Appendix A

Air Quality and Greenhouse Gas Assessment

2905 SENTER ROAD AIR QUALITY AND GREENHOUSE GAS ASSESSMENT

San José, CA

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Introduction

The purpose of this report is to address air quality and greenhouse gas (GHG) impacts associated with the 2905 Senter Road project in San José, California. The air quality impacts and GHG emissions would be associated with demolition of the existing uses at the site, construction of the new building and infrastructure, and operation of the project. Air pollutant and GHG emissions associated with construction and operation of the project were predicted using models. In addition, the potential construction health risk impact to nearby sensitive receptors was evaluated. Project impacts related to increased community risk can occur by project construction affecting nearby sensitive receptors. The analysis was conducted following guidance provided by the Bay Area Air Quality Management District (BAAQMD).[1]

Project Description

The project proposes to demolish the existing commercial building and construct three mixed-use buildings on a 1.05-acre site. Building A would consist of a 4,200 square foot (SF), high-turnover sit-down restaurant and 2,271 SF of retail space, for a total of 6,471 SF. Building B would contain 2,234 SF of commercial/office spaces and 2,000 SF of retail space, for a total of 4,234 SF. Building C would accommodate 1,700 SF of commercial/office spaces and 1,685 SF of retail space, for a total of 3,385 SF. There would be 70 parking spaces.

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 (PM_{10}), and fine particulate matter ($PM_{2.5}$).

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 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.

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

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*.

San José Envision 2040 General Plan

The San José Envision 2040 General Plan includes goals, policies, and actions to reduce exposure of the City's sensitive population to exposure of air pollution and toxic air contaminants or TACs. The following goals, policies, and actions are applicable to the proposed project:

Applicable Goals – Air Pollutant Emission Reduction

Goal MS-10 Minimize air pollutant emissions from new and existing development.

Applicable Policies – Air Pollutant Emission Reduction

MS-10.1 Assess projected air emissions from new development in conformance with the Bay Area Air Quality Management District (BAAQMD) CEQA Guidelines and relative to state and federal standards. Identify and implement feasible air emission reduction measures.

MS-10.2 Consider the cumulative air quality impacts from proposed developments for proposed land use designation changes and new development, consistent with the region's Clean Air Plan and State law.

Applicable Goals – Toxic Air Contaminants

Goal MS-11 Minimize exposure of people to air pollution and toxic air contaminants such as ozone, carbon monoxide, lead, and particulate matter.

[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.

Applicable Policies – Toxic Air Contaminants

MS-11.1 Require completion of air quality modeling for sensitive land uses such as new residential developments that are located near sources of pollution such as freeways and industrial uses. Require new residential development projects and projects categorized as sensitive receptors to incorporate effective mitigation into project designs or be located an adequate distance from sources of toxic air contaminants (TACs) to avoid significant risks to health and safety.

MS-11.2 For projects that emit toxic air contaminants, require project proponents to prepare health risk assessments in accordance with BAAQMD-recommended procedures as part of environmental review and employ effective mitigation to reduce possible health risks to a less than significant level. Alternatively, require new projects (such as, but not limited to, industrial, manufacturing, and processing facilities) that are sources of TACs to be located an adequate distance from residential areas and other sensitive receptors.

MS-11.4 Encourage the installation of appropriate air filtration at existing schools, residences, and other sensitive receptor uses adversely affected by pollution sources.

Actions – Toxic Air Contaminants

MS-11.7 Consult with BAAQMD to identify stationary and mobile TAC sources and determine the need for and requirements of a health risk assessment for proposed developments.

Applicable Goals – Construction Air Emissions

Goal MS-13 Minimize air pollutant emissions during demolition and construction activities

Applicable Policies – Construction Air Emissions

MS-13.1 Include dust, particulate matter, and construction equipment exhaust control measures as conditions of approval for subdivision maps, site development and planned development permits, grading permits, and demolition permits. At minimum, conditions shall conform to construction mitigation measures recommended in the current BAAQMD CEQA Guidelines for the relevant project size and type.

Applicable Actions – Construction Air Emissions

MS-13.4 Adopt and periodically update dust, particulate, and exhaust control standard measures for demolition and grading activities to include on project plans as conditions of approval based upon construction mitigation measures in the BAAQMD CEQA Guidelines.

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 adjacent to the southern site boundary, with additional residences in the nearby area surrounding the project site.

Significance Thresholds

In June 2010, BAAQMD adopted thresholds of significance to assist in the review of projects under CEQA. These Thresholds were designed to establish the level at which BAAQMD believed air pollution emissions would cause significant environmental impacts under CEQA and were posted on BAAQMD's website and included in the Air District's updated CEQA Guidelines (updated May 2017). The significance thresholds identified by BAAQMD and used in this analysis are summarized in Table 1.

Table 1. Community Risk Significance Thresholds

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 $\mu g/m^3$	>0.8 $\mu g/m^3$
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) 660 metric tons annually or 2.8 metric tons per capita (for 2030) *	
Note: ROG = reactive organic gases, NOx = nitrogen oxides, PM_{10} = course particulate matter or particulates with an aerodynamic diameter of 10 micrometers (µm) or less, $PM_{2.5}$ = fine particulate matter or particulates with an aerodynamic diameter of 2.5µm or less. GHG = greenhouse gases. *BAAQMD does not have a recommended post-2020 GHG threshold.		

Operational Community Risk Impacts

Operation of the project is not expected to cause any localized emissions that could expose existing sensitive receptors to unhealthy air pollutant levels. When operating, the project may generate automobile traffic and infrequent truck traffic; however, these emissions are anticipated to result in fairly low impacts in terms of TAC or $PM_{2.5}$ exposure and were not evaluated. No stationary sources of TACs, such as generators, are proposed as part of the project. This commercial/office project would not introduce new sensitive receptors to the area.

Project Construction Activity

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

Construction equipment and associated heavy-duty truck traffic generates diesel exhaust, which is a known TAC. These exhaust air pollutant emissions would not be considered to contribute substantially to existing or projected air quality violations. Construction exhaust emissions may still pose 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 $PM_{2.5}$.[4] The closest sensitive receptors to the project site are residences adjacent to the southern site boundary, with additional residences in the nearby area surrounding the project site (see Figure 1). 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 activity is anticipated to include demolition, site preparation, grading, building construction, paving, and architectural coating. Construction period emissions were modeled using the California Emissions Estimator Model, Version 2016.3.2 (CalEEMod). A build-out construction schedule, including equipment usage assumptions, was based on CalEEMod defaults of a project of this type and size. The proposed project land uses were inputted into CalEEMod, which included 4,200 SF entered as "High Turnover (Sit Down Restaurant)", 5,956 SF entered as "Strip Mall", 3,934 SF entered as "General Office Building", and 70 spaces entered as "Parking Lot". In addition, building demolition of 7,000 SF and 90 one-way additional pavement hauling truck trips during demolition was estimated and entered into the model. The CalEEMod default construction start date of June 2019 was used. The CalEEMod default schedule estimated 236 construction workdays over 12 months. *Attachment 2* includes the CalEEMod model output for construction emissions, information for schedule, equipment usage, and truck hauling.

Construction Emissions

The CalEEMod model provided total annual PM_{10} 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 of 0.1054 tons (211 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

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

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 0.00911 tons (18 pounds) for the overall construction period.

Dispersion Modeling

The U.S. EPA AERMOD dispersion model was used to predict DPM and $PM_{2.5}$ concentrations at sensitive receptors (residences) that would be present in the vicinity of the project site during construction activities. Emission sources for the construction site were grouped into two categories: exhaust emissions of DPM and fugitive $PM_{2.5}$ dust emissions. The AERMOD 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. and 4 p.m., when the majority of construction activity would occur. Figure 1 shows the project site, emission source locations, and nearby sensitive receptor locations where health impacts were evaluated.

The modeling used a five-year data set (2006-2010) of hourly meteorological data from the San José Airport that was prepared for use with the AERMOD model by the BAAQMD. Annual DPM and $PM_{2.5}$ concentrations from construction activities during the 2019-2020 construction 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 in nearby homes and apartment buildings on the first and second floor levels, respectively.

Single-Source Impacts

Figure 1 shows the locations where the maximum-modeled DPM and $PM_{2.5}$ concentrations occurred. The maximum DPM and $PM_{2.5}$ concentrations occurred at a residence (1.5 meter receptor height) adjacent to the southern project site boundary. Using the maximum annual modeled DPM concentration, the maximum increased cancer risk at the location of the maximally exposed individual (MEI) was calculated using BAAQMD recommended methods. 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.

Table 2 reports the predicted increases to cancer risk, annual $PM_{2.5}$ concentrations, and Hazard Index (HI) caused by construction of the project. Results of this assessment indicate that the maximum increased residential cancer risks would be 48.9 in one million for an infant exposure

and 0.9 in one million for an adult exposure. The maximum-modeled annual $PM_{2.5}$ concentration, which is based on combined exhaust and fugitive dust emissions, would be 0.34 $\mu g/m^3$. The cancer risk and $PM_{2.5}$ concentration would exceed the BAAQMD significance thresholds of 10 in one million for cancer risk and 0.3 $\mu g/m^3$ for $PM_{2.5}$ concentrations. The maximum modeled annual residential DPM concentration (i.e., from construction exhaust) would be 0.2978 $\mu g/m^3$. The maximum computed HI based on this DPM concentration is 0.06, which does not exceed the BAAQMD significance criterion of a HI greater than 1.0.

Attachment 3 includes the emission calculations and source information used in the modeling and the cancer risk calculations.

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

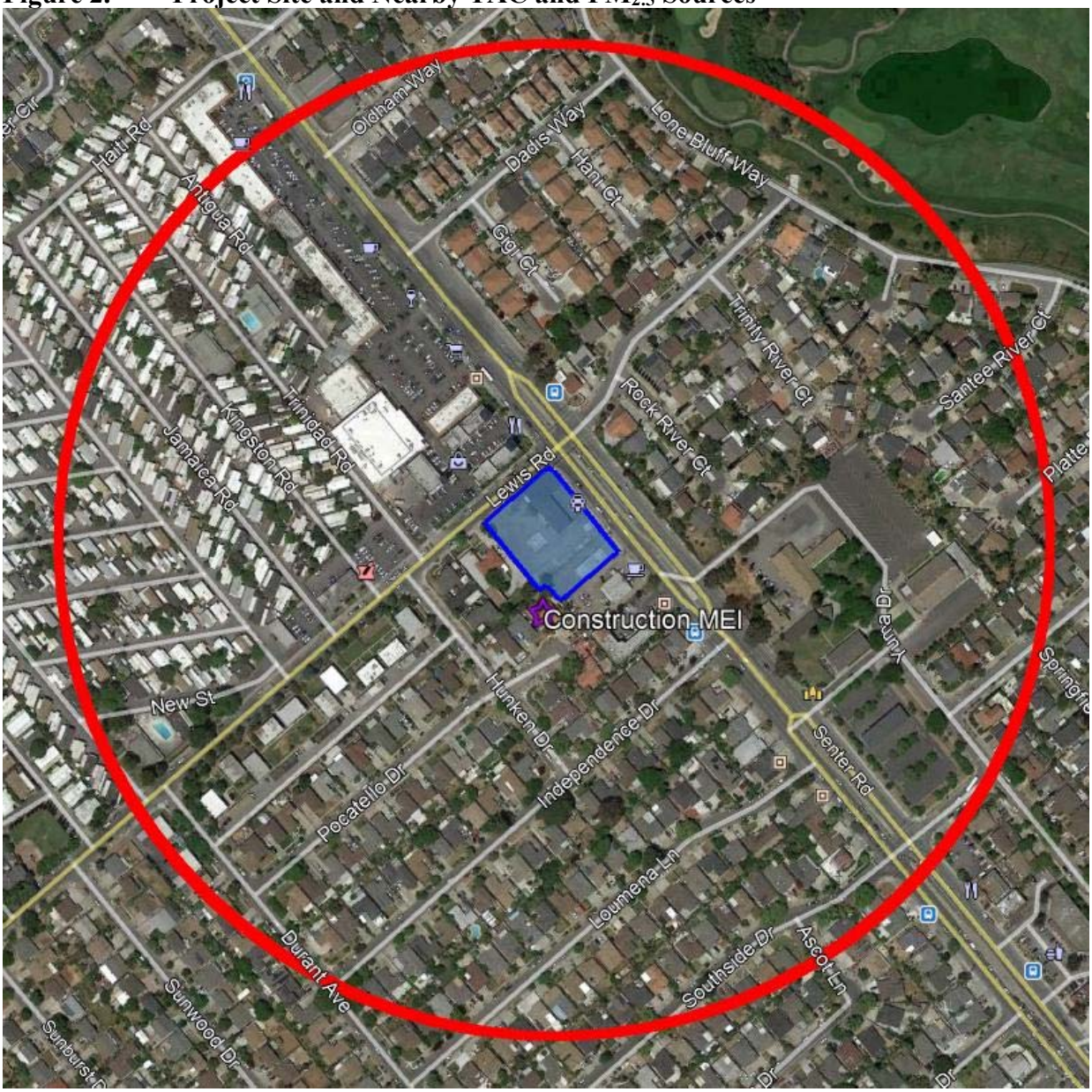
Table 2. Community Risk Impacts from Construction

Source	Maximum Cancer Risk (per million)	$PM_{2.5}$ concentration ($\mu g/m^3$)	Hazard Index
Project Construction			
Unmitigated	**48.9 (infant)**	**0.34**	0.06
Mitigated	7.8 (infant)	0.06	0.01
BAAQMD Single-Source Threshold	***>10.0***	***>0.3***	***>1.0***
Significant?	***Yes (Unmitigated)***	***Yes (Unmitigated)***	***No***
Cumulative Sources Senter Road at 200 feet, 24,505 ADT	3.1	0.09	<0.01
Combined Sources			
Unmitigated	52.0	0.43	<0.07
Mitigated	10.9	0.15	<0.02
BAAQMD Cumulative Source Threshold	***>100***	***>0.8***	***>10.0***
Significant?	***No***	***No***	***No***

Cumulative Impact on Construction MEI

Cumulative community risk impacts were addressed through evaluation of TAC sources located within 1,000 feet of the construction MEI. These sources could include freeways or highways, busy surface streets, and stationary sources identified by BAAQMD. A review of the project area indicates that traffic on Senter Road would exceed 10,000 vehicles per day. Other nearby streets are assumed to have less than 10,000 vehicles per day. A review of BAAQMD's stationary source Google Earth map tool identified no stationary sources with the potential to affect the construction MEI. Figure 2 shows the sources affecting the project site and construction MEI. Community risk impacts from these sources upon the construction MEI are reported in Table 2. *Attachment 4* includes the screening risk calculations for cumulative sources.

