APPENDIX C

Air Quality and Greenhouse Gas Assessment

MORGAN HILL FRY'S SITE MASTER PLAN AIR QUALITY AND GREENHOUSE GAS EMISSIONS ASSESSMENT

Morgan Hill, California

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INTRODUCTION

The City of Morgan Hill is evaluating the environmental impacts of planned development of an 89-acre undeveloped site that is located east of U.S. Highway 101, south of Cochrane Avenue, east of DePaul and Mission View Drives, southeast of Half Road. A proposed Master Plan would develop 89 acres of the site with industrial uses (57 acres), commercial development (4 acres), and residential uses (28 acres). There are only project plans available for approximately 1,060,000 square feet (sf) of industrial development on approximately 55 acres. The potential development for remaining portion of the site is identified; however, there are no project-specific plans available.

The purpose of this report is to address air quality impacts and greenhouse gas (GHG) emissions associated with the proposed Master Plan and specifically identify project impacts associated with the proposed industrial development. The air quality impacts and GHG emissions would be associated with construction and operation of new buildings and infrastructure for the proposed industrial uses, in combination with potential impacts from development of the entire Master Plan. Air pollutant and GHG emissions associated with the construction and operation of the project amendments were predicted using models. In addition, the potential construction health risk impact to nearby sensitive receptors and the impact of existing toxic air contaminant (TAC) sources affecting the proposed residences were evaluated. This analysis addresses those issues following the guidance provided by the Bay Area Air Quality Management District (BAAQMD).[1]

<u>Project Description</u>

The entire Master Plan area is approximately 89.3 acres. The project is proposing Master Plan (MP) Planned Development (PD) to be subdivided into three main zoning designations of Industrial, Commercial, and Low density attached residential development. The project site is planned to be parceled by way of a Parcel Map as follows (see Figure 1):

- Industrial – approximately 57 acres,
- Commercial – approximately 4 acres, and
- Residential Attached Low Density - approximately 28 acres.

Industrial Uses

The proposed Industrial Site consists of approximately 57-acres of the 89-acre site. The existing zoning for the Industrial Site is (CO) Commercial Office and the remaining portion is (ML) Light industrial.

<u>Scenario 1</u>: The industrial site would be reconfigured into four legal lots designated for flexible industrial and commercial uses, including manufacturing, research and development, warehouse distribution, supporting office, and similar light industrial and commercial uses totaling up to 1,044,600 square feet (sf). This portion of the project would be comprised of six buildings located on the western half of the project site adjacent to U.S. 101. The proposed buildings would have maximum heights of 50 feet. The industrial buildings will include a total of 124 loading dock

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

doors; the dock doors will be distributed between the six buildings, with nine dock doors being the smallest number of doors per building (Building C) and 25 doors being the maximum (Building B). This light industrial component of the project would provide 1435 standard vehicle parking stalls.

Scenario 2: The industrial site would be reconfigured into three legal lots designated for flexible industrial and commercial uses, including warehouse distribution, supporting office, and similar industrial and commercial uses totaling up to 1,060,000 sf. Each industrial lot will contain one concrete tilt-up industrial building including a 195,000 square foot building (Building 1), a 325,000 square foot building (Building 2) and a 540,000 square foot building (Building 3). The buildings are designed with a maximum height of 55 feet over 95 percent of the lineal parapet area with the ability to increase the maximum height to 90 feet over less than five percent of the lineal parapet area to accommodate specialized industrial equipment applications and uses including mechanical equipment, and other potential specialized uses including future telecommunication uses. The industrial buildings will include a total of 192 loading dock doors; the dock doors will be distributed between the three buildings. The industrial component of the project would provide 734 standard vehicle parking stalls.

Commercial

The property immediately fronting Cochrane Road would be reconfigured to one legal lot of approximately 2.92 acres. The Commercial portion of the Master Plan is zoning (CH) Highway Commercial. This analysis assumes up to 50,000 sf of commercial (retail) development is planned.

Residential

This analysis evaluates a maximum residential scenario of up to 319 residential units between DePaul Drive and Mission View Drive, north of Half Road. Residential development would occur on a 28-acre area of the site. No formal land use entitlement applications are currently on file, and this portion of the project is being evaluated at a programmatic level. The future development of this land is reasonably foreseeable given the existing land use designation and zoning, and the proposed roadway and other infrastructure improvements discussed below would be available to serve this property

Figure 1. Morgan Hill Fry's Site Master Plan

AERIAL PHOTOGRAPH AND SURROUNDING LAND USES | FIGURE 3

SETTING

Air Pollutants

Health effects of criteria pollutants and their potential sources are described below and summarized in Table 1.

Ozone

Ozone is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving reactive organic gases (ROG) and oxides of nitrogen (NO_X). The main sources of ROG and NO_X, often referred to as ozone precursors, are combustion processes (including combustion in motor vehicle engines) and the evaporation of solvents, paints, and fuels. In the Bay Area, automobiles are the single largest source of ozone precursors. Ozone is referred to as a regional air pollutant because its precursors are transported and diffused by wind concurrently with ozone production through the photochemical reaction process. Ozone causes eye irritation, airway constriction, shortness of breath, and can aggravate existing respiratory diseases such as asthma, bronchitis, and emphysema.

Carbon Monoxide

Carbon monoxide (CO) is an odorless, colorless gas usually formed as the result of the incomplete combustion of fuels. The single largest source of CO is motor vehicles. While CO transport is limited, it disperses with distance from the source under normal meteorological conditions. However, under certain extreme meteorological conditions, CO concentrations near congested roadways or intersections may reach unhealthful levels that adversely affect local sensitive receptors (e.g., residents, schoolchildren, the elderly, hospital patients, etc.). Typically, high CO concentrations are associated with roadways or intersections operating at unacceptable levels of service (LOS) or with extremely high traffic volumes. Exposure to high concentrations of CO reduces the oxygen-carrying capacity of the blood and can cause headaches, nausea, dizziness, fatigue, impair central nervous system function, and induce angina (chest pain) in persons with serious heart disease. Very high levels of CO can be fatal.

Nitrogen Dioxide

NO_2 is a reddish-brown gas that is a byproduct of combustion processes. Automobiles and industrial operations are the main sources of NO_2. Aside from its contribution to ozone formation, NO_2 also contribute to other pollution problems, including a high concentration of fine particulate matter, poor visibility, and acid deposition. NO_2 may be visible as a coloring component on high pollution days, especially in conjunction with high ozone levels. NO_2 decreases lung function and may reduce resistance to infection. On January 22, 2010 the EPA strengthened the health-based NAAQS for NO_2.

Sulfur Dioxide

Sulfur dioxide (SO_2) is a colorless, irritating gas formed primarily from incomplete combustion of fuels containing sulfur. Industrial facilities also contribute to gaseous SO_2 levels in the region. SO_2 irritates the respiratory tract, can injure lung tissue when combined with fine particulate matter, and reduces visibility and the level of sunlight.

Particulate Matter

Particulate matter is the term used for a mixture of solid particles and liquid droplets found in the air. Coarse particles are those that are larger than 2.5 microns but smaller than 10 microns (PM_{10}). $PM_{2.5}$ refers to fine suspended particulate matter with an aerodynamic diameter of 2.5 microns or less that is not readily filtered out by the lungs. Nitrates, sulfates, dust, and combustion particulates are major components of PM_{10} and $PM_{2.5}$. These small particles can be directly emitted into the atmosphere as by-products of fuel combustion, through abrasion, such as tire or brake lining wear, or through fugitive dust (wind or mechanical erosion of soil). They can also be formed in the atmosphere through chemical reactions. Particulates may transport carcinogens and other toxic compounds that adhere to the particle surfaces and can enter the human body through the lungs.

Lead

Lead is a metal found naturally in the environment as well as in manufactured products. The major sources of lead emissions have historically been mobile and industrial sources. As a result of the phase-out of leaded gasoline, metal processing is currently the primary source of lead emissions. The highest levels of lead in air are generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery manufactures.

Twenty years ago, mobile sources were the main contributor to ambient lead concentrations in the air. In the early 1970s, the U.S. EPA established national regulations to gradually reduce the lead content in gasoline. In 1975, unleaded gasoline was introduced for motor vehicles equipped with catalytic converters. The EPA banned the use of leaded gasoline in highway vehicles in December 1995. As a result of the EPA's regulatory efforts to remove lead from gasoline, emissions of lead from the transportation sector and levels of lead in the air decreased dramatically.

Toxic Air Contaminants (TACs)

In addition to the criteria pollutants discussed above, Toxic Air Contaminants (TACs) are another group of pollutants of concern. TACs are injurious in small quantities and are regulated by the EPA and the CARB. Some examples of TACs include: benzene, butadiene, formaldehyde, and hydrogen sulfide. The identification, regulation, and monitoring of TACs is relatively recent compared to that for criteria pollutants.

High volume freeways, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic (distribution centers, truck stops) were identified as posing the highest risk to adjacent receptors. Other facilities associated with increased risk include warehouse distribution

centers, large retail or industrial facilities, high volume transit centers, or schools with a high volume of bus traffic. Health risks from TACs are a function of both concentration and duration of exposure.

Asbestos

Asbestos is a known human carcinogen that can be found in man-made items (e.g. structural asbestos found in ceilings) or found naturally (e.g. naturally occurring asbestos [NOA]). Structural asbestos is regulated by federal and related state/air district regulations, while NOA is regulated by ARN and worker-safety programs. NOA in California may occur in serpentinite and ultramafic rocks. NOA is commonly found in the foothill region of the Sierra Neva, the Coast Ranges, and northwestern California. If in an NOA area, construction could disturb the NOA and it may become airborne. A review of the project site and of asbestos areas in California indicates that the project site should not have NOA present in the area (https://www.arb.ca.gov/toxics/asbestos/geninfo.htm from ARB).

The Industrial/Commercial portion of the site contains an approximately 70,000 cubic yard stockpile of soil mixed with serpentine rock, which is a locally mined aggregate material with some NOA. The stockpile is located in the northwest corner of the site, adjacent to the approximate locations of the proposed commercial building on Cochrane Road and the industrial Buildings 1 and 2. In accordance with Bay Area Air Quality Management District (BAAQMD) regulations, an Asbestos Dust Mitigation Plan (ADMP) will be prepared for BAAQMD review and approved prior to initiating the grading activities. The ADMP will include an air monitoring plan to be implemented when handling the stockpiled serpentine rock material. The Industrial project's construction plans specify the onsite burial of this material for encapsulation beneath permanent site improvements or at depths not to be encountered by future construction activities (i.e. construction of the commercial property fronting Cochrane Road or the industrial office building on the 'Not a Part' parcel). The final deposition of the serpentine rock material will be documented and recorded with BAAQMD. Specially trained and state-certified workers will perform and monitor all construction activities involving this material.

Sensitive Receptors

Some groups of people are more affected by air pollution than others. The State has identified the following people 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. Residential locations are assumed to include infants and small children.

There are existing sensitive receptors in the form of single-family residences to the east and south of the Master Plan area. The closest residence is immediately south of the site at the corner of Half Road and Condit Road. In addition, Live Oak High School lies about 300 feet southeast of the southeastern portion of the Master Plan area where residences are planned. De Paul Health Center is located east of the Master Plan area where industrial uses are planned and to the north-northwest

of the residential portion of the Master Plan area. The Westmont of Morgan Hill assisted living facility is located east of the Master Plan area where commercial uses are planned. The project would introduce new sensitive receptors in the form of residences. These residences would be located east of the planned industrial uses.

REGIONAL AIR QUALITY

The Morgan Hill Fry's Site is in the southern portion of the San Francisco Bay Area Air Basin. The Air Basin includes the counties of San Francisco, Santa Clara, San Mateo, Marin, Napa, Contra Costa, and Alameda, along with the southeast portion of Sonoma County and the southwest portion of Solano County. This Project is within the jurisdiction of the BAAQMD. Air quality conditions in the San Francisco Bay Area have improved significantly since the BAAQMD was created in 1955. Ambient concentrations of air pollutants, and the number of days during which the region exceeds air quality standards, have fallen dramatically. Exceedances of air quality standards occur primarily during meteorological conditions conducive to high pollution levels, such as cold, windless winter nights or hot, sunny summer afternoons.

Local Climate and Air Quality

Air quality is a function of both local climate and local sources of air pollution. Air quality is the balance of the natural dispersal capacity of the atmosphere and emissions of air pollutants from human uses of the environment. Climate and topography are major influences on air quality.

Climate and Meteorology

During the summer, mostly clear skies result in warm daytime temperatures and cool nights in the Santa Clara Valley. Winter temperatures are mild, except for very cool but generally frost-less mornings. Further inland where the moderating effect of the bay is not as strong, temperature extremes are greater. Wind patterns are influenced by local terrain, with a northwesterly sea breeze typically developing during the daytime. Winds are usually stronger in the spring and summer. Rainfall amounts are modest, ranging from 13 inches in the lowlands to 20 inches in the hills.

Air Pollution Potential

Ozone and fine particle pollution, or $PM_{2.5}$, are the major regional air pollutants of concern in the San Francisco Bay Area. Ozone is primarily a problem in the summer, and fine particle pollution in the winter. Most of Santa Clara County is well south of the cooler waters of the San Francisco Bay and far from the cooler marine air which usually reaches across San Mateo County in summer. Ozone frequently forms on hot summer days when the prevailing seasonal northerly winds carry ozone precursors southward across the county, causing health standards to be exceeded. Santa Clara County experiences many exceedances of the $PM_{2.5}$ standard each winter. This is due to the high population density, wood smoke, industrial and freeway traffic, and poor wintertime air circulation caused by extensive hills to the east and west that block wind flow into the region.

Table 1. Health Effects of Air Pollutants

Pollutants	Sources	Primary Effects
Carbon Monoxide (CO)	• Incomplete combustion of fuels and other carbon-containing substances, such as motor exhaust. • Natural events, such as decomposition of organic matter.	• Reduced tolerance for exercise. • Impairment of mental function. • Impairment of fetal development. • Death at high levels of exposure. • Aggravation of some heart diseases (angina).
Nitrogen Dioxide (NO_2)	• Motor vehicle exhaust. • High temperature stationary combustion. • Atmospheric reactions.	• Aggravation of respiratory illness. • Reduced visibility. • Reduced plant growth. • Formation of acid rain.
Ozone (O_3)	• Atmospheric reaction of organic gases with nitrogen oxides in sunlight.	• Aggravation of respiratory and cardiovascular diseases. • Irritation of eyes. • Impairment of cardiopulmonary function. • Plant leaf injury.
Lead (Pb)	• Contaminated soil.	• Impairment of blood functions and nerve construction. • Behavioral and hearing problems in children.
Suspended Particulate Matter ($PM_{2.5}$ and PM_{10})	• Stationary combustion of solid fuels. • Construction activities. • Industrial processes. • Atmospheric chemical reactions.	• Reduced lung function. • Aggravation of the effects of gaseous pollutants. • Aggravation of respiratory and cardiorespiratory diseases. • Increased cough and chest discomfort. • Soiling. • Reduced visibility.
Sulfur Dioxide (SO_2)	• Combustion of sulfur-containing fossil fuels. • Smelting of sulfur-bearing metal ores. • Industrial processes.	• Aggravation of respiratory diseases (asthma, emphysema). • Reduced lung function. • Irritation of eyes. • Reduced visibility. • Plant injury. • Deterioration of metals, textiles, leather, finishes, coatings, etc.
Toxic Air Contaminants	• Cars and trucks, especially diesels. • Industrial sources such as chrome platers. • Neighborhood businesses such as dry cleaners and service stations. • Building materials and product.	Cancer. Chronic eye, lung, or skin irritation. Neurological and reproductive disorders.

Source: CARB, 2009. ARB Fact Sheet: Air Pollution and Health, see: https://www.arb.ca.gov/research/health/fs/fs1/fs1.htm accessed May 1, 2018

Attainment Status Designations

The CARB is required to designate areas of the State as attainment, nonattainment, or unclassified for all State standards. An “attainment” designation for an area signifies that pollutant concentrations did not violate the standard for that pollutant in that area. A “nonattainment” designation indicates that a pollutant concentration violated the standard at least once, excluding those occasions when a violation was caused by an exceptional event, as defined in the criteria. An “unclassified” designation signifies that data does not support either an attainment or nonattainment status. The CCAA divides districts into moderate, serious, and severe air pollution categories, with increasingly stringent control requirements mandated for each category.

Table 2 shows the State and Federal standards for criteria pollutants and provides a summary of the attainment status for the San Francisco Bay Area with respect to National and State ambient air quality standards.

Existing Air Pollutant Levels

BAAQMD monitors air pollution at various sites within the Bay Area. The closest official monitoring stations are the San Martin Station that only measures ozone, the Gilroy station that measures PM2.5 and the San Jose station that measures PM10, carbon monoxide and nitrogen dioxide. The data shows that during the past few years, the project area has exceeded the State and/or federal O_3, PM_{10}, and $PM_{2.5}$ ambient air quality standards. Table 3 lists air quality trends in data collected at the stations closest to the Master Plan area over the past 5 years (2014 through 2018) and published by the BAAQMD, which is the most recent time-period available.

Table 2. San Francisco Bay Area Attainment Status

Pollutant	Averaging Time	California Standards		National Standards	
		Concentration	Attainment Status	Concentration	Attainment Status
Carbon Monoxide (CO)	8-Hour	9 ppm (10 mg/m^3)	Attainment	9 ppm (10 mg/m^3)	Attainment
	1-Hour	20 ppm (23 mg/m^3)	Attainment	35 ppm (40 mg/m^3)	Attainment
Nitrogen Dioxide (NO_2)	Annual Mean	0.030 ppm (57 mg/m^3)	Attainment	0.053 ppm (100 µg/m^3)	Attainment
	1-Hour	0.18 ppm (338 µg/m^3)	Attainment	0.100 ppm	Unclassified
Ozone (O_3)	8-Hour	0.07 ppm (137 µg/m^3)	Nonattainment	0.070 ppm	Nonattainment
	1-Hour	0.09 ppm (180 µg/m^3)	Nonattainment	Not Applicable	Not Applicable
Suspended Particulate Matter (PM_{10})	Annual Mean	20 µg/m^3	Nonattainment	Not Applicable	Not Applicable
	24-Hour	50 µg/m^3	Nonattainment	150 µg/m^3	Unclassified
Suspended Particulate Matter ($PM_{2.5}$)	Annual Mean	12 µg/m^3	Nonattainment	12 µg/m^3	Attainment
	24-Hour	Not Applicable	Not Applicable	35 µg/m^3	Nonattainment
Sulfur Dioxide (SO_2)	Annual Mean	Not Applicable	Not Applicable	80 µg/m^3 (0.03 ppm)	Attainment
	24-Hour	0.04 ppm (105 µg/m^3)	Attainment	365 µg/m^3 (0.14 ppm)	Attainment
	1-Hour	0.25 ppm (655 µg/m^3)	Attainment	0.075 ppm (196 µg/m^3)	Attainment

Lead (Pb) is not listed in the above table because it has been in attainment since the 1980s.
ppm = parts per million, mg/m^3 = milligrams per cubic meter, µg/m^3 = micrograms per cubic meter
Source: Bay Area Air Quality Management District, 2017. *Air Quality Standards and Attainment Status.* January 5.

Table 3. Ambient Air Quality Concentrations from 2014 through 2018

Pollutant	Standard	2014	2015	2016	2017	2018
Ozone (San Martin Station)						
Max 1-hr concentration		97 ppb	98 ppb	96 ppb	96 ppb	92 ppb
No. days exceeded: State	0	1	1	1	1	0
Max 8-hr concentration		78 ppb	83 ppb	71 ppb	86 ppb	80 ppb
No. days exceeded: State	0	5	4	1	3	1
Federal	0	3	4	1	3	1
Carbon Monoxide (San Jose)						
Max 1-hr concentration		2.4 ppm	2.4 ppm	2.0 ppm	2.1 ppm	2.5 ppm
No. days exceeded: State	0	0	0	0	0	0
Federal	0	0	0	0	0	0
Max 8-hr concentration		1.9 ppm	1.8 ppm	1.4 ppm	1.8 ppm	2.1 ppm
No. days exceeded: State	0	0	0	0	0	0
Federal	0	0	0	0	0	0
PM_{10} (San Jose)						
Max 24-hr concentration		55 µg/m^3	58 µg/m^3	41 µg/m^3	70 µg/m^3	122 µg/m^3
No. days exceeded: State	1	1	1	0	0	4
Federal	0	0	0	0	0	0
Max annual concentration		19.9 µg/m^3	22.0 µg/m^3	18.5 µg/m^3	21.6 µg/m^3	23.1 µg/m^3
No. days exceeded: State	20 µg/m^3	-	-	-	-	-
$PM_{2.5}$ (Gilroy)						
Max 24-hr concentration		25.7µg/m^3	42.2µg/m^3	16.0µg/m^3	48.4µg/m^3	97.5µg/m^3
No. days exceeded: Federal	2	0	2	0	2	12
Annual Concentration		6.8 µg/m^3	7.2µg/m^3	5.6 µg/m^3	5.5 µg/m^3	7.7µg/m^3
Nitrogen Dioxide (San Jose)						
Max 1-hr concentration		58 ppb	49 ppb	51 ppb	68 ppb	86 ppb
No. days exceeded: State	0	0	0	0	0	0
Federal	0	0	0	0	0	0
Annual Concentration		13 ppb	13 ppb	11 ppb	12 ppb	13 ppb

ppb = parts per billion, ppm = parts per million, µg/m^3 = micrograms per cubic meter
Source: Bay Area Air Quality Management District, 2019

REGULATORY FRAMEWORK

Pursuant to the federal Clean Air Act (CAA) of 1970, the U.S. Environmental Protection Agency (EPA) established national ambient air quality standards (NAAQS). The NAAQS were established for major pollutants, termed "criteria" pollutants. Criteria pollutants are defined as those pollutants for which the Federal and State governments have established ambient air quality standards, or criteria, for outdoor concentrations in order to protect public health.

Both the EPA and the California Air Resources Board (CARB) have established ambient air quality standards for common pollutants: carbon monoxide (CO), ozone (O_3), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), lead (Pb), and suspended particulate matter (PM). In addition, the State has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility reducing particles. These standards are designed to protect the health and welfare of the public with a reasonable margin of safety. These ambient air quality standards are levels of contaminants which

represent safe levels that avoid specific adverse health effects associated with each criteria pollutant.

Federal Air Quality Regulations

At the federal level, the EPA has been charged with implementing national air quality programs. EPA's air quality mandates are drawn primarily from the Federal Clean Air Act (FCAA), which was enacted in 1963. The FCAA was amended in 1970, 1977, and 1990.

The FCAA required EPA to establish primary and secondary NAAQS and required each state to prepare an air quality control plan referred to as a State Implement Plan (SIP). Federal standards include both primary and secondary standards. Primary standards set limits to protect public health, including the health of sensitive populations such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings.[2] The Federal Clean Air Act Amendments of 1990 (FCAAA) added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is periodically modified to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. EPA has responsibility to review all state SIPs to determine conformity with the mandates of the FCAAA and determine if implementation will achieve air quality goals. Failure to submit an approvable SIP or to implement the Plan within the mandated timeframe may result in the application of sanctions on transportation funding and stationary air pollution sources in the air basin.

The 1970 FCAA authorized the establishment of national health-based air quality standards and also set deadlines for their attainment. The FCAA Amendments of 1990 changed deadlines for attaining NAAQS as well as the remedial actions required of areas of the nation that exceed the standards. Under the FCAA, State and local agencies in areas that exceed the NAAQS are required to develop SIPs to show how they will achieve the NAAQS by specific dates. The FCAA requires that projects receiving federal funds demonstrate conformity to the approved SIP and local air quality attainment Plan for the region. Conformity with the SIP requirements would satisfy the FCAA requirements.

State Air Quality Regulations

The CARB is the agency responsible for the coordination and oversight of State and local air pollution control programs in California and for implementing the California Clean Air Act (CCAA), adopted in 1988. The CCAA requires that all air districts in the State achieve and maintain the California Ambient Air Quality Standards (CAAQS) by the earliest practical date. The CCAA specifies that districts should focus on reducing the emissions from transportation and air-wide emission sources and provides districts with the authority to regulate indirect sources.

CARB is also responsible for developing and implementing air pollution control plans to achieve and maintain the NAAQS. CARB is primarily responsible for statewide pollution sources and

[2] U.S. Environmental Protection Agency, 2013. Website: www.epa.gov/air/criteria.html. February.

produces a major part of the SIP. Local air districts provide additional strategies for sources under their jurisdiction. CARB combines this data and submits the completed SIP to the EPA.
Other CARB duties include monitoring air quality (in conjunction with air monitoring networks maintained by air pollution control and air quality management districts), establishing CAAQS (which in many cases are more stringent than the NAAQS), determining and updating area designations and maps, and setting emissions standards for new mobile sources, consumer products, small utility engines, and off-road vehicles.

California Clean Air Act

In 1988, the CCAA required that all air districts in the State endeavor to achieve and maintain CAAQS for carbon monoxide (CO), ozone (O_3), sulfur dioxide (SO_2) and nitrogen dioxide (NO_2) by the earliest practical date. The CCAA provides districts with authority to regulate indirect sources and mandates that air quality districts focus particular attention on reducing emissions from transportation and area-wide emission sources. Each nonattainment district is required to adopt a plan to achieve a 5 percent annual reduction, averaged over consecutive 3-year periods, in district-wide emissions of each nonattainment pollutant or its precursors. A Clean Air Plan shows how a district would reduce emissions to achieve air quality standards. Generally, the State standards for these pollutants are more stringent than the national standards.

California Air Resources Board Handbook

In 1998, CARB identified particulate matter from diesel-fueled engines as a toxic air contaminant. CARB has completed a risk management process that identified potential cancer risks for a range of activities using diesel-fueled engines.[3] CARB subsequently developed an Air Quality and Land Use Handbook[4] (Handbook) in 2005 that is intended to serve as a general reference guide for evaluating and reducing air pollution impacts associated with new projects that go through the land use decision-making process. The 2005 CARB Handbook recommends that planning agencies consider proximity to air pollution sources when considering new locations for "sensitive" land uses, such as residences, medical facilities, daycare centers, schools, and playgrounds.

Air pollution sources of concern include freeways, rail yards, ports, refineries, distribution centers, chrome plating facilities, dry cleaners, and large gasoline service stations. Key recommendations in the Handbook relative to the Plan Area include taking steps to consider or avoid siting new, sensitive land uses:

- Within 500 feet of a freeway, urban roads with 100,000 vehicles/day or rural roads with 50,000 vehicles/day.
- Within 300 feet of gasoline fueling stations (note that new fueling stations utilize enhanced vapor recovery systems that substantially reduce emissions).
- Within 300 feet of dry-cleaning operations (note that dry cleaning with TACs is being phased out and will be prohibited in 2023).

[3] California Air Resources Board, 2000. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*. October.
[4] California Air Resources Board, 2005. *Air Quality and Land Use Handbook: A Community Health Perspective.* April.

Bay Area Air Quality Management District (BAAQMD)

The BAAQMD seeks to attain and maintain air quality conditions in the San Francisco Bay Area Air Basin (SFBAAB) through a comprehensive program of planning, regulation, enforcement, technical innovation, and education. The clean air strategy includes the preparation of plans for the attainment of ambient air quality standards, adoption and enforcement of rules and regulations, and issuance of permits for stationary sources. The BAAQMD also inspects stationary sources and responds to citizen complaints, monitors ambient air quality and meteorological conditions, and implements programs and regulations required by law.

Clean Air Plan

The BAAQMD is responsible for developing a Clean Air Plan which guides the region's air quality planning efforts to attain the CAAQS. The BAAQMD's 2017 Clean Air Plan is the latest Clean Air Plan which contains district-wide control measures to reduce ozone precursor emissions (i.e., ROG and NO_X), particulate matter and greenhouse gas emissions. The Bay Area 2017 Clean Air Plan, which was adopted on April 19, 2017 by the BAAQMD's board of directors:

- Updates the Bay Area 2010 Clean Air Plan in accordance with the requirements of the California Clean Air Act to implement "all feasible measures" to reduce ozone;
- Provides a control strategy to reduce ozone, particulate matter (PM), air toxics, and greenhouse gases in a single, integrated plan;
- Reviews progress in improving air quality in recent years; and
- Continues and updates emission control measures.

BAAQMD CARE Program

The Community Air Risk Evaluation (CARE) program was initiated in 2004 to evaluate and reduce health risks associated with exposures to outdoor TACs in the Bay Area. The program examines TAC emissions from point sources, area sources and on-road and off-road mobile sources with an emphasis on diesel exhaust, which is a major contributor to airborne health risk in California. The CARE program is an on-going program that encourages community involvement and input. The technical analysis portion of the CARE program is being implemented in three phases that includes an assessment of the sources of TAC emissions, modeling and measurement programs to estimate concentrations of TAC, and an assessment of exposures and health risks. Throughout the program, information derived from the technical analyses will be used to focus emission reduction measures in areas with high TAC exposures and high density of sensitive populations. Risk reduction activities associated with the CARE program are focused on the most at-risk communities in the Bay Area. The BAAQMD has identified six communities as impacted: Concord, Richmond/San Pablo, Western Alameda County, San Jose, Redwood City/East Palo Alto, and Eastern San Francisco.

Planning Healthy Places

BAAQMD developed a guidebook that provides air quality and public health information intended to assist local governments in addressing potential air quality issues related to exposure of sensitive receptors to exposure of emissions from local sources of air pollutants. The guidance provides

tools and recommended best practices that can be implemented to reduce exposures. The information is provided as recommendations to develop policies and implementing measures in city or county General Plans, neighborhood or specific plans, land use development ordinances, or into projects.

BAAQMD California Environmental Quality Act (CEQA) Air Quality Guidelines

The BAAQMD *CEQA Air Quality Guidelines*[5] were prepared to assist in the evaluation of air quality impacts of projects and plans proposed within the Bay Area. The guidelines provide recommended procedures for evaluating potential air impacts during the environmental review process consistent with CEQA requirements including thresholds of significance, mitigation measures, and background air quality information. They also include assessment methodologies for air toxics, odors, and greenhouse gas emissions. In June 2010, the BAAQMD's Board of Directors adopted CEQA thresholds of significance and an update of their *CEQA Guidelines*. In May 2011, the updated BAAQMD *CEQA Air Quality Guidelines* were amended to include a risk and hazards threshold for new receptors and modify procedures for assessing impacts related to risk and hazard impacts. A recent update to the *Guidelines* was published in May 2017.

BAAQMD Rules and Regulations

Combustion equipment associated with the proposed project that includes new diesel engines to power generators and possibly new natural gas-fired boilers would establish new sources of particulate matter and gaseous emissions. Emissions would primarily result from the testing of the emergency backup generators, operation of the boilers for space and water heating and some minor emissions from cooling towers. The project would also generate emissions from vehicles traveling to and from the project.

Certain emission sources would be subject to BAAQMD Regulations and Rules. The District's rules and regulations that may apply to the project include:

- Regulation 2 – Permits
  - Rule 2-1: General Requirements
  - Rule 2-2: New Source Review
- Regulation 6 – Particulate Matter and Visible Emissions
- Regulation 9 – Inorganic Gaseous Pollutants
  - Rule 9-1: Sulfur Dioxide
  - Rule 9-7: Nitrogen Oxides and Carbon Monoxide from Industrial, Institutional, and Commercial Boilers, Steam Generators, And Process Heaters
  - Rule 9-8: Nitrogen Oxides and Carbon Monoxide from Stationary Internal Combustion Engines

Permits – Rule 2-1-301 requires that any person installing, modifying, or replacing any equipment, the use of which may reduce or control the emission of air contaminants, shall first obtain an authority to construct (ATC).

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

Rule 2-1-302 requires that written authorization from the BAAQMD in the form of a permit to operate (PTO) be secured before any such equipment is used or operated.

Rule 2-1 lists sources that are exempt from permitting. At the proposed facility, the diesel fuel storage tanks are expected to be exempt from permitting.

New Source Review - Rule 2-2, New Source Review (NSR), applies to all new and modified sources or facilities that are subject to the requirements of Rule 2-1-301. The purpose of the rule is to provide for review of such sources and to provide mechanisms by which no net increase in emissions will result.

Rule 2-2-301 requires that an applicant for an Authority to Construct (ATC) or Permit to Operate (PTO) apply best available control technology (BACT) to any new or modified source that results in an increase in emissions and has emissions of precursor organic compounds, non-precursor organic compounds, NOx, SO_2, PM_{10}, or CO of 10.0 pounds or more per highest day. Based on the estimated emissions from the proposed project, BACT will be required for NOx emissions from the diesel-fueled generator engines.

BACT for Diesel Generator Engines – Since the generators will be used exclusively for emergency use during involuntary loss of power, the BACT 2 levels listed for IC compression engines in the BAAQMD BACT Guidelines would apply. The BACT 2 NOx emission factor limit is 6.9 grams per horsepower hour (g/hp-hr). The project's proposed engines will have emissions lower than the BACT 2 level and, as such, will comply with the BACT requirements.

Offsets - Rule 2-2-302 require that offsets be provided for a new or modified source that emits more than 10 tons per year of NOx or precursor organic compounds. It is not expected that emissions of any pollutant will exceed the offset thresholds. Thus, is not expected that offsets for the proposed project would be required.

Prohibitory Rules - Regulation 6 pertains to particulate matter and visible emissions. Although the engines will be fueled with diesel, they will be modern, low emission engines. Thus, the engines are expected to comply with Regulation 6.

Rule 9-1 applies to sulfur dioxide. The engines will use ultra-low sulfur diesel fuel (less than 15 ppm sulfur) and will not be a significant source of sulfur dioxide emissions and are expected to comply with the requirements of Rule 9-1.

Rule 9-7 limits the emissions of NOx CO from industrial, institutional and commercial boilers, steam generators and process heaters. This regulation typically applies to boilers with a heat rating of 2 million British Thermal Units (BTU) per hour

Rule 9-8 prescribes NOx and CO emission limits for stationary internal combustion engines. Since the proposed engines will be used with emergency standby generators, Regulation 9-8-110 exempts the engines from the requirements of this Rule, except for the recordkeeping requirements (9-8-530) and limitations on hours of operation for reliability-related operation (maintenance and

testing). The engines will not operate more than 50 hours per year, which will satisfy the requirements of 9-8-111.

Stationary Diesel Airborne Toxic Control Measure (ACTM) – The BAAQMD administers the State's ACTM for Stationary Diesel engines (section 93115, title 17 CA Code of Regulations). The project's engines will be new stationary emergency standby diesel engines larger than 50 hp. Since the engines will have an uncontrolled PM emission factor of less than 0.15 g/hp-hr and operate no more than 50 hours per year, the engines will comply with the requirements of the ACTM.

Naturally Occurring Asbestos ACTM - To reduce public exposure to naturally occurring asbestos, BAAQMD regulates all construction and mining activities that produce dust potentially containing naturally occurring asbestos. The ATCM places requirements on the following activities in areas where naturally occurring asbestos is likely to be found:

- Road construction and maintenance.
- Construction and grading.
- Quarrying and surface mining.

Construction projects greater than one acre with potential to disturb naturally occurring asbestos must submit an asbestos dust mitigation plan application. The District reviews and evaluates the plan to ensure the appropriate minimization measures are incorporated and may require monitoring if in close proximity to sensitive receptors.

City of Morgan Hill

Adopted July 27, 2016, the *Morgan Hill 2035 General Plan* includes goals, policies, and actions to improve air quality issues facing the City of Morgan Hill.[6] The following goals, policies, and actions are applicable to the proposed project:

Goal NRE-10: Reduced air pollution emissions.

Policy NRE-10.1 **Regional and Subregional Cooperation**. Cooperate with regional agencies in developing and implementing air quality management plans. Support subregional coordination with other cities, counties, and agencies in the Santa Clara Valley and adjacent areas to address land use, jobs/housing balance, and transportation planning issues as a means of improving air quality.

Policy NRE-10.2 **State and Federal Regulation**. Encourage effective regulation of mobile and stationary sources of air pollution and support State and federal regulations to improve automobile emission controls.

[6] City of Morgan Hill, California (2016). "Chapter 8 Natural Resources and Environment". *City of Morgan Hill General Plan 2035.* https://www.morgan-hill.ca.gov/DocumentCenter/View/22839/MH2035-General-Plan---December-2017?bidId=

Policy NRE-10.3 **Automobile Emissions**. Encourage the use of and infrastructure for alternative fuel, hybrid, and electric vehicles. Encourage new and existing public and private development to include electric vehicle charging stations.

Policy NRE-10.4 **Reduced Automobile Use**. To reduce air pollution the frequency and length of automobile trips and the amount of traffic congestion by controlling sprawl, promoting infill development, and encouraging mixed uses and higher density development near transit. Support the expansion and improvement of alternative modes of transportation. Encourage development project designs that protect and improve air quality and minimize direct and indirect air pollutant emissions by including components that reduce vehicle trips.

Goal NRE-11: Minimized exposure of people to toxic air contaminants such as ozone, carbon monoxide, lead, and particulate matter.

Policy NRE-11.1 **TACs and Proposed Sensitive Use**s. Require modeling for sensitive land uses, such as residential development, proposed near sources of pollution such as freeways and industrial uses. Require new residential development and projects categorized as sensitive receptors to incorporate effective mitigation measures into project designs or be located adequate distances from sources of toxic air contaminants (TACs) to avoid significant risk to health and safety.

Policy NRE-11.2 **TACs and Existing Sensitive Uses**. Encourage the installation of appropriate air filtration mechanisms at existing schools, residences, and other sensitive receptors adversely affected by existing or proposed pollution sources.

Policy NRE-11.3 **Health Risk Assessments.** For proposed development that emits toxic air contaminants, require project proponents to prepare health risk assessments in accordance with Bay Area Air Quality Management District procedures as part of environmental review and implement effective mitigation measures to reduce potential health risks to less-than-significant levels. Alternatively, require these projects to be located an adequate distance from residences and other sensitive receptors to avoid health risks. Consult with the Bay Area Air Quality Management District to identify stationary and mobile toxic air contaminant sources and determine the need for and requirements of a health risk assessment for proposed developments

Policy NRE-11.4 **Truck Routes**. For development projects generating significant heavy-duty truck traffic, designate truck routes that minimize exposure of sensitive receptors to toxic air contaminants and particulate matter.

Policy NRE-11.5 **Truck Idling**. For development projects generating significant truck traffic, require signage to remind drivers that the State truck idling law limits truck idling to five (5) minutes.

Policy NRE-11.6 **Vegetation Buffers**. Encourage the use of pollution-absorbing trees and vegetation in buffer areas between substantial sources of toxic air contaminants and sensitive receptors.

Goal NRE-12: Minimized air pollutant emissions from demolition and construction activities

Policy NRE-12.1: **Best Practices.** Requirement that development projects implement best management practices to reduce air pollutant emissions associated with construction and operation of the project.

Policy NRE-12.2 **Conditions of Approvals.** Include dust, particulate matter, and construction equipment exhaust control measures as conditions of approval for subdivision maps, site development and planned development permits, grading permits, and demolition permits. At a minimum, conditions shall conform to construction mitigation measures recommended in the current Bay Area Air Quality Management District CEQA Guidelines.

