Appendix A: Air Quality Study

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335 S. WINCHESTER BOULEVARD AIR QUALITY AND GREENHOUSE GAS ASSESSMENT

San José, California

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Introduction

The purpose of this report is to address air quality, community health risk, and greenhouse gas (GHG) impacts associated with the proposed mixed-use development located at 335 S. Winchester Boulevard in San José, California. The air quality impacts from this project would be associated with demolition of the existing uses at the site, construction of the new buildings and infrastructure, and operation of the project. Air pollutants and GHG emissions associated with construction and operation of the project were predicted using models. In addition, the potential construction health risk impact and the impact of existing toxic air contaminant (TAC) sources affecting the nearby sensitive receptors were evaluated. The analysis was conducted following guidance provided by the Bay Area Air Quality Management District (BAAQMD).[1]

Project Description

The 0.7-acre project site is located on the west side of Winchester Boulevard, near Santana Row. The project would involve replacing the existing restaurant with a four-story commercial and office development comprised of 13,157 square feet (sf) of retail space on the ground floor and 82,672 sf of office space. The project proposes 233 parking spaces in a single-level subterranean garage and ground-floor parking.

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 ($PM_{2.5}$).

Air Pollutants of Concern

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

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

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

Toxic Air Contaminants

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

Diesel exhaust is the predominant TAC in urban air and is estimated to represent about three-quarters of the cancer risk from TACs (based on the Bay Area average). According to the California Air Resources Board (CARB), diesel exhaust is a complex mixture of gases, vapors, and fine particles. This complexity makes the evaluation of health effects of diesel exhaust a complex scientific issue. Some of the chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the CARB, and are listed as carcinogens either under the State's Proposition 65 or under the Federal Hazardous Air Pollutants programs.

Regulatory Agencies

CARB has adopted and implemented a number of regulations for stationary and mobile sources to reduce emissions of DPM. Several of these regulatory programs affect medium and heavy-duty diesel trucks that represent the bulk of DPM emissions from California highways. These regulations include the solid waste collection vehicle (SWCV) rule, in-use public and utility fleets, and the heavy-duty diesel truck and bus regulations. In 2008, CARB approved a new regulation to reduce emissions of DPM and nitrogen oxides from existing on-road heavy-duty diesel fueled vehicles.[2] The regulation requires affected vehicles to meet specific performance requirements between 2014 and 2023, with all affected diesel vehicles required to have 2010 model-year engines or equivalent by 2023. These requirements are phased in over the compliance period and depend on the model year of the vehicle.

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

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

[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.

contaminants or TACs. The following goals, policies, and actions are applicable to the proposed project and this assessment:

Applicable Goals – Air Pollutant Emission Reduction

Goal MS-10 Minimize emissions from new 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.

MS-10.3 Promote the expansion and improvement of public transportation services and facilities, where appropriate, to both encourage energy conservation and reduce air pollution.

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.

Applicable Policies – Toxic Air Contaminants

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-11.5 Encourage the use of pollution absorbing trees and vegetation in buffer areas between substantial sources of TACs and sensitive land uses.

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.

MS-11.8 For new projects that generate truck traffic, require signage which reminds drivers that the State truck idling law limits truck idling to five minutes.

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 adjacent residences west of the project site. There are additional residences west, north, and south of the project site at farther distances. There is also the Shalom Christian Academy toddler daycare facility southwest of the project site at 383 Spar Avenue.

Significance Thresholds

In June 2010, BAAQMD adopted thresholds of significance to assist in the review of projects under CEQA and these significance thresholds were contained in the District's 2011 *CEQA Air Quality Guidelines*. These thresholds were designed to establish the level at which BAAQMD believed air pollution emissions would cause significant environmental impacts under CEQA. The thresholds were challenged through a series of court challenges and were mostly upheld. BAAQMD updated the *CEQA Air Quality Guidelines* in 2017 to include the latest significance thresholds, which were used in this analysis and are summarized in Table 1. The commercial use would not be considered a sensitive receptor, so health risk standards would not apply to the proposed use.

Table 1. Air Quality Significance Thresholds

Criteria Air Pollutant	Construction Thresholds	Operational Thresholds	
	Average Daily Emissions (lbs./day)	Average Daily Emissions (lbs./day)	Annual Average Emissions (tons/year)
ROG	54	54	10
NO_x	54	54	10
PM_{10}	82 (Exhaust)	82	15
$PM_{2.5}$	54 (Exhaust)	54	10
CO	Not Applicable	9.0 ppm (8-hour average) or 20.0 ppm (1-hour average)	
Fugitive Dust	Construction Dust Ordinance or other Best Management Practices	Not Applicable	
Health Risks and Hazards	**Single Sources Within 1,000-foot Zone of Influence**	**Combined Sources (Cumulative from all sources within 1,000-foot zone of influence)**	
Excess Cancer Risk	>10 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 $\mu g/m^3$	

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.

Construction & Operational Period Emissions: Criteria Air Pollutants

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

The California Emissions Estimator Model (CalEEMod) Version 2016.3.2 was used to estimate emissions from construction and operation of the site assuming full build-out of the project. The project land use types and size, and anticipated construction schedule were input to CalEEMod. The model output from CalEEMod is included as *Attachment 2*.

Construction Period Emissions

CalEEMod provided annual emissions for construction. CalEEMod provides emission estimates for both on-site and off-site construction activities. On-site activities are primarily made up of construction equipment emissions, while off-site activity includes worker, hauling, and vendor

traffic. A construction build-out scenario, including equipment list and schedule, was based on CalEEMod defaults for a project of this type and size.

The proposed project land uses were input into CalEEMod, which included 82,670 sf entered as "General Office Building", 13,157 sf entered as "Strip Mall", and 233 spaces entered as "Enclosed Parking with Elevator". The default construction acreage was used to account for the grading and trenching of the below-grade parking level. In addition, 6,650 sf of building demolition was entered into the model.

The construction schedule assumed that the project would be built out over a period of approximately 13 months, beginning in January 2019. Based on the CalEEMod default construction schedule and equipment usage assumptions, there were an estimated 269 construction workdays. Average daily emissions were computed by dividing the total construction emissions by the number of construction days. Table 2 shows average daily construction emissions of ROG, NO_X, PM_{10} exhaust, and $PM_{2.5}$ exhaust during construction of the project. As indicated in Table 2, predicted construction period emissions would not exceed the BAAQMD significance thresholds.

Table 2. Construction Period Emissions

Scenario	ROG	NOx	PM_{10} Exhaust	$PM_{2.5}$ Exhaust
Total construction emissions (tons)	0.9 tons	2.8 tons	0.1 tons	0.1 tons
Average daily emissions (pounds)[1]	**6.4 lbs./day**	**21.0 lbs./day**	**1.1 lbs./day**	**1.0 lbs./day**
BAAQMD Thresholds (pounds per day)	*54* lbs./day	*54* lbs./day	*82* lbs./day	*54* lbs./day
Exceed Threshold?	**No**	**No**	**No**	**No**

Notes: [1]Assumes 269 workdays.

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

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

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

identified to reduce construction equipment exhaust emissions. The contractor shall implement the following best management practices that are required of all projects:

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

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

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

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

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

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

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

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

Effectiveness of Mitigation Measure AQ-1

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

Operational Period Emissions

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

Land Uses

The project land uses were input to CalEEMod, as described above for the construction period modeling.

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, including a 9-percent reduction for urban low-transit and VMT reduction strategies for the office land use and a 13-percent reduction for urban low-transit for the retail land use.[4] 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.

Emergency Generator

The project would include a 250-kilowatt emergency generator that would be powered by a 464-horsepower diesel engine. Emissions from the testing and maintenance of the proposed generator engine were computed using CalEEMod. The modeling assumed 50 hours of annual operation for testing and maintenance purposes. According to the project plans, the generator exhaust fan would be located on the roof along the southern façade of the proposed building.

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.[5]

[4] Hexagon Transportation Consultants, Inc., "335 S. Winchester Boulevard Mixed-Use Project Transportation Analysis", July 2018.
[5] Pacific Gas & Electric, 2015. *Greenhouse Gas Emission Factors: Guidance for PG&E Customers*. November.

Other Inputs

Wood-burning stoves and fireplaces are not allowed in new developments in the Bay Area; however, it was assumed that residential units could contain gas-powered fireplaces. 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 building as if it was operating in 2021. Inputs for this modeling scenario included 6,650 sf of "High Turnover (Sit Down Restaurant)", 25,350 sf of "Parking Lot", and the trip rate generation rates used in the traffic report. These inputs were applied to the modeling in the same manner described for the proposed project.

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

Table 3. Operational Emissions

Scenario	ROG	NOx	PM_{10}	$PM_{2.5}$
2021 Project Operational Emissions (*tons/year*)	0.7 tons	1.0 tons	0.7 tons	0.2 tons
2021 Existing Use Emissions (*tons/year*)	0.2 tons	0.5 tons	0.3 tons	0.1 tons
Net Annual Emissions (*tons/year*)	0.5 tons	0.5 tons	0.4 tons	0.1 tons
BAAQMD Thresholds (tons /year)	*10 tons*	*10 tons*	*15 tons*	*10 tons*
Exceed Threshold?	***No***	***No***	***No***	***No***
2021 Project Operational Emissions (*lbs/day*)[1]	2.8 lbs.	2.7 lbs.	2.4 lbs.	0.7 lbs.
BAAQMD Thresholds (pounds/day)	*54* lbs.	*54* lbs.	*82* lbs.	*54* lbs.
Exceed Threshold?	***No***	***No***	***No***	***No***

Notes: [1] Assumes 365-day operation.

Operational Community Risk Impacts

Project impacts related to increased community risk can occur either by introducing a new sensitive receptor, such as a residential use, in proximity to an existing source of TACs or by introducing a new source of TACs with the potential to adversely affect existing sensitive receptors in the project vicinity. The project would not introduce new sensitive receptors. The project would generate automobile traffic and infrequent truck traffic and introduce a diesel generator.

Operational Traffic

BAAQMD has provided the *Roadway Screening Analysis Calculator* to assess whether roadways may have a potentially significant effect on sensitive receptors. Two adjustments were

made to the cancer risk predictions made by this calculator: (1) adjustment for latest vehicle emissions rates predicted using EMFAC2014 and (2) adjustment of cancer risk to reflect new Office of Environmental Health Hazard Assessment (OEHHA) guidance (see *Attachment 1*).

The calculator uses EMFAC2011 emission rates for the year 2014. Overall, emission rates will decrease by the time the project is constructed and occupied. The project would not be occupied prior to at least 2018. In addition, a new version of the emissions factor model, EMFAC2014 is available. This version predicts lower emission rates. An adjustment factor of 0.5 was developed by comparing emission rates of total organic gases (TOG) for running exhaust and running losses developed using EMFAC2011 for year 2014 and those from EMFAC2014 for 2018.

The predicted cancer risk was then adjusted using a factor of 1.3744 to account for new OEHHA guidance. This factor was provided by BAAQMD for use with their CEQA screening tools that are used to predict cancer risk.

The project would generate 477 net new vehicle trips per day.[6] The effect of local traffic generated by the project was computed through use of the BAAQMD's *Roadway Screening Analysis Calculator* with input of the project's daily traffic on Winchester Boulevard. This would be the roadway closest to sensitive receptors that carries the most project traffic. Use of this calculator with project traffic (i.e., 219 daily trips on Winchester Boulevard south of the project site and 258 trips north of the project site) would result in cancer risk of 0.1 chance per million and annual $PM_{2.5}$ concentrations of 0.01 $\mu g/m^3$.

Operational Emergency Generator Modeling

Operation of a diesel generator would be a source of TAC emissions. The project would include a 250-kilowatt (kW) emergency back-up generator powered by a diesel engine (approximately 464 horsepower) to provide emergency backup power. The generator would be operated for testing and maintenance purposes, with a maximum of 50 hours per year of non-emergency operation under normal conditions. During testing periods, the engine would typically be run for less than one hour under light engine loads. The generator engine would be required to meet U.S. EPA emission standards and consume commercially available California low sulfur diesel fuel. The emissions from the operation of the generator were calculated using the CalEEMod model.

This diesel engine would be subject to CARB's Stationary Diesel Airborne Toxics Control Measure (ATCM) and require permits from the BAAQMD, since it will be equipped with an engine larger than 50 hp. As part of the BAAQMD permit requirements for toxics screening analysis, the engine emissions will have to meet Best Available Control Technology for Toxics (TBACT) and pass the toxic risk screening level of less than ten in a million. The risk assessment would be prepared by BAAQMD. Depending on results, BAAQMD would set limits for DPM emissions (e.g., more restricted engine operation periods). Sources of air pollutant emissions complying with all applicable BAAQMD regulations generally will not be considered to have a significant air quality community risk impact.

[6] Hexagon Transportation Consultants, Inc., "335 S. Winchester Boulevard Mixed-Use Project Transportation Analysis", July 2018.

BAAQMD provides a Risk and Hazards Emissions Screening Calculator (Beta Version) to conduct health risk and $PM_{2.5}$ screening analysis of stationary sources of air pollutant emissions. This tool was used to compute cancer risk and annual $PM_{2.5}$ concentrations from the project generator use. Annual emissions of PM_{10} computed by CalEEMod (i.e., 0.0028 tons or 5.6 pounds) were converted to average daily emissions and entered into the calculator. Distances to the nearest sensitive receptors were also used to compute the screening levels. The exact location of the generator has not been determined; therefore, the source risk and $PM_{2.5}$ levels computed using the calculator were used to describe impacts (there are sensitive receptors within 50 feet of the project site).

The screening computations indicate that with infant exposure, the maximum cancer risk would be 22.4 chances per million at the property line. These are screening computations and the risk would likely be lower had a refined modeling analysis been conducted. Annual concentrations of $PM_{2.5}$ would be 0.03 $\mu g/m^3$ or less. Since there is a potential for cancer risk associated with testing and maintenance of the generator to exceed 10 chances per million for assumed infant exposures, the impact is considered to be *significant*.

Project Construction Activity

Construction equipment and associated heavy-duty truck traffic generates diesel exhaust, which is a known TAC. Although it was concluded in the previous sections that construction 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 and day care facilities. 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 to nearby sensitive receptors from construction emissions of DPM and $PM_{2.5}$.[7] This assessment included dispersion modeling to predict the off-site concentrations resulting from project construction, so that lifetime cancer risks and non-cancer health effects could be evaluated.

Construction Emissions

The CalEEMod model provided total annual 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 0.14344 tons (287 pounds). The on-road emissions are a result of haul truck travel during demolition and grading activities, worker travel, and vendor deliveries during construction. A trip length of one mile was used to represent vehicle travel while at or near the construction site. It was assumed that these emissions from on-road vehicles traveling at or near the site would occur at the construction site. Fugitive $PM_{2.5}$ dust emissions were calculated by CalEEMod as 0.01261 tons (25 pounds) for the overall construction period.