Figure 2. Project Site and Nearby TAC and $PM_{2.5}$ Sources



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.[5]

The average daily traffic (ADT) on Senter Road near the project site was estimated to be approximately 24,505 vehicles based on ten times the average Background Plus Project peak a.m. and p.m. traffic volumes from the project's traffic study.[6] Using the BAAQMD *Roadway Screening Analysis Calculator* for Santa Clara County for a north-south directional roadway and at a distance of approximately 200 feet west of the roadway, estimated cancer risk at the closest portion of the construction MEI would be 3.1 per million and $PM_{2.5}$ concentration would be 0.09 $\mu g/m^3$. Chronic or acute HI for the roadway would be less than 0.01. Results of this cumulative analysis are included in Table 2.

Summary of Impacts

The project would have a *significant* impact with respect to community risk caused by project construction activities, since maximum cancer risk is above the single-source thresholds of 10.0 per million for cancer risk and the maximum annual $PM_{2.5}$ concentration would be above the BAAQMD-recommended significance threshold of greater than 0.3 $\mu g/m^3$. The HI associated with construction would not exceed the BAAQMD-recommended significance threshold of greater than 1.0.

As shown in Table 2, the impact of the project and the sum of impacts from combined sources would not exceed the cumulative significance thresholds for cancer risk, annual $PM_{2.5}$ concentrations, and non-cancer hazards (expressed as an HI). Note that this assessment assumes that BAAQMD-recommended basic measures to control dust and exhaust during construction are included in the project.

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

During any construction period ground disturbance, the applicant shall ensure that the project contractor implement measures to control dust and exhaust. Implementation of the measures recommended by BAAQMD and listed below would reduce the air quality impacts associated with grading and new construction to a less-than-significant level. The contractor shall implement the following best management practices that are required of all projects:

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

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

[5] Correspondence with Alison Kirk, BAAQMD, November 23, 2015.
[6] Hexagon Transportation Consultants, Inc., "2905 Senter Road Plaza Draft Traffic Impact Analysis", July 2018.

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.

In addition to the BAAQMD-recommended best management practices listed above, Mitigation Measure AQ-1 would require that the project develop a plan demonstrating that the off-road equipment used on-site to construct the project would achieve a fleet-wide average 81 percent reduction in particulate matter exhaust emissions or more. One feasible plan to achieve this reduction would include the following:

- 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 4 Interim engines or equivalent. The use of equipment that includes CARB-certified Level 3 Diesel Particulate Filters[7] would also meet this requirement. Alternatively, the use of equipment that includes non-diesel-fueled equipment would meet this requirement.

Effectiveness of Mitigation Measure AQ-1

Implementation of Mitigation Measure AQ-1 is considered to reduce fugitive dust emissions by over 72 percent and reduce on-site diesel exhaust emissions by 84 percent. This would reduce the residential infant cancer risk and maximum annual $PM_{2.5}$ concentration proportionally, such that the mitigated infant cancer risk at the residential receptor would be less than 7.8 in one million and

[7] See http://www.arb.ca.gov/diesel/verdev/vt/cvt.htm

the maximum annual $PM_{2.5}$ concentration would be reduced to less than 0.06 $\mu g/m^3$, which is less than the BAAQMD significance thresholds. After implementation of these mitigation measures, the project would have a *less-than-significant* impact with respect to community risk caused by construction activities.

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 (CO_2) and water vapor but there are also several others, most importantly methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). These are released into the earth's atmosphere through a variety of natural processes and human activities. Sources of GHGs are generally as follows:

- CO_2 and N_2O are byproducts of fossil fuel combustion.
- N_2O is associated with agricultural operations such as fertilization of crops.
- CH_4 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 CO_2 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 CO_2 equivalents (CO_2e).

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 a 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 beyond 2020, so a threshold that addresses a future target is appropriate. 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.[8] The 2030 bright-line threshold is a 40 percent reduction of the 2020 1,100 MT CO_2e/year threshold.

[8] 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.

Greenhouse Gas Emissions Analysis

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, the generator, 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 were input to the model, as described in the above construction activity section. Other operational project-specific information input to the model is described below. CalEEMod output is included in *Attachment 2*.

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 2021. Emissions associated with build-out later than 2021 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.[9] The traffic data was based on older land use information, so the trip generation rate was updated in the report based on the current land use square footage. For each land use type, the forecasted daily trip rate with trip reductions applied was divided by the quantity of that land use to identify the weekday daily trip rate. 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 default trip lengths and trip types specified by CalEEMod were used.

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 CO_2 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 CO_2 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 CO_2 per megawatt of electricity delivered.[10]

[9] Hexagon Transportation Consultants, Inc., "2905 Senter Road Plaza Draft Traffic Impact Analysis", July 2018.
[10] 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.

Existing Uses

A CalEEMod model run was developed to compute emissions from use of the existing buildings as if they were operating in 2021. Inputs for this modeling scenario included 7,000 SF entered as "Strip Mall" and 0.89 acres entered as "Parking Lot". These inputs were applied to the modeling in the same manner described for the proposed project.

Service Population Emissions

The project service population efficiency rate is based on the number of future full-time employees. The project applicant has indicated that approximately 12 employees would work at the restaurant land use. The number of future office and retail employees were estimated using the assumption of 4 employees per 1,000-sf of office use and 2.5 employees per 1,000-sf of retail use. Using these assumptions, the number of future office employees would be 16 and the number of future retail employees would be 15. The total future service population at the proposed project site was estimated to be 43 employees.

Construction Emissions

GHG emissions associated with construction were computed to be 253 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. Best management practices assumed to be incorporated into construction of the proposed project include but are not limited to: using local building materials of at least 10 percent and recycling or reusing at least 50 percent of construction waste or demolition materials.

Operational Emissions

The CalEEMod model, along with the project vehicle trip generation rates, was used to estimate daily emissions associated with operation of the fully-developed site under the proposed project. As shown in Table 3, annual emissions resulting from operation of the proposed project are predicted to be 578 MT of CO_2e in 2021 and 479 MT of CO_2e in 2030. The annual emissions from operation of the existing building in 2021 is computed as 205 MT of CO_2e. The net emissions resulting from the project would be 373 MT of CO_2e in 2021 and 274 MT of CO_2e in 2030. The 2030 net GHG emissions would not exceed the 2030 "Substantial Progress" threshold of 660 MT of CO_2e/yr. The service population emissions would be 13.4 for the year 2021 and 11.1 for the year

2030. The 2030 service population emissions would exceed the "Substantial Progress" efficiency metric of 2.6 MT CO_2e/year/service population.

To be considered significant, the project must exceed both the GHG significance threshold in metric tons per year and the service population significance threshold. The proposed project would not exceed the "Substantial Progress" threshold of 660 MT of CO_2e/yr. Therefore, the project would have a *less-than-significant* impact regarding GHG emissions.

Table 43 Annual Project GHG Emissions (CO_2e) in Metric Tons

Source Category	Existing in 2021	Proposed Project in 2021	Proposed Project in 2030
Area	<1	<1	<1
Energy Consumption	27	88	88
Mobile	172	456	357
Solid Waste Generation	4	30	30
Water Usage	2	4	4
Total	205	578	479
Net New Emissions		*373*	*274*
Bright-Line Significance Threshold		**1,100**	**660**
Service Population Emissions		*13.4*	*11.1*
SP Significance Threshold		**4.6**	**2.6**
Significant (Exceeds Both)?		***No***	***No***

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 and operational air quality and GHG emissions. The operational output for existing uses and 2030 project uses are also included in this attachment. Also included are any modeling assumptions.

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 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.[11] 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.[12] 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.[13] Exposure parameters from the OEHHA guidelines and the recent BAAQMD HRA Guidelines were used in this evaluation.

Cancer Risk

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

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

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[11] 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.

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

[13] 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:

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

Where:

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

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

Where:

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

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

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

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

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 ($\mu g/m^3$).

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

18-155 2905 Senter Road, San Jose - Santa Clara County, Annual

18-155 2905 Senter Road, San Jose

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	3.93	1000sqft	0.09	3,934.00	0
Parking Lot	70.00	Space	0.81	28,000.00	0
High Turnover (Sit Down Restaurant)	4.20	1000sqft	0.10	4,200.00	0
Strip Mall	5.96	1000sqft	0.14	5,956.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	290	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E Co2 2020 rate = 290

Land Use - Applicant provided land use

Construction Phase - Default Construction Schedule

Off-road Equipment - Default Construction Equipment

Trips and VMT - 40,000sf existing pavement = 90 one-way Pavement Demo trips = 90+32= 122

Demolition - Demo Existing Building - 7,000sf

Vehicle Trips - office = 10.42, 2.32, 1.00 Rest = 172.86, 215.30, 179.24 Retail = 21.50, 20.40, 9.91

Water And Wastewater - WTP treatment 100% aerobic

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblLandUse	LandUseSquareFeet	3,930.00	3,934.00
tblLandUse	LandUseSquareFeet	5,960.00	5,956.00
tblLandUse	LotAcreage	0.63	0.81
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblTripsAndVMT	HaulingTripNumber	32.00	122.00
tblVehicleTrips	ST_TR	2.46	2.32
tblVehicleTrips	ST_TR	158.37	215.30
tblVehicleTrips	ST_TR	42.04	20.40
tblVehicleTrips	SU_TR	1.05	1.00
tblVehicleTrips	SU_TR	131.84	179.24
tblVehicleTrips	SU_TR	20.43	9.91
tblVehicleTrips	WD_TR	11.03	10.42
tblVehicleTrips	WD_TR	127.15	172.86
tblVehicleTrips	WD_TR	44.32	21.50
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	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	0.1778	1.3631	1.0727	1.9400e-003	0.0327	0.0735	0.1062	0.0122	0.0704	0.0827	0.0000	165.7337	165.7337	0.0300	0.0000	166.4823
2020	0.1643	0.6290	0.5671	1.0200e-003	7.3300e-003	0.0325	0.0399	1.9900e-003	0.0313	0.0333	0.0000	85.9237	85.9237	0.0149	0.0000	86.2952
Maximum	**0.1778**	**1.3631**	**1.0727**	**1.9400e-003**	**0.0327**	**0.0735**	**0.1062**	**0.0122**	**0.0704**	**0.0827**	**0.0000**	**165.7337**	**165.7337**	**0.0300**	**0.0000**	**166.4823**

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	0.1778	1.3631	1.0727	1.9400e-003	0.0327	0.0735	0.1062	0.0122	0.0704	0.0827	0.0000	165.7335	165.7335	0.0300	0.0000	166.4822
2020	0.1643	0.6290	0.5671	1.0200e-003	7.3300e-003	0.0325	0.0399	1.9900e-003	0.0313	0.0333	0.0000	85.9236	85.9236	0.0149	0.0000	86.2952
Maximum	**0.1778**	**1.3631**	**1.0727**	**1.9400e-003**	**0.0327**	**0.0735**	**0.1062**	**0.0122**	**0.0704**	**0.0827**	**0.0000**	**165.7335**	**165.7335**	**0.0300**	**0.0000**	**166.4822**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-3-2019	9-2-2019	0.7035	0.7035
2	9-3-2019	12-2-2019	0.6267	0.6267
3	12-3-2019	3-2-2020	0.5928	0.5928
4	3-3-2020	6-2-2020	0.4031	0.4031
		Highest	0.7035	0.7035