Policy NRE-12.3 **Control Measures.** Require construction and demolition projects that have the potential to disturb asbestos (from soil or building material) to comply with all the requirements of the California Air Resource Board's air toxics control measures (ATCMs) for Construction, Grading, Quarrying, and Surface Mining Operations.

Policy NRE-12.4 **Grading**. Require subdivision designs and site planning to minimize grading and use landform grading in hillside areas.

- Action NRE-12.A Standard Measures for Demolition and Grading. Adopt and periodically update dust, particulate matter, and exhaust control standard measures for demolition, grading, and construction activities to include on project plans mitigation measures as conditions of approval based Bay Area Air Quality Management District CEQA Guidelines. Include measures to prevent silt loading on roadways that generates particulate matter air pollution by prohibiting unpaved or unprotected access to public roadways from construction sites.
- Action NRE-12.B Grading Ordinance. Revise the grading ordinance and condition grading permits to require that graded areas be stabilized from the completion of grading to commencement and construction.

SIGNIFICANCE THRESHOLDS

In June 2010, BAAQMD adopted thresholds of significance to assist in the review of projects under CEQA and these significance thresholds were contained in the District's 2011 *CEQA Air Quality Guidelines*. These thresholds were designed to establish the level at which BAAQMD believed air pollution emissions would cause significant environmental impacts under CEQA. The thresholds were challenged through a series of court challenges and were mostly upheld. BAAQMD updated the *CEQA Air Quality Guidelines* in 2017 to include the latest significance thresholds that were used in this analysis are summarized in Table 4.

Table 4. Air Quality Significance Thresholds

Criteria Air Pollutant	Construction Thresholds	Operational Thresholds	
	Average Daily Emissions (lbs./day)	Average Daily Emissions (lbs./day)	Annual Average Emissions (tons/year)
ROG	54	54	10
NO_x	54	54	10
PM_{10}	82 (Exhaust)	82	15
$PM_{2.5}$	54 (Exhaust)	54	10
CO	Not Applicable	9.0 ppm (8-hour average) or 20.0 ppm (1-hour average)	
Fugitive Dust	Construction Dust Ordinance or other Best Management Practices	Not Applicable	
Health Risks and Hazards	**Single Sources Within 1,000-foot Zone of Influence**	**Combined Sources (Cumulative from all sources within 1,000-foot zone of influence)**	
Excess Cancer Risk	>10.0 per one million	>100 per one million	
Hazard Index	>1.0	>10.0	
Incremental annual $PM_{2.5}$	>0.3 µg/m^3	>0.8 µg/m^3	
Odor			
5 confirmed complaints per year averaged over 3 years			
Greenhouse Gas Emissions			
Land Use Projects – direct and indirect emissions	Compliance with a Qualified GHG Reduction Strategy OR 1,100 metric tons annually or 4.6 metric tons per capita (for 2020) 660 metric tons annually or 2.8 metric tons per capita (for 2030)*		
Note: ROG = reactive organic gases, NOx = nitrogen oxides, PM_{10} = course particulate matter or particulates with an aerodynamic diameter of 10 micrometers (µm) or less, $PM_{2.5}$ = fine particulate matter or particulates with an aerodynamic diameter of 2.5µm or less. GHG = greenhouse gases. *BAAQMD does not have a recommended post-2020 GHG threshold.			

AIR QUALITY IMPACTS AND MITIGATION MEASURES

Impact 1: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

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.

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*. Note that the project could disturb or handle soil material that may contain asbestos. In accordance with BAAQMD regulations, an Asbestos Dust Mitigation Plan (ADMP) will be prepared for BAAQMD review and approved prior to initiating the grading activities. The ADMP will include an air monitoring plan to be implemented when handling the stockpiled serpentine rock material. Mitigation Measure AQ-1 includes the enhanced dust control measures recommended by BAAQMD for soil disturbances. Other measures will likely be imposed by BAAQMD as part of their review prior to issuing any approval to disturb these soils.

The California Emissions Estimator Model (CalEEMod) Version 2016.3.2 was used to estimate emissions from construction and operation of the project site and of the entire Master Plan area. There were four sets of CalEEMod model runs developed for this project. The following project build-out scenario was modeled:

1. Proposed Industrial Project:
    a. Warehouse Scenario: 1,060,000 sf of "Unrefrigerated Warehouse-No Rail" and a 734-space "Parking Lot" on a 54.74-acre site.
    b. General Light Industry Scenario: 1,044,600 sf of "General Light Industrial" and a 1435-space "Parking Lot" on a 54.74-acre site. This portion was modeled as the proposed project and included in the Master Plan land uses.

    One construction scenario was assumed based on provided construction data. Construction would occur in 2021 and 2022 with operation in 2023.

2. Proposed Industrial Commercial Lot: 50,000 sf of “Strip Mall” on a 3.06-acre site. The earliest that construction activity would be possible was estimated at 2021 and 2022 with operation beginning in 2023 at the earliest.

3. Proposed Industrial Office (Industrial Dr. Lee): 45,000 sf of “General Light Industrial ” a on a 2.18-acre site. Construction would occur in 2021 and 2022 with operation beginning in 2023 at the earliest.

4. Proposed Residential Component: 319 units of “Single Family Housing” on a 28-acre site. Construction was assumed to begin in 2021 at the earliest and continue to 2024 with the earliest full operation year of 2025 assumed.

Construction Period Emissions

CalEEMod provided annual emissions for construction and estimated emissions 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 the information provided for the defined industrial project. The other project components relied on the CalEEMod model defaults. Since the project site is flat and mostly undeveloped, no substantial import or export of soil material was assumed in the modeling.

Construction of the Industrial Project is projected to begin 2021 and last through mid-2022. There are an estimated 308 construction workdays for that project. Other components of the Master Plan projects could be constructed in 2021 into 2024. The total construction period for the Master Plan was assumed to be 2021 through 2023, based on the CalEEMod default construction schedule for each of the land uses. Under this build our scenario, there would be 792 construction workdays. Average daily emissions were computed by dividing the total construction emissions by the number of construction days. Table 5 shows average daily construction emissions of ROG, NO_X, PM_{10} exhaust, and $PM_{2.5}$ exhaust during construction of the project and the entire Master Plan build out. The daily NO_x emissions exceed the threshold of 54 pounds per day.

Operational Period Emissions

Operational air emissions from the project would be generated primarily from trucks using the industrial warehouses, autos driven by future residents, employees, and customers. Evaporative emissions from architectural coatings and maintenance products (classified as consumer products) are typical emissions from these types of uses. CalEEMod was also 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 Defined Industrial Project would be constructed in 2021 and 2022, with the earliest full operation year being 2023. Construction of other Master Plan components would follow with full operation in 2025.

Table 5. Project Construction Period Emissions

Scenario	ROG	NOx	Total PM_{10}	Total $PM_{2.5}$
Construction Period Emissions (Year 2021 – 2023)[1]				
Total construction emissions (tons)				
Unmitigated	12.51	22.21	0.92	0.86
Mitigated	--	15.39	--	--
Average daily emissions based on 792 construction days (pounds/day)				
Unmitigated	32	56	2	2
Mitigated	--	39	--	--
BAAQMD Thresholds (pounds/day)	*54* lbs.	*54* lbs.	*82* lbs.	*54* lbs.
Exceed Threshold?				
Unmitigated	No	**Yes**	No	No
Mitigated	--	No	--	--

[1]Assumes similar construction activity for Warehouse or Light Industrial development

Traffic Activity

CalEEMod allows the user to enter specific vehicle trip generation rates, which were input to the model using the daily trip generation rate provided in the project trip generation table. The trip generation rates for each of the land uses were provided by *Hexagon Transportation Consultants*.[7]

For the Industrial uses, *Hexagon* estimated auto and truck traffic for each of the scenarios. The traffic mix was adjusted in the project CalEEMod model run to represent non-truck traffic. In these cases, the Medium Heavy Duty and Heavy Heavy-Duty truck fractions were set to "0" and the mix was recomputed for all other vehicle classes. The CalEEMod default vehicle mix was applied to the commercial and residential uses.

Emissions for truck traffic were computed outside of the CalEEMod model. Vehicle emissions rates from the CARB EMFAC2017 model were applied to the truck travel estimates. Truck travel was estimated for the industrial uses at 385 daily truck trips for the warehouse scenario and 248 daily truck trips for the General Light Industrial scenario. Truck trip lengths were assumed to be 18 miles. A combination of 50 percent Medium Heavy-Duty trucks and 50-percent Heavy Heavy-Duty trucks were assumed.

The trip rates were assumed to be the weekday rate and weekend rates were developed by adjusting

[7] Hexagon Transportation Consultants. 2020. *Morgan Hill Technology Center Traffic Impact Analysis*. January.

that rate to be consistent with CalEEMod. This was done by multiplying the project weekday rate by the ratio of the default CalEEMod weekday and Saturday rate and the weekday and Sunday rate. Both the Light Industrial and Warehouse uses were assumed to operate the same on weekends as weekdays.

Hexagon computed vehicle miles traveled (VMT) for each of the project scenarios and the associated VMT per trip. For the warehouse scenario, trip lengths were assumed at 5.97 miles. A trip length of 5.86 miles was used for the General Light Industrial scenario. The VMT per trip was applied to CalEEMod as the trip length. Since specific trip lengths were assigned, all trip types were assumed to be primary trips (i.e., no passby or diverted trips were assumed).

Electricity

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.[8]

Silicon Valley Clean Energy (SVCE) is the official electricity provider for Morgan Hill. SVCE purchases carbon-free electricity and partners with PG&E to deliver this electricity over existing power lines that they maintain. SVCE provides 100-percent carbon-free energy. However, customers have the option to opt out of the program and purchase electricity from PG&E, which is not carbon free, as described above. This analysis assumes a 10-percent non-participation rate with SVCE. Therefore, an electricity emission rate of 29 pounds per of CO_2 per megawatt of electricity delivered was used for this analysis.

Natural Gas

Ordinance No. 2306 add Chapter 15.63 to the Morgan Hill Municipal Code: Prohibition of Natural Gas Infrastructure in New Buildings. Under this newly adopted code, natural gas infrastructure would be prohibited in newly constructed buildings; however, there is an exception where an applicant can establish that it is not feasible. For this analysis, only newly constructed residences were assumed to be all electric with no gas usage. Industrial and commercial uses were assumed to use natural gas at the default rate assigned by the CalEEMod model.

Stationary Equipment

Although not specifically identified, the Industrial Project is expected to be served by three fire pumps. These fire pumps are assumed to have a diesel engine that would serve as backup power. The size of each engine is assumed to be 200 horsepower, which is the typical large diesel engines

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

CARB identified for engines providing power to fire suppression systems.[9] The CalEEMod modeling assumed 50 hours of annual operation for testing and maintenance purposes per year.

Other Inputs

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

Existing Uses

The Master Plan area is used for agricultural or undeveloped purposes. There are no substantial sources of emissions currently occurring at the site, therefore, no modeling of existing conditions was conducted.

Project and Master Plan Emissions

Table 6 shows average daily emissions of ROG, NOx, PM_{10}, and $PM_{2.5}$ during operation assuming full-build out of the Industrial Project in 2023 and full build out of the Master Plan in 2025. Table 6 shows that the operational emissions would exceed the daily emission significance thresholds for NOx and would be barely under or at the thresholds for ROG when the Master Plan is fully built out and operational. Emissions of ROG and NOx are considered to be significant. *Attachment 1* includes the CalEEMod modeling output.

Based on the results of the modeling shown in Table 6 below, operational ROG emissions would be 54 pounds per day, which is the BAAQMD threshold for ROG emissions. Approximately 64 percent of the operational ROG emissions would be from consumer products (e.g., cleaning products), 11 percent from architectural coatings and 25 percent would be from traffic emissions. There are no apparent feasible mitigation measures that can reduce emissions from consumer products. However, CARB does regulate many of these products.

Table 6. Operational Period Emissions

Scenario	ROG	NOx	Total PM_{10}	Total $PM_{2.5}$
Full Build Out (Warehouse) Operational Emissions (2025)				
Total operational emissions (tons) Unmitigated	9.27	12.46	7.09	1.83
BAAQMD Thresholds (tons/year)	*10*	*10*	*15*	*10*
Average daily emissions (pounds/day)[1] Unmitigated	51	68	39	10
BAAQMD Thresholds (pounds/day)	*54* lbs.	*54* lbs.	*82* lbs.	*54* lbs.
Exceed Threshold?	No	**Yes**	No	No

[9] CARB. 2003. *Staff Report: Initial Statement of Reasons for Proposed Rule Making. Airborne Toxic Control Measure for Stationary Compression Ignition Engines*. September.

Full Build Out (General Light Industrial) Operational Emissions (2025)				
Total operational emissions (tons) Unmitigated	9.91	11.70	9.21	2.52
BAAQMD Thresholds (tons/year)	*10*	*10*	*15*	*10*
Average daily emissions (pounds/day)[1] Unmitigated	54	64	50	14
BAAQMD Thresholds (pounds/day)	*54* lbs.	*54* lbs.	*82* lbs.	*54* lbs.
Exceed Threshold?	No (**Yes**)[2]	**Yes**	No	No
Notes: [1]Assumes 365 days of operation. [2] ROG emissions at the threshold are considered significant.				

Mitigation Measure AQ-1: Implement BAAQMD-Recommended Measures to Control Particulate Matter Emissions during Construction.

Measures to reduce diesel particulate matter (DPM) and PM_{10} from construction are recommended to ensure that short-term health impacts to nearby sensitive receptors are avoided.

Dust (PM_{10}) Control Measures:

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.

9. All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe.

10. All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph and visible dust extends beyond site boundaries.

11. Wind breaks (e.g., trees, fences) shall be installed on the windward side(s) of actively disturbed areas of construction adjacent to sensitive receptors. Wind breaks should have at maximum 50 percent air porosity.

12. Vegetative ground cover (e.g., fast-germinating native grass seed) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.

13. The simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time shall be limited. Activities shall be phased to reduce the amount of disturbed surfaces at any one time.

14. Avoid tracking of visible soil material on to public roadways by employing the following measures if necessary: (1) Site accesses to a distance of 100 feet from public paved roads shall be treated with a 6 to 12-inch compacted layer of wood chips, mulch, or gravel and (2) washing truck tires and construction equipment of prior to leaving the site.

15. Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from sites with a slope greater than one percent.

16. Minimizing the idling time of diesel-powered construction equipment to two minutes.

Effectiveness of Mitigation

The measures above are consistent with the control measures for reducing fugitive particulate matter that are contained in the BAAQMD CEQA Air Quality Guidelines (i.e., Additional Construction Mitigation Measures Recommended for Projects with Construction Emissions Above the Threshold). Implementation of *Mitigation Measure AQ-1* is considered to reduce exhaust emissions by 5 percent and fugitive dust emissions by over 50 percent.

Mitigation Measure AQ-2: Use Construction equipment that has low diesel particulate matter exhaust and NO_X emissions.

Exhaust Emission (NOx and PM) Control Measures:

The project shall develop a plan demonstrating that the off-road equipment (more than 25 horsepower) to be used in the construction project (i.e., owned, leased, and subcontractor vehicles) and overall 60-percent PM (particulate matter) exhaust reduction. Acceptable options for reducing emissions include the use of late model engines, low-emission diesel products, alternative fuels,

engine retrofit technology, after-treatment products, add-on devices such as particulate filters, and/or other options as such become available. The following are feasible methods shall be used unless an alternative plan that achieves this requirement is submitted and approved by the City:

1. Construction equipment larger than 25 horsepower used at the site for more than two continuous days or 20 hours total shall meet U.S. EPA Tier 4 emission standards, if feasible, otherwise,
    a. All construction equipment larger than 25 horsepower used at the site for more than two continuous days or 20 hours total shall meet U.S. EPA emission standards for Tier 3 engines and include particulate matter emissions control equivalent to CARB Level 3 verifiable diesel emission control devices that altogether achieve an 85 percent reduction in particulate matter exhaust; alternatively (or in combination); or
    b. Use of electric or alternatively-fueled equipment with lower NOx emissions that meet the NOx and PM reduction requirements above.
    c. For exceptions, a waiver to use other equipment for specialized purposes would have to be obtained from the City after review of evidence that use of such equipment meeting the above mitigation requirements is not feasible and would not cause emissions to exceed the NOx thresholds or cause significant health risks.

2. Diesel engines, whether for off-road equipment or on-road vehicles, shall not be left idling for more than 2 minutes, except as provided in exceptions to the applicable state regulations (e.g., traffic conditions, safe operating conditions). The construction sites shall have posted legible and visible signs in designated queuing areas and at the construction site to clearly notify operators of idling limit.

3. Provide line power to the site during the early phases of construction to minimize the use of diesel-powered stationary equipment, such as generators.

Effectiveness of Mitigation: Table 5 includes the mitigated emissions for NOx that are based on construction equipment engines meeting U.S. EPA Tier 4i standards. The effectiveness of Mitigation Measure AQ-2 was based on additional CalEEMod modeling that assumed use of Tier 4 equipment that would reduce NOx emissions by up to 31 percent and PM_{10} exhaust emissions by up to 90 percent. Construction period NOx emissions with mitigation measures would be reduced below significance thresholds.

Mitigation Measure AQ-3: Reduce operational emissions

The project would include diesel truck traffic. The CalEEMod modeling of the project operational emissions assume normal operation of trucks. Unnecessary idling and queueing of trucks could cause additional emissions and/or nuisance air quality impacts that are not specifically predicted in this study. To reduce the possibility of these effects, the following project conditions of approval should be applied to the project:

- Electrify Loading Docks. Require the electrification of all loading docks to facilitate plug-in capability and encourage or require trucks to utilize grid power in order to deliver goods.

- Limit Idling Times Prohibit trucks from idling for more than two minutes or prohibit idling altogether. Prohibit off-site queuing and idling of trucks.

- Truck Routes. Establish appropriate truck routes that avoid trucks transiting through residential areas that could be avoided in accordance with General Plan Policy *NRE-11.4*.

- Transportation Demand Management (TDM). Develop TDM Programs to address General Plan Policy *NRE-15.10*. Examples include, but are not limited to, parking pricing strategies; parking maximums; mandated parking spaces for car-sharing programs; the provision of transit passes in residential, commercial and office developments; charging stations for electric vehicles; bicycle lockers or racks; teleworking policies; bicycling improvements; and more.

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

Effectiveness of Mitigation: The effectiveness of the TDM Plan has not been evaluated at this time. TDM plans in this setting can achieve a 5 to 10 percent reduction in normal traffic trips. A majority of the NOx emissions are attributable to truck trips that would not be affected by the TDM plan. Truck traffic accounts for 64 percent for build out of the plan under the warehouse scenario and 40 percent for the Light Industrial plan. For ROG emissions, a reduction in traffic trips would reduce ROG mobile emissions by about one pound per day, such that the daily emissions would be at or below 54 pounds per day. Restricting paint use would reduce ROG emissions by one to two pounds per day, on average. Implementing Mitigation Measure AQ-3 would reduce ROG emissions below thresholds; however, NOx emissions would remain above the significance thresholds.

Significant and Unavoidable NOx Emissions

Operation of the project would have significant emissions of NOx when evaluated using the thresholds contained in the 2017 version of the BAAQMD CEQA Air Quality Guidelines. These emissions would be reduced below significance thresholds by implementing Mitigation Measures AQ-1 and AQ-2. Operational emissions would exceed significance thresholds under both the Warehouse and General Light Industrial scenarios. The effectiveness of mitigation measures are not likely to achieve greater than a 5-percent reducing in NOx emissions. Therefore, operation emissions would not be reduced below the significance thresholds.

Significant emissions of NOx results in a cumulatively considerable net increase of criteria pollutants for which the project region is nonattainment under an applicable ambient air quality standard. Because the project would have emissions of NOx that would exceed emission-based significance thresholds, the project would result in a cumulatively considerable net increase in pollutant emissions that contribute to elevated ozone concentrations that exceed ambient air quality standards.

Ozone is a powerful oxidant that is harmful to public health at high concentrations. Ozone, at high levels, can damage the tissues of the lungs and respiratory tract. High concentrations of ozone irritate the nose, throat, and respiratory system and constrict the airways. Ozone also can aggravate other respiratory conditions such as asthma, bronchitis, and emphysema, causing increased hospital admissions. Repeated exposure to high ozone levels can make people more susceptible to respiratory infection and lung inflammation and permanently damage lung tissue. Ozone can also have negative cardiovascular impacts, including chronic hardening of the arteries and acute triggering of heart attacks. Children are most at risk, as they tend to be active and outdoors in the summer, when ozone levels are highest. Seniors and people with respiratory illnesses are also especially sensitive to ozone's effects. Even healthy adults, working or exercising outdoors during high ozone levels, can be affected. Ozone is not emitted directly from pollution sources. Instead, ozone is formed in the atmosphere through complex chemical reactions in the presence of sunlight between two types of precursor chemicals: hydrocarbons, often referred to as ROG and NOx. As air temperatures rise, the formation of ground-level ozone increases at an accelerated pace. Ozone levels are usually highest on clear, hot, windless summer afternoons, especially in inland valleys that are downwind of pollution sources.

Ozone is a regional pollutant. Emissions of ROG and NOx throughout the Bay Area contribute to ozone formation. Because emissions in one part of the region can impact air quality miles downwind, efforts to reduce ozone levels focus on reducing emissions of ROG and NOx throughout the region. The relationship between ROG and NOx in ozone formation is complex; the ratio between the precursor pollutants influences how ozone forms. BAAQMD's ozone modeling indicates that the Bay Area is "ROG-limited" for ozone formation. This means that reducing ROG emissions in the Bay Area will be more productive in reducing ozone, at least in the near term. However, modeling also suggests that large reductions in NOx emissions will be needed to achieve the ozone reductions required to attain the current health-based ozone standards. A certain amount of ozone formation occurs naturally, even in the absence of anthropogenic emissions of ROG and NOx.

CARB reports statistics for ozone monitoring in the San Francisco Bay Area[10]. Over the last 3 years in San Jose, maximum one-hour average ozone levels are 0.095 parts per million (ppm). Eight-hour maximum ozone levels over this same period were 0.079 ppm. Both levels exceed the ambient air quality standards of 0.09 ppm for the one-hour standard and 0.070ppm for the 8-hour period. Throughout the Bay Area, the 8-hour standard was exceeded on 15 days in 2016, 6 days in 2017 and 3 days in 2018. The 8-hour design value for the 8-hour standard is reported by CARB as 0.073ppm. The less restrictive one-hour standard was exceeded on 2 to 6 days per year and a State standard designation of 0.10ppm was assigned to the basin.

[10] CARB. Top 4 Summary: Highest 4 Daily Maximum Hourly Ozone Measurements. See https://www.arb.ca.gov/adam/topfour/topfourdisplay.php, accessed February 12, 2020.

As stated in the BAAQMD CEQA Air Quality Guidelines, air pollution by its nature is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality is considered significant. In developing thresholds of significance for air pollutants, BAAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions.

The project emissions from construction are compared against regional emissions that lead to elevated concentrations of ozone in Table 7. By comparing project emissions to regional emissions, one gets the sense of the magnitude of the project effects on regional air quality. Project emissions in comparison to regional emissions are such a small portion of the regional inventory (i.e., less than 0.1 percent unmitigated) that the effect of the project would not cause regional pollutant levels to measurably change. As a result, the project would not measurably increase ozone levels. A measurable effect would be a change of 0.001 ppm. Changing emissions in the Bay Area 0.01% would not change ozone levels. Therefore, the health effects associated with the project NOx emissions are not measurable. However, it would increase emissions above the threshold of 54 pounds per average day, such that the emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions.

Table 7. Comparison of Project Emissions to Air Basin Emissions

Scenario	NO_x
Bay Area Air Basin in 2015[1]	298 tons/day
Unmitigated Project Operation	0.03 tons/day
% of Basin	0.01%

[1]Based on Bay Area Air Quality Management District | Clean Air Plan 2017 at http://www.baaqmd.gov/~/media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-proposed-final-cap-vol-1-pdf.pdf?la=en , accessed December 18, 2019)

Impact 2: Expose sensitive receptors to substantial pollutant concentrations?

Project impacts related to increased community risk were evaluated in two ways:

1. Increased exposure to TACs and $PM_{2.5}$ from project emissions sources, and
2. Exposure of new project sensitive receptors to existing and future TAC and $PM_{2.5}$ emissions.

Temporary project construction activity would generate dust and equipment exhaust on a that would affect nearby sensitive receptors. The project would increase traffic in the area that would increase the air pollutant and TAC emissions in the area. In addition, the project would include the installation of emergency generators powered by diesel engines that would also have emissions of TACs and air pollutants. Project impacts to existing sensitive receptors were addressed for construction activities, operational conditions, the combined effect from construction activities and operation and the cumulative effect of the project and nearby emissions sources.

The Master Plan would introduce new residents that are sensitive receptors and would introduce a new source of TACs. There are also several sources of TACs and localized air pollutants in the vicinity of the project. The impact of the existing and new sources of TACs and $PM_{2.5}$ upon the project sensitive receptors was also assessed.

Community risk impacts were addressed by predicting increased lifetime cancer risk, the increase in annual $PM_{2.5}$ concentrations and computing the Hazard Index (HI) for non-cancer health risks. The methodology for computing community risks impacts is contained in *Attachment 2*.

Construction Activity

The Industrial project would produce emissions of TACs and $PM_{2.5}$ through construction, generation of diesel truck traffic and routine testing and maintenance of diesel engines associated with the fire pumps. Construction emissions would be temporary and emissions from truck traffic and fire pump diesel engine operation would be long term.

Construction equipment and associated heavy-duty truck traffic generates diesel exhaust, which is a known TAC. With Mitigation Measures AQ-1 and AQ-2, these exhaust air pollutant emissions would not be considered to contribute substantially to existing or projected air quality violations. Construction exhaust emissions may still pose health risks for sensitive receptors such as surrounding residents. The primary community risk impact issue associated with construction emissions are cancer risk and exposure to $PM_{2.5}$. Diesel exhaust poses both a potential health and nuisance impact to nearby receptors. A community risk assessment of the project construction activities was conducted that evaluated potential health effects to nearby sensitive receptors from construction emissions of DPM and $PM_{2.5}$.[11] This assessment included emissions estimation and dispersion modeling to predict the offsite and onsite concentrations resulting from project construction, so that lifetime cancer risks and non-cancer health effects could be evaluated.

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 reported in Table 8 on an annual basis. The on-road emissions that are included result from 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 to represent localized air emissions from construction. It was assumed that these emissions from on-road vehicles traveling at or near the site would occur at the construction sites. Fugitive $PM_{2.5}$ dust emissions were calculated by CalEEMod for the overall construction period and are included as part of the $PM_{2.5}$ emissions reported in Table 8.

Table 8. Localized Project Construction Emissions of DPM and Fugitive $PM_{2.5}$ (in pounds per year)

Project Description	2020		2021		2022		2023	
	PM_{10} ex.	$PM_{2.5}$ Fug.	PM_{10} ex.	$PM_{2.5}$ Fug.	PM_{10} ex.	$PM_{2.5}$ Fug.	PM_{10} ex.	$PM_{2.5}$ Fug.
Defined Industrial	--	--	677	536	145	17.4	--	--

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

Industrial Commercial	--	--	251	78	1	0	--	--
Industrial Office	--	--	180	22	12	0	--	--
Residential	--	--	319	373	207	16	12.2	0.4
Note: Project construction assumed to begin Jan. 1, 2021 DPM = PM10 exhaust and PM2.5 = fugitive PM2.5. Incremental PM2.5 concentrations are based on DPM plus PM2.5 fugitive emissions.								

Truck Traffic

The traffic report's trip generation estimates include 385 daily truck trips generated from the industrial uses, assuming the Warehouse scenario. The General Light Industrial use scenario would generate less truck traffic. These would include a mix of HHDT and MHDT category trucks. Idle emissions were estimated for loading dock areas. Travel emissions were estimated for 15-mph speeds on site and 20-mph speeds on De Paul Drive and 25 mph on Cochrane Road. Emissions estimates were based on rates generated by the Caltrans version of the EMFAC2017 model, known as CT-EMFAC. The model was run for Santa Clara county assuming 100% Truck category 2, which is a mix of HHDT and MHDT. CT-EMFAC provides emission rates for mobile source air toxics (MSATs) that include diesel particulate matter.

Stationary Sources

As previously discussed, the Industrial Project would include a diesel engine to provide backup power for each fire pump. The project is assumed to include three fire pumps that would have diesel engines to provide backup power. Emissions from these fire pump engines were computed using CalEEMod, as previously described. The annual PM_{10} exhaust emissions were used to represent DPM emissions from the engines. The engine 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.

Dispersion Modeling

The U.S. EPA AERMOD dispersion model was used to predict DPM and $PM_{2.5}$ concentrations at sensitive receptors (residences) in the vicinity of the project site from construction and operation activities. The AERMOD dispersion model is a BAAQMD-recommended model for use in modeling analysis of these types of emission activities for CEQA projects.[12]

Construction Sources

Emission from construction activities in the industrial, commercial, and residential areas were grouped into two categories: exhaust emissions of DPM and fugitive $PM_{2.5}$ dust emissions. For

[12] Bay Area Air Quality Management District (BAAQMD), 2012, *Recommended Methods for Screening and Modeling Local Risks and Hazards, Version 3.0.* May. Note AERMOD is the preferred model.

each of the construction areas modeled, 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 sources. 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 sources. Emissions from the construction equipment and on-road construction 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 most of the construction activity would occur.

Truck Traffic Sources

Project operation was assumed to occur for 365 days per year and that the trucks could be operating at any hour of the day (i.e., 24 hours/day). On-site and off-site truck travel was modeled with the AERMOD model using line-area sources representing the expected truck travel routes (see Figure 2). Idle emissions were modeled as area sources for each the industrial buildings at the loading dock areas. Operation with truck traffic was assumed to begin in 2023.

Stationary Sources

The specific location where the fire pump engines would be located has not yet been determined. As such, the locations of these sources (engine stacks) were assumed to be centrally located at the site of each of the three industrial buildings. Stack parameters (stack height and diameter, exhaust flow rate and exhaust gas temperature) for modeling the engines were based on BAAQMD default parameters for emergency generators.[13]

Meteorological Data

The modeling used a five-year data set (2013 - 2017) of hourly meteorological data from San Martin Airport prepared for use with the AERMOD model by the BAAQMD. The airport is about 5 miles southeast of the project site. Annual DPM and $PM_{2.5}$ concentrations from construction, and operation were computed using the model.

Receptors

Receptors for this assessment included locations of sensitive receptors. These include residences to the east and southeast, and the Westmont of Morgan Hill assisted living facility located east of the Master Plan area where commercial uses are planned. The De Paul Health Center to the east was not expected to have sensitive receptors that would be exposed chronically, and therefore, lifetime cancer risk and increases to annual $PM_{2.5}$ concentration were not evaluated at these receptors. Although the closest portions of Live Oak School are within the area of influence, the classrooms and locations where students would mainly be were beyond 1,000 feet.

[13] The San Francisco Community Risk Reduction Plan: Technical Support Document, BAAQMD, San Francisco Dept. of Public Health, and San Francisco Planning Dept., December 2012

DPM and $PM_{2.5}$ concentrations were calculated at sensitive receptor breathing heights of 1.5 meters (4.9 feet) to represent the breathing heights of the residents in nearby single-family homes. Residential receptors are assumed to include all receptor types with almost continuous exposure.

Figure 2 shows locations of modeled Master Plan emission sources and receptors. Also shown in Figure 2 are the receptors that would be most affected by the project TAC and $PM_{2.5}$ emissions.

Cancer Risk and $PM_{2.5}$ Impacts

The vast majority of TACs emitted from the project that would contribute to increased cancer risk would be DPM. Increased cancer risks from the Defined Industrial Project and Master Plan emission sources were calculated using the modeled maximum annual DPM concentrations and BAAQMD recommended risk assessment methods and parameters described in *Attachment 2*. These methods evaluate cancer risk due to DPM exposure and incorporate age sensitivity factors methods for infant (third trimester to two years of age) and children (two years of age to 16 years). The sensitive receptor identified with the maximum increased cancer risk caused by the Master Plan is referred to as the Maximumly Exposed Individual (MEI). Note that a variety of receptor types (i.e., ages and exposure periods) are tested to identify the maximum cancer risk. All other receptors would have lesser impacts with respect to increase cancer risk caused by the project. The $PM_{2.5}$ concentration and non-cancerous (i.e. Hazard Index) health risk impacts were also calculated. These results are based on the maximum annual concentration during any year that the Master Plan is constructed or operates.

Figure 2. Project Sites, Emission Sources, Locations of Off-Site Sensitive Receptors, and MEI Locations

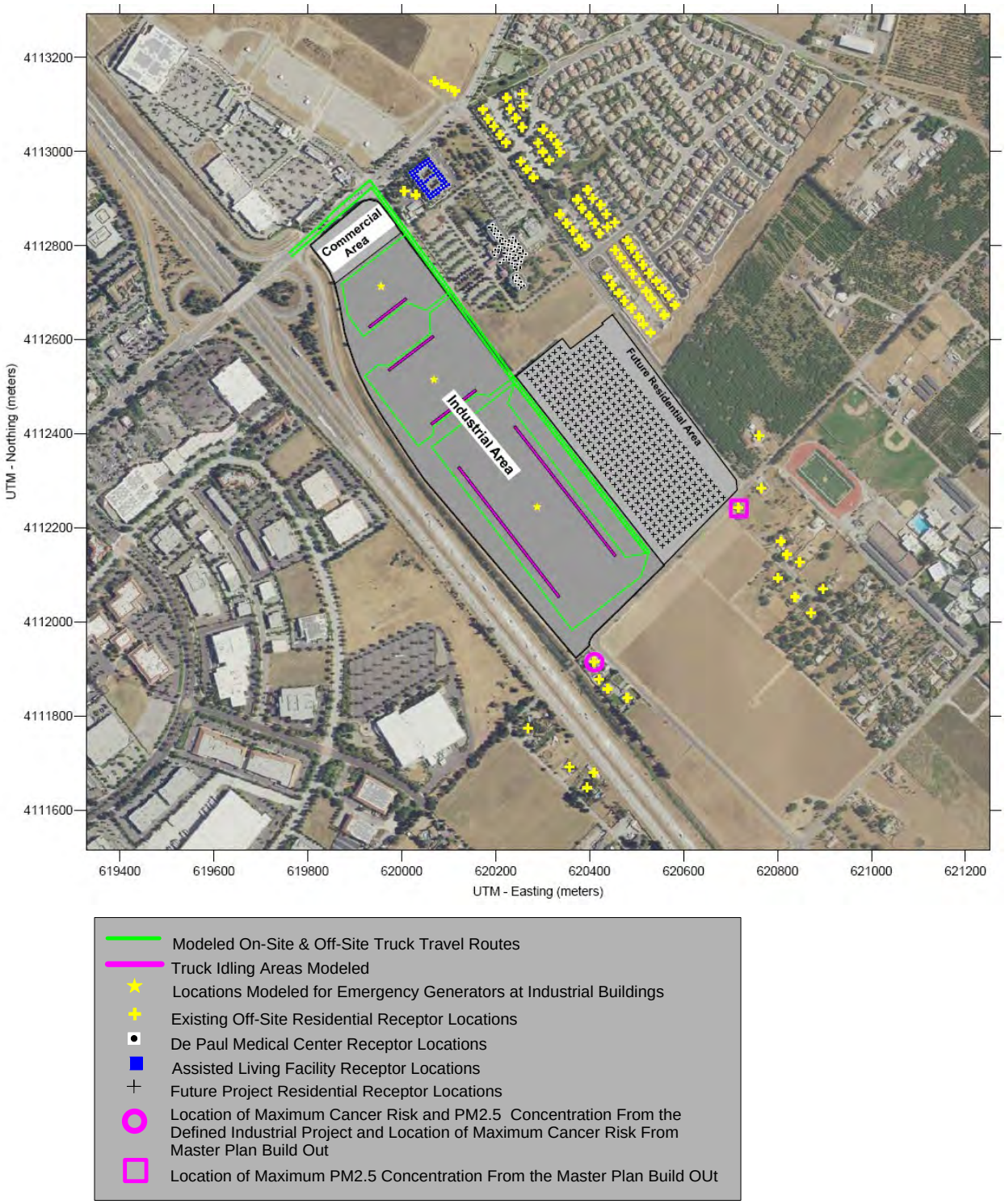

Table 9 reports the community risk impacts in terms of MEI for cancer risk, maximum annual $PM_{2.5}$ concentration and maximum annual Hazard Index for the Defined Industrial Project. The MEI and maximum affected receptors are shown in Figure 2. Table10 reports the same but for the

full Master Plan build out that includes construction and operation. *Attachment 3* includes the Construction and Operational health risk assessment assumptions and computations.

Table 9. Project Community Risk Impacts for the Defined Industrial Project

Source	Cancer Risk at MEI (per million) [1]	Maximum Annual	
		$PM_{2.5}$ ($\mu g/m^3$)	Hazard Index
Construction (year 2021-2022)	**19.12**	0.17	0.02
Truck Traffic Increase (year 2023 on)	0.32	<0.01	<0.01
Fire Pump Engines (2023 on)	0.16	<0.01	<0.01
Combined Project (Construction & Operational Impacts)	**19.6**[1]	0.17[2]	0.02[2]
BAAQMD Single-Source Threshold	***>10.0***	***>0.3***	***>1.0***
Exceed Threshold?	***Yes***	*No*	*No*

1 For cancer risk, at receptor with combined maximum risk, assuming third trimester/infant exposure begins with construction.
2 Maximum annual level for any year of construction or operation

Table 10. Project Community Risk Impacts for the Master Plan Build Out

Source	Cancer Risk at MEI (per million)[1]	Maximum Annual	
		$PM_{2.5}$ ($\mu g/m^3$)	Hazard Index
Construction (year 2021-2023)	**25.81**	0.21	0.02
Truck Traffic Increase (year 2023 on)	0.32	<0.01	<0.01
Fire Pump Engines (2023 on)	0.16	<0.01	<0.01
Combined Project (Construction & Operational Impacts)	**26.3**[1]	0.21[2]	0.02[2]
BAAQMD Single-Source Threshold	***>10.0***	***>0.3***	***>1.0***
Exceed Threshold?	***Yes***	*No*	*No*

1. For cancer risk, at receptor with combined lifetime maximum risk, assuming third trimester/infant exposure begins with construction.
2. Maximum annual level for any year of construction or operation

Combined Impact of All TAC Sources on the Off-Site Project MEI

This community health risk assessments addressed the contribution from substantial sources of TACs located within 1,000 feet of project sites and at new TAC sources that would be introduced by the project. Sources typically evaluated include highways, busy surface streets, and stationary sources identified by BAAQMD. A review of the project area, depicted in Figure 3, indicates that traffic on U.S. 101 and Cochrane Road are the only cumulative sources affecting the Master Plan area. Roadways considered included those with an assumed average daily traffic (ADT) of greater than 10,000 vehicles. No stationary sources were identified within the 1,000-foot influence area using the BAAQMD's stationary source Google Earth map along with their 2017 GIS website database.

