion modeling analysis using site-specific information is needed to refine the cancer risk, chronic hazard index or PM2.5 estimates.
2. Determine the shortest distance from each diesel IC engine to the nearest receptor. Select the shortest distance to receptor found.
3. In the table below, enter the cancer risk and/or PM2.5 concentration found in step 1 for the diesel IC engine in the row which aligns with the shortest distance from each diesel IC engine to the nearest receptor (found in step 2). If the shortest distance to the receptor falls between two distance values, select the multiplier corresponding to the smaller distance. For distances beyond 280 meters, use the multiplier 0.04. The resulting product is the adjusted cancer risk in a million or the adjusted PM2.5 concentration for the diesel IC engine

Note: This distance adjustment multiplier may be used only for the screening level health risk values indicated in the District's Stationary Source Screening Analysis tool for diesel IC engines. This distance multiplier tool may not be used to adjust values from an HRA if an HRA for the facility was conducted.

Note: This distance adjustment multiplier may also be used to adjust the screening values for chronic hazard index found in the District's Stationary Source Screening Analysis Tool for facilities with only diesel IC engines.

Distance (meters)	Distance (feet)	Distance Adjustment Multiplier	Enter Cancer Risk Estimate	Adjusted Cancer Risk Estimate	Enter PM2.5 Concentration	Adjusted PM2.5 Concentration
25	82	0.85		0		0
30	98.4	0.73		0		0
35	115	0.64		0		0
40	131	0.58		0		0
50	164	0.5		0		0
60	197	0.41		0		0
70	230	0.31		0		0
80	262	0.28		0		0
90	295	0.25		0		0
100	328	0.22		0		0
110	361	0.18		0		0
120	394	0.16		0		0
130	426	0.15		0		0
140	459	0.14		0		0
150	492	0.12		0		0
160	525	0.1		0		0
180	590	0.09		0		0
200	656	0.08		0		0
220	722	0.07		0		0
240	787	0.06		0		0
260	853	0.05		0		0
280	918	0.04		0		0

Attachment 5: Los Altos CAP Checklist









NEW DEVELOPMENT CLIMATE ACTION PLAN CHECKLIST

As required in the Los Altos Climate Action Plan, which was adopted in December of 2013, new development shall demonstrate compliance with all applicable best management practices outlined in the checklist below. This list should be included in the project plans and, for all applicable best management practices, provide a description for how the project will complying.

444-450 First Street Los Altos Project

Best Management Practice	Applicable to	Project Compliance		
1.1 Improve Non-Motorized Transportation				
<input type="checkbox"/> Provide end-of-trip facilities to encourage alternative transportation, including showers, lockers, and bicycle racks.	Nonresidential projects over 10,000 square feet	Yes	No	(N/A)
<input type="checkbox"/> Connect to and include non-motorized (bicycle and pedestrian) infrastructure on-site.	Nonresidential projects over 10,000 square feet	Yes	No	(N/A)
<input checked="" type="checkbox"/> Where appropriate, require new projects to provide pedestrian access that internally links all surrounding uses. Applicable to all new commercial and multiple-family development.	Nonresidential projects over 10,000 square feet	(Yes)	No	N/A
1.2 Expand Transit and Commute Options				
<input type="checkbox"/> Develop a program to reduce employee vehicle miles traveled (VMT).	Nonresidential projects over 10,000 square feet (or over 50 employees)	Yes	No	(N/A)
1.3 Provide Alternative-Fuel Vehicle Infrastructure				
<input checked="" type="checkbox"/> Provide electric vehicle (EV) pre-wiring and/or charging stations.	All projects	(Yes)	No	N/A
2.2 Increase Energy Efficiency				
<input checked="" type="checkbox"/> Install higher-efficiency appliances.	All new construction	(Yes)	No	N/A
<input checked="" type="checkbox"/> Install high-efficiency outdoor lights.	All new construction	(Yes)	No	N/A
<input type="checkbox"/> Obtain third-party heating, ventilating and air conditioning (HVAC) commissioning.	All new nonresidential construction	Yes	No	(N/A)