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

Dispersion Modeling

The U.S. EPA AERMOD dispersion model was used to predict concentrations of DPM and $PM_{2.5}$ concentrations at sensitive receptors (residences and school students) in the vicinity of the project construction area. The AERMOD dispersion model is a BAAQMD-recommended model for use in modeling analysis of these types of emission activities for CEQA projects.[8] The modeling utilized two area sources to represent the on-site construction emissions, one for exhaust emissions and one for fugitive dust emissions. To represent the construction equipment exhaust emissions, an emission release height of 6 meters (19.7 feet) was used for the area source. The elevated source height reflects the height of the equipment exhaust pipes plus an additional distance for the height of the exhaust plume above the exhaust pipes to account for plume rise of the exhaust gases. For modeling fugitive $PM_{2.5}$ emissions, a near-ground level release height of 2 meters (6.6 feet) was used for the area source. Emissions from the construction equipment and on-road vehicle travel were distributed throughout the modeled area sources. Construction emissions were modeled as occurring daily between 7 a.m. to 4 p.m., when the majority of construction activity would occur.

The modeling used a 5-year meteorological data set (2006-2010) from the San José Airport prepared for use with the AERMOD model by the BAAQMD. Annual DPM and $PM_{2.5}$ concentrations from construction activities during the 2019-2020 period were calculated using the model. DPM and $PM_{2.5}$ concentrations were calculated at nearby sensitive receptor locations. Receptor heights of 1.5 meters (4.9 feet) and 6.1 meters (20 feet) were used to represent the breathing heights of residents in nearby single-family homes and mixed-use apartments and for residences on the first and second-floor levels. A receptor height of 1.0 meter was used for modeling impacts to children at the daycare.

Figure 1 shows the locations where the maximum-modeled DPM and $PM_{2.5}$ concentrations occurred. The maximum concentrations occurred southeast of the project site at the future 350 Winchester Boulevard residence on the second-floor. 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 and child exposures were assumed to occur at the daycare through the entire construction period. *Attachment 3* to this report includes the emission calculations used for the construction area source modeling and the cancer risk calculations.

Predicted Cancer Risk and Hazards

Results of this assessment indicate that the maximum excess residential cancer risks would be 66.5 in one million for an infant exposure and 1.2 in one million for an adult exposure, occurring at the second-floor level of the construction MEI. For child exposure at the daycare, the

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

maximum increased cancer risk would be 0.3 in one million. The maximum residential excess cancer risk would exceed the BAAQMD significance threshold of 10.0 in one million.

Predicted Annual $PM_{2.5}$ Concentration

The maximum-modeled annual $PM_{2.5}$ concentration, which is based on combined exhaust and fugitive dust emissions, was 0.44 $\mu g/m^3$ at the residential MEI and 0.01 $\mu g/m^3$ at the daycare. The residential maximum annual $PM_{2.5}$ concentration would exceed the BAAQMD significance threshold of 0.3 $\mu g/m^3$.

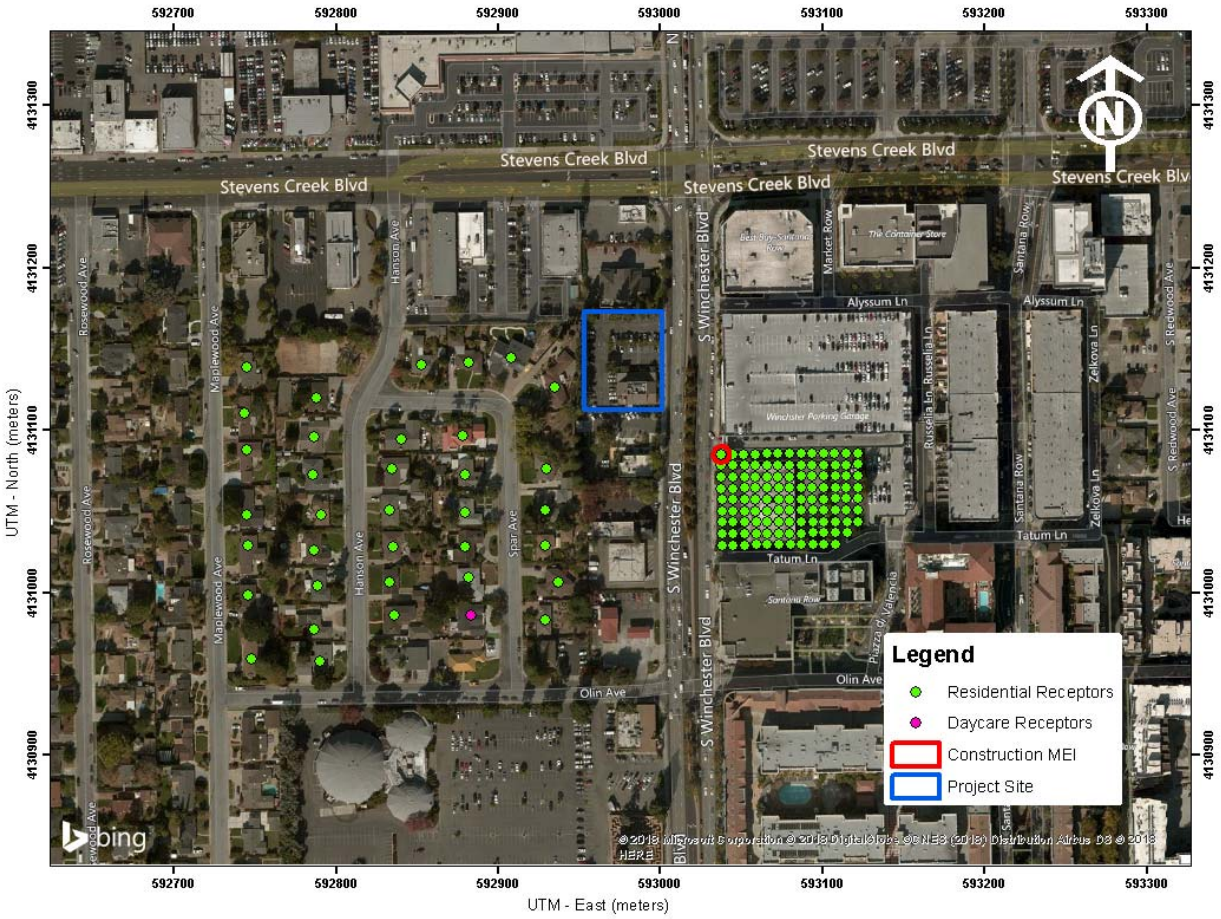
Non-Cancer Hazards

The maximum modeled annual residential DPM concentration (i.e., from construction exhaust) was 0.4049 $\mu g/m^3$ at the residential MEI and 0.0108 $\mu g/m^3$ at the daycare. The maximum computed Hazard Index (HI) based on this DPM concentration is 0.08 at the residential MEI and 0.00 at the daycare. These do not exceed the BAAQMD significance criterion of a HI greater than 1.0.

Summary of Construction Health Risks

As shown in Table 4, construction of the project would result in temporary emissions of TACs and $PM_{2.5}$ that would exceed the single-source cancer risk and annual $PM_{2.5}$ concentration thresholds, assuming infant exposure. This would be considered a *significant* impact.

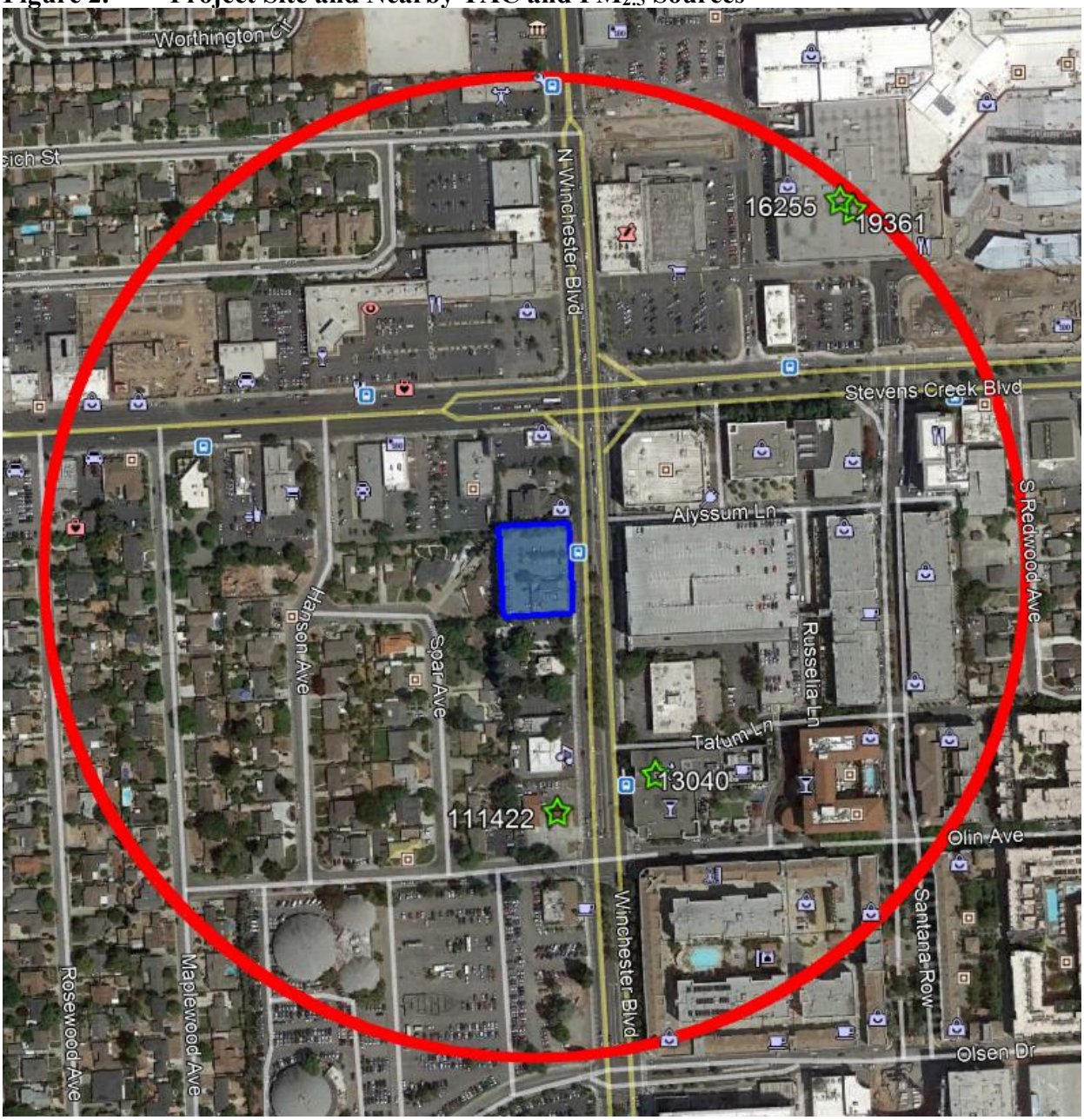
Figure 1. Project Construction Site and Locations of Off-Site Sensitive Receptors and Maximum TAC Impacts



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 include freeways or highways, busy surface streets, and stationary sources identified by BAAQMD. A review of the project area indicates that traffic on Winchester Boulevard and Stevens Creek Boulevard 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 four 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 4. Details of the modeling and community risk calculations are included in *Attachment 4.*

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



Project Generator

As previously described, the project would include a diesel generator. Impacts associated with this generator were predicted at the construction MEI, which would be about 230 feet from the generator exhaust fan of the project building. Estimated generator emissions are shown in Table 4.

Local Roadways – Winchester Boulevard and Stevens Creek Boulevard

For local roadways, BAAQMD has provided the *Roadway Screening Analysis Calculator* to assess whether roadways with traffic volumes of over 10,000 vehicles per day may have a

potentially significant effect on a proposed project. Two adjustments were made to the cancer risk predictions made by this calculator: (1) adjustment for latest vehicle emissions rates predicted using EMFAC2014 and (2) adjustment of cancer risk to reflect new Office of Environmental Health Hazard Assessment (OEHHA) guidance (see *Attachment 1*).

The calculator uses EMFAC2011 emission rates for the year 2014. Overall, emission rates will decrease by the time the project is constructed and occupied. The project would not be occupied prior to at least 2018. In addition, a new version of the emissions factor model, EMFAC2014 is available. This version predicts lower emission rates. An adjustment factor of 0.5 was developed by comparing emission rates of total organic gases (TOG) for running exhaust and running losses developed using EMFAC2011 for year 2014 and those from EMFAC2014 for 2018.

The predicted cancer risk was then adjusted using a factor of 1.3744 to account for new OEHHA guidance. This factor was provided by BAAQMD for use with their CEQA screening tools that are used to predict cancer risk.

The two following roadways were identified as having over 10,000 vehicles per day: Winchester Boulevard and Stevens Creek Boulevard. The average daily traffic (ADT) on Winchester Boulevard was estimated to be 37,650 vehicles and the ADT on Stevens Creek Boulevard was estimated to be 33,790 vehicles. This estimate was based on the peak-hour traffic volumes included in the project's traffic analysis for cumulative plus project conditions.[9] The AM and PM peak-hour volumes were averaged and then multiplied by 10 to estimate the ADT.

The BAAQMD *Roadway Screening Analysis Calculator* for Santa Clara County was used for both roadways. Winchester Boulevard was identified as a north-south directional roadway with the construction MEI 25 feet east of the roadway. Stevens Creek Boulevard was identified as an east-west directional roadway with the construction MEI 530 feet south of the roadway. Estimated cancer risk and annual $PM_{2.5}$ concentration values for both roadways are listed in Table 4. Note that BAAQMD has found that non-cancer hazards from all local roadways would be well below the BAAQMD thresholds. Chronic or acute HI for the roadway would be less than 0.01.

Stationary Sources

Permitted stationary sources of air pollution near the project site were identified using BAAQMD's *Stationary Source Risk & Hazard Analysis Tool*. This mapping tool uses Google Earth and identified the location of four stationary sources and their estimated risk and hazard impacts. A Stationary Source Information Form (SSIF) containing the identified sources was prepared and submitted to BAAQMD. They provided updated risk levels, emissions and adjustments to account for new OEHHA guidance.[10] The adjusted risk values were then adjusted with the appropriate distance multiplier values provided by BAAQMD or the emissions information was used in refined modeling.

[9] Hexagon Transportation Consultants, Inc., "335 S. Winchester Boulevard Mixed-Use Project Transportation Analysis", July 2018.
[10] Correspondence with Areana Flores, BAAQMD, September 25, 2018.

Four stationary sources were identified (Plant #111422, #16255, #19361, and #13040) with one sources being gas dispensing facility and three sources being diesel generators. The emissions data for all these stationary sources were provided by BAAQMD and adjusted for distance based on BAAQMD's *Distance Adjustment Multiplier Tool for Gasoline Dispensing Facilities* or *Distance Adjustment Multiplier Tool for Diesel Internal Combustion Engines* when appropriate. Concentration levels and community risk impacts from these sources upon the project are reported in Table 4.