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	0.0648	1.0000e-005	7.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5000e-003	1.5000e-003	0.0000	0.0000	1.6000e-003
Energy	5.1300e-003	0.0467	0.0392	2.8000e-004		3.5500e-003	3.5500e-003		3.5500e-003	3.5500e-003	0.0000	87.7497	87.7497	4.6700e-003	1.7000e-003	88.3718
Mobile	0.1912	0.7033	1.7535	4.9700e-003	0.4207	4.5200e-003	0.4252	0.1126	4.2200e-003	0.1168	0.0000	455.3213	455.3213	0.0185	0.0000	455.7845
Waste						0.0000	0.0000		0.0000	0.0000	12.1571	0.0000	12.1571	0.7185	0.0000	30.1188
Water						0.0000	0.0000		0.0000	0.0000	0.8544	2.0779	2.9323	3.1500e-003	1.9000e-003	3.5775
Total	**0.2612**	**0.7499**	**1.7935**	**5.2500e-003**	**0.4207**	**8.0700e-003**	**0.4288**	**0.1126**	**7.7700e-003**	**0.1204**	**13.0115**	**545.1504**	**558.1619**	**0.7448**	**3.6000e-003**	**577.8542**

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	0.0648	1.0000e-005	7.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5000e-003	1.5000e-003	0.0000	0.0000	1.6000e-003
Energy	5.1300e-003	0.0467	0.0392	2.8000e-004		3.5500e-003	3.5500e-003		3.5500e-003	3.5500e-003	0.0000	87.7497	87.7497	4.6700e-003	1.7000e-003	88.3718
Mobile	0.1912	0.7033	1.7535	4.9700e-003	0.4207	4.5200e-003	0.4252	0.1126	4.2200e-003	0.1168	0.0000	455.3213	455.3213	0.0185	0.0000	455.7845
Waste						0.0000	0.0000		0.0000	0.0000	12.1571	0.0000	12.1571	0.7185	0.0000	30.1188
Water						0.0000	0.0000		0.0000	0.0000	0.8544	2.0779	2.9323	3.1500e-003	1.9000e-003	3.5775
Total	**0.2612**	**0.7499**	**1.7935**	**5.2500e-003**	**0.4207**	**8.0700e-003**	**0.4288**	**0.1126**	**7.7700e-003**	**0.1204**	**13.0115**	**545.1504**	**558.1619**	**0.7448**	**3.6000e-003**	**577.8542**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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	6/3/2019	6/28/2019	5	20	
2	Site Preparation	Site Preparation	6/29/2019	7/2/2019	5	2	
3	Grading	Grading	7/3/2019	7/8/2019	5	4	
4	Building Construction	Building Construction	7/9/2019	4/13/2020	5	200	
5	Paving	Paving	4/14/2020	4/27/2020	5	10	
6	Architectural Coating	Architectural Coating	4/28/2020	5/11/2020	5	10	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 0.81

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 21,135; Non-Residential Outdoor: 7,045; 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	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	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	5	13.00	0.00	122.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	17.00	7.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

Architectural Coating	1	3.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

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					3.4500e-003	0.0000	3.4500e-003	5.2000e-004	0.0000	5.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0230	0.2268	0.1489	2.4000e-004		0.0129	0.0129		0.0120	0.0120	0.0000	21.4161	21.4161	5.4500e-003	0.0000	21.5524
Total	**0.0230**	**0.2268**	**0.1489**	**2.4000e-004**	**3.4500e-003**	**0.0129**	**0.0163**	**5.2000e-004**	**0.0120**	**0.0125**	**0.0000**	**21.4161**	**21.4161**	**5.4500e-003**	**0.0000**	**21.5524**

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	5.5000e-004	0.0190	3.7500e-003	5.0000e-005	1.0300e-003	7.0000e-005	1.1100e-003	2.8000e-004	7.0000e-005	3.5000e-004	0.0000	4.7009	4.7009	2.2000e-004	0.0000	4.7064
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	4.7000e-004	3.5000e-004	3.6300e-003	1.0000e-005	1.0300e-003	1.0000e-005	1.0400e-003	2.7000e-004	1.0000e-005	2.8000e-004	0.0000	0.9127	0.9127	2.0000e-005	0.0000	0.9133
Total	**1.0200e-003**	**0.0193**	**7.3800e-003**	**6.0000e-005**	**2.0600e-003**	**8.0000e-005**	**2.1500e-003**	**5.5000e-004**	**8.0000e-005**	**6.3000e-004**	**0.0000**	**5.6136**	**5.6136**	**2.4000e-004**	**0.0000**	**5.6198**

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					3.4500e-003	0.0000	3.4500e-003	5.2000e-004	0.0000	5.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0230	0.2268	0.1489	2.4000e-004		0.0129	0.0129		0.0120	0.0120	0.0000	21.4161	21.4161	5.4500e-003	0.0000	21.5524
Total	**0.0230**	**0.2268**	**0.1489**	**2.4000e-004**	**3.4500e-003**	**0.0129**	**0.0163**	**5.2000e-004**	**0.0120**	**0.0125**	**0.0000**	**21.4161**	**21.4161**	**5.4500e-003**	**0.0000**	**21.5524**

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	5.5000e-004	0.0190	3.7500e-003	5.0000e-005	1.0300e-003	7.0000e-005	1.1100e-003	2.8000e-004	7.0000e-005	3.5000e-004	0.0000	4.7009	4.7009	2.2000e-004	0.0000	4.7064
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	4.7000e-004	3.5000e-004	3.6300e-003	1.0000e-005	1.0300e-003	1.0000e-005	1.0400e-003	2.7000e-004	1.0000e-005	2.8000e-004	0.0000	0.9127	0.9127	2.0000e-005	0.0000	0.9133
Total	**1.0200e-003**	**0.0193**	**7.3800e-003**	**6.0000e-005**	**2.0600e-003**	**8.0000e-005**	**2.1500e-003**	**5.5000e-004**	**8.0000e-005**	**6.3000e-004**	**0.0000**	**5.6136**	**5.6136**	**2.4000e-004**	**0.0000**	**5.6198**

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					5.8000e-003	0.0000	5.8000e-003	2.9500e-003	0.0000	2.9500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7100e-003	0.0195	7.8900e-003	2.0000e-005		8.8000e-004	8.8000e-004		8.1000e-004	8.1000e-004	0.0000	1.5467	1.5467	4.9000e-004	0.0000	1.5589
Total	**1.7100e-003**	**0.0195**	**7.8900e-003**	**2.0000e-005**	**5.8000e-003**	**8.8000e-004**	**6.6800e-003**	**2.9500e-003**	**8.1000e-004**	**3.7600e-003**	**0.0000**	**1.5467**	**1.5467**	**4.9000e-004**	**0.0000**	**1.5589**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	2.0000e-005	2.2000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0562	0.0562	0.0000	0.0000	0.0562
Total	**3.0000e-005**	**2.0000e-005**	**2.2000e-004**	**0.0000**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0562**	**0.0562**	**0.0000**	**0.0000**	**0.0562**

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					5.8000e-003	0.0000	5.8000e-003	2.9500e-003	0.0000	2.9500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7100e-003	0.0195	7.8900e-003	2.0000e-005		8.8000e-004	8.8000e-004		8.1000e-004	8.1000e-004	0.0000	1.5467	1.5467	4.9000e-004	0.0000	1.5589

Total	**1.7100e-003**	**0.0195**	**7.8900e-003**	**2.0000e-005**	**5.8000e-003**	**8.8000e-004**	**6.6800e-003**	**2.9500e-003**	**8.1000e-004**	**3.7600e-003**	**0.0000**	**1.5467**	**1.5467**	**4.9000e-004**	**0.0000**	**1.5589**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	2.0000e-005	2.2000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0562	0.0562	0.0000	0.0000	0.0562
Total	**3.0000e-005**	**2.0000e-005**	**2.2000e-004**	**0.0000**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0562**	**0.0562**	**0.0000**	**0.0000**	**0.0562**

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					9.8300e-003	0.0000	9.8300e-003	5.0500e-003	0.0000	5.0500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.8400e-003	0.0321	0.0132	3.0000e-005		1.4700e-003	1.4700e-003		1.3600e-003	1.3600e-003	0.0000	2.5336	2.5336	8.0000e-004	0.0000	2.5536
Total	**2.8400e-003**	**0.0321**	**0.0132**	**3.0000e-005**	**9.8300e-003**	**1.4700e-003**	**0.0113**	**5.0500e-003**	**1.3600e-003**	**6.4100e-003**	**0.0000**	**2.5336**	**2.5336**	**8.0000e-004**	**0.0000**	**2.5536**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	4.0000e-005	4.5000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1123	0.1123	0.0000	0.0000	0.1124
Total	**6.0000e-005**	**4.0000e-005**	**4.5000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.1123**	**0.1123**	**0.0000**	**0.0000**	**0.1124**

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					9.8300e-003	0.0000	9.8300e-003	5.0500e-003	0.0000	5.0500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.8400e-003	0.0321	0.0132	3.0000e-005		1.4700e-003	1.4700e-003		1.3600e-003	1.3600e-003	0.0000	2.5336	2.5336	8.0000e-004	0.0000	2.5536
Total	**2.8400e-003**	**0.0321**	**0.0132**	**3.0000e-005**	**9.8300e-003**	**1.4700e-003**	**0.0113**	**5.0500e-003**	**1.3600e-003**	**6.4100e-003**	**0.0000**	**2.5336**	**2.5336**	**8.0000e-004**	**0.0000**	**2.5536**

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	4.0000e-005	4.5000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1123	0.1123	0.0000	0.0000	0.1124
Total	**6.0000e-005**	**4.0000e-005**	**4.5000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.1123**	**0.1123**	**0.0000**	**0.0000**	**0.1124**

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	0.1431	1.0068	0.8497	1.3900e-003		0.0577	0.0577		0.0557	0.0557	0.0000	115.3353	115.3353	0.0222	0.0000	115.8896
Total	**0.1431**	**1.0068**	**0.8497**	**1.3900e-003**		**0.0577**	**0.0577**		**0.0557**	**0.0557**	**0.0000**	**115.3353**	**115.3353**	**0.0222**	**0.0000**	**115.8896**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1600e-003	0.0557	0.0150	1.2000e-004	2.9000e-003	4.0000e-004	3.3000e-003	8.4000e-004	3.8000e-004	1.2200e-003	0.0000	11.6006	11.6006	5.8000e-004	0.0000	11.6150
Worker	3.8900e-003	2.9000e-003	0.0299	8.0000e-005	8.4900e-003	6.0000e-005	8.5500e-003	2.2600e-003	5.0000e-005	2.3100e-003	0.0000	7.5193	7.5193	2.0000e-004	0.0000	7.5244

Total	**6.0500e-003**	**0.0586**	**0.0449**	**2.0000e-004**	**0.0114**	**4.6000e-004**	**0.0119**	**3.1000e-003**	**4.3000e-004**	**3.5300e-003**	**0.0000**	**19.1199**	**19.1199**	**7.8000e-004**	**0.0000**	**19.1394**

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	0.1431	1.0068	0.8497	1.3900e-003		0.0577	0.0577		0.0557	0.0557	0.0000	115.3352	115.3352	0.0222	0.0000	115.8895
Total	**0.1431**	**1.0068**	**0.8497**	**1.3900e-003**		**0.0577**	**0.0577**		**0.0557**	**0.0557**	**0.0000**	**115.3352**	**115.3352**	**0.0222**	**0.0000**	**115.8895**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1600e-003	0.0557	0.0150	1.2000e-004	2.9000e-003	4.0000e-004	3.3000e-003	8.4000e-004	3.8000e-004	1.2200e-003	0.0000	11.6006	11.6006	5.8000e-004	0.0000	11.6150
Worker	3.8900e-003	2.9000e-003	0.0299	8.0000e-005	8.4900e-003	6.0000e-005	8.5500e-003	2.2600e-003	5.0000e-005	2.3100e-003	0.0000	7.5193	7.5193	2.0000e-004	0.0000	7.5244
Total	**6.0500e-003**	**0.0586**	**0.0449**	**2.0000e-004**	**0.0114**	**4.6000e-004**	**0.0119**	**3.1000e-003**	**4.3000e-004**	**3.5300e-003**	**0.0000**	**19.1199**	**19.1199**	**7.8000e-004**	**0.0000**	**19.1394**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0751	0.5472	0.4880	8.2000e-004		0.0295	0.0295		0.0285	0.0285	0.0000	67.1706	67.1706	0.0125	0.0000	67.4823
Total	**0.0751**	**0.5472**	**0.4880**	**8.2000e-004**		**0.0295**	**0.0295**		**0.0285**	**0.0285**	**0.0000**	**67.1706**	**67.1706**	**0.0125**	**0.0000**	**67.4823**

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	1.0300e-003	0.0295	7.8500e-003	7.0000e-005	1.7000e-003	1.5000e-004	1.8500e-003	4.9000e-004	1.4000e-004	6.3000e-004	0.0000	6.7714	6.7714	3.1000e-004	0.0000	6.7791
Worker	2.0900e-003	1.5000e-003	0.0157	5.0000e-005	4.9900e-003	3.0000e-005	5.0200e-003	1.3300e-003	3.0000e-005	1.3600e-003	0.0000	4.2781	4.2781	1.0000e-004	0.0000	4.2808
Total	**3.1200e-003**	**0.0310**	**0.0236**	**1.2000e-004**	**6.6900e-003**	**1.8000e-004**	**6.8700e-003**	**1.8200e-003**	**1.7000e-004**	**1.9900e-003**	**0.0000**	**11.0495**	**11.0495**	**4.1000e-004**	**0.0000**	**11.0599**