Figure 3. Project Site and Nearby TAC and $PM_{2.5}$ Sources Within 1,000 feet

Highways – U.S. 101

BAAQMD provides a *Highway Screening Analysis Google Earth Map* tool to identify estimated risk and hazard impacts from highways throughout the Bay Area. Cumulative risk, hazard, and $PM_{2.5}$ impacts at various distances from the highway are estimated for different segments of the highways. The tool uses the average annual daily traffic (AADT) count, fleet mix, and other modeling parameters specific to that segment of the highway. The lifetime cancer risk, annual $PM_{2.5}$ exposure, and non-cancer HI impacts from Link 7 (6ft elevation) for U.S. 101 in Santa Clara County, in which the MEI was approximately 250 feet east of U.S. 101, were identified using this tool (see *Attachment 4*).

Local Roadways

For local roadways, BAAQMD has provided the *Roadway Screening Analysis Calculator* to assess whether roadways with traffic volumes of over 10,000 vehicles per day may have a potentially significant effect on a proposed project. Two adjustments were made to the cancer risk predictions made by this calculator: (1) adjustment for latest vehicle emissions rates predicted using EMFAC2014 and (2) adjustment of cancer risk to reflect new OEHHA guidance.

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 2022. 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 2022. 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 roadway average daily traffic (ADT) on this road was based on the peak-hour traffic volumes included in the project's traffic analysis for background plus project conditions.[14] The AM and PM peak-hour volumes were averaged and then multiplied by 10 to estimate the ADT. Cochrane Road was the only nearby roadway identified as having over 10,000 vehicles per day. De Paul Drive and Mission View Drive, which currently are estimated to have less than 10,000 ADT would increase above 10,000 ADT on segments near Cochrane Road under future General Plan build-out conditions with full Master Plan traffic. Therefore, these roadways were included in this analysis. Estimated lifetime cancer risks and annual $PM_{2.5}$ concentration values for the roadways were computed. Note that BAAQMD has found that non-cancer hazards from all local roadways would be well below the BAAQMD thresholds.

Stationary Sources

As described previously, permitted stationary sources were not identified within 1,000 feet of the Master Plan area.

<u>Combined Community Risk at Off-Site Project MEI</u>

Table 10 reports the project and cumulative community risk impacts at the sensitive receptor most affected by project construction and project operation (i.e. the Project MEI). 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. The combined cancer risk from the project (construction and operation) would exceed the cumulative threshold for lifetime cancer risk. The increased $PM_{2.5}$ concentrations and HI value do not exceed the cumulative thresholds.

[14] Hexagon Transportation Consultants. 2020. *Morgan Hill Technology Center Traffic Impact Analysis*. March.

Table 10. Impacts from Combined Sources at Off-Site Project MEI

Source	Cancer Risk (per million)	Annual $PM_{2.5}$ ($\mu g/m^3$)	Hazard Index
Project Construction and Operation			
Unmitigated	**26.3**	0.21	0.02
Mitigated	2.7	<0.05	<0.01
U.S. 101 traffic (250 feet east)	81.3	0.41	0.06
Cochrane Road (30,000 ADT, 3,000 feet north)	<1.0	<.0.02	<0.01
De Paul Drive (14,000 ADT, 2,000 feet north)	<0.3	<0.02	0.00
Mission View Drive (11,000 ADT, 2,600 feet north)	<0.2	<0.02	0.00
Combined Sources			
Unmitigated	**109.1**	0.68	0.10
Mitigated	85.5	0.52	0.09
BAAQMD Cumulative Source Threshold	***>100***	***>0.8***	***>10.0***
Exceed Threshold?			
Unmitigated	***Yes***	*No*	*No*
Mitigated	*No*	*No*	*No*

Effectiveness of Mitigation: Implementation of *Mitigation Measure AQ-1* is considered to reduce exhaust emissions by 5 percent and fugitive dust emissions by over 50 percent. Implementation of *Mitigation Measure AQ-2,* would require a 60-percent reduction in exhaust PM_{10} emissions.

As a result, increased cancer risk at the receptor most affected by the project (from construction and operation) would be reduced to 2.7 per million. This risk includes the contribution of project operational sources (e.g., traffic and generators). The cancer risk would be below the threshold of greater than 10 per one million for cancer risk. When combined with cumulative sources, the overall cancer risk would be reduced to 85.5 chances per million, which is below the threshold of not greater than 100 per million. Therefore, *after implementation of these recommended measures, the project would have a less-than-significant impact with respect to community risk caused by construction activities.*

Operational Community Risk Impacts – New Project Residences

Additionally, a community risk assessment was completed to analyze the impact existing and reasonably foreseeable future TAC and $PM_{2.5}$ sources would have on the new proposed sensitive receptors that that Master Plan would introduce. This analysis was limited to sources that are within 1,000 feet of proposed sensitive receptors. Occupation of the proposed project was assumed to start in 2025 or thereafter. The same TAC sources identified above were used in this HRA assessment.

U.S. 101 Traffic

U.S. 101 is located just over 1,000 feet from the closest portion of the Master Plan where residential development could occur. Therefore, this roadway was not included as a contributing source.

Local Roadways – Cochrane Road, De Paul Drive and Mission View Drive

The roadway analysis was done in the same manner for the new project sensitive receptors as described above for the Project MEI. Cochrane Road is over 1,000 feet from the residential portion of the plan area, and therefore, was not included in this analysis.

Industrial Project

As described previously, the Defined Industrial Project would generate truck traffic and occasionally test (operate) diesel engines that would be used to operate fire pumps during emergency conditions. Modeling of these sources was also conducted for the proposed residential portion of the Master Plan.

Combined Community Risk for New Residences

Community risk impacts from combined sources upon the project site sensitive receptors are reported in Table 12. The proposed project and the combined increased cancer risks, annual $PM_{2.5}$ concentrations, and Hazard Indexes from all TAC sources upon the Project are all below their respective single-source and cumulative significance thresholds and would be considered a *less-than significant* impact.

Table11. Community Health Risk Impact to New Project Residences

Source	Cancer Risk (per million)	Annual $PM_{2.5}$ ($\mu g/m^3$)	Hazard Index
Industrial Project Operation	0.8	0.01	<0.01
De Paul Drive (10,000 ADT, 30 feet east)	5.5	0.19	<0.01
Mission View Drive (10,000 ADT, 30 feet west)	3.9	0.12	0.01
BAAQMD Single-Source Threshold	***>10.0***	***>0.3***	***>1.0***
Exceed Threshold?	*No*	*No*	*No*
Combined Sources	10.2	0.32	<0.02
BAAQMD Cumulative Source Threshold	***>100***	***>0.8***	***>10.0***
Exceed Threshold? Unmitigated	*No*	*No*	*No*

Impact 3: Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Emissions of air pollutants or TACs are addressed under Impacts 1 and 2. Emissions of greenhouse gases are addressed separately. In terms of odor emissions, BAAQMD has identified a variety of land uses and types of operations that would produce emissions that may lead to odors in their CEQA Air Quality Guidelines. Some of the identified land uses include wastewater treatment plans, sanitary landfills, food processing facilities, coffee roasters, compositing facilities, and confined animal facility/feed lot/dairy facility. The proposed project would construct industrial warehousing facilities, residential, office, and retail land uses, which do not fall under any of the land uses BAAQMD has identified.

Additionally, according to the BAAQMD CEQA Guidelines, an odor source with five or more confirmed complaints per year averaged over three years is considered to have a significant impact. Future construction activities in the Project area could result in odorous emissions from diesel exhaust associated with construction equipment. Because of the temporary nature of these emissions and the highly diffusive properties of diesel exhaust, exposure of sensitive receptors to these emissions would be limited. Therefore, odors that could cause complaints from the general public and affect a substantial number of people are not expected and the project would have a *less-than-significant impact*.

Greenhouse Gas Emissions

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.

As directed by AB 32, CARB has also approved a statewide GHG emissions limit. On December 6, 2007, CARB staff resolved an amount of 427 million metric tons (MMT) of CO_2e as the total statewide GHG 1990 emissions level and 2020 emissions limit. The limit is a cumulative statewide limit, not a sector- or facility-specific limit. CARB updated the future 2020 BAU annual emissions forecast, in light of the economic downturn, to 545 MMT of CO_2e. Two GHG emissions reduction measures currently enacted that were not previously included in the 2008 Scoping Plan baseline inventory were included, further reducing the baseline inventory to 507 MMT of CO_2e. Thus, an estimated reduction of 80 MMT of CO_2e is necessary to reduce statewide emissions to meet the AB 32 target by 2020.

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.

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

The new Scoping Plan establishes a strategy that will reduce GHG emissions in California to meet the 2030 target (note that the AB 32 Scoping Plan only addressed 2020 targets and a long-term goal). Key features of this plan are:

- Cap and Trade program places a firm limit on 80 percent of the State's emissions;
- Achieving a 50-percent Renewable Portfolio Standard by 2030 (currently at about 29 percent statewide);
- Increase energy efficiency in existing buildings;
- Develop fuels with an 18-percent reduction in carbon intensity;
- Develop more high-density, transit-oriented housing;
- Develop walkable and 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.

Morgan Hill 2035 General Plan

The Climate Change section of the Natural Resources and Environment chapter of the Morgan Hill 2035 General Plan contains goals, policies and implementing actions that pertain to GHG emissions. Applicable General Plan policies are listed below:

Goal NRE-15 An adaptive and resilient community that responds to climate change.

Policy NRE-15.1 **Greenhouse Gas Emission Reduction Targets**. Maintain a greenhouse gas reduction trajectory that is consistent with the greenhouse gas reduction targets of Executive Orders B-30-15 (40 percent below 1990 levels by 2030) and S-03-05 (80 percent below 1990 levels by 2050) to ensure the City is consistent with statewide efforts to reduce greenhouse gas emissions.

Policy NRE-15.2 **Linking Land Use and Transportation**. Encourage land use and transportation patterns that reduce dependence on automobiles.

Policy NRE-15.3 **Climate Action Plan**. Utilize policies in this General Plan denoted with the green leaf symbol as the City's greenhouse gas emissions reduction strategy.

Policy NRE-15.4 **Sustainable Land Use**. Promote land use patterns that reduce the number and length of motor vehicle trips.

Policy NRE-15.5 **Jobs Housing Balance**. To the extent feasible, encourage a balance and match between jobs and housing.

Policy NRE-15.6 **Residential Near Transit**. Encourage higher density residential and mixed-use development adjacent to commercial centers and transit corridors – the land along or within walking distance of a street served by transit.

Policy NRE-15.7 **Mix of Uses in Employment Centers**. Encourage employment areas to include a mix of support services to minimize the number of employee trips.

Policy NRE-15.8 **Walkable City**. Encourage retail and office areas to be located within walking and biking distance of existing and proposed residential developments.

Policy NRE-15.9 **Urban Forest**. Support development and maintenance of a healthy, vibrant urban forest through outreach, incentives, and strategic leadership.

Policy NRE-15.10 **VMT Reduction**. Continue to work with the Santa Clara Valley Transportation Authority on regional transportation solutions that will reduce vehicle miles traveled and greenhouse gas emissions.

Policy NRE-15.11 **Green Building**. Promote green building practices in new development.

The General Plan's Energy Efficiency section contains policies that indirectly reduce GHG emissions:

Goal NRE-16 Conservation of energy resources.

Policy NRE-16.1 **Energy Standards for New Development**. New development, including public buildings, should be designed to exceed State standards for the use of energy.

Policy NRE-16.2 **Energy Conservation**. Promote energy conservation techniques and energy efficiency in building design, orientation, and construction.

Policy NRE-16.3 **Energy Use Data and Analysis**. Provide information to increase building owner, tenant, and operator knowledge about how, when, and where building energy is used.

Policy NRE-16.5 **Energy Efficiency**. Encourage development project designs that protect and improve air quality and minimize direct and indirect air pollutant emissions by including components that promote energy efficiency.

Policy NRE-16.6 **Landscaping for Energy Conservation**. Encourage landscaping plans for new development to address the planting of trees and shrubs that will provide shade to reduce the need for cooling systems and allow for winter daylighting.

Policy NRE-16.7 **Renewable Energy**. Encourage new and existing development to incorporate renewable energy generating features, like solar panels and solar hot water heaters.

Policy NRE-16.8 **Residential Development Code**. Emphasize energy conservation building techniques for new residential construction through the implementation of Chapter 18.78 of the Municipal Code.

Policy NRE-16.9 **Subdivision Design**. In compliance with Section 66473.1 of the State Subdivision Map Act, promote subdivision design that provides for passive solar heating and natural cooling through the Development Review Committee subdivision review procedures.

<u>BAAQMD Significance Thresholds</u>

The BAAQMD's CEQA Air Quality Guidelines do not use quantified thresholds for projects that are in a jurisdiction with a qualified GHG reductions plan (i.e., a Climate Action Plan). The plan has to address emissions associated with the period that the project would operate (e.g., beyond year 2020). For quantified emissions, the 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 2.8 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 2.8 is calculated for 2030 based on the 1990 inventory and the projected 2030 statewide population and employment levels.[15] The 2030 bright-line threshold is a 40 percent reduction of the 2020 1,100 MT CO_{2e}/year threshold.

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

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

CalEEMod Modeling

CalEEMod was used to predict GHG emissions from operation of the site assuming full build-out of the project. The project land use types and size and other project-specific information were input to the model, as described above within the operational period emissions. CalEEMod output is included in *Attachment 1*.

Service Population Emissions

The project service population efficiency rate is based on the number of future residents and future employees. For this project, the number of future residents was computed using the California Department of Finance estimates for 2019 of 3.15 persons per household that would be 1,005 residents. The number of future retail employees was based on four workers per thousand sf, or 200 workers. A projection of 1,300 workers for the industrial uses were provided by the applicant[16]. Based on ratio for industrial uses (approximately one employee per 805 square feet), the number of future industrial office employees would be 56 employees. The total service population would be about 2,561 people, assuming full development with all industrial, commercial and residential uses for the Warehouse Project.

Construction Emissions

GHG emissions associated with construction were computed to be 4,319 MT of CO_{2e} for the total construction period. These are the emissions from on-site operation of construction equipment,

[15] 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.
[16] Email from Jim Rowe, City of Morgan Hill, dated 8/9/2019

vendor and hauling truck trips, and worker trips. Neither the City nor BAAQMD have an adopted threshold of significance for construction-related GHG emissions. However, the City of Morgan Hill General Plan lists several applicable action items to minimize GHG emissions from construction equipment. BAAQMD also encourages the incorporation of best management practices to reduce GHG emissions during construction where feasible and applicable.

Operational Emissions

The CalEEMod model, along with the project traffic information, was used to estimate emissions associated with operation of the fully-developed site under the proposed project scenarios. The operational emissions for year 2025 are shown in Table 12 and 2030 emissions are shown in Table 13. As shown in both tables, operational per capita emissions would exceed the "Substantial Progress" efficiency metric of 2.8 MT CO_2e/year/service population. Therefore, the project would have a *significant* impact regarding GHG emissions.

Measures to Consider to Reduce GHG Emissions

Develop a GHG reduction plan to reduce GHG emissions in the build-out year by 2,160 MT/year for the warehouse scenario and 4,499 MT/year for the General Light Industrial scenario. These reductions decrease by about 8 percent in the future due to improvements predicted in mobile emissions. The following GHG reduction measure should be considered to further reduce GHG emissions from operation of the project and the service population efficiency metric such that the metric would be below the significance threshold. Elements of this recommendation may include, but would not be limited to, the following:

1. Implementation of Mitigation Measure AQ-3 that would develop and implement a transportation demand management (TDM) program to reduce mobile GHG emissions;

2. Installation of solar power systems or other renewable electric generating systems that provide electricity to power on-site equipment and possibly provide excess electric power;

3. Provide infrastructure for electric vehicle charging in for industrial and commercial parking areas and in residential units (i.e., provide 220 VAC power);

4. Increase water conservation above State average conditions for residential uses by installing low flow water utilities and irrigation; and

5. Purchase verifiable carbon emission offsets.

Table 12. 2025 Annual Project GHG Emissions (metric tons CO_2e) and Per Capita Emissions (metric tons CO2e per service population)

Category	Total	Industrial	Commercial	Industrial Office	Residential
Industrial Warehouse Scenario					
Area	**31**	0	-	-	31
Energy	**372**	252	14	69	37
Mobile	**4,468**	904	1,261	123	2,180
Industrial trucks	**3,649**	3,649	-	-	-
Waste	**748**	501	26	28	193
Water	**194**	169	3	7	15
Total:	**9,462**	5,475	1,304	227	2,456
Per Capita Emissions	3.70	4.21	6.52	4.05	2.44
Stationary Sources	**12**	12	0	0	0
General Light Industrial Scenario					
Area	**31**	0	-	-	31
Energy	**1,725**	1,605	14	69	37
Mobile	**6,473**	2,970	1,239	121	2,143
Industrial trucks	**2,351**	2,351	-	-	-
Waste	**898**	651	26	28	193
Water	**192**	167	3	7	15
Total:	**11,670**	7,744	1,282	225	2,419
Per Capita Emissions	4.55	5.96	6.41	4.01	2.41
Stationary Sources	**12**	12	0	0	0
Notes: Per Capita emissions based on service population of 1,300 employees for general light industrial and warehouse, 200 employees for commercial, 56 for Industrial/office, and 1,005 residents (population plus workers)					

Table 13. 2030 Annual Project GHG Emissions (CO_2e) and Per Capita Emissions (metric tons CO2e per service population)

Category	Total	Industrial	Commercial	Industrial Office	Residential
Industrial Warehouse Scenario					
Area	**31**	-	-	-	31
Energy	**372**	252	14	69	37
Mobile	**3,934**	777	1,117	109	1,931
Industrial trucks	**3,276**	3,276	-	-	-
Waste	**748**	501	26	28	193
Water	**194**	169	3	7	15
Total:	**8,555**	4,975	1,160	213	2,207
Per Capita Emissions	3.34	3.83	5.80	3.80	2.20
Stationary Sources	**12**	12	0	0	0
General Light Industrial Scenario					
Area	**31**	-	-	-	31
Energy	**1,725**	1,605	14	69	37
Mobile	**5,662**	2,559	1,098	107	1,898
Industrial trucks	**2,110**	2,110	-	-	-
Waste	**898**	651	26	28	193
Water	**192**	167	3	7	15
Total:	**10,618**	7,092	1,141	211	2,174
Per Capita Emissions	4.14	5.46	5.70	3.77	2.16

Stationary Sources	**12**	12	0	0	0
Notes: Per Capita emissions based on service population of 1,300 employees for general light industrial and warehouse, 56 for Industrial/office, 200 employees for commercial, and 1,005 residents (population plus workers)					

Supporting Documentation

Attachment 1 includes the CalEEMod output for project construction and operational criteria air pollutant and GHG emissions. The operational output for existing uses is also included in this attachment. Also included are any modeling assumptions.

Attachment 2 is the methodology used to compute community risk impacts, including the methods to compute lifetime cancer risk from exposure to project emissions.

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

Attachment 4 includes the screening community risk calculations from sources affecting the on-site project sensitive receptors and the off-site sensitive receptors.

Attachment 1: Summary of CalEEMod Modeling Output

Note: CalEEMod files are voluminous and provided as separate file in zip format

Construction Emissions - Uncontrolled

								TAC Analysis			
		Emissions in tons/year and Total tons						Unmitigated tons		Mitigated tons	
Scenario	**Year**	**ROG**	**NOx**	**PM10**	**PM2.5**	**GHG**		**PM10ex**	**PM2.5 Fug**	PM10ex	PM2.5 Fug
Industrial Warehouse	2021	2.32	9.86	0.35	0.32	2154		0.3387	0.2683	0.0282	0.0841
Industrial Warehouse	2022	4.49	1.87	0.07	0.07	458		0.0727	0.0087	0.0127	0.0087
		6.81	11.73	0.42	0.39	2,612					
Industrial Commercial	2021	0.26	2.40	0.13	0.12	340		0.1253	0.0390	0.0104	0.0179
Industrial Office	2021	0.23	1.88	0.09	0.09	270		0.0901	0.0111	0.0040	0.0048
Industrial Commercial	2022	0.26	0.01	0.00	0.00	2		0.0007	0.0000	0.0000	0.0000
Industrial Office	2022	0.25	0.12	0.01	0.01	21		0.0062	0.0001	0.0003	0.0001
Residential Development	2021	0.37	3.53	0.16	0.15	550		0.1595	0.1867	0.0116	0.0767
Residential Development	2022	0.27	2.42	0.11	0.10	497		0.1037	0.0080	0.0111	0.0080
Residential Development	2023	4.06	0.12	0.01	0.01	27		0.0061	0.0002	0.0004	0.0002
Total (2021 through 2023)		12.51	22.21	0.92	0.86	4,319					
		Daily Emissions in lbs/Average Day									
Scenario	**Days**	**ROG**	**NOx**	**PM10**	**PM2.5**						
Industrial Warehouse	308	44	**76**	3	3			2021	3314		
Percent Reduction Needed			*29%*					2022	978		
Master Plan	792	32	56	2	2			2023	27		
Percent Reduction Needed			*4%*								

Construction Emissions - Mitigated

			Emissions in tons/year and Total tons								
			Tier4i	Tier 4f	Avg						
Scenario	**Year**		**NOx**	**NOx**	**NOx**						
Industrial Warehouse	2021		6.90	3.72	5.31						
Industrial Warehouse	2022		1.63	0.82	1.23						
Total		tons	8.53	4.54	6.54						
		avg. lbs/d	55	29	42						
Percent Reduction			*27%*	*61%*	*44%*						
Industrial Commercial	2021		1.50	0.38	0.94						
Industrial Office	2021		1.30	0.52	0.91						
Industrial Commercial	2022		0.01	0.01	0.01						
Industrial Office	2022		0.10	0.03	0.07						
Residential Development	2021		1.99	0.68	1.34						
Residential Development	2022		1.84	0.71	1.28						
Residential Development	2023		0.12	0.02	0.07						
Total (2021 through 2023)		tons	15.39	6.89	11.14						
		avg. lbs/d	39	17	28						
Percent Reduction			*31%*	*69%*	*50%*						

Operational Emissions

		Annual Emissions in tons/year				
Scenario	**Year**	**ROG**	**NOx**	**PM10**	**PM2.5**	**GHG**
Industrial Warehouse	2023	5.05	0.73	1.21	0.34	1,910
Trucks	2023	0.23	8.37	1.96	0.41	3,779
	tons:	5.28	9.10	3.17	0.75	5,689
	Avg. lb/day	29	50	17	4	
Industrial Commercial	2023	0.58	1.35	1.41	0.38	1389
Industrial Office	2023	0.22	0.07	0.06	0.02	100
	tons:	6.08	10.52	4.64	1.15	7,178
	Avg. lb/day	33	58	25	6	
Industrial Warehouse	2025	5.02	0.65	1.21	0.34	1838
Trucks	2025	0.22	8.29	1.96	0.41	3,649
Industrial Commercial	2025	0.54	1.25	1.41	0.38	1304
Industrial Office	2025	0.22	0.06	0.06	0.02	96
Residential Development	2025	3.27	2.21	2.45	0.68	2456
	tons:	9.27	12.46	7.09	1.83	9,343
	Avg. lb/day	51	68	39	10	
Percent Reduction Needed			21%			

Operational Emissions

		Annual Emissions in tons/year				
Scenario	**Year**	**ROG**	**NOx**	**PM10**	**PM2.5**	**GHG**
General Light Industrial Use	2023	5.83	3.00	4.03	1.17	5,642
Trucks	2023	0.15	5.39	1.26	0.26	2,435
	tons:	5.98	8.39	5.29	1.43	8,077
	Avg. lb/day	33	46	29	8	
Industrial Commercial	2023	0.58	1.34	1.38	0.38	1,366
Industrial Office	2023	0.24	0.19	0.14	0.04	233
	tons:	6.80	9.92	6.81	1.85	9,676
	Avg. lb/day	37	54	37	10	
General Light Industrial Use	2025	5.72	2.75	4.03	1.17	5,405
Trucks	2025	0.14	5.34	1.26	0.26	2,351
Industrial Commercial	2025	0.54	1.24	1.38	0.38	1,282
Industrial Office	2025	0.24	0.18	0.14	0.04	225
Residential Development	2025	3.27	2.19	2.40	0.67	2,419
		9.91	11.70	9.21	2.52	11,682
	Avg. lb/day	54	64	50	14	
			16%			

Morgan Hill - Hwy Industrial Commercial Component

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Strip Mall	50.00	1000sqft	3.06	50,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2025
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	29	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E rate

Land Use - Based on Trip Generation Data provided for building size and Project Description for acreage

Construction Phase -

Vehicle Trips - Hexagon trip rate of 37.75/1ksf = 37.75,35.81,17.40

Water And Wastewater - wtp treatment

Construction Off-road Equipment Mitigation - enhanced BMPs and Tier4i

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterExposedAreaPM10PercentReduction	61	55
tblConstDustMitigation	WaterExposedAreaPM25PercentReduction	61	55

tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
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	3.00
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	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	11.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblLandUse	LotAcreage	1.15	3.06
tblProjectCharacteristics	CO2IntensityFactor	641.35	29

tblVehicleTrips	CC_TL	7.30	5.86
tblVehicleTrips	CNW_TL	7.30	5.86
tblVehicleTrips	CW_TL	9.50	5.86
tblVehicleTrips	DV_TP	40.00	0.00
tblVehicleTrips	PB_TP	15.00	0.00
tblVehicleTrips	PR_TP	45.00	100.00
tblVehicleTrips	ST_TR	42.04	35.81
tblVehicleTrips	SU_TR	20.43	17.40
tblVehicleTrips	WD_TR	44.32	37.75
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.2569	2.4015	2.2066	3.8800e-003	0.0943	0.1255	0.2198	0.0445	0.1177	0.1623	0.0000	337.6791	337.6791	0.0763	0.0000	339.5872
2022	0.2626	0.0127	0.0169	3.0000e-005	2.1000e-004	7.4000e-004	9.5000e-004	6.0000e-005	7.4000e-004	7.9000e-004	0.0000	2.4688	2.4688	1.5000e-004	0.0000	2.4726
Maximum	**0.2626**	**2.4015**	**2.2066**	**3.8800e-003**	**0.0943**	**0.1255**	**0.2198**	**0.0445**	**0.1177**	**0.1623**	**0.0000**	**337.6791**	**337.6791**	**0.0763**	**0.0000**	**339.5872**

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					
2021	0.0518	0.3760	2.3267	3.8800e-003	0.0550	5.6200e-003	0.0606	0.0235	5.6000e-003	0.0291	0.0000	337.6787	337.6787	0.0763	0.0000	339.5868
2022	0.2611	1.2100e-003	0.0171	3.0000e-005	2.1000e-004	4.0000e-005	2.5000e-004	6.0000e-005	4.0000e-005	9.0000e-005	0.0000	2.4688	2.4688	1.5000e-004	0.0000	2.4726
Maximum	**0.2611**	**0.3760**	**2.3267**	**3.8800e-003**	**0.0550**	**5.6200e-003**	**0.0606**	**0.0235**	**5.6000e-003**	**0.0291**	**0.0000**	**337.6787**	**337.6787**	**0.0763**	**0.0000**	**339.5868**

	ROG	NOx	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	**39.77**	**84.38**	**-5.41**	**0.00**	**41.55**	**95.52**	**72.42**	**47.23**	**95.24**	**82.11**	**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	**1-1-2021**	**3-31-2021**	0.7415	0.1039
2	**4-1-2021**	**6-30-2021**	0.6583	0.1132
3	**7-1-2021**	**9-30-2021**	0.6655	0.1145
4	**10-1-2021**	**12-31-2021**	0.5956	0.0961
5	**1-1-2022**	**3-31-2022**	0.2841	0.2706
		Highest	0.7415	0.2706

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	0.2214	0.0000	4.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.9000e-004	8.9000e-004	0.0000	0.0000	9.5000e-004
Energy	6.4000e-004	5.8100e-003	4.8800e-003	3.0000e-005		4.4000e-004	4.4000e-004		4.4000e-004	4.4000e-004	0.0000	13.3545	13.3545	7.1500e-003	1.5700e-003	14.0014
Mobile	0.3179	1.2371	3.5790	0.0135	1.3707	0.0107	1.3813	0.3669	9.9300e-003	0.3768	0.0000	1,238.4252	1,238.4252	0.0384	0.0000	1,239.3851

Waste						0.0000	0.0000		0.0000	0.0000	10.6570	0.0000	10.6570	0.6298	0.0000	26.4023
Water						0.0000	0.0000		0.0000	0.0000	1.3104	0.3681	1.6785	4.8800e-003	2.9300e-003	2.6723
Total	**0.5400**	**1.2429**	**3.5843**	**0.0135**	**1.3707**	**0.0111**	**1.3818**	**0.3669**	**0.0104**	**0.3772**	**11.9674**	**1,252.1487**	**1,264.1161**	**0.6802**	**4.5000e-003**	**1,282.4621**

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	0.2214	0.0000	4.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.9000e-004	8.9000e-004	0.0000	0.0000	9.5000e-004
Energy	6.4000e-004	5.8100e-003	4.8800e-003	3.0000e-005		4.4000e-004	4.4000e-004		4.4000e-004	4.4000e-004	0.0000	13.3545	13.3545	7.1500e-003	1.5700e-003	14.0014
Mobile	0.3179	1.2371	3.5790	0.0135	1.3707	0.0107	1.3813	0.3669	9.9300e-003	0.3768	0.0000	1,238.4252	1,238.4252	0.0384	0.0000	1,239.3851
Waste						0.0000	0.0000		0.0000	0.0000	10.6570	0.0000	10.6570	0.6298	0.0000	26.4023
Water						0.0000	0.0000		0.0000	0.0000	1.3104	0.3681	1.6785	4.8800e-003	2.9300e-003	2.6723
Total	**0.5400**	**1.2429**	**3.5843**	**0.0135**	**1.3707**	**0.0111**	**1.3818**	**0.3669**	**0.0104**	**0.3772**	**11.9674**	**1,252.1487**	**1,264.1161**	**0.6802**	**4.5000e-003**	**1,282.4621**

	ROG	**NOx**	**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	Site Preparation	Site Preparation	1/1/2021	1/7/2021	5	5	
2	Grading	Grading	1/8/2021	1/19/2021	5	8	

3	Building Construction	Building Construction	1/20/2021	12/7/2021	5	230	
4	Paving	Paving	12/8/2021	12/31/2021	5	18	
5	Architectural Coating	Architectural Coating	1/1/2022	1/26/2022	5	18	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 75,000; Non-Residential Outdoor: 25,000; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	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
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	16.00	8.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	3.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0452	0.0000	0.0452	0.0248	0.0000	0.0248	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.7200e-003	0.1012	0.0529	1.0000e-004		5.1100e-003	5.1100e-003		4.7000e-003	4.7000e-003	0.0000	8.3589	8.3589	2.7000e-003	0.0000	8.4265
Total	**9.7200e-003**	**0.1012**	**0.0529**	**1.0000e-004**	**0.0452**	**5.1100e-003**	**0.0503**	**0.0248**	**4.7000e-003**	**0.0295**	**0.0000**	**8.3589**	**8.3589**	**2.7000e-003**	**0.0000**	**8.4265**

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	1.4000e-004	1.0000e-004	1.0300e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.2954	0.2954	1.0000e-005	0.0000	0.2956
Total	**1.4000e-004**	**1.0000e-004**	**1.0300e-003**	**0.0000**	**3.6000e-004**	**0.0000**	**3.6000e-004**	**9.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.2954**	**0.2954**	**1.0000e-005**	**0.0000**	**0.2956**

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					0.0203	0.0000	0.0203	0.0112	0.0000	0.0112	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1600e-003	5.0400e-003	0.0522	1.0000e-004		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004	0.0000	8.3589	8.3589	2.7000e-003	0.0000	8.4265
Total	**1.1600e-003**	**5.0400e-003**	**0.0522**	**1.0000e-004**	**0.0203**	**1.6000e-004**	**0.0205**	**0.0112**	**1.6000e-004**	**0.0113**	**0.0000**	**8.3589**	**8.3589**	**2.7000e-003**	**0.0000**	**8.4265**

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	1.4000e-004	1.0000e-004	1.0300e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.2954	0.2954	1.0000e-005	0.0000	0.2956
Total	**1.4000e-004**	**1.0000e-004**	**1.0300e-003**	**0.0000**	**3.6000e-004**	**0.0000**	**3.6000e-004**	**9.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.2954**	**0.2954**	**1.0000e-005**	**0.0000**	**0.2956**

3.3 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0262	0.0000	0.0262	0.0135	0.0000	0.0135	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.1600e-003	0.0990	0.0634	1.2000e-004		4.6400e-003	4.6400e-003		4.2700e-003	4.2700e-003	0.0000	10.4215	10.4215	3.3700e-003	0.0000	10.5057
Total	**9.1600e-003**	**0.0990**	**0.0634**	**1.2000e-004**	**0.0262**	**4.6400e-003**	**0.0309**	**0.0135**	**4.2700e-003**	**0.0177**	**0.0000**	**10.4215**	**10.4215**	**3.3700e-003**	**0.0000**	**10.5057**

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	1.8000e-004	1.3000e-004	1.3700e-003	0.0000	4.8000e-004	0.0000	4.8000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3939	0.3939	1.0000e-005	0.0000	0.3942
Total	**1.8000e-004**	**1.3000e-004**	**1.3700e-003**	**0.0000**	**4.8000e-004**	**0.0000**	**4.8000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.3939**	**0.3939**	**1.0000e-005**	**0.0000**	**0.3942**

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					0.0118	0.0000	0.0118	6.0600e-003	0.0000	6.0600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.4500e-003	6.2900e-003	0.0710	1.2000e-004		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	10.4215	10.4215	3.3700e-003	0.0000	10.5057
Total	**1.4500e-003**	**6.2900e-003**	**0.0710**	**1.2000e-004**	**0.0118**	**1.9000e-004**	**0.0120**	**6.0600e-003**	**1.9000e-004**	**6.2500e-003**	**0.0000**	**10.4215**	**10.4215**	**3.3700e-003**	**0.0000**	**10.5057**

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	1.8000e-004	1.3000e-004	1.3700e-003	0.0000	4.8000e-004	0.0000	4.8000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3939	0.3939	1.0000e-005	0.0000	0.3942
Total	**1.8000e-004**	**1.3000e-004**	**1.3700e-003**	**0.0000**	**4.8000e-004**	**0.0000**	**4.8000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.3939**	**0.3939**	**1.0000e-005**	**0.0000**	**0.3942**

3.4 Building Construction - 2021

Unmitigated Construction On-Site

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

Category	tons/yr										MT/yr					
Off-Road	0.2186	2.0047	1.9062	3.1000e-003		0.1102	0.1102		0.1037	0.1037	0.0000	266.3829	266.3829	0.0643	0.0000	267.9895
Total	**0.2186**	**2.0047**	**1.9062**	**3.1000e-003**		**0.1102**	**0.1102**		**0.1037**	**0.1037**	**0.0000**	**266.3829**	**266.3829**	**0.0643**	**0.0000**	**267.9895**

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	3.0000e-003	0.0945	0.0252	2.5000e-004	6.0500e-003	2.1000e-004	6.2600e-003	1.7500e-003	2.0000e-004	1.9500e-003	0.0000	23.8307	23.8307	1.0400e-003	0.0000	23.8567
Worker	5.6700e-003	3.9200e-003	0.0421	1.3000e-004	0.0146	9.0000e-005	0.0147	3.8800e-003	8.0000e-005	3.9700e-003	0.0000	12.0804	12.0804	2.7000e-004	0.0000	12.0872
Total	**8.6700e-003**	**0.0985**	**0.0673**	**3.8000e-004**	**0.0206**	**3.0000e-004**	**0.0210**	**5.6300e-003**	**2.8000e-004**	**5.9200e-003**	**0.0000**	**35.9111**	**35.9111**	**1.3100e-003**	**0.0000**	**35.9439**

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	0.0377	0.2570	2.0079	3.1000e-003		4.6900e-003	4.6900e-003		4.6900e-003	4.6900e-003	0.0000	266.3826	266.3826	0.0643	0.0000	267.9892
Total	**0.0377**	**0.2570**	**2.0079**	**3.1000e-003**		**4.6900e-003**	**4.6900e-003**		**4.6900e-003**	**4.6900e-003**	**0.0000**	**266.3826**	**266.3826**	**0.0643**	**0.0000**	**267.9892**

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	3.0000e-003	0.0945	0.0252	2.5000e-004	6.0500e-003	2.1000e-004	6.2600e-003	1.7500e-003	2.0000e-004	1.9500e-003	0.0000	23.8307	23.8307	1.0400e-003	0.0000	23.8567
Worker	5.6700e-003	3.9200e-003	0.0421	1.3000e-004	0.0146	9.0000e-005	0.0147	3.8800e-003	8.0000e-005	3.9700e-003	0.0000	12.0804	12.0804	2.7000e-004	0.0000	12.0872
Total	**8.6700e-003**	**0.0985**	**0.0673**	**3.8000e-004**	**0.0206**	**3.0000e-004**	**0.0210**	**5.6300e-003**	**2.8000e-004**	**5.9200e-003**	**0.0000**	**35.9111**	**35.9111**	**1.3100e-003**	**0.0000**	**35.9439**

3.5 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.8500e-003	0.0976	0.1103	1.7000e-004		5.2100e-003	5.2100e-003		4.8100e-003	4.8100e-003	0.0000	14.7336	14.7336	4.6300e-003	0.0000	14.8493
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.8500e-003**	**0.0976**	**0.1103**	**1.7000e-004**		**5.2100e-003**	**5.2100e-003**		**4.8100e-003**	**4.8100e-003**	**0.0000**	**14.7336**	**14.7336**	**4.6300e-003**	**0.0000**	**14.8493**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.5000e-004	3.8000e-004	4.1200e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1818	1.1818	3.0000e-005	0.0000	1.1825
Total	**5.5000e-004**	**3.8000e-004**	**4.1200e-003**	**1.0000e-005**	**1.4300e-003**	**1.0000e-005**	**1.4400e-003**	**3.8000e-004**	**1.0000e-005**	**3.9000e-004**	**0.0000**	**1.1818**	**1.1818**	**3.0000e-005**	**0.0000**	**1.1825**

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	1.9700e-003	8.5600e-003	0.1218	1.7000e-004		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	14.7335	14.7335	4.6300e-003	0.0000	14.8493
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.9700e-003**	**8.5600e-003**	**0.1218**	**1.7000e-004**		**2.6000e-004**	**2.6000e-004**		**2.6000e-004**	**2.6000e-004**	**0.0000**	**14.7335**	**14.7335**	**4.6300e-003**	**0.0000**	**14.8493**

Mitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.5000e-004	3.8000e-004	4.1200e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1818	1.1818	3.0000e-005	0.0000	1.1825
Total	**5.5000e-004**	**3.8000e-004**	**4.1200e-003**	**1.0000e-005**	**1.4300e-003**	**1.0000e-005**	**1.4400e-003**	**3.8000e-004**	**1.0000e-005**	**3.9000e-004**	**0.0000**	**1.1818**	**1.1818**	**3.0000e-005**	**0.0000**	**1.1825**