Cumulative Impact on Construction MEI

Table 4 reports both the project and cumulative community risk impacts. Without mitigation, the project would have a *significant* impact with respect to community risk caused by project construction activities, since the maximum cancer risk is above the single-source thresholds of 10.0 per million for cancer risk and the single and cumulative source levels for $PM_{2.5}$ (see Table 4).

Table 4. Impacts from Combined Sources at MEI

Source		Maximum Cancer Risk (per million)	$PM_{2.5}$ concentration ($\mu g/m^3$)	Hazard Index
Project Construction	Unmitigated	**66.5 (infant)**	**0.44**	0.08
	Mitigated	7.4 (infant)	0.06	<0.01
Emergency Generator (based on screening)	Unmitigated	6.9	0.01	0.00
	Mitigated	1.0	0.01	0.00
Winchester Blvd south of project site at 25 feet 258 project daily trips		0.1	0.01	<0.01
Total	Unmitigated	**73.5**	**0.46**	<0.09
	Mitigated	8.5	0.08	<0.02
BAAQMD Single-Source Threshold		***>10.0***	***>0.3***	***>1.0***
Significant?	Unmitigated	***Yes***	***Yes***	*No*
	Mitigated	*No*	*No*	*No*
Winchester Blvd at 25 feet, ADT 37,650		18.6	0.64	<0.01
Stevens Creek Blvd at 530 feet, ADT 33,790		2.5	0.09	<0.01
Plant #111422 (Gas Station) at 300 feet		1.2	NA	0.01
Plant #16255 (Generator) at 940 feet		1.3	<0.01	<0.01
Plant #19361 (Generator) at 940 feet		<0.01	<0.01	<0.01
Plant #13040 (Generator) at 215 feet		0.2	0.01	<0.01
Combined Sources	*Unmitigated*	97.2 (infant)	**1.21**	0.14
	Mitigated	32.2 (infant)	0.83*	<0.07
BAAQMD Cumulative Source Threshold		***>100***	***>0.8***	***>10.0***
Significant?	Unmitigated	*No*	***Yes***	*No*
	Mitigated	*No*	*No**	*No*

*A significant impact would be considered if the cumulative level exceeded 0.8 $\mu g/m^3$.

Mitigation Related to Emergency Generator Health Risk

Mitigation Measure AQ-2: **Selection of diesel equipment and proper placement to minimize health risk impacts to sensitive receptors.**

The project shall develop a plan, submitted to the City, demonstrating that emissions from generator operation do not cause significant cancer risk exposures. There are several methods available to reduce these emissions:

- Placement of the generator and stack that minimizes exposures;
- Use of CARB-certified Level 3 Diesel Particulate Filters[11] or equivalent to reduce diesel particulate matter emissions or use of generator engines that meet U.S. EPA Tier 4 standards for particulate matter;
- Limiting the annual hours of testing to less than 50 hours per year.

The plan submitted to the City shall include the proper analysis that also accounts for impacts from the project caused by construction. The total cancer risk and annual $PM_{2.5}$ concentrations associated with the generator and construction shall be shown to be less than 10 chances per million cancer risk.

Effectiveness of Mitigation Measure AQ-2

The use of Tier 4 generator engines or use of diesel particulate matter filters could reduce generator emissions by 85 percent or greater. Limiting the number of hours and proper placement of the generator would further reduce these impacts. Combined with implementation of Mitigation Measure AQ-3, the impacts would be reduced to *less-than-significant* with respect to community risk caused by construction activities.

Mitigation Related to Construction Health Risk

Mitigation Measure AQ-3: **Selection of equipment during construction to minimize emissions. Such equipment selection would include the following:**

The project shall develop a plan demonstrating that the off-road equipment used on-site to construct the project would achieve a fleet-wide average 85-percent reduction in DPM exhaust emissions or greater. 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 3 engines that include CARB-certified Level 3 Diesel Particulate Filters or equivalent. Equipment that meets U.S. EPA Tier 4 standards for particulate matter or use of equipment that is electrically powered or uses non-diesel fuels would meet this requirement.

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

Effectiveness of Mitigation Measure AQ-3

The computed maximum increased lifetime residential cancer risk from construction, assuming infant exposure, would be 7.4 in one million or less and the maximum annual $PM_{2.5}$ concentration would be reduced to 0.06 $\mu g/m^3$ with implementation of Mitigation Measure AQ-3, which is less than the BAAQMD significance thresholds. As a result, impacts would be reduced to *less-than-significant* 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 (note that new
- Develop fuels with an 18-percent reduction in carbon intensity;
- Develop more high-density, transit oriented housing;
- Develop walkable and bikable 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.[12] The 2030 bright-line threshold is a 40 percent reduction of the 2020 1,100 MT CO_{2e}/year threshold.

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 and other project-specific information were input to the model, as described above. CalEEMod output is included in *Attachment 2*.

Service Population Emissions

The project service population efficiency rate is based on the number of future full-time retail and office employees. Based on the project's proposed 82,670 sf for office use and 13,157 sf for retail use and using an approximate 4 employees per 1,000 sf of office space and an approximate 2.5 employees per 1,000 sf of retail space, the number of future full-time employees is estimated to be 364.

Construction Emissions

GHG emissions associated with construction were computed to be 379 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 5, annual net emissions resulting from operation of the proposed project are

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

predicted to be 1,106 MT of CO_2e in 2021 and 949 MT of CO_2e in 2030. The service population emission for the year 2021 and 2030 are predicted to be 3.0 and 2.6 MT/CO_{2e}/year/service population, respectively. The project would not exceed the 2030 operational annual emissions bright-line threshold of 660 MT CO_2e/year and would not exceed the service population emissions "Substantial Progress" efficiency metric of 2.6 MT CO_2e/year/service population. Therefore, the project will have a *less-than-significant* impact.

Table 5. Annual Project GHG Emissions (CO_2e) in Metric Tons

Source Category	Existing in 2021	Proposed Project in 2021	Proposed Project in 2030
Area	<0.01	<0.01	<0.01
Energy Consumption	104	320	320
Mobile	274	706	549
Stationary	--	9	9
Solid Waste Generation	40	46	46
Water Usage	4	25	25
Total	422	1,106	949
Net New Emissions		*684*	*527*
Bright-Line Significance Threshold		**1,100**	**660**
Service Population Emissions		*3.0*	*2.6*
Significance Threshold		**4.6**	**2.6**
Significant?		***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 criteria air pollutant 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 are the emissions and calculations for the health risk evaluations of project construction and for operational impacts from the project generator. 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.[13] These guidelines incorporate substantial changes designed to provide for enhanced protection of children, as required by State law, compared to previous published risk assessment guidelines. CARB has provided additional guidance on implementing OEHHA's recommended methods.[14] This HRA used the recent 2015 OEHHA risk assessment guidelines and CARB guidance. The BAAQMD has adopted recommended procedures for applying the newest OEHHA guidelines as part of Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants.[15] Exposure parameters from the OEHHA guidelines and the recent BAAQMD HRA Guidelines were used in this evaluation.

Cancer Risk

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

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

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

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

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

Under previous OEHHA and BAAQMD HRA guidance, residential receptors are assumed to be at their home 24 hours a day, or 100 percent of the time. In the 2015 Risk Assessment Guidance, OEHHA includes adjustments to exposure duration to account for the fraction of time at home (FAH), which can be less than 100 percent of the time, based on updated population and activity statistics. The FAH factors are age-specific and are: 0.85 for third trimester of pregnancy to less than 2 years old, 0.72 for ages 2 to less than 16 years, and 0.73 for ages 16 to 70 years. Use of the FAH factors for children 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). An analysis to determine health risk at area schools has not been performed.

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		1.0	1.0	1.0	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

17-191 335 South Winchester Blvd AQ

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	82.67	1000sqft	1.90	82,670.00	0
Enclosed Parking with Elevator	233.00	Space	0.00	40,000.00	0
Strip Mall	13.16	1000sqft	0.30	13,157.00	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 2020 rate

Land Use - Traffic Analysis Land Uses, leave default acreage subterranean garage

Construction Phase - Default Construction Schedule, Added trenching phase

Off-road Equipment -

Off-road Equipment - Default Constrcution Equipment

Off-road Equipment - Trenching Equipment added

Off-road Equipment - Treching Phase Default equipment

Demolition - Traffic Analysis existing building = 6,650sf

Grading -

Vehicle Trips - Office = 8.18, 1.82, 0.78, Retail = 32.83, 31.14, 15.13

Water And Wastewater - WTP Treatment 100% aerobic

Stationary Sources - Emergency Generators and Fire Pumps - 250kW Gen = 464hp

Table Name	Column Name	Default Value	New Value
tblLandUse	LandUseSquareFeet	93,200.00	40,000.00
tblLandUse	LandUseSquareFeet	13,160.00	13,157.00
tblLandUse	LotAcreage	2.10	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblStationaryGeneratorsPumpsEF	CH4_EF	0.07	0.07
tblStationaryGeneratorsPumpsEF	ROG_EF	2.2480e-003	2.2477e-003
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	464.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	50.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblVehicleTrips	ST_TR	2.46	1.82
tblVehicleTrips	ST_TR	42.04	31.14
tblVehicleTrips	SU_TR	1.05	0.78
tblVehicleTrips	SU_TR	20.43	15.13
tblVehicleTrips	WD_TR	11.03	8.18
tblVehicleTrips	WD_TR	44.32	32.83
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	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	0.4554	2.8222	2.1994	4.3200e-003	0.0847	0.1450	0.2297	0.0270	0.1383	0.1653	0.0000	375.9778	375.9778	0.0642	0.0000	377.5819
2020	0.4075	6.8200e-003	8.2300e-003	1.0000e-005	2.9000e-004	4.5000e-004	7.3000e-004	8.0000e-005	4.5000e-004	5.2000e-004	0.0000	1.2662	1.2662	9.0000e-005	0.0000	1.2683
Maximum	**0.4554**	**2.8222**	**2.1994**	**4.3200e-003**	**0.0847**	**0.1450**	**0.2297**	**0.0270**	**0.1383**	**0.1653**	**0.0000**	**375.9778**	**375.9778**	**0.0642**	**0.0000**	**377.5819**

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	0.4554	2.8222	2.1994	4.3200e-003	0.0847	0.1450	0.2297	0.0270	0.1383	0.1653	0.0000	375.9775	375.9775	0.0642	0.0000	377.5816
2020	0.4075	6.8200e-003	8.2300e-003	1.0000e-005	2.9000e-004	4.5000e-004	7.3000e-004	8.0000e-005	4.5000e-004	5.2000e-004	0.0000	1.2662	1.2662	9.0000e-005	0.0000	1.2683
Maximum	**0.4554**	**2.8222**	**2.1994**	**4.3200e-003**	**0.0847**	**0.1450**	**0.2297**	**0.0270**	**0.1383**	**0.1653**	**0.0000**	**375.9775**	**375.9775**	**0.0642**	**0.0000**	**377.5816**

	ROG	NOx	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	1-1-2019	3-31-2019	0.8288	0.8288
2	4-1-2019	6-30-2019	0.7997	0.7997
3	7-1-2019	9-30-2019	0.8085	0.8085
4	10-1-2019	12-31-2019	0.8703	0.8703
5	1-1-2020	3-31-2020	0.3700	0.3700
		Highest	0.8703	0.8703

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	0.4279	3.0000e-005	3.0300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.8800e-003	5.8800e-003	2.0000e-005	0.0000	6.2700e-003
Energy	7.4700e-003	0.0679	0.0570	4.1000e-004		5.1600e-003	5.1600e-003		5.1600e-003	5.1600e-003	0.0000	317.1096	317.1096	0.0257	6.3900e-003	319.6563
Mobile	0.2178	0.8835	2.4098	7.7100e-003	0.6831	6.7400e-003	0.6898	0.1829	6.3000e-003	0.1892	0.0000	705.6061	705.6061	0.0254	0.0000	706.2403
Stationary	0.0190	0.0532	0.0485	9.0000e-005		2.8000e-003	2.8000e-003		2.8000e-003	2.8000e-003	0.0000	8.8345	8.8345	1.2400e-003	0.0000	8.8655
Waste						0.0000	0.0000		0.0000	0.0000	18.4113	0.0000	18.4113	1.0881	0.0000	45.6132
Water						0.0000	0.0000		0.0000	0.0000	5.5434	15.5733	21.1167	0.0206	0.0124	25.3210
Total	**0.6722**	**1.0046**	**2.5184**	**8.2100e-003**	**0.6831**	**0.0147**	**0.6978**	**0.1829**	**0.0143**	**0.1971**	**23.9547**	**1,047.1293**	**1,071.0840**	**1.1611**	**0.0188**	**1,105.7025**

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	0.4279	3.0000e-005	3.0300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.8800e-003	5.8800e-003	2.0000e-005	0.0000	6.2700e-003
Energy	7.4700e-003	0.0679	0.0570	4.1000e-004		5.1600e-003	5.1600e-003		5.1600e-003	5.1600e-003	0.0000	317.1096	317.1096	0.0257	6.3900e-003	319.6563
Mobile	0.2178	0.8835	2.4098	7.7100e-003	0.6831	6.7400e-003	0.6898	0.1829	6.3000e-003	0.1892	0.0000	705.6061	705.6061	0.0254	0.0000	706.2403
Stationary	0.0190	0.0532	0.0485	9.0000e-005		2.8000e-003	2.8000e-003		2.8000e-003	2.8000e-003	0.0000	8.8345	8.8345	1.2400e-003	0.0000	8.8655
Waste						0.0000	0.0000		0.0000	0.0000	18.4113	0.0000	18.4113	1.0881	0.0000	45.6132
Water						0.0000	0.0000		0.0000	0.0000	5.5434	15.5733	21.1167	0.0206	0.0124	25.3210
Total	**0.6722**	**1.0046**	**2.5184**	**8.2100e-003**	**0.6831**	**0.0147**	**0.6978**	**0.1829**	**0.0143**	**0.1971**	**23.9547**	**1,047.1293**	**1,071.0840**	**1.1611**	**0.0188**	**1,105.7025**

	ROG	NOx	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	1/1/2019	1/28/2019	5	20	
2	Site Preparation	Site Preparation	1/29/2019	1/31/2019	5	3	
3	Grading	Grading	2/1/2019	2/8/2019	5	6	
4	Trenching	Trenching	2/1/2019	2/14/2019	5	10	
5	Building Construction	Building Construction	2/9/2019	12/13/2019	5	220	
6	Paving	Paving	12/14/2019	12/27/2019	5	10	
7	Architectural Coating	Architectural Coating	12/28/2019	1/10/2020	5	10	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 3

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 143,741; Non-Residential Outdoor: 47,914; 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	Scrapers	1	8.00	367	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Trenching	Excavators	1	8.00	158	0.38
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	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	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	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	30.00	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	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	47.00	22.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	9.00	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					3.2700e-003	0.0000	3.2700e-003	5.0000e-004	0.0000	5.0000e-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**	**3.2700e-003**	**0.0129**	**0.0161**	**5.0000e-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	1.4000e-004	4.6700e-003	9.2000e-004	1.0000e-005	2.5000e-004	2.0000e-005	2.7000e-004	7.0000e-005	2.0000e-005	9.0000e-005	0.0000	1.1560	1.1560	5.0000e-005	0.0000	1.1573
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	**6.1000e-004**	**5.0200e-003**	**4.5500e-003**	**2.0000e-005**	**1.2800e-003**	**3.0000e-005**	**1.3100e-003**	**3.4000e-004**	**3.0000e-005**	**3.7000e-004**	**0.0000**	**2.0687**	**2.0687**	**7.0000e-005**	**0.0000**	**2.0707**