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	0.0751	0.5472	0.4880	8.2000e-004		0.0295	0.0295		0.0285	0.0285	0.0000	67.1705	67.1705	0.0125	0.0000	67.4822
Total	**0.0751**	**0.5472**	**0.4880**	**8.2000e-004**		**0.0295**	**0.0295**		**0.0285**	**0.0285**	**0.0000**	**67.1705**	**67.1705**	**0.0125**	**0.0000**	**67.4822**

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	1.0300e-003	0.0295	7.8500e-003	7.0000e-005	1.7000e-003	1.5000e-004	1.8500e-003	4.9000e-004	1.4000e-004	6.3000e-004	0.0000	6.7714	6.7714	3.1000e-004	0.0000	6.7791
Worker	2.0900e-003	1.5000e-003	0.0157	5.0000e-005	4.9900e-003	3.0000e-005	5.0200e-003	1.3300e-003	3.0000e-005	1.3600e-003	0.0000	4.2781	4.2781	1.0000e-004	0.0000	4.2808
Total	**3.1200e-003**	**0.0310**	**0.0236**	**1.2000e-004**	**6.6900e-003**	**1.8000e-004**	**6.8700e-003**	**1.8200e-003**	**1.7000e-004**	**1.9900e-003**	**0.0000**	**11.0495**	**11.0495**	**4.1000e-004**	**0.0000**	**11.0599**

3.6 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.2000e-003	0.0423	0.0444	7.0000e-005		2.3500e-003	2.3500e-003		2.1600e-003	2.1600e-003	0.0000	5.8829	5.8829	1.8600e-003	0.0000	5.9295
Paving	1.0600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.2600e-003**	**0.0423**	**0.0444**	**7.0000e-005**		**2.3500e-003**	**2.3500e-003**		**2.1600e-003**	**2.1600e-003**	**0.0000**	**5.8829**	**5.8829**	**1.8600e-003**	**0.0000**	**5.9295**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2000e-004	1.6000e-004	1.6300e-003	0.0000	5.2000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4421	0.4421	1.0000e-005	0.0000	0.4424
Total	**2.2000e-004**	**1.6000e-004**	**1.6300e-003**	**0.0000**	**5.2000e-004**	**0.0000**	**5.2000e-004**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**0.4421**	**0.4421**	**1.0000e-005**	**0.0000**	**0.4424**

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	4.2000e-003	0.0423	0.0444	7.0000e-005		2.3500e-003	2.3500e-003		2.1600e-003	2.1600e-003	0.0000	5.8828	5.8828	1.8600e-003	0.0000	5.9295
Paving	1.0600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.2600e-003**	**0.0423**	**0.0444**	**7.0000e-005**		**2.3500e-003**	**2.3500e-003**		**2.1600e-003**	**2.1600e-003**	**0.0000**	**5.8828**	**5.8828**	**1.8600e-003**	**0.0000**	**5.9295**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2000e-004	1.6000e-004	1.6300e-003	0.0000	5.2000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4421	0.4421	1.0000e-005	0.0000	0.4424
Total	**2.2000e-004**	**1.6000e-004**	**1.6300e-003**	**0.0000**	**5.2000e-004**	**0.0000**	**5.2000e-004**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**0.4421**	**0.4421**	**1.0000e-005**	**0.0000**	**0.4424**

3.7 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0793					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.2100e-003	8.4200e-003	9.1600e-003	1.0000e-005		5.5000e-004	5.5000e-004		5.5000e-004	5.5000e-004	0.0000	1.2766	1.2766	1.0000e-004	0.0000	1.2791
Total	**0.0805**	**8.4200e-003**	**9.1600e-003**	**1.0000e-005**		**5.5000e-004**	**5.5000e-004**		**5.5000e-004**	**5.5000e-004**	**0.0000**	**1.2766**	**1.2766**	**1.0000e-004**	**0.0000**	**1.2791**

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	3.8000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1020	0.1020	0.0000	0.0000	0.1021
Total	**5.0000e-005**	**4.0000e-005**	**3.8000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.1020**	**0.1020**	**0.0000**	**0.0000**	**0.1021**

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	0.0793					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.2100e-003	8.4200e-003	9.1600e-003	1.0000e-005		5.5000e-004	5.5000e-004		5.5000e-004	5.5000e-004	0.0000	1.2766	1.2766	1.0000e-004	0.0000	1.2791
Total	**0.0805**	**8.4200e-003**	**9.1600e-003**	**1.0000e-005**		**5.5000e-004**	**5.5000e-004**		**5.5000e-004**	**5.5000e-004**	**0.0000**	**1.2766**	**1.2766**	**1.0000e-004**	**0.0000**	**1.2791**

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	3.8000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1020	0.1020	0.0000	0.0000	0.1021
Total	**5.0000e-005**	**4.0000e-005**	**3.8000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.1020**	**0.1020**	**0.0000**	**0.0000**	**0.1021**

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	0.1912	0.7033	1.7535	4.9700e-003	0.4207	4.5200e-003	0.4252	0.1126	4.2200e-003	0.1168	0.0000	455.3213	455.3213	0.0185	0.0000	455.7845
Unmitigated	0.1912	0.7033	1.7535	4.9700e-003	0.4207	4.5200e-003	0.4252	0.1126	4.2200e-003	0.1168	0.0000	455.3213	455.3213	0.0185	0.0000	455.7845

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	40.95	9.12	3.93	74,356	74,356
High Turnover (Sit Down Restaurant)	726.01	904.26	752.81	876,352	876,352
Parking Lot	0.00	0.00	0.00		
Strip Mall	128.14	121.58	59.06	180,700	180,700
Total	895.10	1,034.96	815.80	1,131,408	1,131,408

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
High Turnover (Sit Down Restaurant)	9.50	7.30	7.30	8.50	72.50	19.00	37	20	43
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.607897	0.037434	0.184004	0.107261	0.014919	0.004991	0.012447	0.020659	0.002115	0.001554	0.005334	0.000623	0.000761
High Turnover (Sit Down Restaurant)	0.607897	0.037434	0.184004	0.107261	0.014919	0.004991	0.012447	0.020659	0.002115	0.001554	0.005334	0.000623	0.000761
Parking Lot	0.607897	0.037434	0.184004	0.107261	0.014919	0.004991	0.012447	0.020659	0.002115	0.001554	0.005334	0.000623	0.000761
Strip Mall	0.607897	0.037434	0.184004	0.107261	0.014919	0.004991	0.012447	0.020659	0.002115	0.001554	0.005334	0.000623	0.000761

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	36.9681	36.9681	3.7000e-003	7.6000e-004	37.2884
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	36.9681	36.9681	3.7000e-003	7.6000e-004	37.2884
NaturalGas Mitigated	5.1300e-003	0.0467	0.0392	2.8000e-004		3.5500e-003	3.5500e-003		3.5500e-003	3.5500e-003	0.0000	50.7816	50.7816	9.7000e-004	9.3000e-004	51.0834
NaturalGas Unmitigated	5.1300e-003	0.0467	0.0392	2.8000e-004		3.5500e-003	3.5500e-003		3.5500e-003	3.5500e-003	0.0000	50.7816	50.7816	9.7000e-004	9.3000e-004	51.0834

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	64399.6	3.5000e-004	3.1600e-003	2.6500e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	3.4366	3.4366	7.0000e-005	6.0000e-005	3.4570
High Turnover (Sit Down Restaurant)	873096	4.7100e-003	0.0428	0.0360	2.6000e-004		3.2500e-003	3.2500e-003		3.2500e-003	3.2500e-003	0.0000	46.5917	46.5917	8.9000e-004	8.5000e-004	46.8686
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	14115.7	8.0000e-005	6.9000e-004	5.8000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.7533	0.7533	1.0000e-005	1.0000e-005	0.7577
Total		**5.1400e-003**	**0.0467**	**0.0392**	**2.8000e-004**		**3.5400e-003**	**3.5400e-003**		**3.5400e-003**	**3.5400e-003**	**0.0000**	**50.7816**	**50.7816**	**9.7000e-004**	**9.2000e-004**	**51.0834**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	64399.6	3.5000e-004	3.1600e-003	2.6500e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	3.4366	3.4366	7.0000e-005	6.0000e-005	3.4570
High Turnover (Sit Down Restaurant)	873096	4.7100e-003	0.0428	0.0360	2.6000e-004		3.2500e-003	3.2500e-003		3.2500e-003	3.2500e-003	0.0000	46.5917	46.5917	8.9000e-004	8.5000e-004	46.8686
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	14115.7	8.0000e-005	6.9000e-004	5.8000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.7533	0.7533	1.0000e-005	1.0000e-005	0.7577
Total		**5.1400e-003**	**0.0467**	**0.0392**	**2.8000e-004**		**3.5400e-003**	**3.5400e-003**		**3.5400e-003**	**3.5400e-003**	**0.0000**	**50.7816**	**50.7816**	**9.7000e-004**	**9.2000e-004**	**51.0834**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e

Land Use	kWh/yr	MT/yr			
General Office Building	70143.2	9.2268	9.2000e-004	1.9000e-004	9.3067
High Turnover (Sit Down Restaurant)	137424	18.0770	1.8100e-003	3.7000e-004	18.2337
Parking Lot	9800	1.2891	1.3000e-004	3.0000e-005	1.3003
Strip Mall	63669.6	8.3752	8.4000e-004	1.7000e-004	8.4478
Total		**36.9681**	**3.7000e-003**	**7.6000e-004**	**37.2884**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	70143.2	9.2268	9.2000e-004	1.9000e-004	9.3067
High Turnover (Sit Down Restaurant)	137424	18.0770	1.8100e-003	3.7000e-004	18.2337
Parking Lot	9800	1.2891	1.3000e-004	3.0000e-005	1.3003
Strip Mall	63669.6	8.3752	8.4000e-004	1.7000e-004	8.4478
Total		**36.9681**	**3.7000e-003**	**7.6000e-004**	**37.2884**

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	0.0648	1.0000e-005	7.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5000e-003	1.5000e-003	0.0000	0.0000	1.6000e-003
Unmitigated	0.0648	1.0000e-005	7.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5000e-003	1.5000e-003	0.0000	0.0000	1.6000e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	7.9300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0568					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	7.0000e-005	1.0000e-005	7.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5000e-003	1.5000e-003	0.0000	0.0000	1.6000e-003
Total	**0.0648**	**1.0000e-005**	**7.8000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.5000e-003**	**1.5000e-003**	**0.0000**	**0.0000**	**1.6000e-003**

Mitigated

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

SubCategory	tons/yr										MT/yr					
Architectural Coating	7.9300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0568					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	7.0000e-005	1.0000e-005	7.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5000e-003	1.5000e-003	0.0000	0.0000	1.6000e-003
Total	**0.0648**	**1.0000e-005**	**7.8000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.5000e-003**	**1.5000e-003**	**0.0000**	**0.0000**	**1.6000e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	2.9323	3.1500e-003	1.9000e-003	3.5775
Unmitigated	2.9323	3.1500e-003	1.9000e-003	3.5775

7.2 Water by Land Use

Unmitigated

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

General Office Building	0.698494 / 0.428109	0.9414	9.2000e-004	5.5000e-004	1.1288
High Turnover (Sit Down Restaurant)	1.27484 / 0.0813729	1.3959	1.6500e-003	1.0000e-003	1.7352
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.441472 / 0.27058	0.5950	5.8000e-004	3.5000e-004	0.7135
Total		**2.9323**	**3.1500e-003**	**1.9000e-003**	**3.5775**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	0.698494 / 0.428109	0.9414	9.2000e-004	5.5000e-004	1.1288
High Turnover (Sit Down Restaurant)	1.27484 / 0.0813729	1.3959	1.6500e-003	1.0000e-003	1.7352
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.441472 / 0.27058	0.5950	5.8000e-004	3.5000e-004	0.7135
Total		**2.9323**	**3.1500e-003**	**1.9000e-003**	**3.5775**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	12.1571	0.7185	0.0000	30.1188
Unmitigated	12.1571	0.7185	0.0000	30.1188

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	3.65	0.7409	0.0438	0.0000	1.8356
High Turnover (Sit Down Restaurant)	49.98	10.1455	0.5996	0.0000	25.1350
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	6.26	1.2707	0.0751	0.0000	3.1482
Total		**12.1571**	**0.7185**	**0.0000**	**30.1188**

Mitigated

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

General Office Building	3.65	0.7409	0.0438	0.0000	1.8356
High Turnover (Sit Down Restaurant)	49.98	10.1455	0.5996	0.0000	25.1350
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	6.26	1.2707	0.0751	0.0000	3.1482
Total		**12.1571**	**0.7185**	**0.0000**	**30.1188**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