3.6 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2607					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.8400e-003	0.0127	0.0163	3.0000e-005		7.4000e-004	7.4000e-004		7.4000e-004	7.4000e-004	0.0000	2.2979	2.2979	1.5000e-004	0.0000	2.3017
Total	**0.2626**	**0.0127**	**0.0163**	**3.0000e-005**		**7.4000e-004**	**7.4000e-004**		**7.4000e-004**	**7.4000e-004**	**0.0000**	**2.2979**	**2.2979**	**1.5000e-004**	**0.0000**	**2.3017**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-005	5.0000e-005	5.7000e-004	0.0000	2.1000e-004	0.0000	2.2000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1708	0.1708	0.0000	0.0000	0.1709
Total	**8.0000e-005**	**5.0000e-005**	**5.7000e-004**	**0.0000**	**2.1000e-004**	**0.0000**	**2.2000e-004**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**0.1708**	**0.1708**	**0.0000**	**0.0000**	**0.1709**

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	0.2607					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	1.1600e-003	0.0165	3.0000e-005		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	2.2979	2.2979	1.5000e-004	0.0000	2.3017
Total	**0.2610**	**1.1600e-003**	**0.0165**	**3.0000e-005**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**	**0.0000**	**2.2979**	**2.2979**	**1.5000e-004**	**0.0000**	**2.3017**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-005	5.0000e-005	5.7000e-004	0.0000	2.1000e-004	0.0000	2.2000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1708	0.1708	0.0000	0.0000	0.1709
Total	**8.0000e-005**	**5.0000e-005**	**5.7000e-004**	**0.0000**	**2.1000e-004**	**0.0000**	**2.2000e-004**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**0.1708**	**0.1708**	**0.0000**	**0.0000**	**0.1709**

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	0.3179	1.2371	3.5790	0.0135	1.3707	0.0107	1.3813	0.3669	9.9300e-003	0.3768	0.0000	1,238.4252	1,238.4252	0.0384	0.0000	1,239.3851
Unmitigated	0.3179	1.2371	3.5790	0.0135	1.3707	0.0107	1.3813	0.3669	9.9300e-003	0.3768	0.0000	1,238.4252	1,238.4252	0.0384	0.0000	1,239.3851

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Strip Mall	1,887.50	1,790.50	870.00	3,686,503	3,686,503
Total	1,887.50	1,790.50	870.00	3,686,503	3,686,503

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
Strip Mall	5.86	5.86	5.86	16.60	64.40	19.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Strip Mall	0.616749	0.035330	0.181430	0.103378	0.013121	0.005016	0.012828	0.021913	0.002183	0.001508	0.005219	0.000634	0.000691

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	7.0309	7.0309	7.0300e-003	1.4500e-003	7.6402
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	7.0309	7.0309	7.0300e-003	1.4500e-003	7.6402
NaturalGas Mitigated	6.4000e-004	5.8100e-003	4.8800e-003	3.0000e-005		4.4000e-004	4.4000e-004		4.4000e-004	4.4000e-004	0.0000	6.3236	6.3236	1.2000e-004	1.2000e-004	6.3612
NaturalGas Unmitigated	6.4000e-004	5.8100e-003	4.8800e-003	3.0000e-005		4.4000e-004	4.4000e-004		4.4000e-004	4.4000e-004	0.0000	6.3236	6.3236	1.2000e-004	1.2000e-004	6.3612

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					
Strip Mall	118500	6.4000e-004	5.8100e-003	4.8800e-003	3.0000e-005		4.4000e-004	4.4000e-004		4.4000e-004	4.4000e-004	0.0000	6.3236	6.3236	1.2000e-004	1.2000e-004	6.3612
Total		**6.4000e-004**	**5.8100e-003**	**4.8800e-003**	**3.0000e-005**		**4.4000e-004**	**4.4000e-004**		**4.4000e-004**	**4.4000e-004**	**0.0000**	**6.3236**	**6.3236**	**1.2000e-004**	**1.2000e-004**	**6.3612**

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					
Strip Mall	118500	6.4000e-004	5.8100e-003	4.8800e-003	3.0000e-005		4.4000e-004	4.4000e-004		4.4000e-004	4.4000e-004	0.0000	6.3236	6.3236	1.2000e-004	1.2000e-004	6.3612
Total		**6.4000e-004**	**5.8100e-003**	**4.8800e-003**	**3.0000e-005**		**4.4000e-004**	**4.4000e-004**		**4.4000e-004**	**4.4000e-004**	**0.0000**	**6.3236**	**6.3236**	**1.2000e-004**	**1.2000e-004**	**6.3612**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Strip Mall	534500	7.0309	7.0300e-003	1.4500e-003	7.6402
Total		**7.0309**	**7.0300e-003**	**1.4500e-003**	**7.6402**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Strip Mall	534500	7.0309	7.0300e-003	1.4500e-003	7.6402
Total		**7.0309**	**7.0300e-003**	**1.4500e-003**	**7.6402**

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	0.2214	0.0000	4.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.9000e-004	8.9000e-004	0.0000	0.0000	9.5000e-004
Unmitigated	0.2214	0.0000	4.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.9000e-004	8.9000e-004	0.0000	0.0000	9.5000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0261					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1953					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.0000e-005	0.0000	4.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.9000e-004	8.9000e-004	0.0000	0.0000	9.5000e-004
Total	**0.2214**	**0.0000**	**4.6000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**8.9000e-004**	**8.9000e-004**	**0.0000**	**0.0000**	**9.5000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0261					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1953					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.0000e-005	0.0000	4.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.9000e-004	8.9000e-004	0.0000	0.0000	9.5000e-004
Total	**0.2214**	**0.0000**	**4.6000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**8.9000e-004**	**8.9000e-004**	**0.0000**	**0.0000**	**9.5000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1.6785	4.8800e-003	2.9300e-003	2.6723
Unmitigated	1.6785	4.8800e-003	2.9300e-003	2.6723

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Strip Mall	3.70363 / 2.26996	1.6785	4.8800e-003	2.9300e-003	2.6723
Total		**1.6785**	**4.8800e-003**	**2.9300e-003**	**2.6723**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Strip Mall	3.70363 / 2.26996	1.6785	4.8800e-003	2.9300e-003	2.6723
Total		**1.6785**	**4.8800e-003**	**2.9300e-003**	**2.6723**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			

Mitigated	10.6570	0.6298	0.0000	26.4023
Unmitigated	10.6570	0.6298	0.0000	26.4023

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Strip Mall	52.5	10.6570	0.6298	0.0000	26.4023
Total		**10.6570**	**0.6298**	**0.0000**	**26.4023**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Strip Mall	52.5	10.6570	0.6298	0.0000	26.4023
Total		**10.6570**	**0.6298**	**0.0000**	**26.4023**

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

Morgan Hill - Hwy Industrial Component (Light Industrial)

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	1,044.60	1000sqft	54.74	1,044,600.00	0
Parking Lot	1,435.00	Space	0.00	574,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2025
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	29	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E rate

Land Use - Project description

Construction Phase - Assume similar construciton as Warehouse scenario

Off-road Equipment - Construction worksheet

Off-road Equipment - assume same as warehouse scenario

Trips and VMT - On-site hauling 25 cy/load at 0.1mi. Added cement and asphalt trips as vendor trips distances using HHDT,MHDT vehicles

On-road Fugitive Dust - On-site hauling =0%paved

Grading - Construction worksheet - used 165,000cy cut and fill with no mileage

Vehicle Trips - fromGeneral Light Industrial Trip Generation Estimates (Trucks computed seperately using CtEmfac) 4.72,0.90,0.46

Road Dust -

Energy Use -

Water And Wastewater - WTP treatment

Construction Off-road Equipment Mitigation - Enhanced BMPs and Tier 4 mitigation

Fleet Mix - Trucks modeled using CtEmfac so mix adjusted (0.63, 0.04, 0.19, 0.11, 0.014, 0.006, 0,0, 0.002, 0.002, 0.005, 0.001, 0)

Stationary Sources - Emergency Generators and Fire Pumps - Largest typical size per CARB stationary diesel

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	0.5
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	40.00	0.00
tblFleetMix	HHD	0.02	0.00
tblFleetMix	LDA	0.62	0.63
tblFleetMix	LDT1	0.04	0.04
tblFleetMix	LDT2	0.18	0.19
tblFleetMix	LHD1	0.01	0.01
tblFleetMix	LHD2	5.0160e-003	6.0000e-003
tblFleetMix	MCY	5.2190e-003	5.0000e-003
tblFleetMix	MDV	0.10	0.11
tblFleetMix	MH	6.9100e-004	0.00
tblFleetMix	MHD	0.01	0.00
tblFleetMix	OBUS	2.1830e-003	2.0000e-003
tblFleetMix	SBUS	6.3400e-004	1.0000e-003
tblFleetMix	UBUS	1.5080e-003	2.0000e-003
tblLandUse	LotAcreage	23.98	54.74
tblLandUse	LotAcreage	12.91	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	29
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	200.00

tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	50.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	3.00
tblTripsAndVMT	WorkerTripNumber	0.00	18.00
tblVehicleTrips	CC_TL	7.30	5.86
tblVehicleTrips	CNW_TL	7.30	5.86
tblVehicleTrips	CW_TL	9.50	5.86
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	1.32	4.72
tblVehicleTrips	SU_TR	0.68	4.72
tblVehicleTrips	WD_TR	6.97	4.72
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	4.6756	2.1000e-004	0.0227	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0443	0.0443	1.2000e-004	0.0000	0.0472

Energy	0.1486	1.3508	1.1347	8.1000e-003		0.1027	0.1027		0.1027	0.1027	0.0000	1,586.6645	1,586.6645	0.1443	0.0510	1,605.4674
Mobile	0.8727	1.3296	9.8952	0.0327	3.8889	0.0301	3.9190	1.0388	0.0280	1.0667	0.0000	2,968.1033	2,968.1033	0.0826	0.0000	2,970.1674
Stationary	0.0246	0.0688	0.0628	1.2000e-004		3.6200e-003	3.6200e-003		3.6200e-003	3.6200e-003	0.0000	11.4239	11.4239	1.6000e-003	0.0000	11.4640
Waste						0.0000	0.0000		0.0000	0.0000	262.9342	0.0000	262.9342	15.5390	0.0000	651.4083
Water						0.0000	0.0000		0.0000	0.0000	85.4656	17.1939	102.6595	0.3114	0.1894	166.8897
Total	**5.7214**	**2.7495**	**11.1153**	**0.0409**	**3.8889**	**0.1365**	**4.0254**	**1.0388**	**0.1343**	**1.1731**	**348.3998**	**4,583.4299**	**4,931.8297**	**16.0789**	**0.2404**	**5,405.4440**

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	4.6756	2.1000e-004	0.0227	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0443	0.0443	1.2000e-004	0.0000	0.0472
Energy	0.1486	1.3508	1.1347	8.1000e-003		0.1027	0.1027		0.1027	0.1027	0.0000	1,586.6645	1,586.6645	0.1443	0.0510	1,605.4674
Mobile	0.8727	1.3296	9.8952	0.0327	3.8889	0.0301	3.9190	1.0388	0.0280	1.0667	0.0000	2,968.1033	2,968.1033	0.0826	0.0000	2,970.1674
Stationary	0.0246	0.0688	0.0628	1.2000e-004		3.6200e-003	3.6200e-003		3.6200e-003	3.6200e-003	0.0000	11.4239	11.4239	1.6000e-003	0.0000	11.4640
Waste						0.0000	0.0000		0.0000	0.0000	262.9342	0.0000	262.9342	15.5390	0.0000	651.4083
Water						0.0000	0.0000		0.0000	0.0000	85.4656	17.1939	102.6595	0.3114	0.1894	166.8897
Total	**5.7214**	**2.7495**	**11.1153**	**0.0409**	**3.8889**	**0.1365**	**4.0254**	**1.0388**	**0.1343**	**1.1731**	**348.3998**	**4,583.4299**	**4,931.8297**	**16.0789**	**0.2404**	**5,405.4440**

	ROG	**NOx**	**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	0.8727	1.3296	9.8952	0.0327	3.8889	0.0301	3.9190	1.0388	0.0280	1.0667	0.0000	2,968.1033	2,968.1033	0.0826	0.0000	2,970.1674
Unmitigated	0.8727	1.3296	9.8952	0.0327	3.8889	0.0301	3.9190	1.0388	0.0280	1.0667	0.0000	2,968.1033	2,968.1033	0.0826	0.0000	2,970.1674

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	4,930.51	4,930.51	4930.51	10,516,979	10,516,979
Parking Lot	0.00	0.00	0.00		
Total	4,930.51	4,930.51	4,930.51	10,516,979	10,516,979

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	5.86	5.86	5.86	59.00	28.00	13.00	100	0	0
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
General Light Industry	0.630000	0.040000	0.190000	0.110000	0.014000	0.006000	0.000000	0.000000	0.002000	0.002000	0.005000	0.001000	0.000000
Parking Lot	0.616749	0.035330	0.181430	0.103378	0.013121	0.005016	0.012828	0.021913	0.002183	0.001508	0.005219	0.000634	0.000691

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	116.1421	116.1421	0.1161	0.0240	126.2065
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	116.1421	116.1421	0.1161	0.0240	126.2065
NaturalGas Mitigated	0.1486	1.3508	1.1347	8.1000e-003		0.1027	0.1027		0.1027	0.1027	0.0000	1,470.5223	1,470.5223	0.0282	0.0270	1,479.2609
NaturalGas Unmitigated	0.1486	1.3508	1.1347	8.1000e-003		0.1027	0.1027		0.1027	0.1027	0.0000	1,470.5223	1,470.5223	0.0282	0.0270	1,479.2609

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	2.75565e+007	0.1486	1.3508	1.1347	8.1000e-003		0.1027	0.1027		0.1027	0.1027	0.0000	1,470.5223	1,470.5223	0.0282	0.0270	1,479.2609
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		**0.1486**	**1.3508**	**1.1347**	**8.1000e-003**		**0.1027**	**0.1027**		**0.1027**	**0.1027**	**0.0000**	**1,470.5223**	**1,470.5223**	**0.0282**	**0.0270**	**1,479.2609**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	2.75565e+007	0.1486	1.3508	1.1347	8.1000e-003		0.1027	0.1027		0.1027	0.1027	0.0000	1,470.5223	1,470.5223	0.0282	0.0270	1,479.2609
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		**0.1486**	**1.3508**	**1.1347**	**8.1000e-003**		**0.1027**	**0.1027**		**0.1027**	**0.1027**	**0.0000**	**1,470.5223**	**1,470.5223**	**0.0282**	**0.0270**	**1,479.2609**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	8.6284e+006	113.4995	0.1135	0.0235	123.3348
Parking Lot	200900	2.6427	2.6400e-003	5.5000e-004	2.8717
Total		**116.1421**	**0.1161**	**0.0240**	**126.2065**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e

Land Use	kWh/yr	MT/yr			
General Light Industry	8.6284e+006	113.4995	0.1135	0.0235	123.3348
Parking Lot	200900	2.6427	2.6400e-003	5.5000e-004	2.8717
Total		**116.1421**	**0.1161**	**0.0240**	**126.2065**

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	4.6756	2.1000e-004	0.0227	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0443	0.0443	1.2000e-004	0.0000	0.0472
Unmitigated	4.6756	2.1000e-004	0.0227	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0443	0.0443	1.2000e-004	0.0000	0.0472

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	0.5567					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Consumer Products	4.1168					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0900e-003	2.1000e-004	0.0227	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0443	0.0443	1.2000e-004	0.0000	0.0472
Total	**4.6756**	**2.1000e-004**	**0.0227**	**0.0000**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**	**0.0000**	**0.0443**	**0.0443**	**1.2000e-004**	**0.0000**	**0.0472**

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	0.5567					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.1168					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0900e-003	2.1000e-004	0.0227	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0443	0.0443	1.2000e-004	0.0000	0.0472
Total	**4.6756**	**2.1000e-004**	**0.0227**	**0.0000**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**	**0.0000**	**0.0443**	**0.0443**	**1.2000e-004**	**0.0000**	**0.0472**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	102.6595	0.3114	0.1894	166.8897
Unmitigated	102.6595	0.3114	0.1894	166.8897

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	241.564 / 0	102.6595	0.3114	0.1894	166.8897
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**102.6595**	**0.3114**	**0.1894**	**166.8897**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	241.564 / 0	102.6595	0.3114	0.1894	166.8897
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**102.6595**	**0.3114**	**0.1894**	**166.8897**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	262.9342	15.5390	0.0000	651.4083
Unmitigated	262.9342	15.5390	0.0000	651.4083

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	1295.3	262.9342	15.5390	0.0000	651.4083
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**262.9342**	**15.5390**	**0.0000**	**651.4083**

Mitigated

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

General Light Industry	1295.3	262.9342	15.5390	0.0000	651.4083
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**262.9342**	**15.5390**	**0.0000**	**651.4083**

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
Fire Pump	3	0	50	200	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					
Fire Pump - Diesel (175 - 300 HP)	0.0246	0.0688	0.0628	1.2000e-004		3.6200e-003	3.6200e-003		3.6200e-003	3.6200e-003	0.0000	11.4239	11.4239	1.6000e-003	0.0000	11.4640
Total	**0.0246**	**0.0688**	**0.0628**	**1.2000e-004**		**3.6200e-003**	**3.6200e-003**		**3.6200e-003**	**3.6200e-003**	**0.0000**	**11.4239**	**11.4239**	**1.6000e-003**	**0.0000**	**11.4640**

11.0 Vegetation

MH Industrial Office (Dr Lee) General Light Industrial

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	45.00	1000sqft	2.18	45,000.00	0
Parking Lot	32.00	Space	0.00	12,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2025
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	29	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - SVCE w/10%PG&E participation

Land Use - Project description and 0.7 parking space/1ksf

Vehicle Trips - Trip rate= 4.96,0.94,0.48 and 4.91 miles/trip. Ass primary

Water And Wastewater - wtp treatment

Table Name	Column Name	Default Value	New Value
tblLandUse	LotAcreage	1.03	2.18
tblLandUse	LotAcreage	0.29	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	29

tblVehicleTrips	CC_TL	7.30	5.86
tblVehicleTrips	CNW_TL	7.30	5.86
tblVehicleTrips	CW_TL	9.50	5.86
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	1.32	0.94
tblVehicleTrips	SU_TR	0.68	0.48
tblVehicleTrips	WD_TR	6.97	4.96
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.1 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					
2021	0.2334	1.9092	1.6610	3.1400e-003	0.0472	0.0926	0.1398	0.0172	0.0883	0.1055	0.0000	266.4768	266.4768	0.0485	0.0000	267.6903
2022	0.2716	0.2790	0.2885	5.3000e-004	4.4100e-003	0.0131	0.0175	1.1900e-003	0.0125	0.0137	0.0000	45.3277	45.3277	8.5500e-003	0.0000	45.5415
Maximum	**0.2716**	**1.9092**	**1.6610**	**3.1400e-003**	**0.0472**	**0.0926**	**0.1398**	**0.0172**	**0.0883**	**0.1055**	**0.0000**	**266.4768**	**266.4768**	**0.0485**	**0.0000**	**267.6903**

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					
2021	0.2334	1.9092	1.6610	3.1400e-003	0.0472	0.0926	0.1398	0.0172	0.0883	0.1055	0.0000	266.4765	266.4765	0.0485	0.0000	267.6900
2022	0.2716	0.2790	0.2885	5.3000e-004	4.4100e-003	0.0131	0.0175	1.1900e-003	0.0125	0.0137	0.0000	45.3277	45.3277	8.5500e-003	0.0000	45.5415
Maximum	**0.2716**	**1.9092**	**1.6610**	**3.1400e-003**	**0.0472**	**0.0926**	**0.1398**	**0.0172**	**0.0883**	**0.1055**	**0.0000**	**266.4765**	**266.4765**	**0.0485**	**0.0000**	**267.6900**

	ROG	**NOx**	**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	**3-1-2021**	**5-31-2021**	0.6630	0.6630
2	**6-1-2021**	**8-31-2021**	0.6289	0.6289
3	**9-1-2021**	**11-30-2021**	0.6226	0.6226
4	**12-1-2021**	**2-28-2022**	0.5902	0.5902
5	**3-1-2022**	**5-31-2022**	0.1754	0.1754
		Highest	0.6630	0.6630

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	0.2004	1.0000e-005	7.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3800e-003	1.3800e-003	0.0000	0.0000	1.4700e-003

Energy	6.4000e-003	0.0582	0.0489	3.5000e-004		4.4200e-003	4.4200e-003		4.4200e-003	4.4200e-003	0.0000	68.2965	68.2965	6.1600e-003	2.1900e-003	69.1018
Mobile	0.0310	0.1207	0.3491	1.3200e-003	0.1337	1.0400e-003	0.1347	0.0358	9.7000e-004	0.0368	0.0000	120.7818	120.7818	3.7400e-003	0.0000	120.8754
Waste						0.0000	0.0000		0.0000	0.0000	11.3269	0.0000	11.3269	0.6694	0.0000	28.0619
Water						0.0000	0.0000		0.0000	0.0000	3.6818	0.7407	4.4224	0.0134	8.1600e-003	7.1894
Total	**0.2378**	**0.1789**	**0.3986**	**1.6700e-003**	**0.1337**	**5.4600e-003**	**0.1391**	**0.0358**	**5.3900e-003**	**0.0412**	**15.0087**	**189.8204**	**204.8290**	**0.6927**	**0.0104**	**225.2299**

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	0.2004	1.0000e-005	7.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3800e-003	1.3800e-003	0.0000	0.0000	1.4700e-003
Energy	6.4000e-003	0.0582	0.0489	3.5000e-004		4.4200e-003	4.4200e-003		4.4200e-003	4.4200e-003	0.0000	68.2965	68.2965	6.1600e-003	2.1900e-003	69.1018
Mobile	0.0310	0.1207	0.3491	1.3200e-003	0.1337	1.0400e-003	0.1347	0.0358	9.7000e-004	0.0368	0.0000	120.7818	120.7818	3.7400e-003	0.0000	120.8754
Waste						0.0000	0.0000		0.0000	0.0000	11.3269	0.0000	11.3269	0.6694	0.0000	28.0619
Water						0.0000	0.0000		0.0000	0.0000	3.6818	0.7407	4.4224	0.0134	8.1600e-003	7.1894
Total	**0.2378**	**0.1789**	**0.3986**	**1.6700e-003**	**0.1337**	**5.4600e-003**	**0.1391**	**0.0358**	**5.3900e-003**	**0.0412**	**15.0087**	**189.8204**	**204.8290**	**0.6927**	**0.0104**	**225.2299**

	ROG	**NOx**	**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	3/1/2021	3/26/2021	5	20	
2	Site Preparation	Site Preparation	3/27/2021	3/31/2021	5	3	
3	Grading	Grading	4/1/2021	4/8/2021	5	6	
4	Building Construction	Building Construction	4/9/2021	2/10/2022	5	220	
5	Paving	Paving	2/11/2022	2/24/2022	5	10	
6	Architectural Coating	Architectural Coating	2/25/2022	3/10/2022	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: 67,500; Non-Residential Outdoor: 22,500; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
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
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
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
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
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

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
Architectural Coating	1	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	24.00	9.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	5	13.00	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
Paving	6	15.00	0.00	0.00	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

3.1 Mitigation Measures Construction

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0199	0.1970	0.1449	2.4000e-004		0.0104	0.0104		9.7100e-003	9.7100e-003	0.0000	21.0713	21.0713	5.3900e-003	0.0000	21.2060
Total	**0.0199**	**0.1970**	**0.1449**	**2.4000e-004**		**0.0104**	**0.0104**		**9.7100e-003**	**9.7100e-003**	**0.0000**	**21.0713**	**21.0713**	**5.3900e-003**	**0.0000**	**21.2060**

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-004	2.8000e-004	2.9700e-003	1.0000e-005	1.0300e-003	1.0000e-005	1.0400e-003	2.7000e-004	1.0000e-005	2.8000e-004	0.0000	0.8535	0.8535	2.0000e-005	0.0000	0.8540
Total	**4.0000e-004**	**2.8000e-004**	**2.9700e-003**	**1.0000e-005**	**1.0300e-003**	**1.0000e-005**	**1.0400e-003**	**2.7000e-004**	**1.0000e-005**	**2.8000e-004**	**0.0000**	**0.8535**	**0.8535**	**2.0000e-005**	**0.0000**	**0.8540**

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	0.0199	0.1970	0.1449	2.4000e-004		0.0104	0.0104		9.7100e-003	9.7100e-003	0.0000	21.0713	21.0713	5.3900e-003	0.0000	21.2060
Total	**0.0199**	**0.1970**	**0.1449**	**2.4000e-004**		**0.0104**	**0.0104**		**9.7100e-003**	**9.7100e-003**	**0.0000**	**21.0713**	**21.0713**	**5.3900e-003**	**0.0000**	**21.2060**

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-004	2.8000e-004	2.9700e-003	1.0000e-005	1.0300e-003	1.0000e-005	1.0400e-003	2.7000e-004	1.0000e-005	2.8000e-004	0.0000	0.8535	0.8535	2.0000e-005	0.0000	0.8540
Total	**4.0000e-004**	**2.8000e-004**	**2.9700e-003**	**1.0000e-005**	**1.0300e-003**	**1.0000e-005**	**1.0400e-003**	**2.7000e-004**	**1.0000e-005**	**2.8000e-004**	**0.0000**	**0.8535**	**0.8535**	**2.0000e-005**	**0.0000**	**0.8540**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
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	2.3200e-003	0.0274	0.0161	4.0000e-005		1.0500e-003	1.0500e-003		9.7000e-004	9.7000e-004	0.0000	3.2290	3.2290	1.0400e-003	0.0000	3.2551
Total	**2.3200e-003**	**0.0274**	**0.0161**	**4.0000e-005**	**2.3900e-003**	**1.0500e-003**	**3.4400e-003**	**2.6000e-004**	**9.7000e-004**	**1.2300e-003**	**0.0000**	**3.2290**	**3.2290**	**1.0400e-003**	**0.0000**	**3.2551**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	3.0000e-005	2.7000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0788	0.0788	0.0000	0.0000	0.0788

Total	**4.0000e-005**	**3.0000e-005**	**2.7000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0788**	**0.0788**	**0.0000**	**0.0000**	**0.0788**

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	2.3200e-003	0.0274	0.0161	4.0000e-005		1.0500e-003	1.0500e-003		9.7000e-004	9.7000e-004	0.0000	3.2290	3.2290	1.0400e-003	0.0000	3.2551
Total	**2.3200e-003**	**0.0274**	**0.0161**	**4.0000e-005**	**2.3900e-003**	**1.0500e-003**	**3.4400e-003**	**2.6000e-004**	**9.7000e-004**	**1.2300e-003**	**0.0000**	**3.2290**	**3.2290**	**1.0400e-003**	**0.0000**	**3.2551**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	3.0000e-005	2.7000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0788	0.0788	0.0000	0.0000	0.0788
Total	**4.0000e-005**	**3.0000e-005**	**2.7000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0788**	**0.0788**	**0.0000**	**0.0000**	**0.0788**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
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	5.4800e-003	0.0606	0.0293	6.0000e-005		2.7500e-003	2.7500e-003		2.5300e-003	2.5300e-003	0.0000	5.4312	5.4312	1.7600e-003	0.0000	5.4751
Total	**5.4800e-003**	**0.0606**	**0.0293**	**6.0000e-005**	**0.0197**	**2.7500e-003**	**0.0224**	**0.0101**	**2.5300e-003**	**0.0126**	**0.0000**	**5.4312**	**5.4312**	**1.7600e-003**	**0.0000**	**5.4751**

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	6.0000e-005	6.9000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1970	0.1970	0.0000	0.0000	0.1971
Total	**9.0000e-005**	**6.0000e-005**	**6.9000e-004**	**0.0000**	**2.4000e-004**	**0.0000**	**2.4000e-004**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**0.1970**	**0.1970**	**0.0000**	**0.0000**	**0.1971**

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	5.4800e-003	0.0606	0.0293	6.0000e-005		2.7500e-003	2.7500e-003		2.5300e-003	2.5300e-003	0.0000	5.4312	5.4312	1.7600e-003	0.0000	5.4751
Total	**5.4800e-003**	**0.0606**	**0.0293**	**6.0000e-005**	**0.0197**	**2.7500e-003**	**0.0224**	**0.0101**	**2.5300e-003**	**0.0126**	**0.0000**	**5.4312**	**5.4312**	**1.7600e-003**	**0.0000**	**5.4751**

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	6.0000e-005	6.9000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1970	0.1970	0.0000	0.0000	0.1971
Total	**9.0000e-005**	**6.0000e-005**	**6.9000e-004**	**0.0000**	**2.4000e-004**	**0.0000**	**2.4000e-004**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**0.1970**	**0.1970**	**0.0000**	**0.0000**	**0.1971**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1953	1.5306	1.3908	2.3900e-003		0.0781	0.0781		0.0748	0.0748	0.0000	198.3045	198.3045	0.0390	0.0000	199.2799
Total	**0.1953**	**1.5306**	**1.3908**	**2.3900e-003**		**0.0781**	**0.0781**		**0.0748**	**0.0748**	**0.0000**	**198.3045**	**198.3045**	**0.0390**	**0.0000**	**199.2799**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.8000e-003	0.0883	0.0235	2.3000e-004	5.6500e-003	2.0000e-004	5.8500e-003	1.6300e-003	1.9000e-004	1.8200e-003	0.0000	22.2636	22.2636	9.7000e-004	0.0000	22.2878
Worker	7.0600e-003	4.8900e-003	0.0524	1.7000e-004	0.0182	1.1000e-004	0.0183	4.8300e-003	1.1000e-004	4.9400e-003	0.0000	15.0479	15.0479	3.4000e-004	0.0000	15.0565
Total	**9.8600e-003**	**0.0932**	**0.0759**	**4.0000e-004**	**0.0238**	**3.1000e-004**	**0.0241**	**6.4600e-003**	**3.0000e-004**	**6.7600e-003**	**0.0000**	**37.3115**	**37.3115**	**1.3100e-003**	**0.0000**	**37.3443**

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	0.1953	1.5306	1.3908	2.3900e-003		0.0781	0.0781		0.0748	0.0748	0.0000	198.3043	198.3043	0.0390	0.0000	199.2797
Total	**0.1953**	**1.5306**	**1.3908**	**2.3900e-003**		**0.0781**	**0.0781**		**0.0748**	**0.0748**	**0.0000**	**198.3043**	**198.3043**	**0.0390**	**0.0000**	**199.2797**

Mitigated Construction Off-Site

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

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.8000e-003	0.0883	0.0235	2.3000e-004	5.6500e-003	2.0000e-004	5.8500e-003	1.6300e-003	1.9000e-004	1.8200e-003	0.0000	22.2636	22.2636	9.7000e-004	0.0000	22.2878
Worker	7.0600e-003	4.8900e-003	0.0524	1.7000e-004	0.0182	1.1000e-004	0.0183	4.8300e-003	1.1000e-004	4.9400e-003	0.0000	15.0479	15.0479	3.4000e-004	0.0000	15.0565
Total	**9.8600e-003**	**0.0932**	**0.0759**	**4.0000e-004**	**0.0238**	**3.1000e-004**	**0.0241**	**6.4600e-003**	**3.0000e-004**	**6.7600e-003**	**0.0000**	**37.3115**	**37.3115**	**1.3100e-003**	**0.0000**	**37.3443**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0269	0.2118	0.2081	3.6000e-004		0.0102	0.0102		9.7600e-003	9.7600e-003	0.0000	30.1136	30.1136	5.8100e-003	0.0000	30.2589
Total	**0.0269**	**0.2118**	**0.2081**	**3.6000e-004**		**0.0102**	**0.0102**		**9.7600e-003**	**9.7600e-003**	**0.0000**	**30.1136**	**30.1136**	**5.8100e-003**	**0.0000**	**30.2589**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.0000e-004	0.0127	3.3600e-003	3.0000e-005	8.6000e-004	3.0000e-005	8.8000e-004	2.5000e-004	2.0000e-005	2.7000e-004	0.0000	3.3480	3.3480	1.4000e-004	0.0000	3.3515
Worker	1.0000e-003	6.7000e-004	7.3200e-003	2.0000e-005	2.7600e-003	2.0000e-005	2.7800e-003	7.3000e-004	2.0000e-005	7.5000e-004	0.0000	2.2018	2.2018	5.0000e-005	0.0000	2.2029

Total	**1.4000e-003**	**0.0134**	**0.0107**	**5.0000e-005**	**3.6200e-003**	**5.0000e-005**	**3.6600e-003**	**9.8000e-004**	**4.0000e-005**	**1.0200e-003**	**0.0000**	**5.5498**	**5.5498**	**1.9000e-004**	**0.0000**	**5.5545**

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	0.0269	0.2118	0.2081	3.6000e-004		0.0102	0.0102		9.7600e-003	9.7600e-003	0.0000	30.1136	30.1136	5.8100e-003	0.0000	30.2588
Total	**0.0269**	**0.2118**	**0.2081**	**3.6000e-004**		**0.0102**	**0.0102**		**9.7600e-003**	**9.7600e-003**	**0.0000**	**30.1136**	**30.1136**	**5.8100e-003**	**0.0000**	**30.2588**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.0000e-004	0.0127	3.3600e-003	3.0000e-005	8.6000e-004	3.0000e-005	8.8000e-004	2.5000e-004	2.0000e-005	2.7000e-004	0.0000	3.3480	3.3480	1.4000e-004	0.0000	3.3515
Worker	1.0000e-003	6.7000e-004	7.3200e-003	2.0000e-005	2.7600e-003	2.0000e-005	2.7800e-003	7.3000e-004	2.0000e-005	7.5000e-004	0.0000	2.2018	2.2018	5.0000e-005	0.0000	2.2029
Total	**1.4000e-003**	**0.0134**	**0.0107**	**5.0000e-005**	**3.6200e-003**	**5.0000e-005**	**3.6600e-003**	**9.8000e-004**	**4.0000e-005**	**1.0200e-003**	**0.0000**	**5.5498**	**5.5498**	**1.9000e-004**	**0.0000**	**5.5545**

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.7100e-003	0.0467	0.0585	9.0000e-005		2.4400e-003	2.4400e-003		2.2500e-003	2.2500e-003	0.0000	7.7550	7.7550	2.4600e-003	0.0000	7.8165
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.7100e-003**	**0.0467**	**0.0585**	**9.0000e-005**		**2.4400e-003**	**2.4400e-003**		**2.2500e-003**	**2.2500e-003**	**0.0000**	**7.7550**	**7.7550**	**2.4600e-003**	**0.0000**	**7.8165**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2000e-004	1.4000e-004	1.5800e-003	1.0000e-005	5.9000e-004	0.0000	6.0000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4745	0.4745	1.0000e-005	0.0000	0.4748
Total	**2.2000e-004**	**1.4000e-004**	**1.5800e-003**	**1.0000e-005**	**5.9000e-004**	**0.0000**	**6.0000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.4745**	**0.4745**	**1.0000e-005**	**0.0000**	**0.4748**

Mitigated Construction On-Site

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

Off-Road	4.7100e-003	0.0467	0.0585	9.0000e-005		2.4400e-003	2.4400e-003		2.2500e-003	2.2500e-003	0.0000	7.7550	7.7550	2.4600e-003	0.0000	7.8165
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.7100e-003**	**0.0467**	**0.0585**	**9.0000e-005**		**2.4400e-003**	**2.4400e-003**		**2.2500e-003**	**2.2500e-003**	**0.0000**	**7.7550**	**7.7550**	**2.4600e-003**	**0.0000**	**7.8165**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2000e-004	1.4000e-004	1.5800e-003	1.0000e-005	5.9000e-004	0.0000	6.0000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4745	0.4745	1.0000e-005	0.0000	0.4748
Total	**2.2000e-004**	**1.4000e-004**	**1.5800e-003**	**1.0000e-005**	**5.9000e-004**	**0.0000**	**6.0000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.4745**	**0.4745**	**1.0000e-005**	**0.0000**	**0.4748**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2373					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0200e-003	7.0400e-003	9.0700e-003	1.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	1.2766	1.2766	8.0000e-005	0.0000	1.2787
Total	**0.2383**	**7.0400e-003**	**9.0700e-003**	**1.0000e-005**		**4.1000e-004**	**4.1000e-004**		**4.1000e-004**	**4.1000e-004**	**0.0000**	**1.2766**	**1.2766**	**8.0000e-005**	**0.0000**	**1.2787**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	5.0000e-005	5.3000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1582	0.1582	0.0000	0.0000	0.1583
Total	**7.0000e-005**	**5.0000e-005**	**5.3000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**2.0000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.1582**	**0.1582**	**0.0000**	**0.0000**	**0.1583**

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	0.2373					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0200e-003	7.0400e-003	9.0700e-003	1.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	1.2766	1.2766	8.0000e-005	0.0000	1.2787
Total	**0.2383**	**7.0400e-003**	**9.0700e-003**	**1.0000e-005**		**4.1000e-004**	**4.1000e-004**		**4.1000e-004**	**4.1000e-004**	**0.0000**	**1.2766**	**1.2766**	**8.0000e-005**	**0.0000**	**1.2787**

Mitigated Construction Off-Site

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

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	5.0000e-005	5.3000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1582	0.1582	0.0000	0.0000	0.1583
Total	**7.0000e-005**	**5.0000e-005**	**5.3000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**2.0000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.1582**	**0.1582**	**0.0000**	**0.0000**	**0.1583**

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	0.0310	0.1207	0.3491	1.3200e-003	0.1337	1.0400e-003	0.1347	0.0358	9.7000e-004	0.0368	0.0000	120.7818	120.7818	3.7400e-003	0.0000	120.8754
Unmitigated	0.0310	0.1207	0.3491	1.3200e-003	0.1337	1.0400e-003	0.1347	0.0358	9.7000e-004	0.0368	0.0000	120.7818	120.7818	3.7400e-003	0.0000	120.8754

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	223.20	42.30	21.60	359,539	359,539
Parking Lot	0.00	0.00	0.00		
Total	223.20	42.30	21.60	359,539	359,539

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	5.86	5.86	5.86	59.00	28.00	13.00	100	0	0
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
General Light Industry	0.616749	0.035330	0.181430	0.103378	0.013121	0.005016	0.012828	0.021913	0.002183	0.001508	0.005219	0.000634	0.000691
Parking Lot	0.616749	0.035330	0.181430	0.103378	0.013121	0.005016	0.012828	0.021913	0.002183	0.001508	0.005219	0.000634	0.000691

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	4.9483	4.9483	4.9500e-003	1.0200e-003	5.3771
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	4.9483	4.9483	4.9500e-003	1.0200e-003	5.3771
NaturalGas Mitigated	6.4000e-003	0.0582	0.0489	3.5000e-004		4.4200e-003	4.4200e-003		4.4200e-003	4.4200e-003	0.0000	63.3482	63.3482	1.2100e-003	1.1600e-003	63.7246
NaturalGas Unmitigated	6.4000e-003	0.0582	0.0489	3.5000e-004		4.4200e-003	4.4200e-003		4.4200e-003	4.4200e-003	0.0000	63.3482	63.3482	1.2100e-003	1.1600e-003	63.7246