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					3.2700e-003	0.0000	3.2700e-003	5.0000e-004	0.0000	5.0000e-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**	**3.2700e-003**	**0.0129**	**0.0161**	**5.0000e-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	1.4000e-004	4.6700e-003	9.2000e-004	1.0000e-005	2.5000e-004	2.0000e-005	2.7000e-004	7.0000e-005	2.0000e-005	9.0000e-005	0.0000	1.1560	1.1560	5.0000e-005	0.0000	1.1573
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	**6.1000e-004**	**5.0200e-003**	**4.5500e-003**	**2.0000e-005**	**1.2800e-003**	**3.0000e-005**	**1.3100e-003**	**3.4000e-004**	**3.0000e-005**	**3.7000e-004**	**0.0000**	**2.0687**	**2.0687**	**7.0000e-005**	**0.0000**	**2.0707**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.3900e-003	0.0000	2.3900e-003	2.6000e-004	0.0000	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6300e-003	0.0323	0.0179	4.0000e-005		1.2800e-003	1.2800e-003		1.1800e-003	1.1800e-003	0.0000	3.3020	3.3020	1.0400e-003	0.0000	3.3281
Total	**2.6300e-003**	**0.0323**	**0.0179**	**4.0000e-005**	**2.3900e-003**	**1.2800e-003**	**3.6700e-003**	**2.6000e-004**	**1.1800e-003**	**1.4400e-003**	**0.0000**	**3.3020**	**3.3020**	**1.0400e-003**	**0.0000**	**3.3281**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	3.0000e-005	3.4000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0843	0.0843	0.0000	0.0000	0.0843
Total	**4.0000e-005**	**3.0000e-005**	**3.4000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0843**	**0.0843**	**0.0000**	**0.0000**	**0.0843**

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					2.3900e-003	0.0000	2.3900e-003	2.6000e-004	0.0000	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6300e-003	0.0323	0.0179	4.0000e-005		1.2800e-003	1.2800e-003		1.1800e-003	1.1800e-003	0.0000	3.3020	3.3020	1.0400e-003	0.0000	3.3281
Total	**2.6300e-003**	**0.0323**	**0.0179**	**4.0000e-005**	**2.3900e-003**	**1.2800e-003**	**3.6700e-003**	**2.6000e-004**	**1.1800e-003**	**1.4400e-003**	**0.0000**	**3.3020**	**3.3020**	**1.0400e-003**	**0.0000**	**3.3281**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	3.0000e-005	3.4000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0843	0.0843	0.0000	0.0000	0.0843
Total	**4.0000e-005**	**3.0000e-005**	**3.4000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0843**	**0.0843**	**0.0000**	**0.0000**	**0.0843**

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					0.0197	0.0000	0.0197	0.0101	0.0000	0.0101	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.0900e-003	0.0682	0.0305	6.0000e-005		3.2200e-003	3.2200e-003		2.9600e-003	2.9600e-003	0.0000	5.5554	5.5554	1.7600e-003	0.0000	5.5993
Total	**6.0900e-003**	**0.0682**	**0.0305**	**6.0000e-005**	**0.0197**	**3.2200e-003**	**0.0229**	**0.0101**	**2.9600e-003**	**0.0131**	**0.0000**	**5.5554**	**5.5554**	**1.7600e-003**	**0.0000**	**5.5993**

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	1.1000e-004	8.0000e-005	8.4000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.2106	0.2106	1.0000e-005	0.0000	0.2108
Total	**1.1000e-004**	**8.0000e-005**	**8.4000e-004**	**0.0000**	**2.4000e-004**	**0.0000**	**2.4000e-004**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**0.2106**	**0.2106**	**1.0000e-005**	**0.0000**	**0.2108**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0197	0.0000	0.0197	0.0101	0.0000	0.0101	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.0900e-003	0.0682	0.0305	6.0000e-005		3.2200e-003	3.2200e-003		2.9600e-003	2.9600e-003	0.0000	5.5554	5.5554	1.7600e-003	0.0000	5.5993

Total	**6.0900e-003**	**0.0682**	**0.0305**	**6.0000e-005**	**0.0197**	**3.2200e-003**	**0.0229**	**0.0101**	**2.9600e-003**	**0.0131**	**0.0000**	**5.5554**	**5.5554**	**1.7600e-003**	**0.0000**	**5.5993**

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	1.1000e-004	8.0000e-005	8.4000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.2106	0.2106	1.0000e-005	0.0000	0.2108
Total	**1.1000e-004**	**8.0000e-005**	**8.4000e-004**	**0.0000**	**2.4000e-004**	**0.0000**	**2.4000e-004**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**0.2106**	**0.2106**	**1.0000e-005**	**0.0000**	**0.2108**

3.5 Trenching - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.4700e-003	0.0251	0.0278	4.0000e-005		1.4300e-003	1.4300e-003		1.3100e-003	1.3100e-003	0.0000	3.7134	3.7134	1.1700e-003	0.0000	3.7428
Total	**2.4700e-003**	**0.0251**	**0.0278**	**4.0000e-005**		**1.4300e-003**	**1.4300e-003**		**1.3100e-003**	**1.3100e-003**	**0.0000**	**3.7134**	**3.7134**	**1.1700e-003**	**0.0000**	**3.7428**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0000e-005	7.0000e-005	7.0000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1755	0.1755	0.0000	0.0000	0.1756
Total	**9.0000e-005**	**7.0000e-005**	**7.0000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**2.0000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.1755**	**0.1755**	**0.0000**	**0.0000**	**0.1756**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.4700e-003	0.0251	0.0278	4.0000e-005		1.4300e-003	1.4300e-003		1.3100e-003	1.3100e-003	0.0000	3.7134	3.7134	1.1700e-003	0.0000	3.7428
Total	**2.4700e-003**	**0.0251**	**0.0278**	**4.0000e-005**		**1.4300e-003**	**1.4300e-003**		**1.3100e-003**	**1.3100e-003**	**0.0000**	**3.7134**	**3.7134**	**1.1700e-003**	**0.0000**	**3.7428**

Mitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0000e-005	7.0000e-005	7.0000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1755	0.1755	0.0000	0.0000	0.1756
Total	**9.0000e-005**	**7.0000e-005**	**7.0000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**2.0000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.1755**	**0.1755**	**0.0000**	**0.0000**	**0.1756**

3.6 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2814	2.0801	1.6780	2.7500e-003		0.1199	0.1199		0.1149	0.1149	0.0000	230.7297	230.7297	0.0480	0.0000	231.9297
Total	**0.2814**	**2.0801**	**1.6780**	**2.7500e-003**		**0.1199**	**0.1199**		**0.1149**	**0.1149**	**0.0000**	**230.7297**	**230.7297**	**0.0480**	**0.0000**	**231.9297**

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	0.0119	0.3056	0.0820	6.6000e-004	0.0159	2.2000e-003	0.0181	4.6000e-003	2.1000e-003	6.7000e-003	0.0000	63.6585	63.6585	3.1600e-003	0.0000	63.7375
Worker	0.0188	0.0140	0.1444	4.0000e-004	0.0410	2.7000e-004	0.0413	0.0109	2.5000e-004	0.0112	0.0000	36.2977	36.2977	9.9000e-004	0.0000	36.3224

Total	**0.0307**	**0.3196**	**0.2265**	**1.0600e-003**	**0.0569**	**2.4700e-003**	**0.0594**	**0.0155**	**2.3500e-003**	**0.0179**	**0.0000**	**99.9563**	**99.9563**	**4.1500e-003**	**0.0000**	**100.0599**

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	0.2814	2.0801	1.6780	2.7500e-003		0.1199	0.1199		0.1149	0.1149	0.0000	230.7295	230.7295	0.0480	0.0000	231.9294
Total	**0.2814**	**2.0801**	**1.6780**	**2.7500e-003**		**0.1199**	**0.1199**		**0.1149**	**0.1149**	**0.0000**	**230.7295**	**230.7295**	**0.0480**	**0.0000**	**231.9294**

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	0.0119	0.3056	0.0820	6.6000e-004	0.0159	2.2000e-003	0.0181	4.6000e-003	2.1000e-003	6.7000e-003	0.0000	63.6585	63.6585	3.1600e-003	0.0000	63.7375
Worker	0.0188	0.0140	0.1444	4.0000e-004	0.0410	2.7000e-004	0.0413	0.0109	2.5000e-004	0.0112	0.0000	36.2977	36.2977	9.9000e-004	0.0000	36.3224
Total	**0.0307**	**0.3196**	**0.2265**	**1.0600e-003**	**0.0569**	**2.4700e-003**	**0.0594**	**0.0155**	**2.3500e-003**	**0.0179**	**0.0000**	**99.9563**	**99.9563**	**4.1500e-003**	**0.0000**	**100.0599**

3.7 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.2300e-003	0.0628	0.0593	9.0000e-005		3.6500e-003	3.6500e-003		3.3600e-003	3.3600e-003	0.0000	7.9208	7.9208	2.4600e-003	0.0000	7.9823
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.2300e-003**	**0.0628**	**0.0593**	**9.0000e-005**		**3.6500e-003**	**3.6500e-003**		**3.3600e-003**	**3.3600e-003**	**0.0000**	**7.9208**	**7.9208**	**2.4600e-003**	**0.0000**	**7.9823**

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	2.7000e-004	2.0000e-004	2.1000e-003	1.0000e-005	5.9000e-004	0.0000	6.0000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.5266	0.5266	1.0000e-005	0.0000	0.5269
Total	**2.7000e-004**	**2.0000e-004**	**2.1000e-003**	**1.0000e-005**	**5.9000e-004**	**0.0000**	**6.0000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.5266**	**0.5266**	**1.0000e-005**	**0.0000**	**0.5269**

Mitigated Construction On-Site

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

Off-Road	6.2300e-003	0.0628	0.0593	9.0000e-005		3.6500e-003	3.6500e-003		3.3600e-003	3.3600e-003	0.0000	7.9208	7.9208	2.4600e-003	0.0000	7.9823
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.2300e-003**	**0.0628**	**0.0593**	**9.0000e-005**		**3.6500e-003**	**3.6500e-003**		**3.3600e-003**	**3.3600e-003**	**0.0000**	**7.9208**	**7.9208**	**2.4600e-003**	**0.0000**	**7.9823**

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	2.7000e-004	2.0000e-004	2.1000e-003	1.0000e-005	5.9000e-004	0.0000	6.0000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.5266	0.5266	1.0000e-005	0.0000	0.5269
Total	**2.7000e-004**	**2.0000e-004**	**2.1000e-003**	**1.0000e-005**	**5.9000e-004**	**0.0000**	**6.0000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.5266**	**0.5266**	**1.0000e-005**	**0.0000**	**0.5269**

3.8 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1016					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	1.8400e-003	1.8400e-003	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	0.2553	0.2553	2.0000e-005	0.0000	0.2559
Total	**0.1019**	**1.8400e-003**	**1.8400e-003**	**0.0000**		**1.3000e-004**	**1.3000e-004**		**1.3000e-004**	**1.3000e-004**	**0.0000**	**0.2553**	**0.2553**	**2.0000e-005**	**0.0000**	**0.2559**

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	2.5000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0632	0.0632	0.0000	0.0000	0.0632
Total	**3.0000e-005**	**2.0000e-005**	**2.5000e-004**	**0.0000**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0632**	**0.0632**	**0.0000**	**0.0000**	**0.0632**

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	0.1016					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	1.8400e-003	1.8400e-003	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	0.2553	0.2553	2.0000e-005	0.0000	0.2559
Total	**0.1019**	**1.8400e-003**	**1.8400e-003**	**0.0000**		**1.3000e-004**	**1.3000e-004**		**1.3000e-004**	**1.3000e-004**	**0.0000**	**0.2553**	**0.2553**	**2.0000e-005**	**0.0000**	**0.2559**

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	2.5000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0632	0.0632	0.0000	0.0000	0.0632
Total	**3.0000e-005**	**2.0000e-005**	**2.5000e-004**	**0.0000**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0632**	**0.0632**	**0.0000**	**0.0000**	**0.0632**

3.8 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	0.4064					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.7000e-004	6.7400e-003	7.3300e-003	1.0000e-005		4.4000e-004	4.4000e-004		4.4000e-004	4.4000e-004	0.0000	1.0213	1.0213	8.0000e-005	0.0000	1.0233
Total	**0.4074**	**6.7400e-003**	**7.3300e-003**	**1.0000e-005**		**4.4000e-004**	**4.4000e-004**		**4.4000e-004**	**4.4000e-004**	**0.0000**	**1.0213**	**1.0213**	**8.0000e-005**	**0.0000**	**1.0233**

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	1.2000e-004	9.0000e-005	9.0000e-004	0.0000	2.9000e-004	0.0000	2.9000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2449	0.2449	1.0000e-005	0.0000	0.2450
Total	**1.2000e-004**	**9.0000e-005**	**9.0000e-004**	**0.0000**	**2.9000e-004**	**0.0000**	**2.9000e-004**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.2449**	**0.2449**	**1.0000e-005**	**0.0000**	**0.2450**

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	0.4064					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.7000e-004	6.7400e-003	7.3300e-003	1.0000e-005		4.4000e-004	4.4000e-004		4.4000e-004	4.4000e-004	0.0000	1.0213	1.0213	8.0000e-005	0.0000	1.0233
Total	**0.4074**	**6.7400e-003**	**7.3300e-003**	**1.0000e-005**		**4.4000e-004**	**4.4000e-004**		**4.4000e-004**	**4.4000e-004**	**0.0000**	**1.0213**	**1.0213**	**8.0000e-005**	**0.0000**	**1.0233**

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	1.2000e-004	9.0000e-005	9.0000e-004	0.0000	2.9000e-004	0.0000	2.9000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2449	0.2449	1.0000e-005	0.0000	0.2450
Total	**1.2000e-004**	**9.0000e-005**	**9.0000e-004**	**0.0000**	**2.9000e-004**	**0.0000**	**2.9000e-004**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.2449**	**0.2449**	**1.0000e-005**	**0.0000**	**0.2450**

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	0.2178	0.8835	2.4098	7.7100e-003	0.6831	6.7400e-003	0.6898	0.1829	6.3000e-003	0.1892	0.0000	705.6061	705.6061	0.0254	0.0000	706.2403
Unmitigated	0.2178	0.8835	2.4098	7.7100e-003	0.6831	6.7400e-003	0.6898	0.1829	6.3000e-003	0.1892	0.0000	705.6061	705.6061	0.0254	0.0000	706.2403