18-155 2905 Senter Road, San Jose - Existing

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Strip Mall	7.00	1000sqft	0.16	7,000.00	0
Parking Lot	0.89	Acre	0.89	38,768.40	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Existing Land Use

Construction Phase - Existing Land Use

Off-road Equipment - Existing no equip

Grading - Existing land use

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	2.00	1.00

tblConstructionPhase	PhaseEndDate	6/4/2019	6/3/2019
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	7.00	0.00
tblTripsAndVMT	WorkerTripNumber	0.00	8.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0343	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4000e-004	1.4000e-004	0.0000	0.0000	1.5000e-004
Energy	9.0000e-005	8.1000e-004	6.8000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	26.6016	26.6016	1.1800e-003	2.6000e-004	26.7076
Mobile	0.0631	0.2417	0.6268	1.8800e-003	0.1627	1.6800e-003	0.1644	0.0436	1.5700e-003	0.0451	0.0000	172.1156	172.1156	6.6100e-003	0.0000	172.2809
Waste						0.0000	0.0000		0.0000	0.0000	1.4920	0.0000	1.4920	0.0882	0.0000	3.6963
Water						0.0000	0.0000		0.0000	0.0000	0.1645	1.1398	1.3043	0.0170	4.1000e-004	1.8500
Total	**0.0975**	**0.2425**	**0.6276**	**1.8800e-003**	**0.1627**	**1.7400e-003**	**0.1644**	**0.0436**	**1.6300e-003**	**0.0452**	**1.6565**	**199.8570**	**201.5135**	**0.1129**	**6.7000e-004**	**204.5350**

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	0.0343	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4000e-004	1.4000e-004	0.0000	0.0000	1.5000e-004
Energy	9.0000e-005	8.1000e-004	6.8000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	26.6016	26.6016	1.1800e-003	2.6000e-004	26.7076
Mobile	0.0631	0.2417	0.6268	1.8800e-003	0.1627	1.6800e-003	0.1644	0.0436	1.5700e-003	0.0451	0.0000	172.1156	172.1156	6.6100e-003	0.0000	172.2809
Waste						0.0000	0.0000		0.0000	0.0000	1.4920	0.0000	1.4920	0.0882	0.0000	3.6963
Water						0.0000	0.0000		0.0000	0.0000	0.1645	1.1398	1.3043	0.0170	4.1000e-004	1.8500
Total	**0.0975**	**0.2425**	**0.6276**	**1.8800e-003**	**0.1627**	**1.7400e-003**	**0.1644**	**0.0436**	**1.6300e-003**	**0.0452**	**1.6565**	**199.8570**	**201.5135**	**0.1129**	**6.7000e-004**	**204.5350**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0631	0.2417	0.6268	1.8800e-003	0.1627	1.6800e-003	0.1644	0.0436	1.5700e-003	0.0451	0.0000	172.1156	172.1156	6.6100e-003	0.0000	172.2809

Unmitigated	0.0631	0.2417	0.6268	1.8800e-003	0.1627	1.6800e-003	0.1644	0.0436	1.5700e-003	0.0451	0.0000	172.1156	172.1156	6.6100e-003	0.0000	172.2809

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Strip Mall	310.24	294.28	143.01	437,477	437,477
Total	310.24	294.28	143.01	437,477	437,477

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-...	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.607897	0.037434	0.184004	0.107261	0.014919	0.004991	0.012447	0.020659	0.002115	0.001554	0.005334	0.000623	0.000761
Strip Mall	0.607897	0.037434	0.184004	0.107261	0.014919	0.004991	0.012447	0.020659	0.002115	0.001554	0.005334	0.000623	0.000761

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	25.7163	25.7163	1.1600e-003	2.4000e-004	25.8170
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	25.7163	25.7163	1.1600e-003	2.4000e-004	25.8170
NaturalGas Mitigated	9.0000e-005	8.1000e-004	6.8000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.8853	0.8853	2.0000e-005	2.0000e-005	0.8906
NaturalGas Unmitigated	9.0000e-005	8.1000e-004	6.8000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.8853	0.8853	2.0000e-005	2.0000e-005	0.8906

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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	16590	9.0000e-005	8.1000e-004	6.8000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.8853	0.8853	2.0000e-005	2.0000e-005	0.8906
Total		**9.0000e-005**	**8.1000e-004**	**6.8000e-004**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**	**0.0000**	**0.8853**	**0.8853**	**2.0000e-005**	**2.0000e-005**	**0.8906**

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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	16590	9.0000e-005	8.1000e-004	6.8000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.8853	0.8853	2.0000e-005	2.0000e-005	0.8906

Total		**9.0000e-005**	**8.1000e-004**	**6.8000e-004**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**	**0.0000**	**0.8853**	**0.8853**	**2.0000e-005**	**2.0000e-005**	**0.8906**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	13568.9	3.9474	1.8000e-004	4.0000e-005	3.9628
Strip Mall	74830	21.7689	9.8000e-004	2.0000e-004	21.8542
Total		**25.7163**	**1.1600e-003**	**2.4000e-004**	**25.8170**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	13568.9	3.9474	1.8000e-004	4.0000e-005	3.9628
Strip Mall	74830	21.7689	9.8000e-004	2.0000e-004	21.8542
Total		**25.7163**	**1.1600e-003**	**2.4000e-004**	**25.8170**

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	0.0343	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4000e-004	1.4000e-004	0.0000	0.0000	1.5000e-004
Unmitigated	0.0343	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4000e-004	1.4000e-004	0.0000	0.0000	1.5000e-004

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	4.4600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0298					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	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4000e-004	1.4000e-004	0.0000	0.0000	1.5000e-004
Total	**0.0343**	**0.0000**	**7.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.4000e-004**	**1.4000e-004**	**0.0000**	**0.0000**	**1.5000e-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	4.4600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0298					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	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4000e-004	1.4000e-004	0.0000	0.0000	1.5000e-004
Total	**0.0343**	**0.0000**	**7.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.4000e-004**	**1.4000e-004**	**0.0000**	**0.0000**	**1.5000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1.3043	0.0170	4.1000e-004	1.8500
Unmitigated	1.3043	0.0170	4.1000e-004	1.8500

7.2 Water by Land Use

Unmitigated

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

Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.518508 / 0.317795	1.3043	0.0170	4.1000e-004	1.8500
Total		**1.3043**	**0.0170**	**4.1000e-004**	**1.8500**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.518508 / 0.317795	1.3043	0.0170	4.1000e-004	1.8500
Total		**1.3043**	**0.0170**	**4.1000e-004**	**1.8500**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	1.4920	0.0882	0.0000	3.6963
Unmitigated	1.4920	0.0882	0.0000	3.6963

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	7.35	1.4920	0.0882	0.0000	3.6963
Total		**1.4920**	**0.0882**	**0.0000**	**3.6963**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	7.35	1.4920	0.0882	0.0000	3.6963
Total		**1.4920**	**0.0882**	**0.0000**	**3.6963**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

18-155 2905 Senter Road, San Jose - Construction - Santa Clara County, Annual

18-155 2905 Senter Road, San Jose - Construction

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	3.93	1000sqft	0.09	3,934.00	0
Parking Lot	70.00	Space	0.81	28,000.00	0
High Turnover (Sit Down Restaurant)	4.20	1000sqft	0.10	4,200.00	0
Strip Mall	5.96	1000sqft	0.14	5,956.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	290	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E Co2 2020 rate = 290

Land Use - Applicant provided land use

Construction Phase - Default Construction Schedule

Off-road Equipment - Default Construction Equipment

Trips and VMT - 1 Mile Trips, 40,000sf existing pavement = 90 one-way Pavement Demo trips = 90+32= 122

Demolition - Demo Existing Building - 7,000sf

Vehicle Trips - office = 10.42, 2.32, 1.00 Rest = 172.86, 215.30, 179.24 Retail = 21.50, 20.40, 9.91

Water And Wastewater - WTP treatment 100% aerobic

Construction Off-road Equipment Mitigation - BMPs, Tier 4 interim mitigation

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
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	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim

tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblLandUse	LandUseSquareFeet	3,930.00	3,934.00
tblLandUse	LandUseSquareFeet	5,960.00	5,956.00
tblLandUse	LotAcreage	0.63	0.81
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	HaulingTripNumber	32.00	122.00
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	2.46	2.32
tblVehicleTrips	ST_TR	158.37	215.30
tblVehicleTrips	ST_TR	42.04	20.40
tblVehicleTrips	SU_TR	1.05	1.00
tblVehicleTrips	SU_TR	131.84	179.24
tblVehicleTrips	SU_TR	20.43	9.91

tblVehicleTrips	WD_TR	11.03	10.42
tblVehicleTrips	WD_TR	127.15	172.86
tblVehicleTrips	WD_TR	44.32	21.50
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	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	0.1733	1.3234	1.0388	1.7300e-003	0.0204	0.0730	0.0935	8.9000e-003	0.0700	0.0789	0.0000	146.1862	146.1862	0.0294	0.0000	146.9222
2020	0.1622	0.6155	0.5510	9.3000e-004	7.7000e-004	0.0324	0.0332	2.1000e-004	0.0312	0.0314	0.0000	76.9858	76.9858	0.0147	0.0000	77.3523
Maximum	**0.1733**	**1.3234**	**1.0388**	**1.7300e-003**	**0.0204**	**0.0730**	**0.0935**	**8.9000e-003**	**0.0700**	**0.0789**	**0.0000**	**146.1862**	**146.1862**	**0.0294**	**0.0000**	**146.9222**

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	0.0333	0.7667	1.0484	1.7300e-003	9.9500e-003	0.0107	0.0207	2.3000e-003	0.0107	0.0130	0.0000	146.1861	146.1861	0.0294	0.0000	146.9220
2020	0.0978	0.4213	0.5666	9.3000e-004	7.7000e-004	6.1500e-003	6.9100e-003	2.1000e-004	6.1400e-003	6.3500e-003	0.0000	76.9857	76.9857	0.0147	0.0000	77.3523
Maximum	**0.0978**	**0.7667**	**1.0484**	**1.7300e-003**	**9.9500e-003**	**0.0107**	**0.0207**	**2.3000e-003**	**0.0107**	**0.0130**	**0.0000**	**146.1861**	**146.1861**	**0.0294**	**0.0000**	**146.9220**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**60.91**	**38.73**	**-1.58**	**0.00**	**49.46**	**83.98**	**78.20**	**72.45**	**83.33**	**82.43**	**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	**6-3-2019**	**9-2-2019**	0.6820	0.3261
2	**9-3-2019**	**12-2-2019**	0.6107	0.3552
3	**12-3-2019**	**3-2-2020**	0.5781	0.3545
4	**3-3-2020**	**6-2-2020**	0.3965	0.2792
		Highest	0.6820	0.3552

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	6/3/2019	6/28/2019	5	20	
2	Site Preparation	Site Preparation	6/29/2019	7/2/2019	5	2	
3	Grading	Grading	7/3/2019	7/8/2019	5	4	

4	Building Construction	Building Construction	7/9/2019	4/13/2020	5	200	
5	Paving	Paving	4/14/2020	4/27/2020	5	10	
6	Architectural Coating	Architectural Coating	4/28/2020	5/11/2020	5	10	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 0.81

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 21,135; Non-Residential Outdoor: 7,045; 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	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	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	5	13.00	0.00	122.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	17.00	7.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	3.00	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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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					3.4500e-003	0.0000	3.4500e-003	5.2000e-004	0.0000	5.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0230	0.2268	0.1489	2.4000e-004		0.0129	0.0129		0.0120	0.0120	0.0000	21.4161	21.4161	5.4500e-003	0.0000	21.5524

Total	**0.0230**	**0.2268**	**0.1489**	**2.4000e-004**	**3.4500e-003**	**0.0129**	**0.0163**	**5.2000e-004**	**0.0120**	**0.0125**	**0.0000**	**21.4161**	**21.4161**	**5.4500e-003**	**0.0000**	**21.5524**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.5000e-004	6.5300e-003	1.0900e-003	1.0000e-005	5.0000e-005	1.0000e-005	6.0000e-005	1.0000e-005	1.0000e-005	2.0000e-005	0.0000	0.7903	0.7903	9.0000e-005	0.0000	0.7926
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	8.0000e-005	9.6000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1091	0.1091	1.0000e-005	0.0000	0.1092
Total	**3.1000e-004**	**6.6100e-003**	**2.0500e-003**	**1.0000e-005**	**1.5000e-004**	**1.0000e-005**	**1.6000e-004**	**4.0000e-005**	**1.0000e-005**	**5.0000e-005**	**0.0000**	**0.8993**	**0.8993**	**1.0000e-004**	**0.0000**	**0.9018**