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	1.1871e+006	6.4000e-003	0.0582	0.0489	3.5000e-004		4.4200e-003	4.4200e-003		4.4200e-003	4.4200e-003	0.0000	63.3482	63.3482	1.2100e-003	1.1600e-003	63.7246
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		**6.4000e-003**	**0.0582**	**0.0489**	**3.5000e-004**		**4.4200e-003**	**4.4200e-003**		**4.4200e-003**	**4.4200e-003**	**0.0000**	**63.3482**	**63.3482**	**1.2100e-003**	**1.1600e-003**	**63.7246**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	1.1871e+006	6.4000e-003	0.0582	0.0489	3.5000e-004		4.4200e-003	4.4200e-003		4.4200e-003	4.4200e-003	0.0000	63.3482	63.3482	1.2100e-003	1.1600e-003	63.7246
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		**6.4000e-003**	**0.0582**	**0.0489**	**3.5000e-004**		**4.4200e-003**	**4.4200e-003**		**4.4200e-003**	**4.4200e-003**	**0.0000**	**63.3482**	**63.3482**	**1.2100e-003**	**1.1600e-003**	**63.7246**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	371700	4.8894	4.8900e-003	1.0100e-003	5.3131
Parking Lot	4480	0.0589	6.0000e-005	1.0000e-005	0.0640

Total		**4.9483**	**4.9500e-003**	**1.0200e-003**	**5.3771**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	371700	4.8894	4.8900e-003	1.0100e-003	5.3131
Parking Lot	4480	0.0589	6.0000e-005	1.0000e-005	0.0640
Total		**4.9483**	**4.9500e-003**	**1.0200e-003**	**5.3771**

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	0.2004	1.0000e-005	7.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3800e-003	1.3800e-003	0.0000	0.0000	1.4700e-003
Unmitigated	0.2004	1.0000e-005	7.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3800e-003	1.3800e-003	0.0000	0.0000	1.4700e-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	0.0237					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1766					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.0000e-005	1.0000e-005	7.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3800e-003	1.3800e-003	0.0000	0.0000	1.4700e-003
Total	**0.2004**	**1.0000e-005**	**7.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.3800e-003**	**1.3800e-003**	**0.0000**	**0.0000**	**1.4700e-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	0.0237					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1766					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.0000e-005	1.0000e-005	7.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3800e-003	1.3800e-003	0.0000	0.0000	1.4700e-003
Total	**0.2004**	**1.0000e-005**	**7.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.3800e-003**	**1.3800e-003**	**0.0000**	**0.0000**	**1.4700e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	4.4224	0.0134	8.1600e-003	7.1894
Unmitigated	4.4224	0.0134	8.1600e-003	7.1894

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	10.4063 / 0	4.4224	0.0134	8.1600e-003	7.1894
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**4.4224**	**0.0134**	**8.1600e-003**	**7.1894**

Mitigated

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

General Light Industry	10.4063 / 0	4.4224	0.0134	8.1600e-003	7.1894
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**4.4224**	**0.0134**	**8.1600e-003**	**7.1894**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	11.3269	0.6694	0.0000	28.0619
Unmitigated	11.3269	0.6694	0.0000	28.0619

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	55.8	11.3269	0.6694	0.0000	28.0619
Parking Lot	0	0.0000	0.0000	0.0000	0.0000

Total		**11.3269**	**0.6694**	**0.0000**	**28.0619**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	55.8	11.3269	0.6694	0.0000	28.0619
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**11.3269**	**0.6694**	**0.0000**	**28.0619**

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

Morgan Hill - Hwy Residential Component

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	319.00	Dwelling Unit	28.00	574,200.00	912

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2025
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	29	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E rate

Land Use - Assume all SF residences on 28 acre site

Construction Phase - Default schedule

Off-road Equipment - x

Trips and VMT -

Grading - x

Vehicle Trips - Traffic = 9.44,9.83,8.55

Woodstoves - no wood burning 217 nat gas

Energy Use - No natural gas usage

Water And Wastewater - wtp treatment

Construction Off-road Equipment Mitigation - Enhanced BMPs and Tier 4

Area Mitigation -

Energy Mitigation - Assume 2019 Title 24

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterExposedAreaPM10PercentReduction	55	61
tblConstDustMitigation	WaterExposedAreaPM25PercentReduction	55	61
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
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	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim

tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblEnergyUse	NT24NG	3,155.00	0.00
tblEnergyUse	T24NG	25,910.09	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	79.75	217.00
tblFireplaces	NumberWood	137.17	0.00
tblLandUse	LotAcreage	103.57	28.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	29
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	HO_TL	5.70	5.86
tblVehicleTrips	HS_TL	4.80	5.86
tblVehicleTrips	HW_TL	10.80	5.86
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	ST_TR	9.91	9.83
tblVehicleTrips	SU_TR	8.62	8.55
tblVehicleTrips	WD_TR	9.52	9.44
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	WoodstoveWoodMass	956.80	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					
2021	0.3670	3.5251	2.8940	6.1800e-003	0.4921	0.1604	0.6525	0.2117	0.1495	0.3612	0.0000	547.4910	547.4910	0.1108	0.0000	550.2604
2022	0.2703	2.4241	2.5174	5.5700e-003	0.1395	0.1048	0.2443	0.0377	0.0985	0.1362	0.0000	494.6705	494.6705	0.0793	0.0000	496.6524
2023	4.0567	0.1206	0.1808	3.1000e-004	4.3200e-003	6.1100e-003	0.0104	1.1500e-003	5.7200e-003	6.8700e-003	0.0000	26.8109	26.8109	6.4900e-003	0.0000	26.9731
Maximum	**4.0567**	**3.5251**	**2.8940**	**6.1800e-003**	**0.4921**	**0.1604**	**0.6525**	**0.2117**	**0.1495**	**0.3612**	**0.0000**	**547.4910**	**547.4910**	**0.1108**	**0.0000**	**550.2604**

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					
2021	0.1295	1.9924	3.1709	6.1800e-003	0.2629	0.0126	0.2754	0.1017	0.0125	0.1142	0.0000	547.4906	547.4906	0.1108	0.0000	550.2599
2022	0.1211	1.8416	2.7233	5.5700e-003	0.1395	0.0121	0.1517	0.0377	0.0120	0.0498	0.0000	494.6701	494.6701	0.0793	0.0000	496.6520
2023	4.0476	0.1149	0.2069	3.1000e-004	4.3200e-003	4.5000e-004	4.7700e-003	1.1500e-003	4.5000e-004	1.6000e-003	0.0000	26.8109	26.8109	6.4900e-003	0.0000	26.9730
Maximum	**4.0476**	**1.9924**	**3.1709**	**6.1800e-003**	**0.2629**	**0.0126**	**0.2754**	**0.1017**	**0.0125**	**0.1142**	**0.0000**	**547.4906**	**547.4906**	**0.1108**	**0.0000**	**550.2599**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**8.43**	**34.94**	**-9.10**	**0.00**	**36.05**	**90.74**	**52.40**	**43.88**	**90.16**	**67.16**	**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	**1-1-2021**	**3-31-2021**	1.5677	0.5813
2	**4-1-2021**	**6-30-2021**	0.7731	0.5087

3	**7-1-2021**	**9-30-2021**	0.7717	0.5126
4	**10-1-2021**	**12-31-2021**	0.7754	0.5162
5	**1-1-2022**	**3-31-2022**	0.6857	0.4968
6	**4-1-2022**	**6-30-2022**	0.6901	0.4991
7	**7-1-2022**	**9-30-2022**	0.6977	0.5046
8	**10-1-2022**	**12-31-2022**	0.6268	0.4668
9	**1-1-2023**	**3-31-2023**	4.1751	4.1605
		Highest	4.1751	4.1605

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	2.7205	0.0507	2.3763	2.7000e-004		0.0150	0.0150		0.0150	0.0150	0.0000	30.9592	30.9592	4.2200e-003	5.0000e-004	31.2128
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	33.9495	33.9495	0.0340	7.0200e-003	36.8914
Mobile	0.5498	2.1392	6.1888	0.0233	2.3702	0.0185	2.3886	0.6344	0.0172	0.6515	0.0000	2,141.5010	2,141.5010	0.0664	0.0000	2,143.1610
Waste						0.0000	0.0000		0.0000	0.0000	77.7537	0.0000	77.7537	4.5951	0.0000	192.6314
Water						0.0000	0.0000		0.0000	0.0000	7.3535	2.0826	9.4361	0.0274	0.0164	15.0147
Total	**3.2703**	**2.1899**	**8.5651**	**0.0236**	**2.3702**	**0.0335**	**2.4036**	**0.6344**	**0.0322**	**0.6666**	**85.1071**	**2,208.4923**	**2,293.5995**	**4.7271**	**0.0239**	**2,418.9113**

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	2.7205	0.0507	2.3763	2.7000e-004		0.0150	0.0150		0.0150	0.0150	0.0000	30.9592	30.9592	4.2200e-003	5.0000e-004	31.2128
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	33.1977	33.1977	0.0332	6.8700e-003	36.0744
Mobile	0.5498	2.1392	6.1888	0.0233	2.3702	0.0185	2.3886	0.6344	0.0172	0.6515	0.0000	2,141.5010	2,141.5010	0.0664	0.0000	2,143.1610
Waste						0.0000	0.0000		0.0000	0.0000	77.7537	0.0000	77.7537	4.5951	0.0000	192.6314
Water						0.0000	0.0000		0.0000	0.0000	7.3535	2.0458	9.3993	0.0274	0.0164	14.9747
Total	**3.2703**	**2.1899**	**8.5651**	**0.0236**	**2.3702**	**0.0335**	**2.4036**	**0.6344**	**0.0322**	**0.6666**	**85.1071**	**2,207.7037**	**2,292.8108**	**4.7263**	**0.0238**	**2,418.0544**

	ROG	NOx	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**	**0.04**	**0.03**	**0.02**	**0.67**	**0.04**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2021	1/28/2021	5	20	
2	Grading	Grading	1/29/2021	4/1/2021	5	45	
3	Exterior Building Construction	Building Construction	4/2/2021	12/8/2022	5	440	
4	Paving/Site Concrete/Landscape	Paving	12/9/2022	1/26/2023	5	35	
5	Interior Building Construction	Architectural Coating	1/27/2023	3/16/2023	5	35	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 112.5

Acres of Paving: 0

Residential Indoor: 1,162,755; Residential Outdoor: 387,585; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Exterior Building Construction	Cranes	1	7.00	231	0.29
Exterior Building Construction	Forklifts	3	8.00	89	0.20
Exterior Building Construction	Generator Sets	1	8.00	84	0.74
Exterior Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Exterior Building Construction	Welders	1	8.00	46	0.45
Paving/Site Concrete/Landscape	Pavers	2	8.00	130	0.42
Paving/Site Concrete/Landscape	Paving Equipment	2	8.00	132	0.36
Paving/Site Concrete/Landscape	Rollers	2	8.00	80	0.38
Interior Building Construction	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
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Exterior Building Construction	9	115.00	34.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving/Site Concrete/Landscape	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Interior Building Construction	1	23.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1807	0.0000	0.1807	0.0993	0.0000	0.0993	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0389	0.4050	0.2115	3.8000e-004		0.0204	0.0204		0.0188	0.0188	0.0000	33.4357	33.4357	0.0108	0.0000	33.7061
Total	**0.0389**	**0.4050**	**0.2115**	**3.8000e-004**	**0.1807**	**0.0204**	**0.2011**	**0.0993**	**0.0188**	**0.1181**	**0.0000**	**33.4357**	**33.4357**	**0.0108**	**0.0000**	**33.7061**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.5000e-004	3.8000e-004	4.1200e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1818	1.1818	3.0000e-005	0.0000	1.1825
Total	**5.5000e-004**	**3.8000e-004**	**4.1200e-003**	**1.0000e-005**	**1.4300e-003**	**1.0000e-005**	**1.4400e-003**	**3.8000e-004**	**1.0000e-005**	**3.9000e-004**	**0.0000**	**1.1818**	**1.1818**	**3.0000e-005**	**0.0000**	**1.1825**

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					0.0705	0.0000	0.0705	0.0387	0.0000	0.0387	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.9700e-003	0.1216	0.2296	3.8000e-004		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004	0.0000	33.4357	33.4357	0.0108	0.0000	33.7060
Total	**6.9700e-003**	**0.1216**	**0.2296**	**3.8000e-004**	**0.0705**	**6.2000e-004**	**0.0711**	**0.0387**	**6.2000e-004**	**0.0394**	**0.0000**	**33.4357**	**33.4357**	**0.0108**	**0.0000**	**33.7060**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.5000e-004	3.8000e-004	4.1200e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1818	1.1818	3.0000e-005	0.0000	1.1825
Total	**5.5000e-004**	**3.8000e-004**	**4.1200e-003**	**1.0000e-005**	**1.4300e-003**	**1.0000e-005**	**1.4400e-003**	**3.8000e-004**	**1.0000e-005**	**3.9000e-004**	**0.0000**	**1.1818**	**1.1818**	**3.0000e-005**	**0.0000**	**1.1825**

3.3 Grading - 2021

Unmitigated Construction On-Site

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

Fugitive Dust					0.1952	0.0000	0.1952	0.0809	0.0000	0.0809	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0943	1.0440	0.6948	1.4000e-003		0.0447	0.0447		0.0411	0.0411	0.0000	122.6137	122.6137	0.0397	0.0000	123.6051
Total	**0.0943**	**1.0440**	**0.6948**	**1.4000e-003**	**0.1952**	**0.0447**	**0.2398**	**0.0809**	**0.0411**	**0.1220**	**0.0000**	**122.6137**	**122.6137**	**0.0397**	**0.0000**	**123.6051**

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	1.3900e-003	9.6000e-004	0.0103	3.0000e-005	3.5700e-003	2.0000e-005	3.5900e-003	9.5000e-004	2.0000e-005	9.7000e-004	0.0000	2.9544	2.9544	7.0000e-005	0.0000	2.9561
Total	**1.3900e-003**	**9.6000e-004**	**0.0103**	**3.0000e-005**	**3.5700e-003**	**2.0000e-005**	**3.5900e-003**	**9.5000e-004**	**2.0000e-005**	**9.7000e-004**	**0.0000**	**2.9544**	**2.9544**	**7.0000e-005**	**0.0000**	**2.9561**

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					0.0761	0.0000	0.0761	0.0316	0.0000	0.0316	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0228	0.4336	0.8263	1.4000e-003		2.2800e-003	2.2800e-003		2.2800e-003	2.2800e-003	0.0000	122.6136	122.6136	0.0397	0.0000	123.6050
Total	**0.0228**	**0.4336**	**0.8263**	**1.4000e-003**	**0.0761**	**2.2800e-003**	**0.0784**	**0.0316**	**2.2800e-003**	**0.0338**	**0.0000**	**122.6136**	**122.6136**	**0.0397**	**0.0000**	**123.6050**

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	1.3900e-003	9.6000e-004	0.0103	3.0000e-005	3.5700e-003	2.0000e-005	3.5900e-003	9.5000e-004	2.0000e-005	9.7000e-004	0.0000	2.9544	2.9544	7.0000e-005	0.0000	2.9561
Total	**1.3900e-003**	**9.6000e-004**	**0.0103**	**3.0000e-005**	**3.5700e-003**	**2.0000e-005**	**3.5900e-003**	**9.5000e-004**	**2.0000e-005**	**9.7000e-004**	**0.0000**	**2.9544**	**2.9544**	**7.0000e-005**	**0.0000**	**2.9561**

3.4 Exterior Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1863	1.7084	1.6244	2.6400e-003		0.0939	0.0939		0.0883	0.0883	0.0000	227.0045	227.0045	0.0548	0.0000	228.3737
Total	**0.1863**	**1.7084**	**1.6244**	**2.6400e-003**		**0.0939**	**0.0939**		**0.0883**	**0.0883**	**0.0000**	**227.0045**	**227.0045**	**0.0548**	**0.0000**	**228.3737**

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	0.0109	0.3424	0.0911	9.0000e-004	0.0219	7.6000e-004	0.0227	6.3400e-003	7.3000e-004	7.0600e-003	0.0000	86.3086	86.3086	3.7600e-003	0.0000	86.4026
Worker	0.0347	0.0240	0.2578	8.2000e-004	0.0894	5.6000e-004	0.0900	0.0238	5.2000e-004	0.0243	0.0000	73.9923	73.9923	1.6800e-003	0.0000	74.0343
Total	**0.0456**	**0.3664**	**0.3490**	**1.7200e-003**	**0.1113**	**1.3200e-003**	**0.1126**	**0.0301**	**1.2500e-003**	**0.0314**	**0.0000**	**160.3009**	**160.3009**	**5.4400e-003**	**0.0000**	**160.4370**

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	0.0523	1.0694	1.7516	2.6400e-003		8.2900e-003	8.2900e-003		8.2900e-003	8.2900e-003	0.0000	227.0043	227.0043	0.0548	0.0000	228.3734
Total	**0.0523**	**1.0694**	**1.7516**	**2.6400e-003**		**8.2900e-003**	**8.2900e-003**		**8.2900e-003**	**8.2900e-003**	**0.0000**	**227.0043**	**227.0043**	**0.0548**	**0.0000**	**228.3734**

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	0.0109	0.3424	0.0911	9.0000e-004	0.0219	7.6000e-004	0.0227	6.3400e-003	7.3000e-004	7.0600e-003	0.0000	86.3086	86.3086	3.7600e-003	0.0000	86.4026
Worker	0.0347	0.0240	0.2578	8.2000e-004	0.0894	5.6000e-004	0.0900	0.0238	5.2000e-004	0.0243	0.0000	73.9923	73.9923	1.6800e-003	0.0000	74.0343

Total	**0.0456**	**0.3664**	**0.3490**	**1.7200e-003**	**0.1113**	**1.3200e-003**	**0.1126**	**0.0301**	**1.2500e-003**	**0.0314**	**0.0000**	**160.3009**	**160.3009**	**5.4400e-003**	**0.0000**	**160.4370**

3.4 Exterior Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2082	1.9051	1.9963	3.2900e-003		0.0987	0.0987		0.0929	0.0929	0.0000	282.7048	282.7048	0.0677	0.0000	284.3980
Total	**0.2082**	**1.9051**	**1.9963**	**3.2900e-003**		**0.0987**	**0.0987**		**0.0929**	**0.0929**	**0.0000**	**282.7048**	**282.7048**	**0.0677**	**0.0000**	**284.3980**

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	0.0126	0.4029	0.1069	1.1100e-003	0.0273	8.2000e-004	0.0281	7.8900e-003	7.9000e-004	8.6800e-003	0.0000	106.4175	106.4175	4.4700e-003	0.0000	106.5292
Worker	0.0403	0.0269	0.2950	9.8000e-004	0.1113	6.8000e-004	0.1120	0.0296	6.3000e-004	0.0302	0.0000	88.7669	88.7669	1.8800e-003	0.0000	88.8139
Total	**0.0530**	**0.4298**	**0.4019**	**2.0900e-003**	**0.1386**	**1.5000e-003**	**0.1401**	**0.0375**	**1.4200e-003**	**0.0389**	**0.0000**	**195.1844**	**195.1844**	**6.3500e-003**	**0.0000**	**195.3431**

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	0.0651	1.3313	2.1806	3.2900e-003		0.0103	0.0103		0.0103	0.0103	0.0000	282.7045	282.7045	0.0677	0.0000	284.3977
Total	**0.0651**	**1.3313**	**2.1806**	**3.2900e-003**		**0.0103**	**0.0103**		**0.0103**	**0.0103**	**0.0000**	**282.7045**	**282.7045**	**0.0677**	**0.0000**	**284.3977**

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	0.0126	0.4029	0.1069	1.1100e-003	0.0273	8.2000e-004	0.0281	7.8900e-003	7.9000e-004	8.6800e-003	0.0000	106.4175	106.4175	4.4700e-003	0.0000	106.5292
Worker	0.0403	0.0269	0.2950	9.8000e-004	0.1113	6.8000e-004	0.1120	0.0296	6.3000e-004	0.0302	0.0000	88.7669	88.7669	1.8800e-003	0.0000	88.8139
Total	**0.0530**	**0.4298**	**0.4019**	**2.0900e-003**	**0.1386**	**1.5000e-003**	**0.1401**	**0.0375**	**1.4200e-003**	**0.0389**	**0.0000**	**195.1844**	**195.1844**	**6.3500e-003**	**0.0000**	**195.3431**

3.5 Paving/Site Concrete/Landscape - 2022

Unmitigated Construction On-Site

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

Off-Road	8.8200e-003	0.0890	0.1166	1.8000e-004		4.5400e-003	4.5400e-003		4.1800e-003	4.1800e-003	0.0000	16.0221	16.0221	5.1800e-003	0.0000	16.1516
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**8.8200e-003**	**0.0890**	**0.1166**	**1.8000e-004**		**4.5400e-003**	**4.5400e-003**		**4.1800e-003**	**4.1800e-003**	**0.0000**	**16.0221**	**16.0221**	**5.1800e-003**	**0.0000**	**16.1516**

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	3.5000e-004	2.3000e-004	2.5200e-003	1.0000e-005	9.5000e-004	1.0000e-005	9.6000e-004	2.5000e-004	1.0000e-005	2.6000e-004	0.0000	0.7592	0.7592	2.0000e-005	0.0000	0.7596
Total	**3.5000e-004**	**2.3000e-004**	**2.5200e-003**	**1.0000e-005**	**9.5000e-004**	**1.0000e-005**	**9.6000e-004**	**2.5000e-004**	**1.0000e-005**	**2.6000e-004**	**0.0000**	**0.7592**	**0.7592**	**2.0000e-005**	**0.0000**	**0.7596**

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	2.6700e-003	0.0803	0.1384	1.8000e-004		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	16.0220	16.0220	5.1800e-003	0.0000	16.1516
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.6700e-003**	**0.0803**	**0.1384**	**1.8000e-004**		**3.0000e-004**	**3.0000e-004**		**3.0000e-004**	**3.0000e-004**	**0.0000**	**16.0220**	**16.0220**	**5.1800e-003**	**0.0000**	**16.1516**

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	3.5000e-004	2.3000e-004	2.5200e-003	1.0000e-005	9.5000e-004	1.0000e-005	9.6000e-004	2.5000e-004	1.0000e-005	2.6000e-004	0.0000	0.7592	0.7592	2.0000e-005	0.0000	0.7596
Total	**3.5000e-004**	**2.3000e-004**	**2.5200e-003**	**1.0000e-005**	**9.5000e-004**	**1.0000e-005**	**9.6000e-004**	**2.5000e-004**	**1.0000e-005**	**2.6000e-004**	**0.0000**	**0.7592**	**0.7592**	**2.0000e-005**	**0.0000**	**0.7596**

3.5 Paving/Site Concrete/Landscape - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.8100e-003	0.0968	0.1386	2.2000e-004		4.8500e-003	4.8500e-003		4.4600e-003	4.4600e-003	0.0000	19.0255	19.0255	6.1500e-003	0.0000	19.1794
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.8100e-003**	**0.0968**	**0.1386**	**2.2000e-004**		**4.8500e-003**	**4.8500e-003**		**4.4600e-003**	**4.4600e-003**	**0.0000**	**19.0255**	**19.0255**	**6.1500e-003**	**0.0000**	**19.1794**

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	3.8000e-004	2.5000e-004	2.7600e-003	1.0000e-005	1.1300e-003	1.0000e-005	1.1400e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	0.8673	0.8673	2.0000e-005	0.0000	0.8678
Total	**3.8000e-004**	**2.5000e-004**	**2.7600e-003**	**1.0000e-005**	**1.1300e-003**	**1.0000e-005**	**1.1400e-003**	**3.0000e-004**	**1.0000e-005**	**3.1000e-004**	**0.0000**	**0.8673**	**0.8673**	**2.0000e-005**	**0.0000**	**0.8678**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.1700e-003	0.0954	0.1643	2.2000e-004		3.6000e-004	3.6000e-004		3.6000e-004	3.6000e-004	0.0000	19.0255	19.0255	6.1500e-003	0.0000	19.1793
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.1700e-003**	**0.0954**	**0.1643**	**2.2000e-004**		**3.6000e-004**	**3.6000e-004**		**3.6000e-004**	**3.6000e-004**	**0.0000**	**19.0255**	**19.0255**	**6.1500e-003**	**0.0000**	**19.1793**

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	3.8000e-004	2.5000e-004	2.7600e-003	1.0000e-005	1.1300e-003	1.0000e-005	1.1400e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	0.8673	0.8673	2.0000e-005	0.0000	0.8678

Total	**3.8000e-004**	**2.5000e-004**	**2.7600e-003**	**1.0000e-005**	**1.1300e-003**	**1.0000e-005**	**1.1400e-003**	**3.0000e-004**	**1.0000e-005**	**3.1000e-004**	**0.0000**	**0.8673**	**0.8673**	**2.0000e-005**	**0.0000**	**0.8678**

3.6 Interior Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	4.0420					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.3500e-003	0.0228	0.0317	5.0000e-005		1.2400e-003	1.2400e-003		1.2400e-003	1.2400e-003	0.0000	4.4682	4.4682	2.7000e-004	0.0000	4.4749
Total	**4.0454**	**0.0228**	**0.0317**	**5.0000e-005**		**1.2400e-003**	**1.2400e-003**		**1.2400e-003**	**1.2400e-003**	**0.0000**	**4.4682**	**4.4682**	**2.7000e-004**	**0.0000**	**4.4749**

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	1.0800e-003	6.9000e-004	7.7900e-003	3.0000e-005	3.1900e-003	2.0000e-005	3.2100e-003	8.5000e-004	2.0000e-005	8.7000e-004	0.0000	2.4499	2.4499	5.0000e-005	0.0000	2.4511
Total	**1.0800e-003**	**6.9000e-004**	**7.7900e-003**	**3.0000e-005**	**3.1900e-003**	**2.0000e-005**	**3.2100e-003**	**8.5000e-004**	**2.0000e-005**	**8.7000e-004**	**0.0000**	**2.4499**	**2.4499**	**5.0000e-005**	**0.0000**	**2.4511**

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	4.0420					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.5000e-004	0.0186	0.0321	5.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	4.4682	4.4682	2.7000e-004	0.0000	4.4749
Total	**4.0430**	**0.0186**	**0.0321**	**5.0000e-005**		**7.0000e-005**	**7.0000e-005**		**7.0000e-005**	**7.0000e-005**	**0.0000**	**4.4682**	**4.4682**	**2.7000e-004**	**0.0000**	**4.4749**

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	1.0800e-003	6.9000e-004	7.7900e-003	3.0000e-005	3.1900e-003	2.0000e-005	3.2100e-003	8.5000e-004	2.0000e-005	8.7000e-004	0.0000	2.4499	2.4499	5.0000e-005	0.0000	2.4511
Total	**1.0800e-003**	**6.9000e-004**	**7.7900e-003**	**3.0000e-005**	**3.1900e-003**	**2.0000e-005**	**3.2100e-003**	**8.5000e-004**	**2.0000e-005**	**8.7000e-004**	**0.0000**	**2.4499**	**2.4499**	**5.0000e-005**	**0.0000**	**2.4511**

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	0.5498	2.1392	6.1888	0.0233	2.3702	0.0185	2.3886	0.6344	0.0172	0.6515	0.0000	2,141.5010	2,141.5010	0.0664	0.0000	2,143.1610
Unmitigated	0.5498	2.1392	6.1888	0.0233	2.3702	0.0185	2.3886	0.6344	0.0172	0.6515	0.0000	2,141.5010	2,141.5010	0.0664	0.0000	2,143.1610

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	3,011.36	3,135.77	2727.45	6,374,748	6,374,748
Total	3,011.36	3,135.77	2,727.45	6,374,748	6,374,748

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
Single Family Housing	5.86	5.86	5.86	31.00	15.00	54.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.616749	0.035330	0.181430	0.103378	0.013121	0.005016	0.012828	0.021913	0.002183	0.001508	0.005219	0.000634	0.000691

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	33.1977	33.1977	0.0332	6.8700e-003	36.0744
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	33.9495	33.9495	0.0340	7.0200e-003	36.8914
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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					
Single Family Housing	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
Single Family Housing	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	2.58089e+006	33.9495	0.0340	7.0200e-003	36.8914
Total		**33.9495**	**0.0340**	**7.0200e-003**	**36.8914**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	2.52374e+006	33.1977	0.0332	6.8700e-003	36.0744
Total		**33.1977**	**0.0332**	**6.8700e-003**	**36.0744**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.7205	0.0507	2.3763	2.7000e-004		0.0150	0.0150		0.0150	0.0150	0.0000	30.9592	30.9592	4.2200e-003	5.0000e-004	31.2128
Unmitigated	2.7205	0.0507	2.3763	2.7000e-004		0.0150	0.0150		0.0150	0.0150	0.0000	30.9592	30.9592	4.2200e-003	5.0000e-004	31.2128

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	0.4042					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.2425					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	2.7400e-003	0.0234	9.9500e-003	1.5000e-004		1.8900e-003	1.8900e-003		1.8900e-003	1.8900e-003	0.0000	27.0901	27.0901	5.2000e-004	5.0000e-004	27.2511
Landscaping	0.0711	0.0273	2.3664	1.3000e-004		0.0131	0.0131		0.0131	0.0131	0.0000	3.8691	3.8691	3.7100e-003	0.0000	3.9617
Total	**2.7205**	**0.0507**	**2.3763**	**2.8000e-004**		**0.0150**	**0.0150**		**0.0150**	**0.0150**	**0.0000**	**30.9592**	**30.9592**	**4.2300e-003**	**5.0000e-004**	**31.2128**

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	0.4042					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.2425					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	2.7400e-003	0.0234	9.9500e-003	1.5000e-004		1.8900e-003	1.8900e-003		1.8900e-003	1.8900e-003	0.0000	27.0901	27.0901	5.2000e-004	5.0000e-004	27.2511
Landscaping	0.0711	0.0273	2.3664	1.3000e-004		0.0131	0.0131		0.0131	0.0131	0.0000	3.8691	3.8691	3.7100e-003	0.0000	3.9617
Total	**2.7205**	**0.0507**	**2.3763**	**2.8000e-004**		**0.0150**	**0.0150**		**0.0150**	**0.0150**	**0.0000**	**30.9592**	**30.9592**	**4.2300e-003**	**5.0000e-004**	**31.2128**

7.0 Water Detail

7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

Use Water Efficient Landscaping

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	9.3993	0.0274	0.0164	14.9747
Unmitigated	9.4361	0.0274	0.0164	15.0147

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	20.7841 / 13.103	9.4361	0.0274	0.0164	15.0147
Total		**9.4361**	**0.0274**	**0.0164**	**15.0147**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	20.7841 / 12.3038	9.3993	0.0274	0.0164	14.9747
Total		**9.3993**	**0.0274**	**0.0164**	**14.9747**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	77.7537	4.5951	0.0000	192.6314
Unmitigated	77.7537	4.5951	0.0000	192.6314

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	383.04	77.7537	4.5951	0.0000	192.6314
Total		**77.7537**	**4.5951**	**0.0000**	**192.6314**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	383.04	77.7537	4.5951	0.0000	192.6314

Total		**77.7537**	**4.5951**	**0.0000**	**192.6314**

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

EMFAC2017 (v1.0.2) Emission Rates
Region Type: Air Basin
Region: SAN FRANCISCO BAY AREA
Calendar Year: 2025
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HTSK and RUNLS, g/vehicle/day for IDLEX, RESTL and DIURN

Region	Calendar Year	Vehicle Categ	Model Year	Speed	Fuel	Population	VMT	Trips	ROG_RUNEX	ROG_IDLEX	ROG_STREX	ROG_HOTSO/	ROG_RUNLO!	ROG_RESTLO!	ROG_DIURN	NOx_RUNEX	NOx_IDLEX	NOx_STREX
SAN FRANC	2025	HHDT	Aggregatec	Aggregatec	GAS	29.424244	3633.345331	588.7203	0.342841	0	0.001453	0.069161	0.361288	0.017537	0.028043	3.073049678	0	0.131100838
SAN FRANC	2025	HHDT	Aggregatec	Aggregatec	DSL	39107.062	4710871.598	411253.3	0.023981	4.541487	0	0	0	0	0	2.683520862	56.13699148	2.386192217
SAN FRANC	2025	HHDT	Aggregatec	Aggregatec	NG	1650.3932	67283.54863	6436.533	0.107206	0.031856	0	0	0	0	0	1.078189939	19.74506248	0
SAN FRANC	2025	MHDT	Aggregatec	Aggregatec	GAS	6921.6658	369520.0292	138488.7	0.040686	1.019322	0.190417	0.071766	0.400756	0.015818	0.027075	0.282269565	0.088930391	0.354724006
SAN FRANC	2025	MHDT	Aggregatec	Aggregatec	DSL	50378.708	2996062.501	496435	0.011006	0.076825	0	0	0	0	0	1.580549911	5.493848418	2.148253482
Trips/day:								**385**	1245.659	0	0.855273	40.71661	212.6975	0.516025	0.825151	11165.4507	0	77.18172193
Trip Length:								**18**	112972	177604.2	0	0	0	0	0	12641722.21	2195352.83	981329.3192
									7213.213	52.57445	0	0	0	0	0	72544.44522	32587.11629	0
									15034.25	7055.405	26370.55	9938.838	55500.12	109.4854	187.4059	104304.2579	615.546445	49125.26257
									32974.09	3870.363	0	0	0	0	0	4735426.318	276772.9848	1066468.323
									0.02	1.92	0.03	0.01	0.05	0.00	0.00	2.16	25.54	1.99

Road Dust		
	PM10	3,958.50
	PM2.5	593.8

	grams/day	tpy	
ROG	548	0.22	
NOx	20,624	8.29	
PM10	4,881	1.96	
PM2.5	1,022	0.41	
GHG		3,649	MT
CO2	9,557,897	3,486	
CH4	224	2	
N2O	1,434	162	
Trips/day:		**248**	
Trip Length:		**18**	

	tpy	
ROG	0.14	
NOx	5.34	
PM10	1.26	
PM2.5	0.26	
GHG	2,351	MT
CO2	2,245	
CH4	1	
N2O	104	

Morgan Hill - Hwy Industrial Commercial Component

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Strip Mall	50.00	1000sqft	3.06	50,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2025
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	29	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E rate

Land Use - Based on Trip Generation Data provided for building size and Project Description for acreage

Construction Phase -

Vehicle Trips - Hexagon trip rate of 37.75/1ksf = 37.75,35.81,17.40

Water And Wastewater - wtp treatment

Construction Off-road Equipment Mitigation - enhanced BMPs and Tier4i

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterExposedAreaPM10PercentReduction	61	55
tblConstDustMitigation	WaterExposedAreaPM25PercentReduction	61	55

tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
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	3.00
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	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	11.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblLandUse	LotAcreage	1.15	3.06
tblProjectCharacteristics	CO2IntensityFactor	641.35	29

tblVehicleTrips	CC_TL	7.30	5.97
tblVehicleTrips	CNW_TL	7.30	5.97
tblVehicleTrips	CW_TL	9.50	5.97
tblVehicleTrips	DV_TP	40.00	0.00
tblVehicleTrips	PB_TP	15.00	0.00
tblVehicleTrips	PR_TP	45.00	100.00
tblVehicleTrips	ST_TR	42.04	35.81
tblVehicleTrips	SU_TR	20.43	17.40
tblVehicleTrips	WD_TR	44.32	37.75
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.2569	2.4015	2.2066	3.8800e-003	0.0943	0.1255	0.2198	0.0445	0.1177	0.1623	0.0000	337.6791	337.6791	0.0763	0.0000	339.5872
2022	0.2626	0.0127	0.0169	3.0000e-005	2.1000e-004	7.4000e-004	9.5000e-004	6.0000e-005	7.4000e-004	7.9000e-004	0.0000	2.4688	2.4688	1.5000e-004	0.0000	2.4726
Maximum	**0.2626**	**2.4015**	**2.2066**	**3.8800e-003**	**0.0943**	**0.1255**	**0.2198**	**0.0445**	**0.1177**	**0.1623**	**0.0000**	**337.6791**	**337.6791**	**0.0763**	**0.0000**	**339.5872**

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					
2021	0.0518	0.3760	2.3267	3.8800e-003	0.0550	5.6200e-003	0.0606	0.0235	5.6000e-003	0.0291	0.0000	337.6787	337.6787	0.0763	0.0000	339.5868
2022	0.2611	1.2100e-003	0.0171	3.0000e-005	2.1000e-004	4.0000e-005	2.5000e-004	6.0000e-005	4.0000e-005	9.0000e-005	0.0000	2.4688	2.4688	1.5000e-004	0.0000	2.4726
Maximum	**0.2611**	**0.3760**	**2.3267**	**3.8800e-003**	**0.0550**	**5.6200e-003**	**0.0606**	**0.0235**	**5.6000e-003**	**0.0291**	**0.0000**	**337.6787**	**337.6787**	**0.0763**	**0.0000**	**339.5868**

	ROG	**NOx**	**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	**39.77**	**84.38**	**-5.41**	**0.00**	**41.55**	**95.52**	**72.42**	**47.23**	**95.24**	**82.11**	**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	**1-1-2021**	**3-31-2021**	0.7415	0.1039
2	**4-1-2021**	**6-30-2021**	0.6583	0.1132
3	**7-1-2021**	**9-30-2021**	0.6655	0.1145
4	**10-1-2021**	**12-31-2021**	0.5956	0.0961
5	**1-1-2022**	**3-31-2022**	0.2841	0.2706
		Highest	0.7415	0.2706

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	0.2214	0.0000	4.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.9000e-004	8.9000e-004	0.0000	0.0000	9.5000e-004
Energy	6.4000e-004	5.8100e-003	4.8800e-003	3.0000e-005		4.4000e-004	4.4000e-004		4.4000e-004	4.4000e-004	0.0000	13.3545	13.3545	7.1500e-003	1.5700e-003	14.0014
Mobile	0.3199	1.2476	3.6282	0.0137	1.3964	0.0108	1.4072	0.3737	0.0101	0.3838	0.0000	1,259.8461	1,259.8461	0.0389	0.0000	1,260.8194

Waste						0.0000	0.0000		0.0000	0.0000	10.6570	0.0000	10.6570	0.6298	0.0000	26.4023
Water						0.0000	0.0000		0.0000	0.0000	1.3104	0.3681	1.6785	4.8800e-003	2.9300e-003	2.6723
Total	**0.5419**	**1.2534**	**3.6335**	**0.0138**	**1.3964**	**0.0113**	**1.4077**	**0.3737**	**0.0105**	**0.3843**	**11.9674**	**1,273.5696**	**1,285.5370**	**0.6808**	**4.5000e-003**	**1,303.8963**