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Enclosed Parking with Elevator	0.00	0.00	0.00		
General Office Building	676.24	150.46	64.48	1,227,700	1,227,700
Strip Mall	432.04	409.80	199.11	609,221	609,221
Total	1,108.28	560.26	263.59	1,836,921	1,836,921

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
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Enclosed Parking with Elevator	0.607897	0.037434	0.184004	0.107261	0.014919	0.004991	0.012447	0.020659	0.002115	0.001554	0.005334	0.000623	0.000761
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
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	243.2279	243.2279	0.0243	5.0300e-003	245.3356
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	243.2279	243.2279	0.0243	5.0300e-003	245.3356
NaturalGas Mitigated	7.4700e-003	0.0679	0.0570	4.1000e-004		5.1600e-003	5.1600e-003		5.1600e-003	5.1600e-003	0.0000	73.8817	73.8817	1.4200e-003	1.3500e-003	74.3207
NaturalGas Unmitigated	7.4700e-003	0.0679	0.0570	4.1000e-004		5.1600e-003	5.1600e-003		5.1600e-003	5.1600e-003	0.0000	73.8817	73.8817	1.4200e-003	1.3500e-003	74.3207

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					

Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	1.35331e+006	7.3000e-003	0.0663	0.0557	4.0000e-004		5.0400e-003	5.0400e-003		5.0400e-003	5.0400e-003	0.0000	72.2177	72.2177	1.3800e-003	1.3200e-003	72.6468
Strip Mall	31182.1	1.7000e-004	1.5300e-003	1.2800e-003	1.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	1.6640	1.6640	3.0000e-005	3.0000e-005	1.6739
Total		**7.4700e-003**	**0.0679**	**0.0570**	**4.1000e-004**		**5.1600e-003**	**5.1600e-003**		**5.1600e-003**	**5.1600e-003**	**0.0000**	**73.8817**	**73.8817**	**1.4100e-003**	**1.3500e-003**	**74.3207**

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					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	1.35331e+006	7.3000e-003	0.0663	0.0557	4.0000e-004		5.0400e-003	5.0400e-003		5.0400e-003	5.0400e-003	0.0000	72.2177	72.2177	1.3800e-003	1.3200e-003	72.6468
Strip Mall	31182.1	1.7000e-004	1.5300e-003	1.2800e-003	1.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	1.6640	1.6640	3.0000e-005	3.0000e-005	1.6739
Total		**7.4700e-003**	**0.0679**	**0.0570**	**4.1000e-004**		**5.1600e-003**	**5.1600e-003**		**5.1600e-003**	**5.1600e-003**	**0.0000**	**73.8817**	**73.8817**	**1.4100e-003**	**1.3500e-003**	**74.3207**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Enclosed Parking with Elevator	234400	30.8334	3.0800e-003	6.4000e-004	31.1006
General Office Building	1.47401e+006	193.8934	0.0194	4.0100e-003	195.5736
Strip Mall	140648	18.5011	1.8500e-003	3.8000e-004	18.6615

Total		**243.2279**	**0.0243**	**5.0300e-003**	**245.3356**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Enclosed Parking with Elevator	234400	30.8334	3.0800e-003	6.4000e-004	31.1006
General Office Building	1.47401e+006	193.8934	0.0194	4.0100e-003	195.5736
Strip Mall	140648	18.5011	1.8500e-003	3.8000e-004	18.6615
Total		**243.2279**	**0.0243**	**5.0300e-003**	**245.3356**

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	0.4279	3.0000e-005	3.0300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.8800e-003	5.8800e-003	2.0000e-005	0.0000	6.2700e-003
Unmitigated	0.4279	3.0000e-005	3.0300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.8800e-003	5.8800e-003	2.0000e-005	0.0000	6.2700e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0508					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3768					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.8000e-004	3.0000e-005	3.0300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.8800e-003	5.8800e-003	2.0000e-005	0.0000	6.2700e-003
Total	**0.4279**	**3.0000e-005**	**3.0300e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**5.8800e-003**	**5.8800e-003**	**2.0000e-005**	**0.0000**	**6.2700e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0508					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3768					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.8000e-004	3.0000e-005	3.0300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.8800e-003	5.8800e-003	2.0000e-005	0.0000	6.2700e-003
Total	**0.4279**	**3.0000e-005**	**3.0300e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**5.8800e-003**	**5.8800e-003**	**2.0000e-005**	**0.0000**	**6.2700e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	21.1167	0.0206	0.0124	25.3210
Unmitigated	21.1167	0.0206	0.0124	25.3210

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	14.6932 / 9.00554	19.8029	0.0194	0.0116	23.7456
Strip Mall	0.974794 / 0.597455	1.3138	1.2800e-003	7.7000e-004	1.5754
Total		**21.1166**	**0.0206**	**0.0124**	**25.3210**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e

Land Use	Mgal	MT/yr			
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	14.6932 / 9.00554	19.8029	0.0194	0.0116	23.7456
Strip Mall	0.974794 / 0.597455	1.3138	1.2800e-003	7.7000e-004	1.5754
Total		**21.1166**	**0.0206**	**0.0124**	**25.3210**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	18.4113	1.0881	0.0000	45.6132
Unmitigated	18.4113	1.0881	0.0000	45.6132

8.2 Waste by Land Use

Unmitigated

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

Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Office Building	76.88	15.6060	0.9223	0.0000	38.6631
Strip Mall	13.82	2.8053	0.1658	0.0000	6.9501
Total		**18.4113**	**1.0881**	**0.0000**	**45.6132**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Office Building	76.88	15.6060	0.9223	0.0000	38.6631
Strip Mall	13.82	2.8053	0.1658	0.0000	6.9501
Total		**18.4113**	**1.0881**	**0.0000**	**45.6132**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	0	50	464	0.73	Diesel

Boilers

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

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (300 - 600 HP)	0.0190	0.0532	0.0485	9.0000e-005		2.8000e-003	2.8000e-003		2.8000e-003	2.8000e-003	0.0000	8.8345	8.8345	1.2400e-003	0.0000	8.8655
Total	**0.0190**	**0.0532**	**0.0485**	**9.0000e-005**		**2.8000e-003**	**2.8000e-003**		**2.8000e-003**	**2.8000e-003**	**0.0000**	**8.8345**	**8.8345**	**1.2400e-003**	**0.0000**	**8.8655**

11.0 Vegetation

17-191 335 South Winchester Blvd Existing - Santa Clara County, Annual

17-191 335 South Winchester Blvd Existing

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High Turnover (Sit Down Restaurant)	6.65	1000sqft	0.20	6,650.00	0
Parking Lot	25.35	1000sqft	0.50	25,350.00	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 2020 Rate

Land Use - Traffic Report Land Uses

Construction Phase - Existing Use

Off-road Equipment - Existing Use

Grading - Existing Use

Vehicle Trips - Restaurant = 83.84, 104.43, 86.93

Table Name	Column Name	Default Value	New Value

tblLandUse	LotAcreage	0.15	0.20
tblLandUse	LotAcreage	0.58	0.50
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblTripsAndVMT	WorkerTripNumber	0.00	5.00
tblVehicleTrips	ST_TR	158.37	104.43
tblVehicleTrips	SU_TR	131.84	86.93
tblVehicleTrips	WD_TR	127.15	83.84

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	0.0316	0.0000	3.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.7000e-004	5.7000e-004	0.0000	0.0000	6.1000e-004
Energy	7.4500e-003	0.0678	0.0569	4.1000e-004		5.1500e-003	5.1500e-003		5.1500e-003	5.1500e-003	0.0000	103.5593	103.5593	4.3900e-003	1.9700e-003	104.2558
Mobile	0.1208	0.4380	1.0763	2.9900e-003	0.2503	2.7300e-003	0.2530	0.0670	2.5500e-003	0.0695	0.0000	273.3963	273.3963	0.0114	0.0000	273.6808
Waste						0.0000	0.0000		0.0000	0.0000	16.0647	0.0000	16.0647	0.9494	0.0000	39.7996
Water						0.0000	0.0000		0.0000	0.0000	0.6404	1.4960	2.1364	0.0659	1.5800e-003	4.2565
Total	**0.1599**	**0.5057**	**1.1335**	**3.4000e-003**	**0.2503**	**7.8800e-003**	**0.2581**	**0.0670**	**7.7000e-003**	**0.0747**	**16.7051**	**378.4522**	**395.1573**	**1.0311**	**3.5500e-003**	**421.9933**

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	0.0316	0.0000	3.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.7000e-004	5.7000e-004	0.0000	0.0000	6.1000e-004
Energy	7.4500e-003	0.0678	0.0569	4.1000e-004		5.1500e-003	5.1500e-003		5.1500e-003	5.1500e-003	0.0000	103.5593	103.5593	4.3900e-003	1.9700e-003	104.2558
Mobile	0.1208	0.4380	1.0763	2.9900e-003	0.2503	2.7300e-003	0.2530	0.0670	2.5500e-003	0.0695	0.0000	273.3963	273.3963	0.0114	0.0000	273.6808
Waste						0.0000	0.0000		0.0000	0.0000	16.0647	0.0000	16.0647	0.9494	0.0000	39.7996
Water						0.0000	0.0000		0.0000	0.0000	0.6404	1.4960	2.1364	0.0659	1.5800e-003	4.2565
Total	**0.1599**	**0.5057**	**1.1335**	**3.4000e-003**	**0.2503**	**7.8800e-003**	**0.2581**	**0.0670**	**7.7000e-003**	**0.0747**	**16.7051**	**378.4522**	**395.1573**	**1.0311**	**3.5500e-003**	**421.9933**

	ROG	NOx	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	0.1208	0.4380	1.0763	2.9900e-003	0.2503	2.7300e-003	0.2530	0.0670	2.5500e-003	0.0695	0.0000	273.3963	273.3963	0.0114	0.0000	273.6808

Unmitigated	0.1208	0.4380	1.0763	2.9900e-003	0.2503	2.7300e-003	0.2530	0.0670	2.5500e-003	0.0695	0.0000	273.3963	273.3963	0.0114	0.0000	273.6808

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
High Turnover (Sit Down Restaurant)	557.54	694.46	578.08	672,991	672,991
Parking Lot	0.00	0.00	0.00		
Total	557.54	694.46	578.08	672,991	672,991

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
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

4.4 Fleet Mix

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

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	29.7890	29.7890	2.9800e-003	6.2000e-004	30.0472
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	29.7890	29.7890	2.9800e-003	6.2000e-004	30.0472
NaturalGas Mitigated	7.4500e-003	0.0678	0.0569	4.1000e-004		5.1500e-003	5.1500e-003		5.1500e-003	5.1500e-003	0.0000	73.7702	73.7702	1.4100e-003	1.3500e-003	74.2086
NaturalGas Unmitigated	7.4500e-003	0.0678	0.0569	4.1000e-004		5.1500e-003	5.1500e-003		5.1500e-003	5.1500e-003	0.0000	73.7702	73.7702	1.4100e-003	1.3500e-003	74.2086

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					
High Turnover (Sit Down Restaurant)	1.3824e+06	7.4500e-003	0.0678	0.0569	4.1000e-004		5.1500e-003	5.1500e-003		5.1500e-003	5.1500e-003	0.0000	73.7702	73.7702	1.4100e-003	1.3500e-003	74.2086
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
Total		**7.4500e-003**	**0.0678**	**0.0569**	**4.1000e-004**		**5.1500e-003**	**5.1500e-003**		**5.1500e-003**	**5.1500e-003**	**0.0000**	**73.7702**	**73.7702**	**1.4100e-003**	**1.3500e-003**	**74.2086**

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					
High Turnover (Sit Down Restaurant)	1.3824e+06	7.4500e-003	0.0678	0.0569	4.1000e-004		5.1500e-003	5.1500e-003		5.1500e-003	5.1500e-003	0.0000	73.7702	73.7702	1.4100e-003	1.3500e-003	74.2086
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

Total		**7.4500e-003**	**0.0678**	**0.0569**	**4.1000e-004**		**5.1500e-003**	**5.1500e-003**		**5.1500e-003**	**5.1500e-003**	**0.0000**	**73.7702**	**73.7702**	**1.4100e-003**	**1.3500e-003**	**74.2086**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
High Turnover (Sit Down Restaurant)	217588	28.6219	2.8600e-003	5.9000e-004	28.8699
Parking Lot	8872.5	1.1671	1.2000e-004	2.0000e-005	1.1772
Total		**29.7890**	**2.9800e-003**	**6.1000e-004**	**30.0472**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
High Turnover (Sit Down Restaurant)	217588	28.6219	2.8600e-003	5.9000e-004	28.8699
Parking Lot	8872.5	1.1671	1.2000e-004	2.0000e-005	1.1772
Total		**29.7890**	**2.9800e-003**	**6.1000e-004**	**30.0472**

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	0.0316	0.0000	3.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.7000e-004	5.7000e-004	0.0000	0.0000	6.1000e-004
Unmitigated	0.0316	0.0000	3.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.7000e-004	5.7000e-004	0.0000	0.0000	6.1000e-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	4.0000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0276					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	3.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.7000e-004	5.7000e-004	0.0000	0.0000	6.1000e-004
Total	**0.0316**	**0.0000**	**3.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**5.7000e-004**	**5.7000e-004**	**0.0000**	**0.0000**	**6.1000e-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	4.0000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0276					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	3.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.7000e-004	5.7000e-004	0.0000	0.0000	6.1000e-004
Total	**0.0316**	**0.0000**	**3.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**5.7000e-004**	**5.7000e-004**	**0.0000**	**0.0000**	**6.1000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	2.1364	0.0659	1.5800e-003	4.2565
Unmitigated	2.1364	0.0659	1.5800e-003	4.2565

7.2 Water by Land Use

Unmitigated

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

High Turnover (Sit Down Restaurant)	2.0185 / 0.12884	2.1364	0.0659	1.5800e-003	4.2565
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**2.1364**	**0.0659**	**1.5800e-003**	**4.2565**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
High Turnover (Sit Down Restaurant)	2.0185 / 0.12884	2.1364	0.0659	1.5800e-003	4.2565
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**2.1364**	**0.0659**	**1.5800e-003**	**4.2565**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	16.0647	0.9494	0.0000	39.7996
Unmitigated	16.0647	0.9494	0.0000	39.7996

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
High Turnover (Sit Down Restaurant)	79.14	16.0647	0.9494	0.0000	39.7996
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**16.0647**	**0.9494**	**0.0000**	**39.7996**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
High Turnover (Sit Down Restaurant)	79.14	16.0647	0.9494	0.0000	39.7996
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**16.0647**	**0.9494**	**0.0000**	**39.7996**

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

17-191 335 South Winchester Blvd AQ - Santa Clara County, Annual

17-191 335 South Winchester Blvd AQ - 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	82.67	1000sqft	1.90	82,670.00	0
Enclosed Parking with Elevator	233.00	Space	0.00	40,000.00	0
Strip Mall	13.16	1000sqft	0.30	13,157.00	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 2020 rate