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					1.5500e-003	0.0000	1.5500e-003	1.2000e-004	0.0000	1.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.6300e-003	0.0854	0.1542	2.4000e-004		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004	0.0000	21.4161	21.4161	5.4500e-003	0.0000	21.5524
Total	**4.6300e-003**	**0.0854**	**0.1542**	**2.4000e-004**	**1.5500e-003**	**3.7000e-004**	**1.9200e-003**	**1.2000e-004**	**3.7000e-004**	**4.9000e-004**	**0.0000**	**21.4161**	**21.4161**	**5.4500e-003**	**0.0000**	**21.5524**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.5000e-004	6.5300e-003	1.0900e-003	1.0000e-005	5.0000e-005	1.0000e-005	6.0000e-005	1.0000e-005	1.0000e-005	2.0000e-005	0.0000	0.7903	0.7903	9.0000e-005	0.0000	0.7926
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	8.0000e-005	9.6000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1091	0.1091	1.0000e-005	0.0000	0.1092
Total	**3.1000e-004**	**6.6100e-003**	**2.0500e-003**	**1.0000e-005**	**1.5000e-004**	**1.0000e-005**	**1.6000e-004**	**4.0000e-005**	**1.0000e-005**	**5.0000e-005**	**0.0000**	**0.8993**	**0.8993**	**1.0000e-004**	**0.0000**	**0.9018**

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					5.8000e-003	0.0000	5.8000e-003	2.9500e-003	0.0000	2.9500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7100e-003	0.0195	7.8900e-003	2.0000e-005		8.8000e-004	8.8000e-004		8.1000e-004	8.1000e-004	0.0000	1.5467	1.5467	4.9000e-004	0.0000	1.5589
Total	**1.7100e-003**	**0.0195**	**7.8900e-003**	**2.0000e-005**	**5.8000e-003**	**8.8000e-004**	**6.6800e-003**	**2.9500e-003**	**8.1000e-004**	**3.7600e-003**	**0.0000**	**1.5467**	**1.5467**	**4.9000e-004**	**0.0000**	**1.5589**

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	0.0000	6.0000e-005	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	6.7100e-003	6.7100e-003	0.0000	0.0000	6.7200e-003
Total	**1.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**6.7100e-003**	**6.7100e-003**	**0.0000**	**0.0000**	**6.7200e-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					2.6100e-003	0.0000	2.6100e-003	6.6000e-004	0.0000	6.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.0000e-004	5.0700e-003	9.8200e-003	2.0000e-005		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	1.5467	1.5467	4.9000e-004	0.0000	1.5589
Total	**3.0000e-004**	**5.0700e-003**	**9.8200e-003**	**2.0000e-005**	**2.6100e-003**	**3.0000e-005**	**2.6400e-003**	**6.6000e-004**	**3.0000e-005**	**6.9000e-004**	**0.0000**	**1.5467**	**1.5467**	**4.9000e-004**	**0.0000**	**1.5589**

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	0.0000	6.0000e-005	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	6.7100e-003	6.7100e-003	0.0000	0.0000	6.7200e-003

Total	**1.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**6.7100e-003**	**6.7100e-003**	**0.0000**	**0.0000**	**6.7200e-003**

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					9.8300e-003	0.0000	9.8300e-003	5.0500e-003	0.0000	5.0500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.8400e-003	0.0321	0.0132	3.0000e-005		1.4700e-003	1.4700e-003		1.3600e-003	1.3600e-003	0.0000	2.5336	2.5336	8.0000e-004	0.0000	2.5536
Total	**2.8400e-003**	**0.0321**	**0.0132**	**3.0000e-005**	**9.8300e-003**	**1.4700e-003**	**0.0113**	**5.0500e-003**	**1.3600e-003**	**6.4100e-003**	**0.0000**	**2.5336**	**2.5336**	**8.0000e-004**	**0.0000**	**2.5536**

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	1.2000e-004	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0134	0.0134	0.0000	0.0000	0.0134
Total	**2.0000e-005**	**1.0000e-005**	**1.2000e-004**	**0.0000**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0134**	**0.0134**	**0.0000**	**0.0000**	**0.0134**

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					4.4200e-003	0.0000	4.4200e-003	1.1400e-003	0.0000	1.1400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.9000e-004	8.3600e-003	0.0162	3.0000e-005		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	2.5336	2.5336	8.0000e-004	0.0000	2.5536
Total	**4.9000e-004**	**8.3600e-003**	**0.0162**	**3.0000e-005**	**4.4200e-003**	**5.0000e-005**	**4.4700e-003**	**1.1400e-003**	**5.0000e-005**	**1.1900e-003**	**0.0000**	**2.5336**	**2.5336**	**8.0000e-004**	**0.0000**	**2.5536**

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	1.2000e-004	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0134	0.0134	0.0000	0.0000	0.0134
Total	**2.0000e-005**	**1.0000e-005**	**1.2000e-004**	**0.0000**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0134**	**0.0134**	**0.0000**	**0.0000**	**0.0134**

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	0.1431	1.0068	0.8497	1.3900e-003		0.0577	0.0577		0.0557	0.0557	0.0000	115.3353	115.3353	0.0222	0.0000	115.8896
Total	**0.1431**	**1.0068**	**0.8497**	**1.3900e-003**		**0.0577**	**0.0577**		**0.0557**	**0.0557**	**0.0000**	**115.3353**	**115.3353**	**0.0222**	**0.0000**	**115.8896**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.6000e-004	0.0311	8.9400e-003	4.0000e-005	4.1000e-004	8.0000e-005	4.8000e-004	1.2000e-004	7.0000e-005	1.9000e-004	0.0000	3.5368	3.5368	3.8000e-004	0.0000	3.5463
Worker	1.3100e-003	6.2000e-004	7.9100e-003	1.0000e-005	8.0000e-004	1.0000e-005	8.1000e-004	2.1000e-004	1.0000e-005	2.2000e-004	0.0000	0.8984	0.8984	4.0000e-005	0.0000	0.8995
Total	**2.2700e-003**	**0.0317**	**0.0169**	**5.0000e-005**	**1.2100e-003**	**9.0000e-005**	**1.2900e-003**	**3.3000e-004**	**8.0000e-005**	**4.1000e-004**	**0.0000**	**4.4351**	**4.4351**	**4.2000e-004**	**0.0000**	**4.4457**

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	0.0253	0.6295	0.8492	1.3900e-003		0.0102	0.0102		0.0102	0.0102	0.0000	115.3352	115.3352	0.0222	0.0000	115.8895
Total	**0.0253**	**0.6295**	**0.8492**	**1.3900e-003**		**0.0102**	**0.0102**		**0.0102**	**0.0102**	**0.0000**	**115.3352**	**115.3352**	**0.0222**	**0.0000**	**115.8895**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.6000e-004	0.0311	8.9400e-003	4.0000e-005	4.1000e-004	8.0000e-005	4.8000e-004	1.2000e-004	7.0000e-005	1.9000e-004	0.0000	3.5368	3.5368	3.8000e-004	0.0000	3.5463
Worker	1.3100e-003	6.2000e-004	7.9100e-003	1.0000e-005	8.0000e-004	1.0000e-005	8.1000e-004	2.1000e-004	1.0000e-005	2.2000e-004	0.0000	0.8984	0.8984	4.0000e-005	0.0000	0.8995
Total	**2.2700e-003**	**0.0317**	**0.0169**	**5.0000e-005**	**1.2100e-003**	**9.0000e-005**	**1.2900e-003**	**3.3000e-004**	**8.0000e-005**	**4.1000e-004**	**0.0000**	**4.4351**	**4.4351**	**4.2000e-004**	**0.0000**	**4.4457**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0751	0.5472	0.4880	8.2000e-004		0.0295	0.0295		0.0285	0.0285	0.0000	67.1706	67.1706	0.0125	0.0000	67.4823
Total	**0.0751**	**0.5472**	**0.4880**	**8.2000e-004**		**0.0295**	**0.0295**		**0.0285**	**0.0285**	**0.0000**	**67.1706**	**67.1706**	**0.0125**	**0.0000**	**67.4823**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.9000e-004	0.0173	4.8100e-003	2.0000e-005	2.4000e-004	3.0000e-005	2.7000e-004	7.0000e-005	3.0000e-005	1.0000e-004	0.0000	2.0792	2.0792	2.0000e-004	0.0000	2.0843
Worker	7.0000e-004	3.2000e-004	4.1200e-003	1.0000e-005	4.7000e-004	1.0000e-005	4.7000e-004	1.3000e-004	1.0000e-005	1.3000e-004	0.0000	0.5115	0.5115	2.0000e-005	0.0000	0.5121
Total	**1.1900e-003**	**0.0176**	**8.9300e-003**	**3.0000e-005**	**7.1000e-004**	**4.0000e-005**	**7.4000e-004**	**2.0000e-004**	**4.0000e-005**	**2.3000e-004**	**0.0000**	**2.5907**	**2.5907**	**2.2000e-004**	**0.0000**	**2.5963**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0148	0.3697	0.4987	8.2000e-004		5.9800e-003	5.9800e-003		5.9800e-003	5.9800e-003	0.0000	67.1705	67.1705	0.0125	0.0000	67.4822
Total	**0.0148**	**0.3697**	**0.4987**	**8.2000e-004**		**5.9800e-003**	**5.9800e-003**		**5.9800e-003**	**5.9800e-003**	**0.0000**	**67.1705**	**67.1705**	**0.0125**	**0.0000**	**67.4822**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Vendor	4.9000e-004	0.0173	4.8100e-003	2.0000e-005	2.4000e-004	3.0000e-005	2.7000e-004	7.0000e-005	3.0000e-005	1.0000e-004	0.0000	2.0792	2.0792	2.0000e-004	0.0000	2.0843
Worker	7.0000e-004	3.2000e-004	4.1200e-003	1.0000e-005	4.7000e-004	1.0000e-005	4.7000e-004	1.3000e-004	1.0000e-005	1.3000e-004	0.0000	0.5115	0.5115	2.0000e-005	0.0000	0.5121
Total	**1.1900e-003**	**0.0176**	**8.9300e-003**	**3.0000e-005**	**7.1000e-004**	**4.0000e-005**	**7.4000e-004**	**2.0000e-004**	**4.0000e-005**	**2.3000e-004**	**0.0000**	**2.5907**	**2.5907**	**2.2000e-004**	**0.0000**	**2.5963**

3.6 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.2000e-003	0.0423	0.0444	7.0000e-005		2.3500e-003	2.3500e-003		2.1600e-003	2.1600e-003	0.0000	5.8829	5.8829	1.8600e-003	0.0000	5.9295
Paving	1.0600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.2600e-003**	**0.0423**	**0.0444**	**7.0000e-005**		**2.3500e-003**	**2.3500e-003**		**2.1600e-003**	**2.1600e-003**	**0.0000**	**5.8829**	**5.8829**	**1.8600e-003**	**0.0000**	**5.9295**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	3.0000e-005	4.3000e-004	0.0000	5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0529	0.0529	0.0000	0.0000	0.0529
Total	**7.0000e-005**	**3.0000e-005**	**4.3000e-004**	**0.0000**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0529**	**0.0529**	**0.0000**	**0.0000**	**0.0529**

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	1.0700e-003	0.0286	0.0493	7.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	5.8828	5.8828	1.8600e-003	0.0000	5.9295
Paving	1.0600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.1300e-003**	**0.0286**	**0.0493**	**7.0000e-005**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**	**0.0000**	**5.8828**	**5.8828**	**1.8600e-003**	**0.0000**	**5.9295**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	3.0000e-005	4.3000e-004	0.0000	5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0529	0.0529	0.0000	0.0000	0.0529
Total	**7.0000e-005**	**3.0000e-005**	**4.3000e-004**	**0.0000**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0529**	**0.0529**	**0.0000**	**0.0000**	**0.0529**

3.7 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0793					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.2100e-003	8.4200e-003	9.1600e-003	1.0000e-005		5.5000e-004	5.5000e-004		5.5000e-004	5.5000e-004	0.0000	1.2766	1.2766	1.0000e-004	0.0000	1.2791
Total	**0.0805**	**8.4200e-003**	**9.1600e-003**	**1.0000e-005**		**5.5000e-004**	**5.5000e-004**		**5.5000e-004**	**5.5000e-004**	**0.0000**	**1.2766**	**1.2766**	**1.0000e-004**	**0.0000**	**1.2791**

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	1.0000e-004	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0122	0.0122	0.0000	0.0000	0.0122
Total	**2.0000e-005**	**1.0000e-005**	**1.0000e-004**	**0.0000**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0122**	**0.0122**	**0.0000**	**0.0000**	**0.0122**

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	0.0793					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Off-Road	2.7000e-004	5.3000e-003	9.1600e-003	1.0000e-005		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	1.2766	1.2766	1.0000e-004	0.0000	1.2791
Total	**0.0796**	**5.3000e-003**	**9.1600e-003**	**1.0000e-005**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**1.2766**	**1.2766**	**1.0000e-004**	**0.0000**	**1.2791**

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	1.0000e-004	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0122	0.0122	0.0000	0.0000	0.0122
Total	**2.0000e-005**	**1.0000e-005**	**1.0000e-004**	**0.0000**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0122**	**0.0122**	**0.0000**	**0.0000**	**0.0122**

18-155 2905 Senter Road, San Jose - Santa Clara County, Annual

18-155 2905 Senter Road, San Jose - 2030

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	3.93	1000sqft	0.09	3,934.00	0
Parking Lot	70.00	Space	0.81	28,000.00	0
High Turnover (Sit Down Restaurant)	4.20	1000sqft	0.10	4,200.00	0
Strip Mall	5.96	1000sqft	0.14	5,956.00	0