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	0.2214	0.0000	4.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.9000e-004	8.9000e-004	0.0000	0.0000	9.5000e-004
Energy	6.4000e-004	5.8100e-003	4.8800e-003	3.0000e-005		4.4000e-004	4.4000e-004		4.4000e-004	4.4000e-004	0.0000	13.3545	13.3545	7.1500e-003	1.5700e-003	14.0014
Mobile	0.3199	1.2476	3.6282	0.0137	1.3964	0.0108	1.4072	0.3737	0.0101	0.3838	0.0000	1,259.8461	1,259.8461	0.0389	0.0000	1,260.8194
Waste						0.0000	0.0000		0.0000	0.0000	10.6570	0.0000	10.6570	0.6298	0.0000	26.4023
Water						0.0000	0.0000		0.0000	0.0000	1.3104	0.3681	1.6785	4.8800e-003	2.9300e-003	2.6723
Total	**0.5419**	**1.2534**	**3.6335**	**0.0138**	**1.3964**	**0.0113**	**1.4077**	**0.3737**	**0.0105**	**0.3843**	**11.9674**	**1,273.5696**	**1,285.5370**	**0.6808**	**4.5000e-003**	**1,303.8963**

	ROG	NOx	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	Site Preparation	Site Preparation	1/1/2021	1/7/2021	5	5	
2	Grading	Grading	1/8/2021	1/19/2021	5	8	

3	Building Construction	Building Construction	1/20/2021	12/7/2021	5	230	
4	Paving	Paving	12/8/2021	12/31/2021	5	18	
5	Architectural Coating	Architectural Coating	1/1/2022	1/26/2022	5	18	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 75,000; Non-Residential Outdoor: 25,000; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	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
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	16.00	8.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	3.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0452	0.0000	0.0452	0.0248	0.0000	0.0248	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.7200e-003	0.1012	0.0529	1.0000e-004		5.1100e-003	5.1100e-003		4.7000e-003	4.7000e-003	0.0000	8.3589	8.3589	2.7000e-003	0.0000	8.4265
Total	**9.7200e-003**	**0.1012**	**0.0529**	**1.0000e-004**	**0.0452**	**5.1100e-003**	**0.0503**	**0.0248**	**4.7000e-003**	**0.0295**	**0.0000**	**8.3589**	**8.3589**	**2.7000e-003**	**0.0000**	**8.4265**

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	1.4000e-004	1.0000e-004	1.0300e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.2954	0.2954	1.0000e-005	0.0000	0.2956
Total	**1.4000e-004**	**1.0000e-004**	**1.0300e-003**	**0.0000**	**3.6000e-004**	**0.0000**	**3.6000e-004**	**9.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.2954**	**0.2954**	**1.0000e-005**	**0.0000**	**0.2956**

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					0.0203	0.0000	0.0203	0.0112	0.0000	0.0112	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1600e-003	5.0400e-003	0.0522	1.0000e-004		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004	0.0000	8.3589	8.3589	2.7000e-003	0.0000	8.4265
Total	**1.1600e-003**	**5.0400e-003**	**0.0522**	**1.0000e-004**	**0.0203**	**1.6000e-004**	**0.0205**	**0.0112**	**1.6000e-004**	**0.0113**	**0.0000**	**8.3589**	**8.3589**	**2.7000e-003**	**0.0000**	**8.4265**

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	1.4000e-004	1.0000e-004	1.0300e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.2954	0.2954	1.0000e-005	0.0000	0.2956
Total	**1.4000e-004**	**1.0000e-004**	**1.0300e-003**	**0.0000**	**3.6000e-004**	**0.0000**	**3.6000e-004**	**9.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.2954**	**0.2954**	**1.0000e-005**	**0.0000**	**0.2956**

3.3 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0262	0.0000	0.0262	0.0135	0.0000	0.0135	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.1600e-003	0.0990	0.0634	1.2000e-004		4.6400e-003	4.6400e-003		4.2700e-003	4.2700e-003	0.0000	10.4215	10.4215	3.3700e-003	0.0000	10.5057
Total	**9.1600e-003**	**0.0990**	**0.0634**	**1.2000e-004**	**0.0262**	**4.6400e-003**	**0.0309**	**0.0135**	**4.2700e-003**	**0.0177**	**0.0000**	**10.4215**	**10.4215**	**3.3700e-003**	**0.0000**	**10.5057**

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	1.8000e-004	1.3000e-004	1.3700e-003	0.0000	4.8000e-004	0.0000	4.8000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3939	0.3939	1.0000e-005	0.0000	0.3942
Total	**1.8000e-004**	**1.3000e-004**	**1.3700e-003**	**0.0000**	**4.8000e-004**	**0.0000**	**4.8000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.3939**	**0.3939**	**1.0000e-005**	**0.0000**	**0.3942**

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					0.0118	0.0000	0.0118	6.0600e-003	0.0000	6.0600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.4500e-003	6.2900e-003	0.0710	1.2000e-004		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	10.4215	10.4215	3.3700e-003	0.0000	10.5057
Total	**1.4500e-003**	**6.2900e-003**	**0.0710**	**1.2000e-004**	**0.0118**	**1.9000e-004**	**0.0120**	**6.0600e-003**	**1.9000e-004**	**6.2500e-003**	**0.0000**	**10.4215**	**10.4215**	**3.3700e-003**	**0.0000**	**10.5057**

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	1.8000e-004	1.3000e-004	1.3700e-003	0.0000	4.8000e-004	0.0000	4.8000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3939	0.3939	1.0000e-005	0.0000	0.3942
Total	**1.8000e-004**	**1.3000e-004**	**1.3700e-003**	**0.0000**	**4.8000e-004**	**0.0000**	**4.8000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.3939**	**0.3939**	**1.0000e-005**	**0.0000**	**0.3942**

3.4 Building Construction - 2021

Unmitigated Construction On-Site

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

Category	tons/yr										MT/yr					
Off-Road	0.2186	2.0047	1.9062	3.1000e-003		0.1102	0.1102		0.1037	0.1037	0.0000	266.3829	266.3829	0.0643	0.0000	267.9895
Total	**0.2186**	**2.0047**	**1.9062**	**3.1000e-003**		**0.1102**	**0.1102**		**0.1037**	**0.1037**	**0.0000**	**266.3829**	**266.3829**	**0.0643**	**0.0000**	**267.9895**

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	3.0000e-003	0.0945	0.0252	2.5000e-004	6.0500e-003	2.1000e-004	6.2600e-003	1.7500e-003	2.0000e-004	1.9500e-003	0.0000	23.8307	23.8307	1.0400e-003	0.0000	23.8567
Worker	5.6700e-003	3.9200e-003	0.0421	1.3000e-004	0.0146	9.0000e-005	0.0147	3.8800e-003	8.0000e-005	3.9700e-003	0.0000	12.0804	12.0804	2.7000e-004	0.0000	12.0872
Total	**8.6700e-003**	**0.0985**	**0.0673**	**3.8000e-004**	**0.0206**	**3.0000e-004**	**0.0210**	**5.6300e-003**	**2.8000e-004**	**5.9200e-003**	**0.0000**	**35.9111**	**35.9111**	**1.3100e-003**	**0.0000**	**35.9439**

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	0.0377	0.2570	2.0079	3.1000e-003		4.6900e-003	4.6900e-003		4.6900e-003	4.6900e-003	0.0000	266.3826	266.3826	0.0643	0.0000	267.9892
Total	**0.0377**	**0.2570**	**2.0079**	**3.1000e-003**		**4.6900e-003**	**4.6900e-003**		**4.6900e-003**	**4.6900e-003**	**0.0000**	**266.3826**	**266.3826**	**0.0643**	**0.0000**	**267.9892**

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	3.0000e-003	0.0945	0.0252	2.5000e-004	6.0500e-003	2.1000e-004	6.2600e-003	1.7500e-003	2.0000e-004	1.9500e-003	0.0000	23.8307	23.8307	1.0400e-003	0.0000	23.8567
Worker	5.6700e-003	3.9200e-003	0.0421	1.3000e-004	0.0146	9.0000e-005	0.0147	3.8800e-003	8.0000e-005	3.9700e-003	0.0000	12.0804	12.0804	2.7000e-004	0.0000	12.0872
Total	**8.6700e-003**	**0.0985**	**0.0673**	**3.8000e-004**	**0.0206**	**3.0000e-004**	**0.0210**	**5.6300e-003**	**2.8000e-004**	**5.9200e-003**	**0.0000**	**35.9111**	**35.9111**	**1.3100e-003**	**0.0000**	**35.9439**

3.5 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.8500e-003	0.0976	0.1103	1.7000e-004		5.2100e-003	5.2100e-003		4.8100e-003	4.8100e-003	0.0000	14.7336	14.7336	4.6300e-003	0.0000	14.8493
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.8500e-003**	**0.0976**	**0.1103**	**1.7000e-004**		**5.2100e-003**	**5.2100e-003**		**4.8100e-003**	**4.8100e-003**	**0.0000**	**14.7336**	**14.7336**	**4.6300e-003**	**0.0000**	**14.8493**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.5000e-004	3.8000e-004	4.1200e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1818	1.1818	3.0000e-005	0.0000	1.1825
Total	**5.5000e-004**	**3.8000e-004**	**4.1200e-003**	**1.0000e-005**	**1.4300e-003**	**1.0000e-005**	**1.4400e-003**	**3.8000e-004**	**1.0000e-005**	**3.9000e-004**	**0.0000**	**1.1818**	**1.1818**	**3.0000e-005**	**0.0000**	**1.1825**

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	1.9700e-003	8.5600e-003	0.1218	1.7000e-004		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	14.7335	14.7335	4.6300e-003	0.0000	14.8493
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.9700e-003**	**8.5600e-003**	**0.1218**	**1.7000e-004**		**2.6000e-004**	**2.6000e-004**		**2.6000e-004**	**2.6000e-004**	**0.0000**	**14.7335**	**14.7335**	**4.6300e-003**	**0.0000**	**14.8493**

Mitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.5000e-004	3.8000e-004	4.1200e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1818	1.1818	3.0000e-005	0.0000	1.1825
Total	**5.5000e-004**	**3.8000e-004**	**4.1200e-003**	**1.0000e-005**	**1.4300e-003**	**1.0000e-005**	**1.4400e-003**	**3.8000e-004**	**1.0000e-005**	**3.9000e-004**	**0.0000**	**1.1818**	**1.1818**	**3.0000e-005**	**0.0000**	**1.1825**

3.6 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2607					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.8400e-003	0.0127	0.0163	3.0000e-005		7.4000e-004	7.4000e-004		7.4000e-004	7.4000e-004	0.0000	2.2979	2.2979	1.5000e-004	0.0000	2.3017
Total	**0.2626**	**0.0127**	**0.0163**	**3.0000e-005**		**7.4000e-004**	**7.4000e-004**		**7.4000e-004**	**7.4000e-004**	**0.0000**	**2.2979**	**2.2979**	**1.5000e-004**	**0.0000**	**2.3017**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-005	5.0000e-005	5.7000e-004	0.0000	2.1000e-004	0.0000	2.2000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1708	0.1708	0.0000	0.0000	0.1709
Total	**8.0000e-005**	**5.0000e-005**	**5.7000e-004**	**0.0000**	**2.1000e-004**	**0.0000**	**2.2000e-004**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**0.1708**	**0.1708**	**0.0000**	**0.0000**	**0.1709**

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	0.2607					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	1.1600e-003	0.0165	3.0000e-005		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	2.2979	2.2979	1.5000e-004	0.0000	2.3017
Total	**0.2610**	**1.1600e-003**	**0.0165**	**3.0000e-005**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**	**0.0000**	**2.2979**	**2.2979**	**1.5000e-004**	**0.0000**	**2.3017**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-005	5.0000e-005	5.7000e-004	0.0000	2.1000e-004	0.0000	2.2000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1708	0.1708	0.0000	0.0000	0.1709
Total	**8.0000e-005**	**5.0000e-005**	**5.7000e-004**	**0.0000**	**2.1000e-004**	**0.0000**	**2.2000e-004**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**0.1708**	**0.1708**	**0.0000**	**0.0000**	**0.1709**

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	0.3199	1.2476	3.6282	0.0137	1.3964	0.0108	1.4072	0.3737	0.0101	0.3838	0.0000	1,259.8461	1,259.8461	0.0389	0.0000	1,260.8194
Unmitigated	0.3199	1.2476	3.6282	0.0137	1.3964	0.0108	1.4072	0.3737	0.0101	0.3838	0.0000	1,259.8461	1,259.8461	0.0389	0.0000	1,260.8194

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Strip Mall	1,887.50	1,790.50	870.00	3,755,703	3,755,703
Total	1,887.50	1,790.50	870.00	3,755,703	3,755,703

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
Strip Mall	5.97	5.97	5.97	16.60	64.40	19.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Strip Mall	0.616749	0.035330	0.181430	0.103378	0.013121	0.005016	0.012828	0.021913	0.002183	0.001508	0.005219	0.000634	0.000691

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	7.0309	7.0309	7.0300e-003	1.4500e-003	7.6402
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	7.0309	7.0309	7.0300e-003	1.4500e-003	7.6402
NaturalGas Mitigated	6.4000e-004	5.8100e-003	4.8800e-003	3.0000e-005		4.4000e-004	4.4000e-004		4.4000e-004	4.4000e-004	0.0000	6.3236	6.3236	1.2000e-004	1.2000e-004	6.3612
NaturalGas Unmitigated	6.4000e-004	5.8100e-003	4.8800e-003	3.0000e-005		4.4000e-004	4.4000e-004		4.4000e-004	4.4000e-004	0.0000	6.3236	6.3236	1.2000e-004	1.2000e-004	6.3612

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					
Strip Mall	118500	6.4000e-004	5.8100e-003	4.8800e-003	3.0000e-005		4.4000e-004	4.4000e-004		4.4000e-004	4.4000e-004	0.0000	6.3236	6.3236	1.2000e-004	1.2000e-004	6.3612
Total		**6.4000e-004**	**5.8100e-003**	**4.8800e-003**	**3.0000e-005**		**4.4000e-004**	**4.4000e-004**		**4.4000e-004**	**4.4000e-004**	**0.0000**	**6.3236**	**6.3236**	**1.2000e-004**	**1.2000e-004**	**6.3612**

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					
Strip Mall	118500	6.4000e-004	5.8100e-003	4.8800e-003	3.0000e-005		4.4000e-004	4.4000e-004		4.4000e-004	4.4000e-004	0.0000	6.3236	6.3236	1.2000e-004	1.2000e-004	6.3612
Total		**6.4000e-004**	**5.8100e-003**	**4.8800e-003**	**3.0000e-005**		**4.4000e-004**	**4.4000e-004**		**4.4000e-004**	**4.4000e-004**	**0.0000**	**6.3236**	**6.3236**	**1.2000e-004**	**1.2000e-004**	**6.3612**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Strip Mall	534500	7.0309	7.0300e-003	1.4500e-003	7.6402
Total		**7.0309**	**7.0300e-003**	**1.4500e-003**	**7.6402**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Strip Mall	534500	7.0309	7.0300e-003	1.4500e-003	7.6402
Total		**7.0309**	**7.0300e-003**	**1.4500e-003**	**7.6402**

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	0.2214	0.0000	4.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.9000e-004	8.9000e-004	0.0000	0.0000	9.5000e-004
Unmitigated	0.2214	0.0000	4.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.9000e-004	8.9000e-004	0.0000	0.0000	9.5000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0261					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1953					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.0000e-005	0.0000	4.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.9000e-004	8.9000e-004	0.0000	0.0000	9.5000e-004
Total	**0.2214**	**0.0000**	**4.6000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**8.9000e-004**	**8.9000e-004**	**0.0000**	**0.0000**	**9.5000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0261					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1953					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.0000e-005	0.0000	4.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.9000e-004	8.9000e-004	0.0000	0.0000	9.5000e-004
Total	**0.2214**	**0.0000**	**4.6000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**8.9000e-004**	**8.9000e-004**	**0.0000**	**0.0000**	**9.5000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1.6785	4.8800e-003	2.9300e-003	2.6723
Unmitigated	1.6785	4.8800e-003	2.9300e-003	2.6723

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Strip Mall	3.70363 / 2.26996	1.6785	4.8800e-003	2.9300e-003	2.6723
Total		**1.6785**	**4.8800e-003**	**2.9300e-003**	**2.6723**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Strip Mall	3.70363 / 2.26996	1.6785	4.8800e-003	2.9300e-003	2.6723
Total		**1.6785**	**4.8800e-003**	**2.9300e-003**	**2.6723**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			

Mitigated	10.6570	0.6298	0.0000	26.4023
Unmitigated	10.6570	0.6298	0.0000	26.4023

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Strip Mall	52.5	10.6570	0.6298	0.0000	26.4023
Total		**10.6570**	**0.6298**	**0.0000**	**26.4023**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Strip Mall	52.5	10.6570	0.6298	0.0000	26.4023
Total		**10.6570**	**0.6298**	**0.0000**	**26.4023**

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

Morgan Hill - Hwy Industrial Component (Warehouse)

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	1,060.00	1000sqft	54.74	1,060,000.00	0
Parking Lot	734.00	Space	0.00	238,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2023
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 rate

Land Use - Based on Trip Generation Data provided for building size and Construction data sheet for parking spaces and acreage

Construction Phase - Based on provided construction worksheet adjusted to 1/1/2021 start

Off-road Equipment - Construction worksheet

Off-road Equipment - Construction worksheet

Off-road Equipment - Construction worksheet

Off-road Equipment - Construction worksheet

Off-road Equipment - Construction worksheet

Off-road Equipment - Based on construction worksheet

Off-road Equipment - Construction worksheet. Dump tender = 8 trips

Trips and VMT - On-site hauling accounted with off-road dump tenders. Added cement and asphalt trips as vendor trips distances using HHDT,MHDT vehicles

On-road Fugitive Dust -

Demolition -

Grading - Construction worksheet - used 165,000cy cut and fill with no mileage

Vehicle Trips - TIA for autos only = 1.39/1ksf. (Trucks computed seperately using CtEmfac)

Road Dust -

Energy Use -

Water And Wastewater - WTP treatment

Construction Off-road Equipment Mitigation - Enhanced BMPs and Tier 4 mitigation

Fleet Mix - Trucks modeled using CtEmfac so mix added to LDA 70% and LDT1 5%, LDT2 15%, MDV 10% (0.63, 0.04, 0.19, 0.11, 0.014, 0.006, 0,0, 0.002, 0.002, 0.005, 0.001, 0)

Stationary Sources - Emergency Generators and Fire Pumps - Largest typical size per CARB stationary diesel

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	0.5
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	18.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	11.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	20.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
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tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstructionPhase	NumDays	40.00	30.00
tblConstructionPhase	NumDays	110.00	70.00

tblConstructionPhase	NumDays	1,110.00	260.00
tblConstructionPhase	NumDays	75.00	90.00
tblConstructionPhase	NumDays	75.00	60.00
tblFleetMix	HHD	0.02	0.00
tblFleetMix	LDA	0.61	0.63
tblFleetMix	LDT1	0.04	0.04
tblFleetMix	LDT2	0.18	0.19
tblFleetMix	LHD1	0.01	0.01
tblFleetMix	LHD2	5.0110e-003	6.0000e-003
tblFleetMix	MCY	5.2800e-003	5.0000e-003
tblFleetMix	MDV	0.11	0.11
tblFleetMix	MH	7.2000e-004	0.00
tblFleetMix	MHD	0.01	0.00
tblFleetMix	OBUS	2.1680e-003	2.0000e-003
tblFleetMix	SBUS	6.2900e-004	1.0000e-003
tblFleetMix	UBUS	1.5290e-003	2.0000e-003
tblLandUse	LandUseSquareFeet	293,600.00	238,000.00
tblLandUse	LotAcreage	24.33	54.74
tblLandUse	LotAcreage	6.61	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	6.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	6.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	6.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	6.00
tblOffRoadEquipment	UsageHours	7.00	1.20
tblOffRoadEquipment	UsageHours	8.00	6.20

tblOffRoadEquipment	UsageHours	8.00	1.80
tblOffRoadEquipment	UsageHours	7.00	1.10
tblOffRoadEquipment	UsageHours	8.00	0.80
tblOffRoadEquipment	UsageHours	8.00	1.80
tblOffRoadEquipment	UsageHours	8.00	1.80
tblOffRoadEquipment	UsageHours	8.00	1.80
tblOffRoadEquipment	UsageHours	6.00	8.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	200.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	50.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	3.00
tblTripsAndVMT	HaulingTripLength	20.00	7.30
tblTripsAndVMT	HaulingTripLength	20.00	7.30
tblTripsAndVMT	HaulingTripNumber	0.00	5,200.00
tblTripsAndVMT	HaulingTripNumber	0.00	35.00
tblTripsAndVMT	WorkerTripNumber	35.00	33.00
tblVehicleTrips	ST_TR	1.68	1.39
tblVehicleTrips	SU_TR	1.68	1.39
tblVehicleTrips	WD_TR	1.68	1.39
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.1 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					
2021	2.3198	9.8604	8.0365	0.0237	1.2091	0.3486	1.5576	0.4162	0.3248	0.7410	0.0000	2,145.8073	2,145.8073	0.3373	0.0000	2,154.2402
2022	4.4885	1.8676	2.1629	5.1000e-003	0.1531	0.0739	0.2270	0.0412	0.0713	0.1125	0.0000	457.0776	457.0776	0.0481	0.0000	458.2800
Maximum	**4.4885**	**9.8604**	**8.0365**	**0.0237**	**1.2091**	**0.3486**	**1.5576**	**0.4162**	**0.3248**	**0.7410**	**0.0000**	**2,145.8073**	**2,145.8073**	**0.3373**	**0.0000**	**2,154.2402**

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					
2021	1.8036	6.9017	9.4573	0.0237	0.8927	0.0383	0.9309	0.2319	0.0375	0.2694	0.0000	2,145.8061	2,145.8061	0.3373	0.0000	2,154.2390
2022	4.3869	1.6332	2.2956	5.1000e-003	0.1531	0.0138	0.1670	0.0412	0.0137	0.0549	0.0000	457.0773	457.0773	0.0481	0.0000	458.2797
Maximum	**4.3869**	**6.9017**	**9.4573**	**0.0237**	**0.8927**	**0.0383**	**0.9309**	**0.2319**	**0.0375**	**0.2694**	**0.0000**	**2,145.8061**	**2,145.8061**	**0.3373**	**0.0000**	**2,154.2390**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**9.07**	**27.23**	**-15.23**	**0.00**	**23.23**	**87.66**	**38.48**	**40.29**	**87.07**	**62.00**	**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	**3-2-2021**	**6-1-2021**	4.4426	2.7924
2	**6-2-2021**	**9-1-2021**	2.1258	1.6987
3	**9-2-2021**	**12-1-2021**	1.9200	1.5423
4	**12-2-2021**	**3-1-2022**	8.2136	7.6637

5	**3-2-2022**	**6-1-2022**	0.4942	0.4778
		Highest	8.2136	7.6637

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	4.7144	1.5000e-004	0.0165	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0321	0.0321	8.0000e-005	0.0000	0.0342
Energy	0.0198	0.1803	0.1515	1.0800e-003		0.0137	0.0137		0.0137	0.0137	0.0000	699.4433	699.4433	0.0541	0.0140	704.9698
Mobile	0.3270	0.6101	4.3021	0.0143	1.5908	0.0125	1.6033	0.4249	0.0117	0.4366	0.0000	1,297.7027	1,297.7027	0.0368	0.0000	1,298.6235
Stationary	0.0246	0.0688	0.0628	1.2000e-004		3.6200e-003	3.6200e-003		3.6200e-003	3.6200e-003	0.0000	11.4239	11.4239	1.6000e-003	0.0000	11.4640
Waste						0.0000	0.0000		0.0000	0.0000	202.2602	0.0000	202.2602	11.9532	0.0000	501.0911
Water						0.0000	0.0000		0.0000	0.0000	86.7256	174.4733	261.1989	0.3160	0.1922	326.3760
Total	**5.0859**	**0.8593**	**4.5328**	**0.0155**	**1.5908**	**0.0299**	**1.6207**	**0.4249**	**0.0290**	**0.4540**	**288.9858**	**2,183.0752**	**2,472.0610**	**12.3618**	**0.2062**	**2,842.5585**

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	4.7144	1.5000e-004	0.0165	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0321	0.0321	8.0000e-005	0.0000	0.0342
Energy	0.0198	0.1803	0.1515	1.0800e-003		0.0137	0.0137		0.0137	0.0137	0.0000	699.4433	699.4433	0.0541	0.0140	704.9698

Mobile	0.3270	0.6101	4.3021	0.0143	1.5908	0.0125	1.6033	0.4249	0.0117	0.4366	0.0000	1,297.7027	1,297.7027	0.0368	0.0000	1,298.6235
Stationary	0.0246	0.0688	0.0628	1.2000e-004		3.6200e-003	3.6200e-003		3.6200e-003	3.6200e-003	0.0000	11.4239	11.4239	1.6000e-003	0.0000	11.4640
Waste						0.0000	0.0000		0.0000	0.0000	202.2602	0.0000	202.2602	11.9532	0.0000	501.0911
Water						0.0000	0.0000		0.0000	0.0000	86.7256	174.4733	261.1989	0.3160	0.1922	326.3760
Total	**5.0859**	**0.8593**	**4.5328**	**0.0155**	**1.5908**	**0.0299**	**1.6207**	**0.4249**	**0.0290**	**0.4540**	**288.9858**	**2,183.0752**	**2,472.0610**	**12.3618**	**0.2062**	**2,842.5585**

	ROG	NOx	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	Site Preparation	Site Preparation	1/1/2021	2/11/2021	5	30	
2	Grading	Grading	2/12/2021	5/20/2021	5	70	overlap
3	Exterior Building Construction	Building Construction	3/1/2021	2/25/2022	5	260	overlap
4	Trenching	Trenching	4/1/2021	7/21/2021	5	80	overlap
5	Paving/Site Concrete/Landscape	Paving	10/1/2021	2/3/2022	5	90	overlap
6	Interior Building Construction	Architectural Coating	12/14/2021	3/7/2022	5	60	overlap

Acres of Grading (Site Preparation Phase): 30

Acres of Grading (Grading Phase): 210

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 1,590,000; Non-Residential Outdoor: 530,000; Striped Parking

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	2	8.00	187	0.41

Site Preparation	Off-Highway Trucks	1	8.00	402	0.38
Site Preparation	Rollers	2	8.00	80	0.38
Site Preparation	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Sweepers/Scrubbers	1	8.00	64	0.46
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Excavators	3	8.00	158	0.38
Grading	Graders	2	8.00	187	0.41
Grading	Off-Highway Trucks	2	8.00	402	0.38
Grading	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Exterior Building Construction	Air Compressors	6	0.90	78	0.48
Exterior Building Construction	Cranes	1	1.20	231	0.29
Exterior Building Construction	Forklifts	6	6.20	89	0.20
Exterior Building Construction	Generator Sets	3	1.80	84	0.74
Exterior Building Construction	Off-Highway Trucks	4	0.70	402	0.38
Exterior Building Construction	Pressure Washers	6	0.70	13	0.30
Exterior Building Construction	Pumps	2	1.20	84	0.74
Exterior Building Construction	Tractors/Loaders/Backhoes	6	1.10	97	0.37
Exterior Building Construction	Welders	6	0.80	46	0.45
Trenching	Excavators	2	8.00	158	0.38
Trenching	Off-Highway Trucks	4	8.00	402	0.38
Trenching	Plate Compactors	4	8.00	8	0.43
Trenching	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving/Site Concrete/Landscape	Air Compressors	6	0.40	78	0.48
Paving/Site Concrete/Landscape	Forklifts	4	5.80	89	0.20
Paving/Site Concrete/Landscape	Pavers	2	1.80	130	0.42
Paving/Site Concrete/Landscape	Paving Equipment	2	1.80	132	0.36
Paving/Site Concrete/Landscape	Rollers	2	1.80	80	0.38

Paving/Site Concrete/Landscape	Sweepers/Scrubbers	2	1.80	64	0.46
Paving/Site Concrete/Landscape	Tractors/Loaders/Backhoes	4	7.10	97	0.37
Paving/Site Concrete/Landscape	Trenchers	3	2.20	78	0.50
Interior Building Construction	Aerial Lifts	8	7.30	63	0.31
Interior Building Construction	Air Compressors	6	8.00	78	0.48
Interior Building Construction	Concrete/Industrial Saws	6	2.00	81	0.73
Interior Building Construction	Generator Sets	6	6.00	84	0.74
Interior Building Construction	Sweepers/Scrubbers	2	4.00	64	0.46
Interior Building Construction	Tractors/Loaders/Backhoes	3	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	10	25.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	14	33.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Exterior Building Construction	40	545.00	213.00	5,200.00	10.80	7.30	7.30	LD_Mix	HDT_Mix	HHDT
Trenching	13	33.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving/Site Concrete/Landscape	25	63.00	0.00	35.00	10.80	7.30	7.30	LD_Mix	HDT_Mix	HHDT
Interior Building Construction	31	109.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1966	0.0000	0.1966	0.1010	0.0000	0.1010	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0688	0.7313	0.3817	8.6000e-004		0.0337	0.0337		0.0310	0.0310	0.0000	75.8327	75.8327	0.0245	0.0000	76.4459
Total	**0.0688**	**0.7313**	**0.3817**	**8.6000e-004**	**0.1966**	**0.0337**	**0.2302**	**0.1010**	**0.0310**	**0.1320**	**0.0000**	**75.8327**	**75.8327**	**0.0245**	**0.0000**	**76.4459**

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	1.1600e-003	8.0000e-004	8.5800e-003	3.0000e-005	2.9700e-003	2.0000e-005	2.9900e-003	7.9000e-004	2.0000e-005	8.1000e-004	0.0000	2.4620	2.4620	6.0000e-005	0.0000	2.4634
Total	**1.1600e-003**	**8.0000e-004**	**8.5800e-003**	**3.0000e-005**	**2.9700e-003**	**2.0000e-005**	**2.9900e-003**	**7.9000e-004**	**2.0000e-005**	**8.1000e-004**	**0.0000**	**2.4620**	**2.4620**	**6.0000e-005**	**0.0000**	**2.4634**

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					0.0767	0.0000	0.0767	0.0197	0.0000	0.0197	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0155	0.2683	0.5051	8.6000e-004		2.2200e-003	2.2200e-003		2.2200e-003	2.2200e-003	0.0000	75.8326	75.8326	0.0245	0.0000	76.4458
Total	**0.0155**	**0.2683**	**0.5051**	**8.6000e-004**	**0.0767**	**2.2200e-003**	**0.0789**	**0.0197**	**2.2200e-003**	**0.0219**	**0.0000**	**75.8326**	**75.8326**	**0.0245**	**0.0000**	**76.4458**

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	1.1600e-003	8.0000e-004	8.5800e-003	3.0000e-005	2.9700e-003	2.0000e-005	2.9900e-003	7.9000e-004	2.0000e-005	8.1000e-004	0.0000	2.4620	2.4620	6.0000e-005	0.0000	2.4634
Total	**1.1600e-003**	**8.0000e-004**	**8.5800e-003**	**3.0000e-005**	**2.9700e-003**	**2.0000e-005**	**2.9900e-003**	**7.9000e-004**	**2.0000e-005**	**8.1000e-004**	**0.0000**	**2.4620**	**2.4620**	**6.0000e-005**	**0.0000**	**2.4634**

3.3 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3221	0.0000	0.3221	0.1279	0.0000	0.1279	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2262	2.4099	1.6411	3.6900e-003		0.1015	0.1015		0.0933	0.0933	0.0000	324.3140	324.3140	0.1049	0.0000	326.9363
Total	**0.2262**	**2.4099**	**1.6411**	**3.6900e-003**	**0.3221**	**0.1015**	**0.4236**	**0.1279**	**0.0933**	**0.2212**	**0.0000**	**324.3140**	**324.3140**	**0.1049**	**0.0000**	**326.9363**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.5600e-003	2.4600e-003	0.0264	8.0000e-005	9.1600e-003	6.0000e-005	9.2200e-003	2.4400e-003	5.0000e-005	2.4900e-003	0.0000	7.5831	7.5831	1.7000e-004	0.0000	7.5874
Total	**3.5600e-003**	**2.4600e-003**	**0.0264**	**8.0000e-005**	**9.1600e-003**	**6.0000e-005**	**9.2200e-003**	**2.4400e-003**	**5.0000e-005**	**2.4900e-003**	**0.0000**	**7.5831**	**7.5831**	**1.7000e-004**	**0.0000**	**7.5874**

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					0.1256	0.0000	0.1256	0.0249	0.0000	0.0249	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0641	1.1362	2.1611	3.6900e-003		8.0500e-003	8.0500e-003		7.8800e-003	7.8800e-003	0.0000	324.3136	324.3136	0.1049	0.0000	326.9359
Total	**0.0641**	**1.1362**	**2.1611**	**3.6900e-003**	**0.1256**	**8.0500e-003**	**0.1337**	**0.0249**	**7.8800e-003**	**0.0328**	**0.0000**	**324.3136**	**324.3136**	**0.1049**	**0.0000**	**326.9359**

Mitigated Construction Off-Site

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

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.5600e-003	2.4600e-003	0.0264	8.0000e-005	9.1600e-003	6.0000e-005	9.2200e-003	2.4400e-003	5.0000e-005	2.4900e-003	0.0000	7.5831	7.5831	1.7000e-004	0.0000	7.5874
Total	**3.5600e-003**	**2.4600e-003**	**0.0264**	**8.0000e-005**	**9.1600e-003**	**6.0000e-005**	**9.2200e-003**	**2.4400e-003**	**5.0000e-005**	**2.4900e-003**	**0.0000**	**7.5831**	**7.5831**	**1.7000e-004**	**0.0000**	**7.5874**

3.4 Exterior Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1965	1.6672	1.6784	2.8700e-003		0.0970	0.0970		0.0919	0.0919	0.0000	246.8464	246.8464	0.0541	0.0000	248.1987
Total	**0.1965**	**1.6672**	**1.6784**	**2.8700e-003**		**0.0970**	**0.0970**		**0.0919**	**0.0919**	**0.0000**	**246.8464**	**246.8464**	**0.0541**	**0.0000**	**248.1987**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	8.7200e-003	0.3410	0.0664	7.6000e-004	0.0155	7.3000e-004	0.0162	4.2100e-003	7.0000e-004	4.9100e-003	0.0000	73.8300	73.8300	4.4200e-003	0.0000	73.9405
Vendor	0.0764	2.4077	0.6409	6.3300e-003	0.1541	5.3400e-003	0.1595	0.0446	5.1000e-003	0.0497	0.0000	606.9059	606.9059	0.0265	0.0000	607.5671
Worker	0.1847	0.1279	1.3714	4.3500e-003	0.4755	2.9900e-003	0.4785	0.1265	2.7600e-003	0.1292	0.0000	393.5968	393.5968	8.9500e-003	0.0000	393.8206

Total	**0.2698**	**2.8765**	**2.0787**	**0.0114**	**0.6451**	**9.0600e-003**	**0.6542**	**0.1752**	**8.5600e-003**	**0.1838**	**0.0000**	**1,074.3327**	**1,074.3327**	**0.0398**	**0.0000**	**1,075.3282**

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	0.0551	1.0917	1.8423	2.8700e-003		7.1500e-003	7.1500e-003		7.1500e-003	7.1500e-003	0.0000	246.8461	246.8461	0.0541	0.0000	248.1984
Total	**0.0551**	**1.0917**	**1.8423**	**2.8700e-003**		**7.1500e-003**	**7.1500e-003**		**7.1500e-003**	**7.1500e-003**	**0.0000**	**246.8461**	**246.8461**	**0.0541**	**0.0000**	**248.1984**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	8.7200e-003	0.3410	0.0664	7.6000e-004	0.0155	7.3000e-004	0.0162	4.2100e-003	7.0000e-004	4.9100e-003	0.0000	73.8300	73.8300	4.4200e-003	0.0000	73.9405
Vendor	0.0764	2.4077	0.6409	6.3300e-003	0.1541	5.3400e-003	0.1595	0.0446	5.1000e-003	0.0497	0.0000	606.9059	606.9059	0.0265	0.0000	607.5671
Worker	0.1847	0.1279	1.3714	4.3500e-003	0.4755	2.9900e-003	0.4785	0.1265	2.7600e-003	0.1292	0.0000	393.5968	393.5968	8.9500e-003	0.0000	393.8206
Total	**0.2698**	**2.8765**	**2.0787**	**0.0114**	**0.6451**	**9.0600e-003**	**0.6542**	**0.1752**	**8.5600e-003**	**0.1838**	**0.0000**	**1,074.3327**	**1,074.3327**	**0.0398**	**0.0000**	**1,075.3282**

3.4 Exterior Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0321	0.2698	0.3010	5.2000e-004		0.0148	0.0148		0.0141	0.0141	0.0000	44.8894	44.8894	9.7600e-003	0.0000	45.1334
Total	**0.0321**	**0.2698**	**0.3010**	**5.2000e-004**		**0.0148**	**0.0148**		**0.0141**	**0.0141**	**0.0000**	**44.8894**	**44.8894**	**9.7600e-003**	**0.0000**	**45.1334**

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	1.4900e-003	0.0581	0.0118	1.4000e-004	0.0127	1.1000e-004	0.0128	3.1900e-003	1.1000e-004	3.2900e-003	0.0000	13.2535	13.2535	7.7000e-004	0.0000	13.2728
Vendor	0.0130	0.4138	0.1098	1.1400e-003	0.0280	8.4000e-004	0.0289	8.1000e-003	8.1000e-004	8.9100e-003	0.0000	109.2908	109.2908	4.5900e-003	0.0000	109.4056
Worker	0.0313	0.0209	0.2292	7.6000e-004	0.0865	5.3000e-004	0.0870	0.0230	4.9000e-004	0.0235	0.0000	68.9636	68.9636	1.4600e-003	0.0000	69.0001
Total	**0.0458**	**0.4927**	**0.3507**	**2.0400e-003**	**0.1272**	**1.4800e-003**	**0.1286**	**0.0343**	**1.4100e-003**	**0.0357**	**0.0000**	**191.5079**	**191.5079**	**6.8200e-003**	**0.0000**	**191.6786**

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	0.0100	0.1985	0.3350	5.2000e-004		1.3000e-003	1.3000e-003		1.3000e-003	1.3000e-003	0.0000	44.8894	44.8894	9.7600e-003	0.0000	45.1333
Total	**0.0100**	**0.1985**	**0.3350**	**5.2000e-004**		**1.3000e-003**	**1.3000e-003**		**1.3000e-003**	**1.3000e-003**	**0.0000**	**44.8894**	**44.8894**	**9.7600e-003**	**0.0000**	**45.1333**

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	1.4900e-003	0.0581	0.0118	1.4000e-004	0.0127	1.1000e-004	0.0128	3.1900e-003	1.1000e-004	3.2900e-003	0.0000	13.2535	13.2535	7.7000e-004	0.0000	13.2728
Vendor	0.0130	0.4138	0.1098	1.1400e-003	0.0280	8.4000e-004	0.0289	8.1000e-003	8.1000e-004	8.9100e-003	0.0000	109.2908	109.2908	4.5900e-003	0.0000	109.4056
Worker	0.0313	0.0209	0.2292	7.6000e-004	0.0865	5.3000e-004	0.0870	0.0230	4.9000e-004	0.0235	0.0000	68.9636	68.9636	1.4600e-003	0.0000	69.0001
Total	**0.0458**	**0.4927**	**0.3507**	**2.0400e-003**	**0.1272**	**1.4800e-003**	**0.1286**	**0.0343**	**1.4100e-003**	**0.0357**	**0.0000**	**191.5079**	**191.5079**	**6.8200e-003**	**0.0000**	**191.6786**