Land Use - Traffic Analysis Land Uses, leave default acreage subterranean garage

Construction Phase - Default Construction Schedule, Added trenching phase

Off-road Equipment - Treching Phase Default equipment

Demolition - Traffic Analysis existing building = 6,650sf

Grading -

Vehicle Trips - Office = 8.18, 1.82, 0.78, Retail = 32.83, 31.14, 15.13

Water And Wastewater - WTP Treatment 100% aerobic

Off-road Equipment - Default Constrcution Equipment

Off-road Equipment - Trenching Equipment added

Off-road Equipment -

Trips and VMT - 1 Mile Trips

Construction Off-road Equipment Mitigation - BMPs, Tier 3 DPF 3 Mitigation

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	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	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblLandUse	LandUseSquareFeet	93,200.00	40,000.00
tblLandUse	LandUseSquareFeet	13,160.00	13,157.00
tblLandUse	LotAcreage	2.10	0.00
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes

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	HaulingTripLength	20.00	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	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
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblVehicleTrips	ST_TR	2.46	1.82
tblVehicleTrips	ST_TR	42.04	31.14
tblVehicleTrips	SU_TR	1.05	0.78
tblVehicleTrips	SU_TR	20.43	15.13
tblVehicleTrips	WD_TR	11.03	8.18
tblVehicleTrips	WD_TR	44.32	32.83
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	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	0.4356	2.6724	2.0538	3.4800e-003	0.0316	0.1430	0.1746	0.0126	0.1364	0.1490	0.0000	297.0735	297.0735	0.0622	0.0000	298.6295
2020	0.4074	6.7500e-003	7.5600e-003	1.0000e-005	3.0000e-005	4.4000e-004	4.7000e-004	1.0000e-005	4.4000e-004	4.5000e-004	0.0000	1.0506	1.0506	8.0000e-005	0.0000	1.0526
Maximum	**0.4356**	**2.6724**	**2.0538**	**3.4800e-003**	**0.0316**	**0.1430**	**0.1746**	**0.0126**	**0.1364**	**0.1490**	**0.0000**	**297.0735**	**297.0735**	**0.0622**	**0.0000**	**298.6295**

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	0.2033	1.9096	2.0936	3.4800e-003	0.0177	0.0160	0.0337	4.1800e-003	0.0159	0.0201	0.0000	297.0732	297.0732	0.0622	0.0000	298.6292

2020	0.4067	5.4500e-003	7.5700e-003	1.0000e-005	3.0000e-005	6.0000e-005	8.0000e-005	1.0000e-005	6.0000e-005	6.0000e-005	0.0000	1.0506	1.0506	8.0000e-005	0.0000	1.0526
Maximum	**0.4067**	**1.9096**	**2.0936**	**3.4800e-003**	**0.0177**	**0.0160**	**0.0337**	**4.1800e-003**	**0.0159**	**0.0201**	**0.0000**	**297.0732**	**297.0732**	**0.0622**	**0.0000**	**298.6292**

	ROG	NOx	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	**27.64**	**28.52**	**-1.93**	**0.00**	**44.01**	**88.82**	**80.73**	**66.77**	**88.30**	**86.49**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**1-1-2019**	**3-31-2019**	0.7964	0.4861
2	**4-1-2019**	**6-30-2019**	0.7529	0.5211
3	**7-1-2019**	**9-30-2019**	0.7612	0.5268
4	**10-1-2019**	**12-31-2019**	0.8288	0.6166
5	**1-1-2020**	**3-31-2020**	0.3698	0.3680
		Highest	0.8288	0.6166

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2019	1/28/2019	5	20	
2	Site Preparation	Site Preparation	1/29/2019	1/31/2019	5	3	
3	Grading	Grading	2/1/2019	2/8/2019	5	6	
4	Trenching	Trenching	2/1/2019	2/14/2019	5	10	
5	Building Construction	Building Construction	2/9/2019	12/13/2019	5	220	
6	Paving	Paving	12/14/2019	12/27/2019	5	10	
7	Architectural Coating	Architectural Coating	12/28/2019	1/10/2020	5	10	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 3

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 143,741; Non-Residential Outdoor: 47,914; 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	Scrapers	1	8.00	367	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	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	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Trenching	Excavators	1	8.00	158	0.38
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class

Demolition	5	13.00	0.00	30.00	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	4	10.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	47.00	22.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	9.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Trenching	2	5.00	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 DPF 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					3.2700e-003	0.0000	3.2700e-003	5.0000e-004	0.0000	5.0000e-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**	**3.2700e-003**	**0.0129**	**0.0161**	**5.0000e-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	4.0000e-005	1.6100e-003	2.7000e-004	0.0000	1.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.1943	0.1943	2.0000e-005	0.0000	0.1949
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	**2.0000e-004**	**1.6900e-003**	**1.2300e-003**	**0.0000**	**1.1000e-004**	**0.0000**	**1.2000e-004**	**3.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.3034**	**0.3034**	**3.0000e-005**	**0.0000**	**0.3041**

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					1.4700e-003	0.0000	1.4700e-003	1.1000e-004	0.0000	1.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.6200e-003	0.1210	0.1542	2.4000e-004		1.0800e-003	1.0800e-003		1.0800e-003	1.0800e-003	0.0000	21.4161	21.4161	5.4500e-003	0.0000	21.5524
Total	**5.6200e-003**	**0.1210**	**0.1542**	**2.4000e-004**	**1.4700e-003**	**1.0800e-003**	**2.5500e-003**	**1.1000e-004**	**1.0800e-003**	**1.1900e-003**	**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	4.0000e-005	1.6100e-003	2.7000e-004	0.0000	1.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.1943	0.1943	2.0000e-005	0.0000	0.1949
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	**2.0000e-004**	**1.6900e-003**	**1.2300e-003**	**0.0000**	**1.1000e-004**	**0.0000**	**1.2000e-004**	**3.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.3034**	**0.3034**	**3.0000e-005**	**0.0000**	**0.3041**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.3900e-003	0.0000	2.3900e-003	2.6000e-004	0.0000	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6300e-003	0.0323	0.0179	4.0000e-005		1.2800e-003	1.2800e-003		1.1800e-003	1.1800e-003	0.0000	3.3020	3.3020	1.0400e-003	0.0000	3.3281
Total	**2.6300e-003**	**0.0323**	**0.0179**	**4.0000e-005**	**2.3900e-003**	**1.2800e-003**	**3.6700e-003**	**2.6000e-004**	**1.1800e-003**	**1.4400e-003**	**0.0000**	**3.3020**	**3.3020**	**1.0400e-003**	**0.0000**	**3.3281**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	9.0000e-005	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0101	0.0101	0.0000	0.0000	0.0101

Total	**1.0000e-005**	**1.0000e-005**	**9.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0101**	**0.0101**	**0.0000**	**0.0000**	**0.0101**

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					1.0700e-003	0.0000	1.0700e-003	6.0000e-005	0.0000	6.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.0000e-004	0.0178	0.0205	4.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	3.3020	3.3020	1.0400e-003	0.0000	3.3281
Total	**9.0000e-004**	**0.0178**	**0.0205**	**4.0000e-005**	**1.0700e-003**	**1.1000e-004**	**1.1800e-003**	**6.0000e-005**	**1.1000e-004**	**1.7000e-004**	**0.0000**	**3.3020**	**3.3020**	**1.0400e-003**	**0.0000**	**3.3281**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	9.0000e-005	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0101	0.0101	0.0000	0.0000	0.0101
Total	**1.0000e-005**	**1.0000e-005**	**9.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0101**	**0.0101**	**0.0000**	**0.0000**	**0.0101**

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					0.0197	0.0000	0.0197	0.0101	0.0000	0.0101	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.0900e-003	0.0682	0.0305	6.0000e-005		3.2200e-003	3.2200e-003		2.9600e-003	2.9600e-003	0.0000	5.5554	5.5554	1.7600e-003	0.0000	5.5993
Total	**6.0900e-003**	**0.0682**	**0.0305**	**6.0000e-005**	**0.0197**	**3.2200e-003**	**0.0229**	**0.0101**	**2.9600e-003**	**0.0131**	**0.0000**	**5.5554**	**5.5554**	**1.7600e-003**	**0.0000**	**5.5993**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	2.0000e-005	2.2000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0252	0.0252	0.0000	0.0000	0.0252
Total	**4.0000e-005**	**2.0000e-005**	**2.2000e-004**	**0.0000**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0252**	**0.0252**	**0.0000**	**0.0000**	**0.0252**

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					8.8500e-003	0.0000	8.8500e-003	2.2700e-003	0.0000	2.2700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5100e-003	0.0307	0.0364	6.0000e-005		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004	0.0000	5.5554	5.5554	1.7600e-003	0.0000	5.5993
Total	**1.5100e-003**	**0.0307**	**0.0364**	**6.0000e-005**	**8.8500e-003**	**2.2000e-004**	**9.0700e-003**	**2.2700e-003**	**2.2000e-004**	**2.4900e-003**	**0.0000**	**5.5554**	**5.5554**	**1.7600e-003**	**0.0000**	**5.5993**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	2.0000e-005	2.2000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0252	0.0252	0.0000	0.0000	0.0252
Total	**4.0000e-005**	**2.0000e-005**	**2.2000e-004**	**0.0000**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0252**	**0.0252**	**0.0000**	**0.0000**	**0.0252**

3.5 Trenching - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.4700e-003	0.0251	0.0279	4.0000e-005		1.4300e-003	1.4300e-003		1.3100e-003	1.3100e-003	0.0000	3.7194	3.7194	1.1800e-003	0.0000	3.7488
Total	**2.4700e-003**	**0.0251**	**0.0279**	**4.0000e-005**		**1.4300e-003**	**1.4300e-003**		**1.3100e-003**	**1.3100e-003**	**0.0000**	**3.7194**	**3.7194**	**1.1800e-003**	**0.0000**	**3.7488**

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	1.0000e-005	1.8000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0210	0.0210	0.0000	0.0000	0.0210
Total	**3.0000e-005**	**1.0000e-005**	**1.8000e-004**	**0.0000**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0210**	**0.0210**	**0.0000**	**0.0000**	**0.0210**

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	1.0200e-003	0.0210	0.0314	4.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	3.7194	3.7194	1.1800e-003	0.0000	3.7488
Total	**1.0200e-003**	**0.0210**	**0.0314**	**4.0000e-005**		**1.8000e-004**	**1.8000e-004**		**1.8000e-004**	**1.8000e-004**	**0.0000**	**3.7194**	**3.7194**	**1.1800e-003**	**0.0000**	**3.7488**

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	1.0000e-005	1.8000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0210	0.0210	0.0000	0.0000	0.0210
Total	**3.0000e-005**	**1.0000e-005**	**1.8000e-004**	**0.0000**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0210**	**0.0210**	**0.0000**	**0.0000**	**0.0210**

3.6 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2814	2.0801	1.6780	2.7500e-003		0.1199	0.1199		0.1149	0.1149	0.0000	230.7297	230.7297	0.0480	0.0000	231.9297
Total	**0.2814**	**2.0801**	**1.6780**	**2.7500e-003**		**0.1199**	**0.1199**		**0.1149**	**0.1149**	**0.0000**	**230.7297**	**230.7297**	**0.0480**	**0.0000**	**231.9297**

Unmitigated Construction Off-Site

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

Vendor	5.2700e-003	0.1704	0.0491	2.0000e-004	2.2400e-003	4.2000e-004	2.6500e-003	6.5000e-004	4.0000e-004	1.0500e-003	0.0000	19.4081	19.4081	2.0900e-003	0.0000	19.4602
Worker	6.3400e-003	3.0000e-003	0.0382	5.0000e-005	3.8400e-003	5.0000e-005	3.9000e-003	1.0300e-003	5.0000e-005	1.0800e-003	0.0000	4.3367	4.3367	2.1000e-004	0.0000	4.3420
Total	**0.0116**	**0.1734**	**0.0873**	**2.5000e-004**	**6.0800e-003**	**4.7000e-004**	**6.5500e-003**	**1.6800e-003**	**4.5000e-004**	**2.1300e-003**	**0.0000**	**23.7448**	**23.7448**	**2.3000e-003**	**0.0000**	**23.8022**

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	0.0785	1.4984	1.6949	2.7500e-003		0.0135	0.0135		0.0135	0.0135	0.0000	230.7295	230.7295	0.0480	0.0000	231.9294
Total	**0.0785**	**1.4984**	**1.6949**	**2.7500e-003**		**0.0135**	**0.0135**		**0.0135**	**0.0135**	**0.0000**	**230.7295**	**230.7295**	**0.0480**	**0.0000**	**231.9294**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.2700e-003	0.1704	0.0491	2.0000e-004	2.2400e-003	4.2000e-004	2.6500e-003	6.5000e-004	4.0000e-004	1.0500e-003	0.0000	19.4081	19.4081	2.0900e-003	0.0000	19.4602
Worker	6.3400e-003	3.0000e-003	0.0382	5.0000e-005	3.8400e-003	5.0000e-005	3.9000e-003	1.0300e-003	5.0000e-005	1.0800e-003	0.0000	4.3367	4.3367	2.1000e-004	0.0000	4.3420
Total	**0.0116**	**0.1734**	**0.0873**	**2.5000e-004**	**6.0800e-003**	**4.7000e-004**	**6.5500e-003**	**1.6800e-003**	**4.5000e-004**	**2.1300e-003**	**0.0000**	**23.7448**	**23.7448**	**2.3000e-003**	**0.0000**	**23.8022**

3.7 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.2300e-003	0.0628	0.0593	9.0000e-005		3.6500e-003	3.6500e-003		3.3600e-003	3.3600e-003	0.0000	7.9208	7.9208	2.4600e-003	0.0000	7.9823
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.2300e-003**	**0.0628**	**0.0593**	**9.0000e-005**		**3.6500e-003**	**3.6500e-003**		**3.3600e-003**	**3.3600e-003**	**0.0000**	**7.9208**	**7.9208**	**2.4600e-003**	**0.0000**	**7.9823**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0000e-005	4.0000e-005	5.5000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	1.0000e-005	0.0000	2.0000e-005	0.0000	0.0629	0.0629	0.0000	0.0000	0.0630
Total	**9.0000e-005**	**4.0000e-005**	**5.5000e-004**	**0.0000**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**1.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0629**	**0.0629**	**0.0000**	**0.0000**	**0.0630**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.1000e-003	0.0443	0.0649	9.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004	0.0000	7.9208	7.9208	2.4600e-003	0.0000	7.9823
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.1000e-003**	**0.0443**	**0.0649**	**9.0000e-005**		**4.0000e-004**	**4.0000e-004**		**4.0000e-004**	**4.0000e-004**	**0.0000**	**7.9208**	**7.9208**	**2.4600e-003**	**0.0000**	**7.9823**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0000e-005	4.0000e-005	5.5000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	1.0000e-005	0.0000	2.0000e-005	0.0000	0.0629	0.0629	0.0000	0.0000	0.0630
Total	**9.0000e-005**	**4.0000e-005**	**5.5000e-004**	**0.0000**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**1.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0629**	**0.0629**	**0.0000**	**0.0000**	**0.0630**