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/MWhr)	290	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E Co2 2020 rate = 290

Land Use - Applicant provided land use

Construction Phase - Default Construction Schedule

Off-road Equipment - Default Construction Equipment

Trips and VMT - 40,000sf existing pavement = 90 one-way Pavement Demo trips = 90+32= 122

Demolition - Demo Existing Building - 7,000sf

Vehicle Trips - office = 10.42, 2.32, 1.00 Rest = 172.86, 215.30, 179.24 Retail = 21.50, 20.40, 9.91

Water And Wastewater - WTP treatment 100% aerobic

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblLandUse	LandUseSquareFeet	3,930.00	3,934.00
tblLandUse	LandUseSquareFeet	5,960.00	5,956.00
tblLandUse	LotAcreage	0.63	0.81
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblTripsAndVMT	HaulingTripNumber	32.00	122.00
tblVehicleTrips	ST_TR	2.46	2.32
tblVehicleTrips	ST_TR	158.37	215.30
tblVehicleTrips	ST_TR	42.04	20.40
tblVehicleTrips	SU_TR	1.05	1.00
tblVehicleTrips	SU_TR	131.84	179.24
tblVehicleTrips	SU_TR	20.43	9.91
tblVehicleTrips	WD_TR	11.03	10.42
tblVehicleTrips	WD_TR	127.15	172.86
tblVehicleTrips	WD_TR	44.32	21.50
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0648	1.0000e-005	7.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5000e-003	1.5000e-003	0.0000	0.0000	1.6000e-003
Energy	5.1300e-003	0.0467	0.0392	2.8000e-004		3.5500e-003	3.5500e-003		3.5500e-003	3.5500e-003	0.0000	87.7497	87.7497	4.6700e-003	1.7000e-003	88.3718
Mobile	0.1128	0.4726	1.0155	3.8700e-003	0.4206	2.7600e-003	0.4234	0.1126	2.5600e-003	0.1151	0.0000	356.3340	356.3340	0.0115	0.0000	356.6221
Waste						0.0000	0.0000		0.0000	0.0000	12.1571	0.0000	12.1571	0.7185	0.0000	30.1188
Water						0.0000	0.0000		0.0000	0.0000	0.8544	2.0779	2.9323	3.1500e-003	1.9000e-003	3.5775
Total	**0.1827**	**0.5193**	**1.0554**	**4.1500e-003**	**0.4206**	**6.3100e-003**	**0.4269**	**0.1126**	**6.1100e-003**	**0.1187**	**13.0115**	**446.1632**	**459.1746**	**0.7378**	**3.6000e-003**	**478.6918**

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	0.0648	1.0000e-005	7.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5000e-003	1.5000e-003	0.0000	0.0000	1.6000e-003
Energy	5.1300e-003	0.0467	0.0392	2.8000e-004		3.5500e-003	3.5500e-003		3.5500e-003	3.5500e-003	0.0000	87.7497	87.7497	4.6700e-003	1.7000e-003	88.3718
Mobile	0.1128	0.4726	1.0155	3.8700e-003	0.4206	2.7600e-003	0.4234	0.1126	2.5600e-003	0.1151	0.0000	356.3340	356.3340	0.0115	0.0000	356.6221

Waste						0.0000	0.0000		0.0000	0.0000	12.1571	0.0000	12.1571	0.7185	0.0000	30.1188
Water						0.0000	0.0000		0.0000	0.0000	0.8544	2.0779	2.9323	3.1500e-003	1.9000e-003	3.5775
Total	**0.1827**	**0.5193**	**1.0554**	**4.1500e-003**	**0.4206**	**6.3100e-003**	**0.4269**	**0.1126**	**6.1100e-003**	**0.1187**	**13.0115**	**446.1632**	**459.1746**	**0.7378**	**3.6000e-003**	**478.6918**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1128	0.4726	1.0155	3.8700e-003	0.4206	2.7600e-003	0.4234	0.1126	2.5600e-003	0.1151	0.0000	356.3340	356.3340	0.0115	0.0000	356.6221
Unmitigated	0.1128	0.4726	1.0155	3.8700e-003	0.4206	2.7600e-003	0.4234	0.1126	2.5600e-003	0.1151	0.0000	356.3340	356.3340	0.0115	0.0000	356.6221

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	40.95	9.12	3.93	74,356	74,356
High Turnover (Sit Down Restaurant)	726.01	904.26	752.81	876,352	876,352
Parking Lot	0.00	0.00	0.00		

Strip Mall	128.14	121.58	59.06	180,700	180,700
Total	895.10	1,034.96	815.80	1,131,408	1,131,408

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
High Turnover (Sit Down Restaurant)	9.50	7.30	7.30	8.50	72.50	19.00	37	20	43
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	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
High Turnover (Sit Down Restaurant)	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
Parking Lot	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
Strip Mall	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

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	36.9681	36.9681	3.7000e-003	7.6000e-004	37.2884
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	36.9681	36.9681	3.7000e-003	7.6000e-004	37.2884

NaturalGas Mitigated	5.1300e-003	0.0467	0.0392	2.8000e-004		3.5500e-003	3.5500e-003		3.5500e-003	3.5500e-003	0.0000	50.7816	50.7816	9.7000e-004	9.3000e-004	51.0834
NaturalGas Unmitigated	5.1300e-003	0.0467	0.0392	2.8000e-004		3.5500e-003	3.5500e-003		3.5500e-003	3.5500e-003	0.0000	50.7816	50.7816	9.7000e-004	9.3000e-004	51.0834

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	64399.6	3.5000e-004	3.1600e-003	2.6500e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	3.4366	3.4366	7.0000e-005	6.0000e-005	3.4570
High Turnover (Sit Down Restaurant)	873096	4.7100e-003	0.0428	0.0360	2.6000e-004		3.2500e-003	3.2500e-003		3.2500e-003	3.2500e-003	0.0000	46.5917	46.5917	8.9000e-004	8.5000e-004	46.8686
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	14115.7	8.0000e-005	6.9000e-004	5.8000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.7533	0.7533	1.0000e-005	1.0000e-005	0.7577
Total		**5.1400e-003**	**0.0467**	**0.0392**	**2.8000e-004**		**3.5400e-003**	**3.5400e-003**		**3.5400e-003**	**3.5400e-003**	**0.0000**	**50.7816**	**50.7816**	**9.7000e-004**	**9.2000e-004**	**51.0834**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	64399.6	3.5000e-004	3.1600e-003	2.6500e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	3.4366	3.4366	7.0000e-005	6.0000e-005	3.4570
High Turnover (Sit Down Restaurant)	873096	4.7100e-003	0.0428	0.0360	2.6000e-004		3.2500e-003	3.2500e-003		3.2500e-003	3.2500e-003	0.0000	46.5917	46.5917	8.9000e-004	8.5000e-004	46.8686
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	14115.7	8.0000e-005	6.9000e-004	5.8000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.7533	0.7533	1.0000e-005	1.0000e-005	0.7577

Total		**5.1400e-003**	**0.0467**	**0.0392**	**2.8000e-004**		**3.5400e-003**	**3.5400e-003**		**3.5400e-003**	**3.5400e-003**	**0.0000**	**50.7816**	**50.7816**	**9.7000e-004**	**9.2000e-004**	**51.0834**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	70143.2	9.2268	9.2000e-004	1.9000e-004	9.3067
High Turnover (Sit Down Restaurant)	137424	18.0770	1.8100e-003	3.7000e-004	18.2337
Parking Lot	9800	1.2891	1.3000e-004	3.0000e-005	1.3003
Strip Mall	63669.6	8.3752	8.4000e-004	1.7000e-004	8.4478
Total		**36.9681**	**3.7000e-003**	**7.6000e-004**	**37.2884**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	70143.2	9.2268	9.2000e-004	1.9000e-004	9.3067
High Turnover (Sit Down Restaurant)	137424	18.0770	1.8100e-003	3.7000e-004	18.2337
Parking Lot	9800	1.2891	1.3000e-004	3.0000e-005	1.3003
Strip Mall	63669.6	8.3752	8.4000e-004	1.7000e-004	8.4478
Total		**36.9681**	**3.7000e-003**	**7.6000e-004**	**37.2884**

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	0.0648	1.0000e-005	7.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5000e-003	1.5000e-003	0.0000	0.0000	1.6000e-003
Unmitigated	0.0648	1.0000e-005	7.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5000e-003	1.5000e-003	0.0000	0.0000	1.6000e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	7.9300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0568					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	7.0000e-005	1.0000e-005	7.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5000e-003	1.5000e-003	0.0000	0.0000	1.6000e-003
Total	**0.0648**	**1.0000e-005**	**7.7000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.5000e-003**	**1.5000e-003**	**0.0000**	**0.0000**	**1.6000e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	7.9300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0568					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	7.0000e-005	1.0000e-005	7.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5000e-003	1.5000e-003	0.0000	0.0000	1.6000e-003
Total	**0.0648**	**1.0000e-005**	**7.7000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.5000e-003**	**1.5000e-003**	**0.0000**	**0.0000**	**1.6000e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	2.9323	3.1500e-003	1.9000e-003	3.5775
Unmitigated	2.9323	3.1500e-003	1.9000e-003	3.5775

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	0.698494 / 0.428109	0.9414	9.2000e-004	5.5000e-004	1.1288
High Turnover (Sit Down Restaurant)	1.27484 / 0.0813729	1.3959	1.6500e-003	1.0000e-003	1.7352
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.441472 / 0.27058	0.5950	5.8000e-004	3.5000e-004	0.7135
Total		**2.9323**	**3.1500e-003**	**1.9000e-003**	**3.5775**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	0.698494 / 0.428109	0.9414	9.2000e-004	5.5000e-004	1.1288
High Turnover (Sit Down Restaurant)	1.27484 / 0.0813729	1.3959	1.6500e-003	1.0000e-003	1.7352
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.441472 / 0.27058	0.5950	5.8000e-004	3.5000e-004	0.7135
Total		**2.9323**	**3.1500e-003**	**1.9000e-003**	**3.5775**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	12.1571	0.7185	0.0000	30.1188
Unmitigated	12.1571	0.7185	0.0000	30.1188

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	3.65	0.7409	0.0438	0.0000	1.8356
High Turnover (Sit Down Restaurant)	49.98	10.1455	0.5996	0.0000	25.1350
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	6.26	1.2707	0.0751	0.0000	3.1482
Total		**12.1571**	**0.7185**	**0.0000**	**30.1188**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	3.65	0.7409	0.0438	0.0000	1.8356
High Turnover (Sit Down Restaurant)	49.98	10.1455	0.5996	0.0000	25.1350
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	6.26	1.2707	0.0751	0.0000	3.1482
Total		**12.1571**	**0.7185**	**0.0000**	**30.1188**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

development that both begin and end within the development (walking trips). However, to provide a conservative estimate of project trips, no internal trip reduction was applied to the project.

The project site is occupied by a commercial building that will be demolished as part of this project. Trips that are generated by existing uses to be removed generally can be subtracted from the gross project trip generation estimates. However, since the existing use is underutilized and generates a negligible amount of traffic during the AM and PM peak hours, no existing trip credits were applied.

Based on the standard ITE trip rates, it is estimated that the proposed project would generate 721 net daily vehicle trips, with 74 trips occurring during the AM peak hour and 50 trips occurring during the PM peak hour. Using the inbound/outbound splits recommended by ITE, the project would generate 42 inbound trips and 32 outbound trips during the AM peak hour, and 27 inbound trips and 23 outbound trips during the PM peak hour.

Table 3
Project Trip Generation Estimates

Proposed Land Use	Land Use [1]	Size		Daily Rate	Daily Trips	AM Peak Hour				PM Peak Hour			
						Rate	In	Out	Total Trips	Rate	In	Out	Total Trips
Office	710	4,260	SF	9.74	41	1.16	4	1	5	1.15	1	4	5
Shopping Center	820	3,385	SF	37.75	128	0.94	2	2	4	3.81	6	7	13
Pass-By Reduction (Daily/AM/PM)(17%/0%/34%) [2]					*(22)*		*0*	*0*	*0*		*(2)*	*(2)*	*(4)*
High-Turnover Sit-Down Restaurant	932	6,471	SF	112.18	726	9.94	36	29	65	9.77	39	24	63
Pass-By Reduction (Daily/AM/PM)(21%/0%/43%) [2]					*(152)*		*0*	*0*	*0*		*(17)*	*(10)*	*(27)*
Net Project Trips:					**721**		**42**	**32**	**74**		**27**	**23**	**50**

Notes:
[1] Rates based on ITE Trip Generation, 10th Edition.
[2] PM peak hour pass-by trip reduction based on ITE Trip Generation Handbook (Third Edition). There is no AM peak hour pass-by trip reduction for these land uses. Daily pass-by trip reduction percentage assumed to be average of AM and PM pass-by reduction.

Trip Distribution

The trip distribution pattern for the project was estimated based on existing travel patterns on the surrounding roadway system and the locations of complementary land uses (see Figure 7).