3.5 Trenching - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1442	1.2821	1.1433	2.9800e-003		0.0542	0.0542		0.0500	0.0500	0.0000	259.6397	259.6397	0.0829	0.0000	261.7115
Total	**0.1442**	**1.2821**	**1.1433**	**2.9800e-003**		**0.0542**	**0.0542**		**0.0500**	**0.0500**	**0.0000**	**259.6397**	**259.6397**	**0.0829**	**0.0000**	**261.7115**

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	4.0700e-003	2.8200e-003	0.0302	1.0000e-004	0.0105	7.0000e-005	0.0105	2.7800e-003	6.0000e-005	2.8400e-003	0.0000	8.6664	8.6664	2.0000e-004	0.0000	8.6713
Total	**4.0700e-003**	**2.8200e-003**	**0.0302**	**1.0000e-004**	**0.0105**	**7.0000e-005**	**0.0105**	**2.7800e-003**	**6.0000e-005**	**2.8400e-003**	**0.0000**	**8.6664**	**8.6664**	**2.0000e-004**	**0.0000**	**8.6713**

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	0.0506	0.8988	1.7050	2.9800e-003		6.2700e-003	6.2700e-003		6.1400e-003	6.1400e-003	0.0000	259.6394	259.6394	0.0829	0.0000	261.7112
Total	**0.0506**	**0.8988**	**1.7050**	**2.9800e-003**		**6.2700e-003**	**6.2700e-003**		**6.1400e-003**	**6.1400e-003**	**0.0000**	**259.6394**	**259.6394**	**0.0829**	**0.0000**	**261.7112**

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	4.0700e-003	2.8200e-003	0.0302	1.0000e-004	0.0105	7.0000e-005	0.0105	2.7800e-003	6.0000e-005	2.8400e-003	0.0000	8.6664	8.6664	2.0000e-004	0.0000	8.6713
Total	**4.0700e-003**	**2.8200e-003**	**0.0302**	**1.0000e-004**	**0.0105**	**7.0000e-005**	**0.0105**	**2.7800e-003**	**6.0000e-005**	**2.8400e-003**	**0.0000**	**8.6664**	**8.6664**	**2.0000e-004**	**0.0000**	**8.6713**

3.6 Paving/Site Concrete/Landscape - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0603	0.5772	0.6093	8.5000e-004		0.0366	0.0366		0.0337	0.0337	0.0000	74.4589	74.4589	0.0232	0.0000	75.0394
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0603**	**0.5772**	**0.6093**	**8.5000e-004**		**0.0366**	**0.0366**		**0.0337**	**0.0337**	**0.0000**	**74.4589**	**74.4589**	**0.0232**	**0.0000**	**75.0394**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.0000e-005	1.9900e-003	3.9000e-004	0.0000	1.0000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.4307	0.4307	3.0000e-005	0.0000	0.4313
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.4000e-003	4.4300e-003	0.0476	1.5000e-004	0.0165	1.0000e-004	0.0166	4.3900e-003	1.0000e-004	4.4800e-003	0.0000	13.6495	13.6495	3.1000e-004	0.0000	13.6573

Total	**6.4500e-003**	**6.4200e-003**	**0.0480**	**1.5000e-004**	**0.0166**	**1.0000e-004**	**0.0167**	**4.4200e-003**	**1.0000e-004**	**4.5100e-003**	**0.0000**	**14.0802**	**14.0802**	**3.4000e-004**	**0.0000**	**14.0886**

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	0.0177	0.3727	0.6360	8.5000e-004		2.1800e-003	2.1800e-003		2.1800e-003	2.1800e-003	0.0000	74.4588	74.4588	0.0232	0.0000	75.0393
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0177**	**0.3727**	**0.6360**	**8.5000e-004**		**2.1800e-003**	**2.1800e-003**		**2.1800e-003**	**2.1800e-003**	**0.0000**	**74.4588**	**74.4588**	**0.0232**	**0.0000**	**75.0393**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.0000e-005	1.9900e-003	3.9000e-004	0.0000	1.0000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.4307	0.4307	3.0000e-005	0.0000	0.4313
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.4000e-003	4.4300e-003	0.0476	1.5000e-004	0.0165	1.0000e-004	0.0166	4.3900e-003	1.0000e-004	4.4800e-003	0.0000	13.6495	13.6495	3.1000e-004	0.0000	13.6573
Total	**6.4500e-003**	**6.4200e-003**	**0.0480**	**1.5000e-004**	**0.0166**	**1.0000e-004**	**0.0167**	**4.4200e-003**	**1.0000e-004**	**4.5100e-003**	**0.0000**	**14.0802**	**14.0802**	**3.4000e-004**	**0.0000**	**14.0886**

3.6 Paving/Site Concrete/Landscape - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0196	0.1881	0.2196	3.1000e-004		0.0112	0.0112		0.0104	0.0104	0.0000	27.0904	27.0904	8.4400e-003	0.0000	27.3015
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0196**	**0.1881**	**0.2196**	**3.1000e-004**		**0.0112**	**0.0112**		**0.0104**	**0.0104**	**0.0000**	**27.0904**	**27.0904**	**8.4400e-003**	**0.0000**	**27.3015**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-005	6.8000e-004	1.4000e-004	0.0000	9.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.1546	0.1546	1.0000e-005	0.0000	0.1549
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1700e-003	1.4500e-003	0.0159	5.0000e-005	6.0000e-003	4.0000e-005	6.0300e-003	1.5900e-003	3.0000e-005	1.6300e-003	0.0000	4.7832	4.7832	1.0000e-004	0.0000	4.7857
Total	**2.1900e-003**	**2.1300e-003**	**0.0160**	**5.0000e-005**	**6.0900e-003**	**4.0000e-005**	**6.1200e-003**	**1.6100e-003**	**3.0000e-005**	**1.6500e-003**	**0.0000**	**4.9378**	**4.9378**	**1.1000e-004**	**0.0000**	**4.9406**

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	6.4200e-003	0.1355	0.2313	3.1000e-004		7.9000e-004	7.9000e-004		7.9000e-004	7.9000e-004	0.0000	27.0904	27.0904	8.4400e-003	0.0000	27.3015
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.4200e-003**	**0.1355**	**0.2313**	**3.1000e-004**		**7.9000e-004**	**7.9000e-004**		**7.9000e-004**	**7.9000e-004**	**0.0000**	**27.0904**	**27.0904**	**8.4400e-003**	**0.0000**	**27.3015**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-005	6.8000e-004	1.4000e-004	0.0000	9.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.1546	0.1546	1.0000e-005	0.0000	0.1549
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1700e-003	1.4500e-003	0.0159	5.0000e-005	6.0000e-003	4.0000e-005	6.0300e-003	1.5900e-003	3.0000e-005	1.6300e-003	0.0000	4.7832	4.7832	1.0000e-004	0.0000	4.7857
Total	**2.1900e-003**	**2.1300e-003**	**0.0160**	**5.0000e-005**	**6.0900e-003**	**4.0000e-005**	**6.1200e-003**	**1.6100e-003**	**3.0000e-005**	**1.6500e-003**	**0.0000**	**4.9378**	**4.9378**	**1.1000e-004**	**0.0000**	**4.9406**

3.7 Interior Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.3013					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0350	0.3020	0.3735	6.1000e-004		0.0164	0.0164		0.0160	0.0160	0.0000	52.5819	52.5819	7.0200e-003	0.0000	52.7573
Total	**1.3363**	**0.3020**	**0.3735**	**6.1000e-004**		**0.0164**	**0.0164**		**0.0160**	**0.0160**	**0.0000**	**52.5819**	**52.5819**	**7.0200e-003**	**0.0000**	**52.7573**

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	2.3500e-003	1.6300e-003	0.0175	6.0000e-005	6.0500e-003	4.0000e-005	6.0900e-003	1.6100e-003	4.0000e-005	1.6400e-003	0.0000	5.0094	5.0094	1.1000e-004	0.0000	5.0123
Total	**2.3500e-003**	**1.6300e-003**	**0.0175**	**6.0000e-005**	**6.0500e-003**	**4.0000e-005**	**6.0900e-003**	**1.6100e-003**	**4.0000e-005**	**1.6400e-003**	**0.0000**	**5.0094**	**5.0094**	**1.1000e-004**	**0.0000**	**5.0123**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.3013					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0121	0.2433	0.3987	6.1000e-004		3.0700e-003	3.0700e-003		3.0700e-003	3.0700e-003	0.0000	52.5819	52.5819	7.0200e-003	0.0000	52.7573
Total	**1.3133**	**0.2433**	**0.3987**	**6.1000e-004**		**3.0700e-003**	**3.0700e-003**		**3.0700e-003**	**3.0700e-003**	**0.0000**	**52.5819**	**52.5819**	**7.0200e-003**	**0.0000**	**52.7573**

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	2.3500e-003	1.6300e-003	0.0175	6.0000e-005	6.0500e-003	4.0000e-005	6.0900e-003	1.6100e-003	4.0000e-005	1.6400e-003	0.0000	5.0094	5.0094	1.1000e-004	0.0000	5.0123
Total	**2.3500e-003**	**1.6300e-003**	**0.0175**	**6.0000e-005**	**6.0500e-003**	**4.0000e-005**	**6.0900e-003**	**1.6100e-003**	**4.0000e-005**	**1.6400e-003**	**0.0000**	**5.0094**	**5.0094**	**1.1000e-004**	**0.0000**	**5.0123**

3.7 Interior Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	4.2756					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1060	0.9100	1.2228	2.0000e-003		0.0462	0.0462		0.0453	0.0453	0.0000	172.7905	172.7905	0.0226	0.0000	173.3560
Total	**4.3816**	**0.9100**	**1.2228**	**2.0000e-003**		**0.0462**	**0.0462**		**0.0453**	**0.0453**	**0.0000**	**172.7905**	**172.7905**	**0.0226**	**0.0000**	**173.3560**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.2100e-003	4.8000e-003	0.0527	1.8000e-004	0.0199	1.2000e-004	0.0200	5.2900e-003	1.1000e-004	5.4000e-003	0.0000	15.8616	15.8616	3.4000e-004	0.0000	15.8700

Total	**7.2100e-003**	**4.8000e-003**	**0.0527**	**1.8000e-004**	**0.0199**	**1.2000e-004**	**0.0200**	**5.2900e-003**	**1.1000e-004**	**5.4000e-003**	**0.0000**	**15.8616**	**15.8616**	**3.4000e-004**	**0.0000**	**15.8700**

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	4.2756					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0396	0.7995	1.3099	2.0000e-003		0.0101	0.0101		0.0101	0.0101	0.0000	172.7902	172.7902	0.0226	0.0000	173.3558
Total	**4.3153**	**0.7995**	**1.3099**	**2.0000e-003**		**0.0101**	**0.0101**		**0.0101**	**0.0101**	**0.0000**	**172.7902**	**172.7902**	**0.0226**	**0.0000**	**173.3558**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.2100e-003	4.8000e-003	0.0527	1.8000e-004	0.0199	1.2000e-004	0.0200	5.2900e-003	1.1000e-004	5.4000e-003	0.0000	15.8616	15.8616	3.4000e-004	0.0000	15.8700
Total	**7.2100e-003**	**4.8000e-003**	**0.0527**	**1.8000e-004**	**0.0199**	**1.2000e-004**	**0.0200**	**5.2900e-003**	**1.1000e-004**	**5.4000e-003**	**0.0000**	**15.8616**	**15.8616**	**3.4000e-004**	**0.0000**	**15.8700**

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	0.3270	0.6101	4.3021	0.0143	1.5908	0.0125	1.6033	0.4249	0.0117	0.4366	0.0000	1,297.7027	1,297.7027	0.0368	0.0000	1,298.6235
Unmitigated	0.3270	0.6101	4.3021	0.0143	1.5908	0.0125	1.6033	0.4249	0.0117	0.4366	0.0000	1,297.7027	1,297.7027	0.0368	0.0000	1,298.6235

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	1,473.40	1,473.40	1473.40	4,301,608	4,301,608
Total	1,473.40	1,473.40	1,473.40	4,301,608	4,301,608

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
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No Rail	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.612822	0.036208	0.182365	0.105071	0.013933	0.005011	0.012748	0.021514	0.002168	0.001529	0.005280	0.000629	0.000720
Unrefrigerated Warehouse-No Rail	0.630000	0.040000	0.190000	0.110000	0.014000	0.006000	0.000000	0.000000	0.002000	0.002000	0.005000	0.001000	0.000000

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	503.1605	503.1605	0.0503	0.0104	507.5206
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	503.1605	503.1605	0.0503	0.0104	507.5206
NaturalGas Mitigated	0.0198	0.1803	0.1515	1.0800e-003		0.0137	0.0137		0.0137	0.0137	0.0000	196.2828	196.2828	3.7600e-003	3.6000e-003	197.4492
NaturalGas Unmitigated	0.0198	0.1803	0.1515	1.0800e-003		0.0137	0.0137		0.0137	0.0137	0.0000	196.2828	196.2828	3.7600e-003	3.6000e-003	197.4492

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	3.6782e+006	0.0198	0.1803	0.1515	1.0800e-003		0.0137	0.0137		0.0137	0.0137	0.0000	196.2828	196.2828	3.7600e-003	3.6000e-003	197.4492
Total		**0.0198**	**0.1803**	**0.1515**	**1.0800e-003**		**0.0137**	**0.0137**		**0.0137**	**0.0137**	**0.0000**	**196.2828**	**196.2828**	**3.7600e-003**	**3.6000e-003**	**197.4492**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	3.6782e+006	0.0198	0.1803	0.1515	1.0800e-003		0.0137	0.0137		0.0137	0.0137	0.0000	196.2828	196.2828	3.7600e-003	3.6000e-003	197.4492
Total		**0.0198**	**0.1803**	**0.1515**	**1.0800e-003**		**0.0137**	**0.0137**		**0.0137**	**0.0137**	**0.0000**	**196.2828**	**196.2828**	**3.7600e-003**	**3.6000e-003**	**197.4492**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	83300	10.9574	1.1000e-003	2.3000e-004	11.0524
Unrefrigerated Warehouse-No Rail	3.7418e+006	492.2031	0.0492	0.0102	496.4683
Total		**503.1605**	**0.0503**	**0.0104**	**507.5206**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	83300	10.9574	1.1000e-003	2.3000e-004	11.0524

Unrefrigerated Warehouse-No Rail	3.7418e+006	492.2031	0.0492	0.0102	496.4683
Total		**503.1605**	**0.0503**	**0.0104**	**507.5206**

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	4.7144	1.5000e-004	0.0165	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0321	0.0321	8.0000e-005	0.0000	0.0342
Unmitigated	4.7144	1.5000e-004	0.0165	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0321	0.0321	8.0000e-005	0.0000	0.0342

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	0.5577					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.1552					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.5300e-003	1.5000e-004	0.0165	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0321	0.0321	8.0000e-005	0.0000	0.0342

Total	**4.7144**	**1.5000e-004**	**0.0165**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**	**0.0000**	**0.0321**	**0.0321**	**8.0000e-005**	**0.0000**	**0.0342**

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	0.5577					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.1552					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.5300e-003	1.5000e-004	0.0165	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0321	0.0321	8.0000e-005	0.0000	0.0342
Total	**4.7144**	**1.5000e-004**	**0.0165**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**	**0.0000**	**0.0321**	**0.0321**	**8.0000e-005**	**0.0000**	**0.0342**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	261.1989	0.3160	0.1922	326.3760
Unmitigated	261.1989	0.3160	0.1922	326.3760

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	245.125 / 0	261.1989	0.3160	0.1922	326.3760
Total		**261.1989**	**0.3160**	**0.1922**	**326.3760**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	245.125 / 0	261.1989	0.3160	0.1922	326.3760
Total		**261.1989**	**0.3160**	**0.1922**	**326.3760**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	202.2602	11.9532	0.0000	501.0911
Unmitigated	202.2602	11.9532	0.0000	501.0911

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	996.4	202.2602	11.9532	0.0000	501.0911
Total		**202.2602**	**11.9532**	**0.0000**	**501.0911**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000

Unrefrigerated Warehouse-No Rail	996.4	202.2602	11.9532	0.0000	501.0911
Total		**202.2602**	**11.9532**	**0.0000**	**501.0911**

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
Fire Pump	3	0	50	200	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					
Fire Pump - Diesel (175 - 300 HP)	0.0246	0.0688	0.0628	1.2000e-004		3.6200e-003	3.6200e-003		3.6200e-003	3.6200e-003	0.0000	11.4239	11.4239	1.6000e-003	0.0000	11.4640
Total	**0.0246**	**0.0688**	**0.0628**	**1.2000e-004**		**3.6200e-003**	**3.6200e-003**		**3.6200e-003**	**3.6200e-003**	**0.0000**	**11.4239**	**11.4239**	**1.6000e-003**	**0.0000**	**11.4640**

11.0 Vegetation

MH Industrial Office (Dr Lee) General Light Industrial

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	45.00	1000sqft	2.18	45,000.00	0
Parking Lot	32.00	Space	0.00	12,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2025
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	29	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - SVCE w/10%PG&E participation

Land Use - Project description and 0.7 parking space/1ksf

Vehicle Trips - Trip rate= 4.96,0.94,0.48 and 5.97 miles/trip. Ass primary

Water And Wastewater - wtp treatment

Table Name	Column Name	Default Value	New Value
tblLandUse	LotAcreage	1.03	2.18
tblLandUse	LotAcreage	0.29	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	29

tblVehicleTrips	CC_TL	7.30	5.97
tblVehicleTrips	CNW_TL	7.30	5.97
tblVehicleTrips	CW_TL	9.50	5.97
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	1.32	0.94
tblVehicleTrips	SU_TR	0.68	0.48
tblVehicleTrips	WD_TR	6.97	4.96
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.1 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					
2021	0.2334	1.9092	1.6610	3.1400e-003	0.0472	0.0926	0.1398	0.0172	0.0883	0.1055	0.0000	266.4768	266.4768	0.0485	0.0000	267.6903
2022	0.2716	0.2790	0.2885	5.3000e-004	4.4100e-003	0.0131	0.0175	1.1900e-003	0.0125	0.0137	0.0000	45.3277	45.3277	8.5500e-003	0.0000	45.5415
Maximum	**0.2716**	**1.9092**	**1.6610**	**3.1400e-003**	**0.0472**	**0.0926**	**0.1398**	**0.0172**	**0.0883**	**0.1055**	**0.0000**	**266.4768**	**266.4768**	**0.0485**	**0.0000**	**267.6903**

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					
2021	0.2334	1.9092	1.6610	3.1400e-003	0.0472	0.0926	0.1398	0.0172	0.0883	0.1055	0.0000	266.4765	266.4765	0.0485	0.0000	267.6900
2022	0.2716	0.2790	0.2885	5.3000e-004	4.4100e-003	0.0131	0.0175	1.1900e-003	0.0125	0.0137	0.0000	45.3277	45.3277	8.5500e-003	0.0000	45.5415
Maximum	**0.2716**	**1.9092**	**1.6610**	**3.1400e-003**	**0.0472**	**0.0926**	**0.1398**	**0.0172**	**0.0883**	**0.1055**	**0.0000**	**266.4765**	**266.4765**	**0.0485**	**0.0000**	**267.6900**

	ROG	**NOx**	**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	**3-1-2021**	**5-31-2021**	0.6630	0.6630
2	**6-1-2021**	**8-31-2021**	0.6289	0.6289
3	**9-1-2021**	**11-30-2021**	0.6226	0.6226
4	**12-1-2021**	**2-28-2022**	0.5902	0.5902
5	**3-1-2022**	**5-31-2022**	0.1754	0.1754
		Highest	0.6630	0.6630

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	0.2004	1.0000e-005	7.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3800e-003	1.3800e-003	0.0000	0.0000	1.4700e-003

Energy	6.4000e-003	0.0582	0.0489	3.5000e-004		4.4200e-003	4.4200e-003		4.4200e-003	4.4200e-003	0.0000	68.2965	68.2965	6.1600e-003	2.1900e-003	69.1018
Mobile	0.0312	0.1217	0.3539	1.3400e-003	0.1362	1.0600e-003	0.1372	0.0365	9.8000e-004	0.0374	0.0000	122.8709	122.8709	3.8000e-003	0.0000	122.9658
Waste						0.0000	0.0000		0.0000	0.0000	11.3269	0.0000	11.3269	0.6694	0.0000	28.0619
Water						0.0000	0.0000		0.0000	0.0000	3.6818	0.7407	4.4224	0.0134	8.1600e-003	7.1894
Total	**0.2380**	**0.1799**	**0.4034**	**1.6900e-003**	**0.1362**	**5.4800e-003**	**0.1417**	**0.0365**	**5.4000e-003**	**0.0419**	**15.0087**	**191.9095**	**206.9182**	**0.6928**	**0.0104**	**227.3204**

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	0.2004	1.0000e-005	7.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3800e-003	1.3800e-003	0.0000	0.0000	1.4700e-003
Energy	6.4000e-003	0.0582	0.0489	3.5000e-004		4.4200e-003	4.4200e-003		4.4200e-003	4.4200e-003	0.0000	68.2965	68.2965	6.1600e-003	2.1900e-003	69.1018
Mobile	0.0312	0.1217	0.3539	1.3400e-003	0.1362	1.0600e-003	0.1372	0.0365	9.8000e-004	0.0374	0.0000	122.8709	122.8709	3.8000e-003	0.0000	122.9658
Waste						0.0000	0.0000		0.0000	0.0000	11.3269	0.0000	11.3269	0.6694	0.0000	28.0619
Water						0.0000	0.0000		0.0000	0.0000	3.6818	0.7407	4.4224	0.0134	8.1600e-003	7.1894
Total	**0.2380**	**0.1799**	**0.4034**	**1.6900e-003**	**0.1362**	**5.4800e-003**	**0.1417**	**0.0365**	**5.4000e-003**	**0.0419**	**15.0087**	**191.9095**	**206.9182**	**0.6928**	**0.0104**	**227.3204**

	ROG	**NOx**	**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	3/1/2021	3/26/2021	5	20	
2	Site Preparation	Site Preparation	3/27/2021	3/31/2021	5	3	
3	Grading	Grading	4/1/2021	4/8/2021	5	6	
4	Building Construction	Building Construction	4/9/2021	2/10/2022	5	220	
5	Paving	Paving	2/11/2022	2/24/2022	5	10	
6	Architectural Coating	Architectural Coating	2/25/2022	3/10/2022	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: 67,500; Non-Residential Outdoor: 22,500; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
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
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
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
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
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

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
Architectural Coating	1	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	24.00	9.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	5	13.00	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
Paving	6	15.00	0.00	0.00	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

3.1 Mitigation Measures Construction

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0199	0.1970	0.1449	2.4000e-004		0.0104	0.0104		9.7100e-003	9.7100e-003	0.0000	21.0713	21.0713	5.3900e-003	0.0000	21.2060
Total	**0.0199**	**0.1970**	**0.1449**	**2.4000e-004**		**0.0104**	**0.0104**		**9.7100e-003**	**9.7100e-003**	**0.0000**	**21.0713**	**21.0713**	**5.3900e-003**	**0.0000**	**21.2060**

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-004	2.8000e-004	2.9700e-003	1.0000e-005	1.0300e-003	1.0000e-005	1.0400e-003	2.7000e-004	1.0000e-005	2.8000e-004	0.0000	0.8535	0.8535	2.0000e-005	0.0000	0.8540
Total	**4.0000e-004**	**2.8000e-004**	**2.9700e-003**	**1.0000e-005**	**1.0300e-003**	**1.0000e-005**	**1.0400e-003**	**2.7000e-004**	**1.0000e-005**	**2.8000e-004**	**0.0000**	**0.8535**	**0.8535**	**2.0000e-005**	**0.0000**	**0.8540**

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	0.0199	0.1970	0.1449	2.4000e-004		0.0104	0.0104		9.7100e-003	9.7100e-003	0.0000	21.0713	21.0713	5.3900e-003	0.0000	21.2060
Total	**0.0199**	**0.1970**	**0.1449**	**2.4000e-004**		**0.0104**	**0.0104**		**9.7100e-003**	**9.7100e-003**	**0.0000**	**21.0713**	**21.0713**	**5.3900e-003**	**0.0000**	**21.2060**

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-004	2.8000e-004	2.9700e-003	1.0000e-005	1.0300e-003	1.0000e-005	1.0400e-003	2.7000e-004	1.0000e-005	2.8000e-004	0.0000	0.8535	0.8535	2.0000e-005	0.0000	0.8540
Total	**4.0000e-004**	**2.8000e-004**	**2.9700e-003**	**1.0000e-005**	**1.0300e-003**	**1.0000e-005**	**1.0400e-003**	**2.7000e-004**	**1.0000e-005**	**2.8000e-004**	**0.0000**	**0.8535**	**0.8535**	**2.0000e-005**	**0.0000**	**0.8540**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
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	2.3200e-003	0.0274	0.0161	4.0000e-005		1.0500e-003	1.0500e-003		9.7000e-004	9.7000e-004	0.0000	3.2290	3.2290	1.0400e-003	0.0000	3.2551
Total	**2.3200e-003**	**0.0274**	**0.0161**	**4.0000e-005**	**2.3900e-003**	**1.0500e-003**	**3.4400e-003**	**2.6000e-004**	**9.7000e-004**	**1.2300e-003**	**0.0000**	**3.2290**	**3.2290**	**1.0400e-003**	**0.0000**	**3.2551**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	3.0000e-005	2.7000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0788	0.0788	0.0000	0.0000	0.0788

Total	**4.0000e-005**	**3.0000e-005**	**2.7000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0788**	**0.0788**	**0.0000**	**0.0000**	**0.0788**

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	2.3200e-003	0.0274	0.0161	4.0000e-005		1.0500e-003	1.0500e-003		9.7000e-004	9.7000e-004	0.0000	3.2290	3.2290	1.0400e-003	0.0000	3.2551
Total	**2.3200e-003**	**0.0274**	**0.0161**	**4.0000e-005**	**2.3900e-003**	**1.0500e-003**	**3.4400e-003**	**2.6000e-004**	**9.7000e-004**	**1.2300e-003**	**0.0000**	**3.2290**	**3.2290**	**1.0400e-003**	**0.0000**	**3.2551**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	3.0000e-005	2.7000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0788	0.0788	0.0000	0.0000	0.0788
Total	**4.0000e-005**	**3.0000e-005**	**2.7000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0788**	**0.0788**	**0.0000**	**0.0000**	**0.0788**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
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	5.4800e-003	0.0606	0.0293	6.0000e-005		2.7500e-003	2.7500e-003		2.5300e-003	2.5300e-003	0.0000	5.4312	5.4312	1.7600e-003	0.0000	5.4751
Total	**5.4800e-003**	**0.0606**	**0.0293**	**6.0000e-005**	**0.0197**	**2.7500e-003**	**0.0224**	**0.0101**	**2.5300e-003**	**0.0126**	**0.0000**	**5.4312**	**5.4312**	**1.7600e-003**	**0.0000**	**5.4751**

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	6.0000e-005	6.9000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1970	0.1970	0.0000	0.0000	0.1971
Total	**9.0000e-005**	**6.0000e-005**	**6.9000e-004**	**0.0000**	**2.4000e-004**	**0.0000**	**2.4000e-004**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**0.1970**	**0.1970**	**0.0000**	**0.0000**	**0.1971**

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	5.4800e-003	0.0606	0.0293	6.0000e-005		2.7500e-003	2.7500e-003		2.5300e-003	2.5300e-003	0.0000	5.4312	5.4312	1.7600e-003	0.0000	5.4751
Total	**5.4800e-003**	**0.0606**	**0.0293**	**6.0000e-005**	**0.0197**	**2.7500e-003**	**0.0224**	**0.0101**	**2.5300e-003**	**0.0126**	**0.0000**	**5.4312**	**5.4312**	**1.7600e-003**	**0.0000**	**5.4751**

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	6.0000e-005	6.9000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1970	0.1970	0.0000	0.0000	0.1971
Total	**9.0000e-005**	**6.0000e-005**	**6.9000e-004**	**0.0000**	**2.4000e-004**	**0.0000**	**2.4000e-004**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**0.1970**	**0.1970**	**0.0000**	**0.0000**	**0.1971**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1953	1.5306	1.3908	2.3900e-003		0.0781	0.0781		0.0748	0.0748	0.0000	198.3045	198.3045	0.0390	0.0000	199.2799
Total	**0.1953**	**1.5306**	**1.3908**	**2.3900e-003**		**0.0781**	**0.0781**		**0.0748**	**0.0748**	**0.0000**	**198.3045**	**198.3045**	**0.0390**	**0.0000**	**199.2799**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.8000e-003	0.0883	0.0235	2.3000e-004	5.6500e-003	2.0000e-004	5.8500e-003	1.6300e-003	1.9000e-004	1.8200e-003	0.0000	22.2636	22.2636	9.7000e-004	0.0000	22.2878
Worker	7.0600e-003	4.8900e-003	0.0524	1.7000e-004	0.0182	1.1000e-004	0.0183	4.8300e-003	1.1000e-004	4.9400e-003	0.0000	15.0479	15.0479	3.4000e-004	0.0000	15.0565
Total	**9.8600e-003**	**0.0932**	**0.0759**	**4.0000e-004**	**0.0238**	**3.1000e-004**	**0.0241**	**6.4600e-003**	**3.0000e-004**	**6.7600e-003**	**0.0000**	**37.3115**	**37.3115**	**1.3100e-003**	**0.0000**	**37.3443**

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	0.1953	1.5306	1.3908	2.3900e-003		0.0781	0.0781		0.0748	0.0748	0.0000	198.3043	198.3043	0.0390	0.0000	199.2797
Total	**0.1953**	**1.5306**	**1.3908**	**2.3900e-003**		**0.0781**	**0.0781**		**0.0748**	**0.0748**	**0.0000**	**198.3043**	**198.3043**	**0.0390**	**0.0000**	**199.2797**

Mitigated Construction Off-Site

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

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.8000e-003	0.0883	0.0235	2.3000e-004	5.6500e-003	2.0000e-004	5.8500e-003	1.6300e-003	1.9000e-004	1.8200e-003	0.0000	22.2636	22.2636	9.7000e-004	0.0000	22.2878
Worker	7.0600e-003	4.8900e-003	0.0524	1.7000e-004	0.0182	1.1000e-004	0.0183	4.8300e-003	1.1000e-004	4.9400e-003	0.0000	15.0479	15.0479	3.4000e-004	0.0000	15.0565
Total	**9.8600e-003**	**0.0932**	**0.0759**	**4.0000e-004**	**0.0238**	**3.1000e-004**	**0.0241**	**6.4600e-003**	**3.0000e-004**	**6.7600e-003**	**0.0000**	**37.3115**	**37.3115**	**1.3100e-003**	**0.0000**	**37.3443**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0269	0.2118	0.2081	3.6000e-004		0.0102	0.0102		9.7600e-003	9.7600e-003	0.0000	30.1136	30.1136	5.8100e-003	0.0000	30.2589
Total	**0.0269**	**0.2118**	**0.2081**	**3.6000e-004**		**0.0102**	**0.0102**		**9.7600e-003**	**9.7600e-003**	**0.0000**	**30.1136**	**30.1136**	**5.8100e-003**	**0.0000**	**30.2589**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.0000e-004	0.0127	3.3600e-003	3.0000e-005	8.6000e-004	3.0000e-005	8.8000e-004	2.5000e-004	2.0000e-005	2.7000e-004	0.0000	3.3480	3.3480	1.4000e-004	0.0000	3.3515
Worker	1.0000e-003	6.7000e-004	7.3200e-003	2.0000e-005	2.7600e-003	2.0000e-005	2.7800e-003	7.3000e-004	2.0000e-005	7.5000e-004	0.0000	2.2018	2.2018	5.0000e-005	0.0000	2.2029

Total	**1.4000e-003**	**0.0134**	**0.0107**	**5.0000e-005**	**3.6200e-003**	**5.0000e-005**	**3.6600e-003**	**9.8000e-004**	**4.0000e-005**	**1.0200e-003**	**0.0000**	**5.5498**	**5.5498**	**1.9000e-004**	**0.0000**	**5.5545**

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	0.0269	0.2118	0.2081	3.6000e-004		0.0102	0.0102		9.7600e-003	9.7600e-003	0.0000	30.1136	30.1136	5.8100e-003	0.0000	30.2588
Total	**0.0269**	**0.2118**	**0.2081**	**3.6000e-004**		**0.0102**	**0.0102**		**9.7600e-003**	**9.7600e-003**	**0.0000**	**30.1136**	**30.1136**	**5.8100e-003**	**0.0000**	**30.2588**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.0000e-004	0.0127	3.3600e-003	3.0000e-005	8.6000e-004	3.0000e-005	8.8000e-004	2.5000e-004	2.0000e-005	2.7000e-004	0.0000	3.3480	3.3480	1.4000e-004	0.0000	3.3515
Worker	1.0000e-003	6.7000e-004	7.3200e-003	2.0000e-005	2.7600e-003	2.0000e-005	2.7800e-003	7.3000e-004	2.0000e-005	7.5000e-004	0.0000	2.2018	2.2018	5.0000e-005	0.0000	2.2029
Total	**1.4000e-003**	**0.0134**	**0.0107**	**5.0000e-005**	**3.6200e-003**	**5.0000e-005**	**3.6600e-003**	**9.8000e-004**	**4.0000e-005**	**1.0200e-003**	**0.0000**	**5.5498**	**5.5498**	**1.9000e-004**	**0.0000**	**5.5545**

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.7100e-003	0.0467	0.0585	9.0000e-005		2.4400e-003	2.4400e-003		2.2500e-003	2.2500e-003	0.0000	7.7550	7.7550	2.4600e-003	0.0000	7.8165
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.7100e-003**	**0.0467**	**0.0585**	**9.0000e-005**		**2.4400e-003**	**2.4400e-003**		**2.2500e-003**	**2.2500e-003**	**0.0000**	**7.7550**	**7.7550**	**2.4600e-003**	**0.0000**	**7.8165**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2000e-004	1.4000e-004	1.5800e-003	1.0000e-005	5.9000e-004	0.0000	6.0000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4745	0.4745	1.0000e-005	0.0000	0.4748
Total	**2.2000e-004**	**1.4000e-004**	**1.5800e-003**	**1.0000e-005**	**5.9000e-004**	**0.0000**	**6.0000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.4745**	**0.4745**	**1.0000e-005**	**0.0000**	**0.4748**

Mitigated Construction On-Site

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

Off-Road	4.7100e-003	0.0467	0.0585	9.0000e-005		2.4400e-003	2.4400e-003		2.2500e-003	2.2500e-003	0.0000	7.7550	7.7550	2.4600e-003	0.0000	7.8165
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.7100e-003**	**0.0467**	**0.0585**	**9.0000e-005**		**2.4400e-003**	**2.4400e-003**		**2.2500e-003**	**2.2500e-003**	**0.0000**	**7.7550**	**7.7550**	**2.4600e-003**	**0.0000**	**7.8165**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2000e-004	1.4000e-004	1.5800e-003	1.0000e-005	5.9000e-004	0.0000	6.0000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4745	0.4745	1.0000e-005	0.0000	0.4748
Total	**2.2000e-004**	**1.4000e-004**	**1.5800e-003**	**1.0000e-005**	**5.9000e-004**	**0.0000**	**6.0000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.4745**	**0.4745**	**1.0000e-005**	**0.0000**	**0.4748**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2373					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0200e-003	7.0400e-003	9.0700e-003	1.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	1.2766	1.2766	8.0000e-005	0.0000	1.2787
Total	**0.2383**	**7.0400e-003**	**9.0700e-003**	**1.0000e-005**		**4.1000e-004**	**4.1000e-004**		**4.1000e-004**	**4.1000e-004**	**0.0000**	**1.2766**	**1.2766**	**8.0000e-005**	**0.0000**	**1.2787**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	5.0000e-005	5.3000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1582	0.1582	0.0000	0.0000	0.1583
Total	**7.0000e-005**	**5.0000e-005**	**5.3000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**2.0000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.1582**	**0.1582**	**0.0000**	**0.0000**	**0.1583**

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	0.2373					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0200e-003	7.0400e-003	9.0700e-003	1.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	1.2766	1.2766	8.0000e-005	0.0000	1.2787
Total	**0.2383**	**7.0400e-003**	**9.0700e-003**	**1.0000e-005**		**4.1000e-004**	**4.1000e-004**		**4.1000e-004**	**4.1000e-004**	**0.0000**	**1.2766**	**1.2766**	**8.0000e-005**	**0.0000**	**1.2787**

Mitigated Construction Off-Site

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

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	5.0000e-005	5.3000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1582	0.1582	0.0000	0.0000	0.1583
Total	**7.0000e-005**	**5.0000e-005**	**5.3000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**2.0000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.1582**	**0.1582**	**0.0000**	**0.0000**	**0.1583**

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	0.0312	0.1217	0.3539	1.3400e-003	0.1362	1.0600e-003	0.1372	0.0365	9.8000e-004	0.0374	0.0000	122.8709	122.8709	3.8000e-003	0.0000	122.9658
Unmitigated	0.0312	0.1217	0.3539	1.3400e-003	0.1362	1.0600e-003	0.1372	0.0365	9.8000e-004	0.0374	0.0000	122.8709	122.8709	3.8000e-003	0.0000	122.9658

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	223.20	42.30	21.60	366,288	366,288
Parking Lot	0.00	0.00	0.00		
Total	223.20	42.30	21.60	366,288	366,288

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-NW	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	5.97	5.97	5.97	59.00	28.00	13.00	100	0	0
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
General Light Industry	0.616749	0.035330	0.181430	0.103378	0.013121	0.005016	0.012828	0.021913	0.002183	0.001508	0.005219	0.000634	0.000691
Parking Lot	0.616749	0.035330	0.181430	0.103378	0.013121	0.005016	0.012828	0.021913	0.002183	0.001508	0.005219	0.000634	0.000691

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	4.9483	4.9483	4.9500e-003	1.0200e-003	5.3771
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	4.9483	4.9483	4.9500e-003	1.0200e-003	5.3771
NaturalGas Mitigated	6.4000e-003	0.0582	0.0489	3.5000e-004		4.4200e-003	4.4200e-003		4.4200e-003	4.4200e-003	0.0000	63.3482	63.3482	1.2100e-003	1.1600e-003	63.7246
NaturalGas Unmitigated	6.4000e-003	0.0582	0.0489	3.5000e-004		4.4200e-003	4.4200e-003		4.4200e-003	4.4200e-003	0.0000	63.3482	63.3482	1.2100e-003	1.1600e-003	63.7246