3.8 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1016					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	1.8400e-003	1.8400e-003	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	0.2553	0.2553	2.0000e-005	0.0000	0.2559
Total	**0.1019**	**1.8400e-003**	**1.8400e-003**	**0.0000**		**1.3000e-004**	**1.3000e-004**		**1.3000e-004**	**1.3000e-004**	**0.0000**	**0.2553**	**0.2553**	**2.0000e-005**	**0.0000**	**0.2559**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	7.0000e-005	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	7.5500e-003	7.5500e-003	0.0000	0.0000	7.5600e-003
Total	**1.0000e-005**	**1.0000e-005**	**7.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**7.5500e-003**	**7.5500e-003**	**0.0000**	**0.0000**	**7.5600e-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					
Archit. Coating	0.1016					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.0000e-005	1.3600e-003	1.8300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.2553	0.2553	2.0000e-005	0.0000	0.2559
Total	**0.1017**	**1.3600e-003**	**1.8300e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**0.2553**	**0.2553**	**2.0000e-005**	**0.0000**	**0.2559**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	7.0000e-005	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	7.5500e-003	7.5500e-003	0.0000	0.0000	7.5600e-003
Total	**1.0000e-005**	**1.0000e-005**	**7.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**7.5500e-003**	**7.5500e-003**	**0.0000**	**0.0000**	**7.5600e-003**

3.8 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	0.4064					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.7000e-004	6.7400e-003	7.3300e-003	1.0000e-005		4.4000e-004	4.4000e-004		4.4000e-004	4.4000e-004	0.0000	1.0213	1.0213	8.0000e-005	0.0000	1.0233
Total	**0.4074**	**6.7400e-003**	**7.3300e-003**	**1.0000e-005**		**4.4000e-004**	**4.4000e-004**		**4.4000e-004**	**4.4000e-004**	**0.0000**	**1.0213**	**1.0213**	**8.0000e-005**	**0.0000**	**1.0233**

Unmitigated Construction Off-Site

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

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	2.0000e-005	2.4000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0293	0.0293	0.0000	0.0000	0.0293
Total	**4.0000e-005**	**2.0000e-005**	**2.4000e-004**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0293**	**0.0293**	**0.0000**	**0.0000**	**0.0293**

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	0.4064					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.4000e-004	5.4300e-003	7.3300e-003	1.0000e-005		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	1.0213	1.0213	8.0000e-005	0.0000	1.0233
Total	**0.4067**	**5.4300e-003**	**7.3300e-003**	**1.0000e-005**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**	**0.0000**	**1.0213**	**1.0213**	**8.0000e-005**	**0.0000**	**1.0233**

Mitigated Construction Off-Site

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

Worker	4.0000e-005	2.0000e-005	2.4000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0293	0.0293	0.0000	0.0000	0.0293
Total	**4.0000e-005**	**2.0000e-005**	**2.4000e-004**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0293**	**0.0293**	**0.0000**	**0.0000**	**0.0293**

17-191 335 South Winchester Blvd AQ - Santa Clara County, Annual

17-191 335 South Winchester Blvd AQ - 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	82.67	1000sqft	1.90	82,670.00	0
Enclosed Parking with Elevator	233.00	Space	0.00	40,000.00	0
Strip Mall	13.16	1000sqft	0.30	13,157.00	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 2020 rate

Land Use - Traffic Analysis Land Uses, leave default acreage subterranean garage

Construction Phase - Default Construction Schedule, Added trenching phase

Off-road Equipment -

Off-road Equipment - Default Constrcution Equipment

Off-road Equipment - Trenching Equipment added

Off-road Equipment - Treching Phase Default equipment

Demolition - Traffic Analysis existing building = 6,650sf

Grading -

Vehicle Trips - Office = 8.18, 1.82, 0.78, Retail = 32.83, 31.14, 15.13

Water And Wastewater - WTP Treatment 100% aerobic

Stationary Sources - Emergency Generators and Fire Pumps - 250kW Gen = 464hp

Table Name	Column Name	Default Value	New Value
tblLandUse	LandUseSquareFeet	93,200.00	40,000.00
tblLandUse	LandUseSquareFeet	13,160.00	13,157.00
tblLandUse	LotAcreage	2.10	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblStationaryGeneratorsPumpsEF	CH4_EF	0.07	0.07
tblStationaryGeneratorsPumpsEF	ROG_EF	2.2480e-003	2.2477e-003
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	464.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	50.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblVehicleTrips	ST_TR	2.46	1.82
tblVehicleTrips	ST_TR	42.04	31.14
tblVehicleTrips	SU_TR	1.05	0.78
tblVehicleTrips	SU_TR	20.43	15.13
tblVehicleTrips	WD_TR	11.03	8.18
tblVehicleTrips	WD_TR	44.32	32.83
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	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	0.4279	3.0000e-005	3.0100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.8800e-003	5.8800e-003	2.0000e-005	0.0000	6.2500e-003
Energy	7.4700e-003	0.0679	0.0570	4.1000e-004		5.1600e-003	5.1600e-003		5.1600e-003	5.1600e-003	0.0000	317.1096	317.1096	0.0257	6.3900e-003	319.6563
Mobile	0.1299	0.5568	1.4171	5.9700e-003	0.6829	4.0400e-003	0.6870	0.1828	3.7600e-003	0.1865	0.0000	549.1244	549.1244	0.0161	0.0000	549.5280
Stationary	0.0190	0.0532	0.0485	9.0000e-005		2.8000e-003	2.8000e-003		2.8000e-003	2.8000e-003	0.0000	8.8345	8.8345	1.2400e-003	0.0000	8.8655
Waste						0.0000	0.0000		0.0000	0.0000	18.4113	0.0000	18.4113	1.0881	0.0000	45.6132
Water						0.0000	0.0000		0.0000	0.0000	5.5434	15.5733	21.1167	0.0206	0.0124	25.3210
Total	**0.5843**	**0.6779**	**1.5257**	**6.4700e-003**	**0.6829**	**0.0120**	**0.6949**	**0.1828**	**0.0117**	**0.1945**	**23.9547**	**890.6476**	**914.6023**	**1.1519**	**0.0188**	**948.9902**

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	0.4279	3.0000e-005	3.0100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.8800e-003	5.8800e-003	2.0000e-005	0.0000	6.2500e-003
Energy	7.4700e-003	0.0679	0.0570	4.1000e-004		5.1600e-003	5.1600e-003		5.1600e-003	5.1600e-003	0.0000	317.1096	317.1096	0.0257	6.3900e-003	319.6563

Mobile	0.1299	0.5568	1.4171	5.9700e-003	0.6829	4.0400e-003	0.6870	0.1828	3.7600e-003	0.1865	0.0000	549.1244	549.1244	0.0161	0.0000	549.5280
Stationary	0.0190	0.0532	0.0485	9.0000e-005		2.8000e-003	2.8000e-003		2.8000e-003	2.8000e-003	0.0000	8.8345	8.8345	1.2400e-003	0.0000	8.8655
Waste						0.0000	0.0000		0.0000	0.0000	18.4113	0.0000	18.4113	1.0881	0.0000	45.6132
Water						0.0000	0.0000		0.0000	0.0000	5.5434	15.5733	21.1167	0.0206	0.0124	25.3210
Total	**0.5843**	**0.6779**	**1.5257**	**6.4700e-003**	**0.6829**	**0.0120**	**0.6949**	**0.1828**	**0.0117**	**0.1945**	**23.9547**	**890.6476**	**914.6023**	**1.1519**	**0.0188**	**948.9902**

	ROG	NOx	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	0.1299	0.5568	1.4171	5.9700e-003	0.6829	4.0400e-003	0.6870	0.1828	3.7600e-003	0.1865	0.0000	549.1244	549.1244	0.0161	0.0000	549.5280
Unmitigated	0.1299	0.5568	1.4171	5.9700e-003	0.6829	4.0400e-003	0.6870	0.1828	3.7600e-003	0.1865	0.0000	549.1244	549.1244	0.0161	0.0000	549.5280

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Enclosed Parking with Elevator	0.00	0.00	0.00		

General Office Building	676.24	150.46	64.48	1,227,700	1,227,700
Strip Mall	432.04	409.80	199.11	609,221	609,221
Total	1,108.28	560.26	263.59	1,836,921	1,836,921

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
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Enclosed Parking with Elevator	0.621541	0.034056	0.180136	0.101248	0.011859	0.005060	0.013110	0.022881	0.002221	0.001470	0.005122	0.000646	0.000651
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
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	243.2279	243.2279	0.0243	5.0300e-003	245.3356
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	243.2279	243.2279	0.0243	5.0300e-003	245.3356

NaturalGas Mitigated	7.4700e-003	0.0679	0.0570	4.1000e-004		5.1600e-003	5.1600e-003		5.1600e-003	5.1600e-003	0.0000	73.8817	73.8817	1.4200e-003	1.3500e-003	74.3207
NaturalGas Unmitigated	7.4700e-003	0.0679	0.0570	4.1000e-004		5.1600e-003	5.1600e-003		5.1600e-003	5.1600e-003	0.0000	73.8817	73.8817	1.4200e-003	1.3500e-003	74.3207

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					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	1.35331e+006	7.3000e-003	0.0663	0.0557	4.0000e-004		5.0400e-003	5.0400e-003		5.0400e-003	5.0400e-003	0.0000	72.2177	72.2177	1.3800e-003	1.3200e-003	72.6468
Strip Mall	31182.1	1.7000e-004	1.5300e-003	1.2800e-003	1.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	1.6640	1.6640	3.0000e-005	3.0000e-005	1.6739
Total		**7.4700e-003**	**0.0679**	**0.0570**	**4.1000e-004**		**5.1600e-003**	**5.1600e-003**		**5.1600e-003**	**5.1600e-003**	**0.0000**	**73.8817**	**73.8817**	**1.4100e-003**	**1.3500e-003**	**74.3207**

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					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	1.35331e+006	7.3000e-003	0.0663	0.0557	4.0000e-004		5.0400e-003	5.0400e-003		5.0400e-003	5.0400e-003	0.0000	72.2177	72.2177	1.3800e-003	1.3200e-003	72.6468
Strip Mall	31182.1	1.7000e-004	1.5300e-003	1.2800e-003	1.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	1.6640	1.6640	3.0000e-005	3.0000e-005	1.6739
Total		**7.4700e-003**	**0.0679**	**0.0570**	**4.1000e-004**		**5.1600e-003**	**5.1600e-003**		**5.1600e-003**	**5.1600e-003**	**0.0000**	**73.8817**	**73.8817**	**1.4100e-003**	**1.3500e-003**	**74.3207**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Enclosed Parking with Elevator	234400	30.8334	3.0800e-003	6.4000e-004	31.1006
General Office Building	1.47401e+006	193.8934	0.0194	4.0100e-003	195.5736
Strip Mall	140648	18.5011	1.8500e-003	3.8000e-004	18.6615
Total		**243.2279**	**0.0243**	**5.0300e-003**	**245.3356**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Enclosed Parking with Elevator	234400	30.8334	3.0800e-003	6.4000e-004	31.1006
General Office Building	1.47401e+006	193.8934	0.0194	4.0100e-003	195.5736
Strip Mall	140648	18.5011	1.8500e-003	3.8000e-004	18.6615
Total		**243.2279**	**0.0243**	**5.0300e-003**	**245.3356**

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	0.4279	3.0000e-005	3.0100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.8800e-003	5.8800e-003	2.0000e-005	0.0000	6.2500e-003
Unmitigated	0.4279	3.0000e-005	3.0100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.8800e-003	5.8800e-003	2.0000e-005	0.0000	6.2500e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0508					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3768					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.8000e-004	3.0000e-005	3.0100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.8800e-003	5.8800e-003	2.0000e-005	0.0000	6.2500e-003
Total	**0.4279**	**3.0000e-005**	**3.0100e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**5.8800e-003**	**5.8800e-003**	**2.0000e-005**	**0.0000**	**6.2500e-003**

Mitigated

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

SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0508					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3768					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.8000e-004	3.0000e-005	3.0100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.8800e-003	5.8800e-003	2.0000e-005	0.0000	6.2500e-003
Total	**0.4279**	**3.0000e-005**	**3.0100e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**5.8800e-003**	**5.8800e-003**	**2.0000e-005**	**0.0000**	**6.2500e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	21.1167	0.0206	0.0124	25.3210
Unmitigated	21.1167	0.0206	0.0124	25.3210

7.2 Water by Land Use

Unmitigated

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

Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	14.6932 / 9.00554	19.8029	0.0194	0.0116	23.7456
Strip Mall	0.974794 / 0.597455	1.3138	1.2800e-003	7.7000e-004	1.5754
Total		**21.1166**	**0.0206**	**0.0124**	**25.3210**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	14.6932 / 9.00554	19.8029	0.0194	0.0116	23.7456
Strip Mall	0.974794 / 0.597455	1.3138	1.2800e-003	7.7000e-004	1.5754
Total		**21.1166**	**0.0206**	**0.0124**	**25.3210**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			

Mitigated	18.4113	1.0881	0.0000	45.6132
Unmitigated	18.4113	1.0881	0.0000	45.6132

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Office Building	76.88	15.6060	0.9223	0.0000	38.6631
Strip Mall	13.82	2.8053	0.1658	0.0000	6.9501
Total		**18.4113**	**1.0881**	**0.0000**	**45.6132**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Office Building	76.88	15.6060	0.9223	0.0000	38.6631
Strip Mall	13.82	2.8053	0.1658	0.0000	6.9501
Total		**18.4113**	**1.0881**	**0.0000**	**45.6132**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	0	50	464	0.73	Diesel

Boilers

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

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (300 - 600 HP)	0.0190	0.0532	0.0485	9.0000e-005		2.8000e-003	2.8000e-003		2.8000e-003	2.8000e-003	0.0000	8.8345	8.8345	1.2400e-003	0.0000	8.8655
Total	**0.0190**	**0.0532**	**0.0485**	**9.0000e-005**		**2.8000e-003**	**2.8000e-003**		**2.8000e-003**	**2.8000e-003**	**0.0000**	**8.8345**	**8.8345**	**1.2400e-003**	**0.0000**	**8.8655**

11.0 Vegetation

Attachment 3: Screening Community Risk Calculations

Fire Station & Borel Park

Standby Emergency Generator Impacts

Rating:	250	kW
	464	HP
Operating Hours per Unit:	1	hours/day
	50	hours/year
Load	0.73	from CARB OFFROAD

Standby Emergency Generator Emissions **(PER UNIT)**

Criteria Pollutants

Units	ROG	NOX	CO	SOX	PM10	PM2.5	CO2e
tons/yr (from CalEEMod)					**0.0028**	**0.0028**	
metric tons/yr	—	—	—	—	—	—	9
g/HP-hr	*0.00*	*0.00*	*0.00*	*0.00*	*0.110*	*0.110*	
lbs/hr	0.00	0.00	0.00	0.00	0.112	0.112	
lbs/yr	0.00	0.00	0.00	0.00	5.600	5.600	
Average annual lbs/day	0.00	0.00	0.00	0.00	0.015	0.015	