Trip Assignment

The project-generated trips were assigned to the roadway network based on the project trip distribution pattern. The trip assignment took into account the project driveway locations and freeway access points. Project trips at the driveways and at the study intersections are shown on Figure 8.

Existing Plus Project Traffic Volumes

The project trips were added to existing traffic volumes to obtain existing plus project traffic volumes (see Figure 9). Traffic volumes for all components of traffic are tabulated in Appendix C.

Attachment 3: Construction Health Risk Calculations

2905 Senter Road, San Jose CA

DPM Emissions and Modeling Emission Rates

Construction Year	Activity	DPM (ton/year)	Area Source	DPM Emissions (lb/yr)	DPM Emissions (lb/hr)	DPM Emissions (g/s)	Modeled Area (m^2)	DPM Emission Rate ($g/s/m^2$)
2019-2020	Construction	0.1054	CON_DPM	210.8	0.06417	8.09E-03	4,344	1.86E-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	PM2.5 Emissions (ton/year)	PM2.5 Emissions (lb/yr)	PM2.5 Emissions (lb/hr)	PM2.5 Emissions (g/s)	Modeled Area (m^2)	PM2.5 Emission Rate $g/s/m^2$
2019	Construction	CON_FUG	0.00911	18.2	0.00555	6.99E-04	4,344	1.61E-07

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 (lb/yr)	DPM Emissions (lb/hr)	DPM Emissions (g/s)	Modeled Area (m^2)	DPM Emission Rate ($g/s/m^2$)
2019	Construction	0.0169	CON_DPM	33.8	0.01029	1.30E-03	4,344	2.98E-07

Construction Hours

hr/day =	10	(7am - 4pm)
days/yr =	365	
hours/year =	3285	

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

Construction Year	Activity	Area Source	PM2.5 Emissions (ton/year)	PM2.5 Emissions (lb/yr)	PM2.5 Emissions (lb/hr)	PM2.5 Emissions (g/s)	Modeled Area (m^2)	PM2.5 Emission Rate $g/s/m^2$
2019	Construction	CON_FUG	0.00251	5.0	0.00153	1.93E-04	4,344	4.43E-08

Construction Hours

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

2905 Senter Road, San Jose CA - Construction Health Impact Summary

Maximum Impacts at MEI Location - Unmitigated

Emissions Year	Maximum Concentrations: Exhaust PM10/DPM ($\mu g/m^3$)	Maximum Concentrations: Fugitive PM2.5 ($\mu g/m^3$)	Cancer Risk (per million): Infant/Child	Cancer Risk (per million): Adult	Hazard Index (-)	Maximum Annual PM2.5 Concentration ($\mu g/m^3$)
2019-2020	0.2978	0.0427	**48.9**	**0.9**	**0.060**	**0.34**

Maximum Impacts at MEI Location - With Mitigation

Emissions Year	Maximum Concentrations: Exhaust PM10/DPM ($\mu g/m^3$)	Maximum Concentrations: Fugitive PM2.5 ($\mu g/m^3$)	Cancer Risk (per million): Infant/Child	Cancer Risk (per million): Adult	Hazard Index (-)	Maximum Annual PM2.5 Concentration ($\mu g/m^3$)
2019-2020	0.0477	0.0117	**7.8**	**0.1**	**0.010**	**0.06**

2905 Senter Road, San Jose 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 $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

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

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

Values

	Infant/Child				Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 9**	**2 - 16**	**16 - 30**
Parameter					
ASF =	10	10	3	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	631	572	261
A =	1	1	1	1	1
EF =	350	350	350	350	350
AT =	70	70	70	70	70
FAH =	1.00	1.00	1.00	1.00	0.73

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information			Infant/Child	Adult - Exposure Information			Adult	Maximum	
			DPM Conc (ug/m3)		Age	Cancer	Modeled DPM Conc (ug/m3)		Age	Cancer		
Exposure Year	**Exposure Duration (years)**	**Age**	**Year**	**Annual**	**Sensitivity Factor**	**Risk (per million)**	**Year**	**Annual**	**Sensitivity Factor**	**Risk (per million)**	**Fugitive PM2.5**	**Total PM2.5**
0	0.25	-0.25 - 0*	-	-	10	-	-	-	-	-		
1	1	0 - 1	2019-2020	0.2978	10	48.91	2019-2020	0.2978	1	0.85	0.0427	0.340
2	1	1 - 2		0.0000	10	0.00		0.0000	1	0.00		
3	1	2 - 3		0.0000	3	0.00		0.0000	1	0.00		
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00		
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00		
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00		
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00		
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00		
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00		
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00		
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00		
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00		
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00		
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00		
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00		
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00		
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00		
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00		
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00		
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00		
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00		
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00		
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00		
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00		
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00		
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00		
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00		
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00		
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00		
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00		
Total Increased Cancer Risk						**48.91**				**0.85**		

* Third trimester of pregnancy

2905 Senter Road, San Jose 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 $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

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

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

Values

	Infant/Child				Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 9**	**2 - 16**	**16 - 30**
Parameter					
ASF =	10	10	3	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	631	572	261
A =	1	1	1	1	1
EF =	350	350	350	350	350
AT =	70	70	70	70	70
FAH =	1.00	1.00	1.00	1.00	0.73

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information			Infant/Child	Adult - Exposure Information			Adult	Maximum	
			DPM Conc (ug/m3)		Age	Cancer	Modeled DPM Conc (ug/m3)		Age	Cancer		
Exposure Year	**Exposure Duration (years)**	**Age**	**Year**	**Annual**	**Sensitivity Factor**	**Risk (per million)**	**Year**	**Annual**	**Sensitivity Factor**	**Risk (per million)**	**Fugitive PM2.5**	**Total PM2.5**
0	0.25	-0.25 - 0*	-	-	10	-	-	-	-	-		
1	1	0 - 1	2019-2020	0.2977	10	48.90	2019-2020	0.2977	1	0.85	0.0289	0.327
2	1	1 - 2		0.0000	10	0.00		0.0000	1	0.00		
3	1	2 - 3		0.0000	3	0.00		0.0000	1	0.00		
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00		
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00		
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00		
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00		
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00		
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00		
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00		
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00		
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00		
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00		
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00		
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00		
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00		
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00		
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00		
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00		
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00		
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00		
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00		
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00		
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00		
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00		
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00		
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00		
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00		
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00		
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00		
Total Increased Cancer Risk						**48.90**				**0.85**		

* Third trimester of pregnancy

2905 Senter Road, San Jose CA - Construction Impacts - With 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 $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

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

Where: C_{air} = concentration in air $(\mu g/m^3)$
DBR = daily breathing rate (L/kg body weight-day)
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Values

	Infant/Child				Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 9**	**2 - 16**	**16 - 30**
Parameter					
ASF =	10	10	3	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	631	572	261
A =	1	1	1	1	1
EF =	350	350	350	350	350
AT =	70	70	70	70	70
FAH =	1.00	1.00	1.00	1.00	0.73

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information			Infant/Child	Adult - Exposure Information			Adult	Maximum	
							Modeled					
Exposure	**Exposure Duration**		**DPM Conc (ug/m3)**		**Age Sensitivity**	**Cancer Risk**	**DPM Conc (ug/m3)**		**Age Sensitivity**	**Cancer Risk**	**Fugitive**	**Total**
Year	**(years)**	**Age**	**Year**	**Annual**	**Factor**	**(per million)**	**Year**	**Annual**	**Factor**	**(per million)**	**PM2.5**	**PM2.5**
0	0.25	-0.25 - 0*	-	-	10	-	-	-	-	-		
1	1	0 - 1	2019	0.0477	10	7.84	2019	0.0477	1	0.14	0.0117	0.059
2	1	1 - 2	2020	0.0000	10	0.00	2020	0.0000	1	0.00		
3	1	2 - 3	2021	0.0000	3	0.00	2021	0.0000	1	0.00		
4	1	3 - 4	2022	0.0000	3	0.00	2022	0.0000	1	0.00		
5	1	4 - 5	2023	0.0000	3	0.00	2023	0.0000	1	0.00		
6	1	5 - 6	2024	0.0000	3	0.00	2024	0.0000	1	0.00		
7	1	6 - 7	2025	0.0000	3	0.00	2025	0.0000	1	0.00		
8	1	7 - 8	2026	0.0000	3	0.00	2026	0.0000	1	0.00		
9	1	8 - 9	2027	0.0000	3	0.00	2027	0.0000	1	0.00		
10	1	9 - 10	2028	0.0000	3	0.00	2028	0.0000	1	0.00		
11	1	10 - 11	2029	0.0000	3	0.00	2029	0.0000	1	0.00		
12	1	11 - 12	2030	0.0000	3	0.00	2030	0.0000	1	0.00		
13	1	12 - 13	2031	0.0000	3	0.00	2031	0.0000	1	0.00		
14	1	13 - 14	2032	0.0000	3	0.00	2032	0.0000	1	0.00		
15	1	14 - 15	2033	0.0000	3	0.00	2033	0.0000	1	0.00		
16	1	15 - 16	2034	0.0000	3	0.00	2034	0.0000	1	0.00		
17	1	16-17	2035	0.0000	1	0.00	2035	0.0000	1	0.00		
18	1	17-18	2036	0.0000	1	0.00	2036	0.0000	1	0.00		
19	1	18-19	2037	0.0000	1	0.00	2037	0.0000	1	0.00		
20	1	19-20	2038	0.0000	1	0.00	2038	0.0000	1	0.00		
21	1	20-21	2039	0.0000	1	0.00	2039	0.0000	1	0.00		
22	1	21-22	2040	0.0000	1	0.00	2040	0.0000	1	0.00		
23	1	22-23	2041	0.0000	1	0.00	2041	0.0000	1	0.00		
24	1	23-24	2042	0.0000	1	0.00	2042	0.0000	1	0.00		
25	1	24-25	2043	0.0000	1	0.00	2043	0.0000	1	0.00		
26	1	25-26	2044	0.0000	1	0.00	2044	0.0000	1	0.00		
27	1	26-27	2045	0.0000	1	0.00	2045	0.0000	1	0.00		
28	1	27-28	2046	0.0000	1	0.00	2046	0.0000	1	0.00		
29	1	28-29	2047	0.0000	1	0.00	2047	0.0000	1	0.00		
30	1	29-30	2048	0.0000	1	0.00	2048	0.0000	1	0.00		
Total Increased Cancer Risk						**7.8**				**0.14**		

* Third trimester of pregnancy

Attachment 4: Screening Community Risk Calculations

Bay Area Air Quality Management District

Roadway Screening Analysis Calculator

County specific tables containing estimates of risk and hazard impacts from roadways in the Bay Area.

INSTRUCTIONS:

Input the site-specific characteristics of your project by using the drop down menu in the "Search Parameter" box. We recommend that this analysis be used for roadways with 10,000 AADT and above.

• County: Select the County where the project is located. The calculator is only applicable for projects within the nine Bay Area counties.

• Roadway Direction: Select the orientation that best matches the roadway. If the roadway orientation is neither clearly north-south nor east-west, use the highest values predicted from either orientation.

• Side of the Roadway: Identify on which side of the roadway the project is located.

• Distance from Roadway: Enter the distance in feet from the nearest edge of the roadway to the project site. The calculator estimates values for distances greater than 10 feet and less than 1000 feet. For distances greater than 1000 feet, the user can choose to extrapolate values using a distribution curve or apply 1000 feet values for greater distances.

• Annual Average Daily Traffic (ADT): Enter the annual average daily traffic on the roadway. These data may be collected from the city or the county (if the area is unincorporated).

When the user has completed the data entries, the screening level PM2.5 annual average concentration and the cancer risk results will appear in the Results Box on the right. Please note that the roadway tool is not applicable for California State Highways and the District refers the user to the Highway Screening Analysis Tool at: http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx.

Notes and References listed below the Search Boxes

Search Parameters

County	Santa Clara
Roadway Direction	North-South
Side of the Roadway	West
Distance from Roadway	200 feet
Annual Average Daily Traffic (ADT)	24,505

Results

Santa Clara County

NORTH-SOUTH DIRECTIONAL ROADWAY

PM2.5 annual average

0.090 ($\mu g/m^3$)

Cancer Risk

4.53 (per million)

Senter Rd

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

3.12

(per million)

Note that EMFAC2014 predicts DSL PM2.5 aggragate rates in 2018 that are 46% of EMFAC2011 for 2014. TOG gasoline rates are 56% of EMFAC2011 year 2014 rates. This is for light- and medium-duty vehciles traveling at 30 mph for Bay Area

Notes and References:

1. Emissions were developed using EMFAC2011 for fleet mix in 2014 assuming 10,000 AADT and includes impacts from diesel and gasoline vehicle exhaust, brake and tire wear, and resuspended dust.
2. Roadways were modeled using ~~CALINE4~~ Cal3qhcr air dispersion model assuming a source length of one kilometer. Meteorological data used to estimate the screening values are noted at the bottom of the "Results" box.
3. Cancer risks were estimated for 70 year lifetime exposure starting in 2014 that includes sensitivity values for early life exposures and OEHHA toxicity values adopted in 2013.