Best Management Practice	Applicable to	Project Compliance		
3.1 Reduce and Divert Waste				
 Develop and implement a Construction and Demolition (C&D) waste plan.	All new projects	Yes	No	N/A
3.2 Conserve Water				
 Reduce turf area and increase native plant landscaping.	All new projects	Yes	No	N/A
3.3 Use Carbon-Efficient Construction Equipment				
 Implement applicable Bay Area Air Quality Management District construction site and equipment best practices. <i>Tables 8-1 and 8-2 in the District's Air Quality Guidelines (see separate handout).</i>	All new projects	Yes	No	N/A
4.1 Sustain a Green Infrastructure System and Sequester Carbon				
 Create or restore vegetated common space.	Projects over 10,000 sq ft	Yes	No	N/A
 Establish a carbon sequestration project or similar off-site mitigation strategy.	Projects over 10,000 sq ft	Yes	No	N/A
 Plant at least one well-placed shade tree per dwelling unit.	New residential projects	Yes	No	N/A

444-450 First Street Los Altos CAP Checklist Project Compliance

1.1 Improve Non-Motorized Transportation

- Provide end-of-trip facilities to encourage alternative transportation, including showers, lockers, and bicycle racks.
- Connect to and include non-motorized infrastructure on-site
- Where appropriate, require new projects to provide pedestrian access that internally links all surrounding uses. Applicable to all new commercial and multiple-family development.
 - Project Compliance: **N/A**
 - Reasoning: **The project is a residential project. This BMP only applies to non-residential projects.**

1.2 Expand Transit and Commute Options

- Develop a program to reduce employee VMT
 - Project Compliance: **N/A**
 - Reasoning: **The project is a residential project. This BMP only applies to non-residential projects.**

1.3 Provide Alternative-Fuel Vehicle Infrastructure

- Provide electric vehicle (EV) pre-wiring and/or charging stations
 - Project Compliance: **YES**
 - Description of compliance: **The project will provide two EV parking spaces.**

2.2 Increase Energy Efficiency

- Install higher efficiency appliances
 - Project Compliance: **YES**
 - Description of Compliance: **The project will include high-efficiency appliances as applicable**
- Install high-efficiency outdoor lights
 - Project Compliance: **YES**
 - Description of Compliance: **The project will include high-efficiency outdoor lights**
- Obtain third-party heating, ventilating and air conditioning (HVAC) commissioning.
 - Project Compliance: **N/A**
 - Description of Compliance: **HVAC commissioning is not required for residential projects.**

3.1 Reduce and Divert Waste

- Develop and implement a Construction and Demolition (C&D) waste plan
 - Project Compliance: **YES**
 - Description of Compliance: **A Construction and Demolition (C&D) waste plan will be developed and implemented prior to commencing demolition of existing structures.**

3.2 Conserve Water

- Reduce turf area and increase native plant landscaping
 - Project Compliance: **YES**
 - Description of compliance: The project's landscape design does not include any turf or lawns. Most of the vegetation would include bioretention planting. Vegetation incorporated into the landscape will comply with the State Water Efficient Landscape Ordinance.

3.3 Use Carbon Efficient Construction Equipment

- Implement applicable Bay Area Air Quality Management District construction site and equipment best practices. Tables 8-1 and 8-2 in the District's Air Quality Guidelines (see separate handout)
 - Project Compliance: **YES**
 - Description of compliance: As stated within the Air Quality report, the project must implement the Bay Area Air Quality Management District (BAAQMD) Best Management Practices during construction. Mitigation Measure AQ-3 implements additional measures to reduce emissions from construction.

4.1 Sustain a Green Infrastructure System and Sequester Carbon

- Create or restore vegetative common space.
 - Project Compliance: **YES**
 - Description of compliance: The landscape design includes common social areas that include new planters, shrubbery, and trees on the ground-level. Additionally, the roof deck terrace would be another common space that would include new vegetation.
- Establish a carbon sequestration project or similar off-site strategy
 - Project Compliance: **YES**
 - Description of compliance: The project proposes to plant 4-5 small trees and 2 large trees with some shrub planting to assist with carbon sequestration. The project will also work with the City of Los Altos to plant new trees at the off-site residents most impacted by construction, which include residences located west of Foothill Expressway.
- Plant at least one well-placed shade tree per dwelling unit.
 - Project Compliance: **YES**
 - Description of compliance: The project cannot plant one shade tree per dwelling unit due to the project being high-density housing. However, as mentioned before, the landscape design does plan to incorporate six to seven additional trees onsite and will work with the City of Los Altos to plant additional trees within the area to help the community.