-- Emission factor from U.S. Environmental Protection Agency, AP-42 Compilation of Air Pollutant Emission Factors , Fifth Edition, Section 3.4, Table 3.4-1. PM10 and PM2.5 assumed to meet CARB ATCM standards diesel IC engines > 50HP

Community Risk

	50 ft Source level	Worst Location	Construction MEI	
Cancer Risk at Source =	2.24E-05			single unit with OEHHA Adj.
Cancer Risk closest unit =			6.94E-06	closest at 230 feet
Cancer Risk further unit =				
Total at MEI =				

	50 ft Source level		
Annual PM2.5 at Source	0.0296		
Total at MEI =		0.01	$\mu g/m^3$

Bay Area Air Quality Management District

Roadway Screening Analysis Calculator

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

INSTRUCTIONS:

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

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

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

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

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

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

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

Notes and References listed below the Search Boxes

Search Parameters

County	Santa Clara
Roadway Direction	North-South
Side of the Roadway	East
Distance from Roadway	25 feet
	Const MEI
Annual Average Daily Traffic (ADT)	37,650

Results

Santa Clara County

NORTH-SOUTH DIRECTIONAL ROADWAY

PM2.5 annual average

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

Cancer Risk

27.03 (per million)

Winchester Blvd

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

18.58
(per million)

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

Notes and References:

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

Bay Area Air Quality Management District

Roadway Screening Analysis Calculator

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

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Notes and References listed below the Search Boxes

Search Parameters

County	Santa Clara
Roadway Direction	East-West
Side of the Roadway	South
Distance from Roadway	530 feet
	Const MEI
Annual Average Daily Traffic (ADT)	33,790

Results

Santa Clara County

EAST-WEST DIRECTIONAL ROADWAY

PM2.5 annual average

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

Cancer Risk

3.70 (per million)

Stevens Creek Blvd

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

2.54
(per million)

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

Notes and References:

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

Bay Area Air Quality Management District

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

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

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

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

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

Notes and References listed below the Search Boxes

Search Parameters

County	Santa Clara
Roadway Direction	North-South
Side of the Roadway	East
Distance from Roadway	25 feet
	46% Operational - South
Annual Average Daily Traffic (ADT)	219

Results

Santa Clara County

NORTH-SOUTH DIRECTIONAL ROADWAY

PM2.5 annual average

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

Cancer Risk

0.20 (per million)

Winchester Blvd

Cumulative plus project volumes from traffic report

Data for Santa Clara County based on meteorological data collected from San Jose Airport in 1997

Adjusted for 2015 OEHHA and EMFAC2014 for 2018

0.14

(per million)

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

Notes and References:

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

Bay Area Air Quality Management District

Risk & Hazard Stationary Source Inquiry Form

This form is required when users request stationary source data from BAAQMD

This form is to be used with the BAAQMD's Google Earth stationary source screening tables.

Click here for guidance on coducting risk & hazard screening, including roadways & freeways, refer to the District's Risk & Hazard Analysis flow chart.

Click here for District's Recommended Methods for Screening and Modeling Local Risks and Hazards document.

Table A: Requester Contact Information

Date of Request	**9/24/2018**
Contact Name	Mimi McNamara
Affiliation	Illingworth & Rodkin, Inc.
Phone	707-794-0400 x35
Email	mmcnamara@illingworthrodkin.com
Project Name	335 South Winchester
Address	335 South Winchester
City	San Jose
County	Santa Clara
Type (residential, commercial, mixed use, industrial, etc.)	Commerical Offices
Project Size (# of units or building square feet)	122,227
Comments:	

For Air District assistance, the following steps must be completed:

1. Complete all the contact and project information requested in Table A mplete forms will not be processed. Please include a project site map.

2. Download and install the free program Google Earth, **http://www.google.com/earth/download/ge/,** and then download the county specific Google Earth stationary source application files from the District's website, **http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx.** The small points on the map represent stationary sources permitted by the District (Map A on right). These permitted sources include diesel back-up generators, gas stations, dry cleaners, boilers, printers, auto spray booths, etc. Click on a point to view the source's Information Table, including the name, location, and preliminary estimated cancer risk, hazard index, and PM2.5 concentration.

3. Find the project site in Google Earth by inputting the site's address in the Google Earth search box.

4. Identify stationary sources within at least a 1000ft radius of project site. Verify that the location of the source on the map matches with the source's address in the Information Table, by using the Google Earth address search box to confirm the source's address location. Please report any mapping errors to the District.

5. List the stationary source information in Table B on only.

6. Note that a small percentage of the stationary sources have Health Risk Screening Assessment (HRSA) data INSTEAD of screening level data. These sources will be noted by an asterisk next to the Plant Name (Map B on right). If HRSA values are presented, these values have already been modeled and cannot be adjusted further.

7. Email this completed form to District staff. District staff will provide the most recent risk, hazard, and PM2.5 data that are available for the source(s). If this information or data are not available, source emissions data will be provided. Staff will respond to inquiries within three weeks.

Note that a public records request received for the same stationary source information will cancel the processing of your SSIF request.

Table B: Google Earth data

Distance from Receptor (feet) or MEI[1]	Facility Name	Address	Plant No.	Cancer Risk[2]	Hazard Risk[2]	$PM_{2.5}$[2]	Source No.[3]	Type of Source[4]	Fuel Code[5]	Status/Comments
300	Santana Row Gas Mart	425 S Winchester Blvd	111422	11.62	0.0574	na	S1	Gas Dispensing Facility		Use GDF Multiplier
940	Macy's Valley Fair, Attn: James Sky	3051 Stevens Creek Blvd	16255	32.62	0.0169	0.0425	S1	Generator	98	Use IC Distance Multiplier
940	Macys Inc, Attn: James Skyberg	2801 Stevens Creek Blvd	19361	0.02	0.0002	0.0008	S1	Generator	189	Use IC Distance Multiplier
215	FRIT, Santana Row	3055 Olin Ave, Suite #2100	13040	0.39	0.0008	0.0231	S1-S7	Boiler (4), Generator (3)	98	Emissions file attached

Construction MEI

Distance Adjustment Multiplier	Adjusted Cancer Risk Estimate	Adjusted Hazard Risk	Adjusted PM2.5
0.10	1.2	0.01	#VALUE!
0.04	1.3	0.00	0.00
0.04	0.0	0.00	0.00
0.41	0.2	0.00	0.01

Footnotes:

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

Date last updated:

Attachment 4: Construction Health Risk Calculations

335 S. Winchester Blvd Office, San Jose, CA

DPM Emissions and Modeling Emission Rates - Unmitigated

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	0.1434	CON_DPM	286.9	0.08733	1.10E-02	2926.877	3.76E-06

Construction Hours

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

335 S. Winchester Blvd Office, San Jose, CA

PM2.5 Fugitive Dust Emissions for Modeling - Unmitigated

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 $g/s/m^2$
2019-2020	Construction	CON_FUG	0.01261	25.2	0.00768	9.67E-04	2,927	3.31E-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 ($g/s/m^2$)
2019-2020	Construction	0.0161	CON_DPM	32.1	0.00978	1.23E-03	2926.877	4.21E-07

Construction Hours

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

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

Construction Year	Activity	Area Source	PM2.5 Emissions (ton/year)	(lb/yr)	(lb/hr)	(g/s)	Modeled Area (m^2)	PM2.5 Emission Rate $g/s/m^2$
2019-2020	Construction	CON_FUG	0.00419	8.4	0.00255	3.21E-04	2,927	1.10E-07

Construction Hours

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

335 S. Winchester Blvd Office, 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	0.4049	0.0399	**66.5**	**1.2**	**0.081**	**0.44**

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	0.0453	0.0133	**7.4**	**0.1**	**0.009**	**0.06**

Maximum Impacts at Daycare

	Unmitigated Emissions				
Construction Year	Maximum Concentrations: Exhaust PM2.5/DPM ($\mu g/m^3$)	Maximum Concentrations: Fugitive PM2.5 ($\mu g/m^3$)	Child Cancer Risk (per million)	Hazard Index (-)	Maximum Annual PM2.5 Concentration ($\mu g/m^3$)
2019-2020	0.0108	0.0009	**0.3**	**0.00**	**0.01**

335 S. Winchester Blvd Office, 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				Adult - Exposure Information				Maximum	
							Modeled					
Exposure Year	Exposure Duration (years)	Age	DPM Conc (ug/m3) Year	DPM Conc (ug/m3) Annual	Age Sensitivity Factor	Infant/Child Cancer Risk (per million)	DPM Conc (ug/m3) Year	DPM Conc (ug/m3) Annual	Age Sensitivity Factor	Adult Cancer Risk (per million)	Fugitive PM2.5	Total PM2.5
0	0.25	-0.25 - 0*	-	-	10	-	-	-	-	-		
1	1	0 - 1	2019	0.1930	10	31.69	2019	0.1930	1	0.55	0.0293	0.2223
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						**31.7**				**0.55**		

* Third trimester of pregnancy

335 S. Winchester Blvd Office - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction Impacts at Off-Site MEI Location - 6.1 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				Adult - Exposure Information				Maximum	
							Modeled					
Exposure Year	Exposure Duration (years)	Age	DPM Conc (ug/m3) Year	DPM Conc (ug/m3) Annual	Age Sensitivity Factor	Infant/Child Cancer Risk (per million)	DPM Conc (ug/m3) Year	DPM Conc (ug/m3) Annual	Age Sensitivity Factor	Adult Cancer Risk (per million)	Fugitive PM2.5	Total PM2.5
0	0.25	-0.25 - 0*	-	-	10	-	-	-	-	-		
1	1	0 - 1	2019	0.4049	10	66.50	2019	0.4049	1	1.16	0.0399	0.4448
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						**66.5**				**1.16**		

* Third trimester of pregnancy

335 S. Winchester Blvd Office, San Jose, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk Calculations From Construction
Daycare - 1.0 meters - Child Exposure

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
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

Exposure Year	Exposure Duration (years)	Child - Exposure Information: DPM Conc (ug/m3) Year	DPM Conc (ug/m3) Annual	Age* Sensitivity Factor	Child Cancer Risk (per million)	Maximum Fugitive PM2.5	Maximum Total PM2.5
1	1	2019-2020	0.0108	3	0.3	0.0009	0.012

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

335 S. Winchester Blvd Office, San Jose, CA - Construction Impacts - With Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction
Impacts at Off-Site MEI Location - 6.1 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				Adult - Exposure Information				Maximum	
							Modeled					
Exposure Year	Exposure Duration (years)	Age	DPM Conc (ug/m3) Year	DPM Conc (ug/m3) Annual	Age Sensitivity Factor	Infant/Child Cancer Risk (per million)	DPM Conc (ug/m3) Year	DPM Conc (ug/m3) Annual	Age Sensitivity Factor	Adult Cancer Risk (per million)	Fugitive PM2.5	Total PM2.5
0	0.25	-0.25 - 0*	-	-	10	-	-	-	-	-		
1	1	0 - 1	2019	0.0453	10	7.45	2019	0.0453	1	0.13	0.0133	0.0586
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						**7.4**				**0.13**		

* Third trimester of pregnancy

description, the office-and-retail project is estimated to generate 451 net new daily trips with 85 new trips occurring during the AM peak hour and 47 trips occurring during the PM peak hour. The office-only alternative project description would generate 232 net new daily trips with 88 net new trips during the AM and 35 net new trips during the PM peak hour (see Appendix E). The currently proposed office and retail project and the alternative office-only project are estimated to generate the same or fewer trips than the project description evaluated in this report. Therefore, the intersection level of service analysis was conducted for only the office-and-retail project description listed in Table 8 and is considered a conservative evaluation of the project as currently proposed as well as the alternative office-only project scenario.

Table 8
Project Trip Generation Estimates

		Daily		AM Peak Hour				PM Peak Hour			
Land Use	**Size**	**Rate**	**Trips**	**Rate**	**In**	**Out**	**Total**	**Rate**	**In**	**Out**	**Total**
Proposed Project *											
Office Space [1]	82.67 ksf	9.74	805	1.16	83	13	96	1.15	15	80	95
Location-based Adjustment (Urban Low-Transit - 9%) [3]			(72)		(7)	(1)	(8)		(1)	(8)	(9)
Subtotal			**733**		**76**	**12**	**88**		**14**	**72**	**86**
Retail Space [2]	13.16 ksf	37.75	497	0.94	7	5	12	3.81	24	26	50
Location-based Adjustment (Urban Low-Transit - 13%) [3]			(65)		(1)	(1)	(2)		(3)	(4)	(7)
Subtotal			**432**		**6**	**4**	**10**		**21**	**22**	**43**
Total Project Trips			**1,165**		**82**	**16**	**98**		**35**	**94**	**129**
Other Project Trip Adjustments											
VMT Reduction Strategies [4]			(57)		(8)	(2)	(10)		(3)	(9)	(12)
Retail Pass-By Reduction [5]			(73)		-	-	-		(7)	(7)	(14)
Existing Use (Khahn's Restaurant) [6]	6.65 ksf	83.84	(558)		-	-	-	7.80	(8)	(44)	(52)
Subtotal			**(688)**		**(8)**	**(2)**	**(10)**		**(18)**	**(60)**	**(78)**
Net Project Trips *			**477**		**74**	**14**	**88**		**17**	**34**	**51**

Notes:

ksf = 1,000 square feet

* The project trip estimates presented above are based on an earlier, slightly larger project size. The currently proposed office-and-retail project is estimated to generate 451 net new daily trips with 85 new trips occurring during the AM peak hour and 47 trips occurring during the PM peak hour.

[1] General Office Building (Land Use 710) average rates published in ITE's *Trip Generation Manual, 10th Edition* , 2017.

[2] Shopping Center (Land Use 820) average rates published in ITE's *Trip Generation Manual, 10th Edition* , 2017.

[3] Trip reduction percentages obtained from the City of San Jose *Transportation Analysis Handbook* (2018). Proximity to transit based on the *San Jose VMT Evaluation Tool* , 2018.

[4] VMT reduction strategies obtained from the City of San Jose *Transportation Analysis Handbook* (2018). Reduction percentage for limited parking supply (9.8%) was based on the *San Jose VMT Evaluation Tool* , 2018.

[5] A pass-by trip reduction of 34% was applied to the retail component of the project during the PM peak hour, based on the average Shopping Center pass-by trip percentage published in Table E.9 of ITE's *Trip Generation Manual, 10th Edition* , 2017. The daily pass-by trip reduction was assumed to be the average of the AM/PM reduction (17%).

[6] Quality Restaurant (Land Use 931) average rates published in ITE's *Trip Generation Manual, 10th Edition* , 2017.

Trip Distribution and Trip Assignment

The trip distribution pattern for the project was developed based on existing travel patterns on the surrounding roadway system and the locations of complementary land uses. The peak-hour vehicle trips generated by the project were assigned to the roadway network in accordance with the trip distribution pattern, with an emphasis on freeway access and project driveway location. Figure 10 shows the trip distribution pattern and Figure 11 shows the net trip assignment of project traffic on the local transportation network.