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	1.1871e+006	6.4000e-003	0.0582	0.0489	3.5000e-004		4.4200e-003	4.4200e-003		4.4200e-003	4.4200e-003	0.0000	63.3482	63.3482	1.2100e-003	1.1600e-003	63.7246
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		**6.4000e-003**	**0.0582**	**0.0489**	**3.5000e-004**		**4.4200e-003**	**4.4200e-003**		**4.4200e-003**	**4.4200e-003**	**0.0000**	**63.3482**	**63.3482**	**1.2100e-003**	**1.1600e-003**	**63.7246**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	1.1871e+006	6.4000e-003	0.0582	0.0489	3.5000e-004		4.4200e-003	4.4200e-003		4.4200e-003	4.4200e-003	0.0000	63.3482	63.3482	1.2100e-003	1.1600e-003	63.7246
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		**6.4000e-003**	**0.0582**	**0.0489**	**3.5000e-004**		**4.4200e-003**	**4.4200e-003**		**4.4200e-003**	**4.4200e-003**	**0.0000**	**63.3482**	**63.3482**	**1.2100e-003**	**1.1600e-003**	**63.7246**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	371700	4.8894	4.8900e-003	1.0100e-003	5.3131
Parking Lot	4480	0.0589	6.0000e-005	1.0000e-005	0.0640

Total		**4.9483**	**4.9500e-003**	**1.0200e-003**	**5.3771**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	371700	4.8894	4.8900e-003	1.0100e-003	5.3131
Parking Lot	4480	0.0589	6.0000e-005	1.0000e-005	0.0640
Total		**4.9483**	**4.9500e-003**	**1.0200e-003**	**5.3771**

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	0.2004	1.0000e-005	7.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3800e-003	1.3800e-003	0.0000	0.0000	1.4700e-003
Unmitigated	0.2004	1.0000e-005	7.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3800e-003	1.3800e-003	0.0000	0.0000	1.4700e-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	0.0237					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1766					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.0000e-005	1.0000e-005	7.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3800e-003	1.3800e-003	0.0000	0.0000	1.4700e-003
Total	**0.2004**	**1.0000e-005**	**7.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.3800e-003**	**1.3800e-003**	**0.0000**	**0.0000**	**1.4700e-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	0.0237					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1766					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.0000e-005	1.0000e-005	7.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3800e-003	1.3800e-003	0.0000	0.0000	1.4700e-003
Total	**0.2004**	**1.0000e-005**	**7.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.3800e-003**	**1.3800e-003**	**0.0000**	**0.0000**	**1.4700e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	4.4224	0.0134	8.1600e-003	7.1894
Unmitigated	4.4224	0.0134	8.1600e-003	7.1894

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	10.4063 / 0	4.4224	0.0134	8.1600e-003	7.1894
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**4.4224**	**0.0134**	**8.1600e-003**	**7.1894**

Mitigated

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

General Light Industry	10.4063 / 0	4.4224	0.0134	8.1600e-003	7.1894
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**4.4224**	**0.0134**	**8.1600e-003**	**7.1894**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	11.3269	0.6694	0.0000	28.0619
Unmitigated	11.3269	0.6694	0.0000	28.0619

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	55.8	11.3269	0.6694	0.0000	28.0619
Parking Lot	0	0.0000	0.0000	0.0000	0.0000

Total		**11.3269**	**0.6694**	**0.0000**	**28.0619**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	55.8	11.3269	0.6694	0.0000	28.0619
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**11.3269**	**0.6694**	**0.0000**	**28.0619**

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

Morgan Hill - Hwy Industrial Component (Warehouse)

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	1,060.00	1000sqft	54.74	1,060,000.00	0
Parking Lot	734.00	Space	0.00	238,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2025
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	29	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E rate

Land Use - Based on Trip Generation Data provided for building size and Construction data sheet for parking spaces and acreage

Construction Phase - Based on provided construction worksheet adjusted to 1/1/2021 start

Off-road Equipment - Construction worksheet

Off-road Equipment - operation only

Trips and VMT - On-site hauling accounted with off-road dump tenders. Added cement and asphalt trips as vendor trips distances using HHDT,MHDT vehicles

On-road Fugitive Dust -

Demolition -

Grading - Construction worksheet - used 165,000cy cut and fill with no mileage

Vehicle Trips - TIA for autos only = 1.39/1ksf. (Trucks computed seperately using CtEmfac)

Road Dust -

Energy Use -

Water And Wastewater - WTP treatment

Construction Off-road Equipment Mitigation - Enhanced BMPs and Tier 4 mitigation

Fleet Mix - Trucks modeled using CtEmfac so mix added to LDA 70% and LDT1 5%, LDT2 15%, MDV 10% (0.63, 0.04, 0.19, 0.11, 0.014, 0.006, 0,0, 0.002, 0.002, 0.005, 0.001, 0)

Stationary Sources - Emergency Generators and Fire Pumps - Largest typical size per CARB stationary diesel

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	0.5
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	11.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	20.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstructionPhase	NumDays	40.00	0.00
tblConstructionPhase	PhaseEndDate	3/30/2020	2/3/2020
tblFleetMix	HHD	0.02	0.00
tblFleetMix	LDA	0.62	0.63
tblFleetMix	LDT1	0.04	0.04
tblFleetMix	LDT2	0.18	0.19
tblFleetMix	LHD1	0.01	0.01

tblFleetMix	LHD2	5.0160e-003	6.0000e-003
tblFleetMix	MCY	5.2190e-003	5.0000e-003
tblFleetMix	MDV	0.10	0.11
tblFleetMix	MH	6.9100e-004	0.00
tblFleetMix	MHD	0.01	0.00
tblFleetMix	OBUS	2.1830e-003	2.0000e-003
tblFleetMix	SBUS	6.3400e-004	1.0000e-003
tblFleetMix	UBUS	1.5080e-003	2.0000e-003
tblGrading	AcresOfGrading	0.00	30.00
tblLandUse	LandUseSquareFeet	293,600.00	238,000.00
tblLandUse	LotAcreage	24.33	54.74
tblLandUse	LotAcreage	6.61	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	29
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	200.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	50.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	3.00
tblVehicleTrips	CC_TL	7.30	5.97
tblVehicleTrips	CNW_TL	7.30	5.97
tblVehicleTrips	CW_TL	9.50	5.97
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	1.68	1.39
tblVehicleTrips	SU_TR	1.68	1.39
tblVehicleTrips	WD_TR	1.68	1.39
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00

tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	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)
		Highest		

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	4.7144	1.5000e-004	0.0164	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0321	0.0321	8.0000e-005	0.0000	0.0341
Energy	0.0198	0.1803	0.1515	1.0800e-003		0.0137	0.0137		0.0137	0.0137	0.0000	246.5988	246.5988	0.0541	0.0140	252.1254
Mobile	0.2623	0.4032	2.9986	9.9500e-003	1.1840	9.1300e-003	1.1931	0.3162	8.4900e-003	0.3247	0.0000	902.9993	902.9993	0.0251	0.0000	903.6259
Stationary	0.0246	0.0688	0.0628	1.2000e-004		3.6200e-003	3.6200e-003		3.6200e-003	3.6200e-003	0.0000	11.4239	11.4239	1.6000e-003	0.0000	11.4640
Waste						0.0000	0.0000		0.0000	0.0000	202.2602	0.0000	202.2602	11.9532	0.0000	501.0911
Water						0.0000	0.0000		0.0000	0.0000	86.7256	17.4473	104.1729	0.3160	0.1922	169.3501
Total	**5.0212**	**0.6525**	**3.2293**	**0.0112**	**1.1840**	**0.0265**	**1.2105**	**0.3162**	**0.0259**	**0.3421**	**288.9858**	**1,178.5014**	**1,467.4872**	**12.3500**	**0.2062**	**1,837.6906**

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	4.7144	1.5000e-004	0.0164	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0321	0.0321	8.0000e-005	0.0000	0.0341
Energy	0.0198	0.1803	0.1515	1.0800e-003		0.0137	0.0137		0.0137	0.0137	0.0000	246.5988	246.5988	0.0541	0.0140	252.1254
Mobile	0.2623	0.4032	2.9986	9.9500e-003	1.1840	9.1300e-003	1.1931	0.3162	8.4900e-003	0.3247	0.0000	902.9993	902.9993	0.0251	0.0000	903.6259
Stationary	0.0246	0.0688	0.0628	1.2000e-004		3.6200e-003	3.6200e-003		3.6200e-003	3.6200e-003	0.0000	11.4239	11.4239	1.6000e-003	0.0000	11.4640
Waste						0.0000	0.0000		0.0000	0.0000	202.2602	0.0000	202.2602	11.9532	0.0000	501.0911
Water						0.0000	0.0000		0.0000	0.0000	86.7256	17.4473	104.1729	0.3160	0.1922	169.3501
Total	**5.0212**	**0.6525**	**3.2293**	**0.0112**	**1.1840**	**0.0265**	**1.2105**	**0.3162**	**0.0259**	**0.3421**	**288.9858**	**1,178.5014**	**1,467.4872**	**12.3500**	**0.2062**	**1,837.6906**

	ROG	NOx	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	Site Preparation	Site Preparation	2/4/2020	2/3/2020	5	0	

Acres of Grading (Site Preparation Phase): 30

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	0	8.00	187	0.41
Site Preparation	Off-Highway Trucks	0	8.00	402	0.38
Site Preparation	Rollers	0	8.00	80	0.38

Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Sweepers/Scrubbers	0	8.00	64	0.46
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2020

Unmitigated Construction On-Site

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

Unmitigated Construction Off-Site

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

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	0.2623	0.4032	2.9986	9.9500e-003	1.1840	9.1300e-003	1.1931	0.3162	8.4900e-003	0.3247	0.0000	902.9993	902.9993	0.0251	0.0000	903.6259
Unmitigated	0.2623	0.4032	2.9986	9.9500e-003	1.1840	9.1300e-003	1.1931	0.3162	8.4900e-003	0.3247	0.0000	902.9993	902.9993	0.0251	0.0000	903.6259

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	1,473.40	1,473.40	1473.40	3,201,816	3,201,816
Total	1,473.40	1,473.40	1,473.40	3,201,816	3,201,816

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
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No Rail	5.97	5.97	5.97	59.00	0.00	41.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.616749	0.035330	0.181430	0.103378	0.013121	0.005016	0.012828	0.021913	0.002183	0.001508	0.005219	0.000634	0.000691
Unrefrigerated Warehouse-No Rail	0.630000	0.040000	0.190000	0.110000	0.014000	0.006000	0.000000	0.000000	0.002000	0.002000	0.005000	0.001000	0.000000

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	50.3161	50.3161	0.0503	0.0104	54.6762
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	50.3161	50.3161	0.0503	0.0104	54.6762
NaturalGas Mitigated	0.0198	0.1803	0.1515	1.0800e-003		0.0137	0.0137		0.0137	0.0137	0.0000	196.2828	196.2828	3.7600e-003	3.6000e-003	197.4492
NaturalGas Unmitigated	0.0198	0.1803	0.1515	1.0800e-003		0.0137	0.0137		0.0137	0.0137	0.0000	196.2828	196.2828	3.7600e-003	3.6000e-003	197.4492

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	3.6782e+006	0.0198	0.1803	0.1515	1.0800e-003		0.0137	0.0137		0.0137	0.0137	0.0000	196.2828	196.2828	3.7600e-003	3.6000e-003	197.4492
Total		**0.0198**	**0.1803**	**0.1515**	**1.0800e-003**		**0.0137**	**0.0137**		**0.0137**	**0.0137**	**0.0000**	**196.2828**	**196.2828**	**3.7600e-003**	**3.6000e-003**	**197.4492**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	3.6782e+006	0.0198	0.1803	0.1515	1.0800e-003		0.0137	0.0137		0.0137	0.0137	0.0000	196.2828	196.2828	3.7600e-003	3.6000e-003	197.4492
Total		**0.0198**	**0.1803**	**0.1515**	**1.0800e-003**		**0.0137**	**0.0137**		**0.0137**	**0.0137**	**0.0000**	**196.2828**	**196.2828**	**3.7600e-003**	**3.6000e-003**	**197.4492**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	83300	1.0957	1.1000e-003	2.3000e-004	1.1907
Unrefrigerated Warehouse-No Rail	3.7418e+006	49.2203	0.0492	0.0102	53.4855

Total		**50.3161**	**0.0503**	**0.0104**	**54.6762**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	83300	1.0957	1.1000e-003	2.3000e-004	1.1907
Unrefrigerated Warehouse-No Rail	3.7418e+006	49.2203	0.0492	0.0102	53.4855
Total		**50.3161**	**0.0503**	**0.0104**	**54.6762**

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	4.7144	1.5000e-004	0.0164	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0321	0.0321	8.0000e-005	0.0000	0.0341
Unmitigated	4.7144	1.5000e-004	0.0164	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0321	0.0321	8.0000e-005	0.0000	0.0341

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	0.5577					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.1552					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.5100e-003	1.5000e-004	0.0164	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0321	0.0321	8.0000e-005	0.0000	0.0341
Total	**4.7144**	**1.5000e-004**	**0.0164**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**	**0.0000**	**0.0321**	**0.0321**	**8.0000e-005**	**0.0000**	**0.0341**

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	0.5577					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.1552					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.5100e-003	1.5000e-004	0.0164	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0321	0.0321	8.0000e-005	0.0000	0.0341
Total	**4.7144**	**1.5000e-004**	**0.0164**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**	**0.0000**	**0.0321**	**0.0321**	**8.0000e-005**	**0.0000**	**0.0341**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	104.1729	0.3160	0.1922	169.3501
Unmitigated	104.1729	0.3160	0.1922	169.3501

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	245.125 / 0	104.1729	0.3160	0.1922	169.3501
Total		**104.1729**	**0.3160**	**0.1922**	**169.3501**

Mitigated

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

Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	245.125 / 0	104.1729	0.3160	0.1922	169.3501
Total		**104.1729**	**0.3160**	**0.1922**	**169.3501**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	202.2602	11.9532	0.0000	501.0911
Unmitigated	202.2602	11.9532	0.0000	501.0911

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	996.4	202.2602	11.9532	0.0000	501.0911

Total		**202.2602**	**11.9532**	**0.0000**	**501.0911**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	996.4	202.2602	11.9532	0.0000	501.0911
Total		**202.2602**	**11.9532**	**0.0000**	**501.0911**

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
Fire Pump	3	0	50	200	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					
Fire Pump - Diesel (175 - 300 HP)	0.0246	0.0688	0.0628	1.2000e-004		3.6200e-003	3.6200e-003		3.6200e-003	3.6200e-003	0.0000	11.4239	11.4239	1.6000e-003	0.0000	11.4640
Total	**0.0246**	**0.0688**	**0.0628**	**1.2000e-004**		**3.6200e-003**	**3.6200e-003**		**3.6200e-003**	**3.6200e-003**	**0.0000**	**11.4239**	**11.4239**	**1.6000e-003**	**0.0000**	**11.4640**

11.0 Vegetation

Morgan Hill - Hwy Residential Component

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	319.00	Dwelling Unit	28.00	574,200.00	912

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2025
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	29	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E rate

Land Use - Assume all SF residences on 28 acre site

Construction Phase - Default schedule

Off-road Equipment - x

Trips and VMT -

Grading - x

Vehicle Trips - Traffic = 9.44,9.83,8.55

Woodstoves - no wood burning 217 nat gas

Water And Wastewater - wtp treatment

Construction Off-road Equipment Mitigation - Enhanced BMPs and Tier 4

Area Mitigation -

Energy Mitigation - Assume 2019 Title 24

Water Mitigation -

Energy Use - No natural gas usage

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterExposedAreaPM10PercentReduction	55	61
tblConstDustMitigation	WaterExposedAreaPM25PercentReduction	55	61
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
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	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim

tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblEnergyUse	NT24NG	3,155.00	0.00
tblEnergyUse	T24NG	25,910.09	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	79.75	217.00
tblFireplaces	NumberWood	137.17	0.00
tblLandUse	LotAcreage	103.57	28.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	29
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	HO_TL	5.70	5.97
tblVehicleTrips	HS_TL	4.80	5.97
tblVehicleTrips	HW_TL	10.80	5.97
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	ST_TR	9.91	9.83
tblVehicleTrips	SU_TR	8.62	8.55
tblVehicleTrips	WD_TR	9.52	9.44
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	WoodstoveWoodMass	956.80	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					
2021	0.3670	3.5251	2.8940	6.1800e-003	0.4921	0.1604	0.6525	0.2117	0.1495	0.3612	0.0000	547.4910	547.4910	0.1108	0.0000	550.2604
2022	0.2703	2.4241	2.5174	5.5700e-003	0.1395	0.1048	0.2443	0.0377	0.0985	0.1362	0.0000	494.6705	494.6705	0.0793	0.0000	496.6524
2023	4.0567	0.1206	0.1808	3.1000e-004	4.3200e-003	6.1100e-003	0.0104	1.1500e-003	5.7200e-003	6.8700e-003	0.0000	26.8109	26.8109	6.4900e-003	0.0000	26.9731
Maximum	**4.0567**	**3.5251**	**2.8940**	**6.1800e-003**	**0.4921**	**0.1604**	**0.6525**	**0.2117**	**0.1495**	**0.3612**	**0.0000**	**547.4910**	**547.4910**	**0.1108**	**0.0000**	**550.2604**

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					
2021	0.1295	1.9924	3.1709	6.1800e-003	0.2629	0.0126	0.2754	0.1017	0.0125	0.1142	0.0000	547.4906	547.4906	0.1108	0.0000	550.2599
2022	0.1211	1.8416	2.7233	5.5700e-003	0.1395	0.0121	0.1517	0.0377	0.0120	0.0498	0.0000	494.6701	494.6701	0.0793	0.0000	496.6520
2023	4.0476	0.1149	0.2069	3.1000e-004	4.3200e-003	4.5000e-004	4.7700e-003	1.1500e-003	4.5000e-004	1.6000e-003	0.0000	26.8109	26.8109	6.4900e-003	0.0000	26.9730
Maximum	**4.0476**	**1.9924**	**3.1709**	**6.1800e-003**	**0.2629**	**0.0126**	**0.2754**	**0.1017**	**0.0125**	**0.1142**	**0.0000**	**547.4906**	**547.4906**	**0.1108**	**0.0000**	**550.2599**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**8.43**	**34.94**	**-9.10**	**0.00**	**36.05**	**90.74**	**52.40**	**43.88**	**90.16**	**67.16**	**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	**1-1-2021**	**3-31-2021**	1.5677	0.5813
2	**4-1-2021**	**6-30-2021**	0.7731	0.5087

3	**7-1-2021**	**9-30-2021**	0.7717	0.5126
4	**10-1-2021**	**12-31-2021**	0.7754	0.5162
5	**1-1-2022**	**3-31-2022**	0.6857	0.4968
6	**4-1-2022**	**6-30-2022**	0.6901	0.4991
7	**7-1-2022**	**9-30-2022**	0.6977	0.5046
8	**10-1-2022**	**12-31-2022**	0.6268	0.4668
9	**1-1-2023**	**3-31-2023**	4.1751	4.1605
		Highest	4.1751	4.1605

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	2.7205	0.0507	2.3763	2.7000e-004		0.0150	0.0150		0.0150	0.0150	0.0000	30.9592	30.9592	4.2200e-003	5.0000e-004	31.2128
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	33.9495	33.9495	0.0340	7.0200e-003	36.8914
Mobile	0.5531	2.1574	6.2739	0.0237	2.4147	0.0188	2.4334	0.6463	0.0174	0.6637	0.0000	2,178.5423	2,178.5423	0.0673	0.0000	2,180.2253
Waste						0.0000	0.0000		0.0000	0.0000	77.7537	0.0000	77.7537	4.5951	0.0000	192.6314
Water						0.0000	0.0000		0.0000	0.0000	7.3535	2.0826	9.4361	0.0274	0.0164	15.0147
Total	**3.2736**	**2.2081**	**8.6502**	**0.0240**	**2.4147**	**0.0338**	**2.4484**	**0.6463**	**0.0325**	**0.6787**	**85.1071**	**2,245.5337**	**2,330.6408**	**4.7280**	**0.0239**	**2,455.9757**

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	2.7205	0.0507	2.3763	2.7000e-004		0.0150	0.0150		0.0150	0.0150	0.0000	30.9592	30.9592	4.2200e-003	5.0000e-004	31.2128
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	33.1977	33.1977	0.0332	6.8700e-003	36.0744
Mobile	0.5531	2.1574	6.2739	0.0237	2.4147	0.0188	2.4334	0.6463	0.0174	0.6637	0.0000	2,178.5423	2,178.5423	0.0673	0.0000	2,180.2253
Waste						0.0000	0.0000		0.0000	0.0000	77.7537	0.0000	77.7537	4.5951	0.0000	192.6314
Water						0.0000	0.0000		0.0000	0.0000	7.3535	2.0458	9.3993	0.0274	0.0164	14.9747
Total	**3.2736**	**2.2081**	**8.6502**	**0.0240**	**2.4147**	**0.0338**	**2.4484**	**0.6463**	**0.0325**	**0.6787**	**85.1071**	**2,244.7450**	**2,329.8522**	**4.7272**	**0.0238**	**2,455.1187**

	ROG	NOx	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**	**0.04**	**0.03**	**0.02**	**0.67**	**0.03**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2021	1/28/2021	5	20	
2	Grading	Grading	1/29/2021	4/1/2021	5	45	
3	Exterior Building Construction	Building Construction	4/2/2021	12/8/2022	5	440	
4	Paving/Site Concrete/Landscape	Paving	12/9/2022	1/26/2023	5	35	
5	Interior Building Construction	Architectural Coating	1/27/2023	3/16/2023	5	35	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 112.5

Acres of Paving: 0

Residential Indoor: 1,162,755; Residential Outdoor: 387,585; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Exterior Building Construction	Cranes	1	7.00	231	0.29
Exterior Building Construction	Forklifts	3	8.00	89	0.20
Exterior Building Construction	Generator Sets	1	8.00	84	0.74
Exterior Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Exterior Building Construction	Welders	1	8.00	46	0.45
Paving/Site Concrete/Landscape	Pavers	2	8.00	130	0.42
Paving/Site Concrete/Landscape	Paving Equipment	2	8.00	132	0.36
Paving/Site Concrete/Landscape	Rollers	2	8.00	80	0.38
Interior Building Construction	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
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Exterior Building Construction	9	115.00	34.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving/Site Concrete/Landscape	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Interior Building Construction	1	23.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1807	0.0000	0.1807	0.0993	0.0000	0.0993	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0389	0.4050	0.2115	3.8000e-004		0.0204	0.0204		0.0188	0.0188	0.0000	33.4357	33.4357	0.0108	0.0000	33.7061
Total	**0.0389**	**0.4050**	**0.2115**	**3.8000e-004**	**0.1807**	**0.0204**	**0.2011**	**0.0993**	**0.0188**	**0.1181**	**0.0000**	**33.4357**	**33.4357**	**0.0108**	**0.0000**	**33.7061**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.5000e-004	3.8000e-004	4.1200e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1818	1.1818	3.0000e-005	0.0000	1.1825
Total	**5.5000e-004**	**3.8000e-004**	**4.1200e-003**	**1.0000e-005**	**1.4300e-003**	**1.0000e-005**	**1.4400e-003**	**3.8000e-004**	**1.0000e-005**	**3.9000e-004**	**0.0000**	**1.1818**	**1.1818**	**3.0000e-005**	**0.0000**	**1.1825**

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					0.0705	0.0000	0.0705	0.0387	0.0000	0.0387	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.9700e-003	0.1216	0.2296	3.8000e-004		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004	0.0000	33.4357	33.4357	0.0108	0.0000	33.7060
Total	**6.9700e-003**	**0.1216**	**0.2296**	**3.8000e-004**	**0.0705**	**6.2000e-004**	**0.0711**	**0.0387**	**6.2000e-004**	**0.0394**	**0.0000**	**33.4357**	**33.4357**	**0.0108**	**0.0000**	**33.7060**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.5000e-004	3.8000e-004	4.1200e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1818	1.1818	3.0000e-005	0.0000	1.1825
Total	**5.5000e-004**	**3.8000e-004**	**4.1200e-003**	**1.0000e-005**	**1.4300e-003**	**1.0000e-005**	**1.4400e-003**	**3.8000e-004**	**1.0000e-005**	**3.9000e-004**	**0.0000**	**1.1818**	**1.1818**	**3.0000e-005**	**0.0000**	**1.1825**

3.3 Grading - 2021

Unmitigated Construction On-Site

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

Fugitive Dust					0.1952	0.0000	0.1952	0.0809	0.0000	0.0809	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0943	1.0440	0.6948	1.4000e-003		0.0447	0.0447		0.0411	0.0411	0.0000	122.6137	122.6137	0.0397	0.0000	123.6051
Total	**0.0943**	**1.0440**	**0.6948**	**1.4000e-003**	**0.1952**	**0.0447**	**0.2398**	**0.0809**	**0.0411**	**0.1220**	**0.0000**	**122.6137**	**122.6137**	**0.0397**	**0.0000**	**123.6051**

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	1.3900e-003	9.6000e-004	0.0103	3.0000e-005	3.5700e-003	2.0000e-005	3.5900e-003	9.5000e-004	2.0000e-005	9.7000e-004	0.0000	2.9544	2.9544	7.0000e-005	0.0000	2.9561
Total	**1.3900e-003**	**9.6000e-004**	**0.0103**	**3.0000e-005**	**3.5700e-003**	**2.0000e-005**	**3.5900e-003**	**9.5000e-004**	**2.0000e-005**	**9.7000e-004**	**0.0000**	**2.9544**	**2.9544**	**7.0000e-005**	**0.0000**	**2.9561**

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					0.0761	0.0000	0.0761	0.0316	0.0000	0.0316	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0228	0.4336	0.8263	1.4000e-003		2.2800e-003	2.2800e-003		2.2800e-003	2.2800e-003	0.0000	122.6136	122.6136	0.0397	0.0000	123.6050
Total	**0.0228**	**0.4336**	**0.8263**	**1.4000e-003**	**0.0761**	**2.2800e-003**	**0.0784**	**0.0316**	**2.2800e-003**	**0.0338**	**0.0000**	**122.6136**	**122.6136**	**0.0397**	**0.0000**	**123.6050**

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	1.3900e-003	9.6000e-004	0.0103	3.0000e-005	3.5700e-003	2.0000e-005	3.5900e-003	9.5000e-004	2.0000e-005	9.7000e-004	0.0000	2.9544	2.9544	7.0000e-005	0.0000	2.9561
Total	**1.3900e-003**	**9.6000e-004**	**0.0103**	**3.0000e-005**	**3.5700e-003**	**2.0000e-005**	**3.5900e-003**	**9.5000e-004**	**2.0000e-005**	**9.7000e-004**	**0.0000**	**2.9544**	**2.9544**	**7.0000e-005**	**0.0000**	**2.9561**

3.4 Exterior Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1863	1.7084	1.6244	2.6400e-003		0.0939	0.0939		0.0883	0.0883	0.0000	227.0045	227.0045	0.0548	0.0000	228.3737
Total	**0.1863**	**1.7084**	**1.6244**	**2.6400e-003**		**0.0939**	**0.0939**		**0.0883**	**0.0883**	**0.0000**	**227.0045**	**227.0045**	**0.0548**	**0.0000**	**228.3737**

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	0.0109	0.3424	0.0911	9.0000e-004	0.0219	7.6000e-004	0.0227	6.3400e-003	7.3000e-004	7.0600e-003	0.0000	86.3086	86.3086	3.7600e-003	0.0000	86.4026
Worker	0.0347	0.0240	0.2578	8.2000e-004	0.0894	5.6000e-004	0.0900	0.0238	5.2000e-004	0.0243	0.0000	73.9923	73.9923	1.6800e-003	0.0000	74.0343
Total	**0.0456**	**0.3664**	**0.3490**	**1.7200e-003**	**0.1113**	**1.3200e-003**	**0.1126**	**0.0301**	**1.2500e-003**	**0.0314**	**0.0000**	**160.3009**	**160.3009**	**5.4400e-003**	**0.0000**	**160.4370**

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	0.0523	1.0694	1.7516	2.6400e-003		8.2900e-003	8.2900e-003		8.2900e-003	8.2900e-003	0.0000	227.0043	227.0043	0.0548	0.0000	228.3734
Total	**0.0523**	**1.0694**	**1.7516**	**2.6400e-003**		**8.2900e-003**	**8.2900e-003**		**8.2900e-003**	**8.2900e-003**	**0.0000**	**227.0043**	**227.0043**	**0.0548**	**0.0000**	**228.3734**

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	0.0109	0.3424	0.0911	9.0000e-004	0.0219	7.6000e-004	0.0227	6.3400e-003	7.3000e-004	7.0600e-003	0.0000	86.3086	86.3086	3.7600e-003	0.0000	86.4026
Worker	0.0347	0.0240	0.2578	8.2000e-004	0.0894	5.6000e-004	0.0900	0.0238	5.2000e-004	0.0243	0.0000	73.9923	73.9923	1.6800e-003	0.0000	74.0343

Total	**0.0456**	**0.3664**	**0.3490**	**1.7200e-003**	**0.1113**	**1.3200e-003**	**0.1126**	**0.0301**	**1.2500e-003**	**0.0314**	**0.0000**	**160.3009**	**160.3009**	**5.4400e-003**	**0.0000**	**160.4370**

3.4 Exterior Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2082	1.9051	1.9963	3.2900e-003		0.0987	0.0987		0.0929	0.0929	0.0000	282.7048	282.7048	0.0677	0.0000	284.3980
Total	**0.2082**	**1.9051**	**1.9963**	**3.2900e-003**		**0.0987**	**0.0987**		**0.0929**	**0.0929**	**0.0000**	**282.7048**	**282.7048**	**0.0677**	**0.0000**	**284.3980**

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	0.0126	0.4029	0.1069	1.1100e-003	0.0273	8.2000e-004	0.0281	7.8900e-003	7.9000e-004	8.6800e-003	0.0000	106.4175	106.4175	4.4700e-003	0.0000	106.5292
Worker	0.0403	0.0269	0.2950	9.8000e-004	0.1113	6.8000e-004	0.1120	0.0296	6.3000e-004	0.0302	0.0000	88.7669	88.7669	1.8800e-003	0.0000	88.8139
Total	**0.0530**	**0.4298**	**0.4019**	**2.0900e-003**	**0.1386**	**1.5000e-003**	**0.1401**	**0.0375**	**1.4200e-003**	**0.0389**	**0.0000**	**195.1844**	**195.1844**	**6.3500e-003**	**0.0000**	**195.3431**

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	0.0651	1.3313	2.1806	3.2900e-003		0.0103	0.0103		0.0103	0.0103	0.0000	282.7045	282.7045	0.0677	0.0000	284.3977
Total	**0.0651**	**1.3313**	**2.1806**	**3.2900e-003**		**0.0103**	**0.0103**		**0.0103**	**0.0103**	**0.0000**	**282.7045**	**282.7045**	**0.0677**	**0.0000**	**284.3977**

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	0.0126	0.4029	0.1069	1.1100e-003	0.0273	8.2000e-004	0.0281	7.8900e-003	7.9000e-004	8.6800e-003	0.0000	106.4175	106.4175	4.4700e-003	0.0000	106.5292
Worker	0.0403	0.0269	0.2950	9.8000e-004	0.1113	6.8000e-004	0.1120	0.0296	6.3000e-004	0.0302	0.0000	88.7669	88.7669	1.8800e-003	0.0000	88.8139
Total	**0.0530**	**0.4298**	**0.4019**	**2.0900e-003**	**0.1386**	**1.5000e-003**	**0.1401**	**0.0375**	**1.4200e-003**	**0.0389**	**0.0000**	**195.1844**	**195.1844**	**6.3500e-003**	**0.0000**	**195.3431**

3.5 Paving/Site Concrete/Landscape - 2022

Unmitigated Construction On-Site

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

Off-Road	8.8200e-003	0.0890	0.1166	1.8000e-004		4.5400e-003	4.5400e-003		4.1800e-003	4.1800e-003	0.0000	16.0221	16.0221	5.1800e-003	0.0000	16.1516
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**8.8200e-003**	**0.0890**	**0.1166**	**1.8000e-004**		**4.5400e-003**	**4.5400e-003**		**4.1800e-003**	**4.1800e-003**	**0.0000**	**16.0221**	**16.0221**	**5.1800e-003**	**0.0000**	**16.1516**

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	3.5000e-004	2.3000e-004	2.5200e-003	1.0000e-005	9.5000e-004	1.0000e-005	9.6000e-004	2.5000e-004	1.0000e-005	2.6000e-004	0.0000	0.7592	0.7592	2.0000e-005	0.0000	0.7596
Total	**3.5000e-004**	**2.3000e-004**	**2.5200e-003**	**1.0000e-005**	**9.5000e-004**	**1.0000e-005**	**9.6000e-004**	**2.5000e-004**	**1.0000e-005**	**2.6000e-004**	**0.0000**	**0.7592**	**0.7592**	**2.0000e-005**	**0.0000**	**0.7596**

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	2.6700e-003	0.0803	0.1384	1.8000e-004		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	16.0220	16.0220	5.1800e-003	0.0000	16.1516
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.6700e-003**	**0.0803**	**0.1384**	**1.8000e-004**		**3.0000e-004**	**3.0000e-004**		**3.0000e-004**	**3.0000e-004**	**0.0000**	**16.0220**	**16.0220**	**5.1800e-003**	**0.0000**	**16.1516**

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	3.5000e-004	2.3000e-004	2.5200e-003	1.0000e-005	9.5000e-004	1.0000e-005	9.6000e-004	2.5000e-004	1.0000e-005	2.6000e-004	0.0000	0.7592	0.7592	2.0000e-005	0.0000	0.7596
Total	**3.5000e-004**	**2.3000e-004**	**2.5200e-003**	**1.0000e-005**	**9.5000e-004**	**1.0000e-005**	**9.6000e-004**	**2.5000e-004**	**1.0000e-005**	**2.6000e-004**	**0.0000**	**0.7592**	**0.7592**	**2.0000e-005**	**0.0000**	**0.7596**

3.5 Paving/Site Concrete/Landscape - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.8100e-003	0.0968	0.1386	2.2000e-004		4.8500e-003	4.8500e-003		4.4600e-003	4.4600e-003	0.0000	19.0255	19.0255	6.1500e-003	0.0000	19.1794
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.8100e-003**	**0.0968**	**0.1386**	**2.2000e-004**		**4.8500e-003**	**4.8500e-003**		**4.4600e-003**	**4.4600e-003**	**0.0000**	**19.0255**	**19.0255**	**6.1500e-003**	**0.0000**	**19.1794**

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	3.8000e-004	2.5000e-004	2.7600e-003	1.0000e-005	1.1300e-003	1.0000e-005	1.1400e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	0.8673	0.8673	2.0000e-005	0.0000	0.8678
Total	**3.8000e-004**	**2.5000e-004**	**2.7600e-003**	**1.0000e-005**	**1.1300e-003**	**1.0000e-005**	**1.1400e-003**	**3.0000e-004**	**1.0000e-005**	**3.1000e-004**	**0.0000**	**0.8673**	**0.8673**	**2.0000e-005**	**0.0000**	**0.8678**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.1700e-003	0.0954	0.1643	2.2000e-004		3.6000e-004	3.6000e-004		3.6000e-004	3.6000e-004	0.0000	19.0255	19.0255	6.1500e-003	0.0000	19.1793
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.1700e-003**	**0.0954**	**0.1643**	**2.2000e-004**		**3.6000e-004**	**3.6000e-004**		**3.6000e-004**	**3.6000e-004**	**0.0000**	**19.0255**	**19.0255**	**6.1500e-003**	**0.0000**	**19.1793**

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	3.8000e-004	2.5000e-004	2.7600e-003	1.0000e-005	1.1300e-003	1.0000e-005	1.1400e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	0.8673	0.8673	2.0000e-005	0.0000	0.8678

Total	**3.8000e-004**	**2.5000e-004**	**2.7600e-003**	**1.0000e-005**	**1.1300e-003**	**1.0000e-005**	**1.1400e-003**	**3.0000e-004**	**1.0000e-005**	**3.1000e-004**	**0.0000**	**0.8673**	**0.8673**	**2.0000e-005**	**0.0000**	**0.8678**

3.6 Interior Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	4.0420					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.3500e-003	0.0228	0.0317	5.0000e-005		1.2400e-003	1.2400e-003		1.2400e-003	1.2400e-003	0.0000	4.4682	4.4682	2.7000e-004	0.0000	4.4749
Total	**4.0454**	**0.0228**	**0.0317**	**5.0000e-005**		**1.2400e-003**	**1.2400e-003**		**1.2400e-003**	**1.2400e-003**	**0.0000**	**4.4682**	**4.4682**	**2.7000e-004**	**0.0000**	**4.4749**

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	1.0800e-003	6.9000e-004	7.7900e-003	3.0000e-005	3.1900e-003	2.0000e-005	3.2100e-003	8.5000e-004	2.0000e-005	8.7000e-004	0.0000	2.4499	2.4499	5.0000e-005	0.0000	2.4511
Total	**1.0800e-003**	**6.9000e-004**	**7.7900e-003**	**3.0000e-005**	**3.1900e-003**	**2.0000e-005**	**3.2100e-003**	**8.5000e-004**	**2.0000e-005**	**8.7000e-004**	**0.0000**	**2.4499**	**2.4499**	**5.0000e-005**	**0.0000**	**2.4511**

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	4.0420					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.5000e-004	0.0186	0.0321	5.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	4.4682	4.4682	2.7000e-004	0.0000	4.4749
Total	**4.0430**	**0.0186**	**0.0321**	**5.0000e-005**		**7.0000e-005**	**7.0000e-005**		**7.0000e-005**	**7.0000e-005**	**0.0000**	**4.4682**	**4.4682**	**2.7000e-004**	**0.0000**	**4.4749**

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	1.0800e-003	6.9000e-004	7.7900e-003	3.0000e-005	3.1900e-003	2.0000e-005	3.2100e-003	8.5000e-004	2.0000e-005	8.7000e-004	0.0000	2.4499	2.4499	5.0000e-005	0.0000	2.4511
Total	**1.0800e-003**	**6.9000e-004**	**7.7900e-003**	**3.0000e-005**	**3.1900e-003**	**2.0000e-005**	**3.2100e-003**	**8.5000e-004**	**2.0000e-005**	**8.7000e-004**	**0.0000**	**2.4499**	**2.4499**	**5.0000e-005**	**0.0000**	**2.4511**

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	0.5531	2.1574	6.2739	0.0237	2.4147	0.0188	2.4334	0.6463	0.0174	0.6637	0.0000	2,178.5423	2,178.5423	0.0673	0.0000	2,180.2253
Unmitigated	0.5531	2.1574	6.2739	0.0237	2.4147	0.0188	2.4334	0.6463	0.0174	0.6637	0.0000	2,178.5423	2,178.5423	0.0673	0.0000	2,180.2253

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	3,011.36	3,135.77	2727.45	6,494,411	6,494,411
Total	3,011.36	3,135.77	2,727.45	6,494,411	6,494,411

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
Single Family Housing	5.97	5.97	5.97	31.00	15.00	54.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.616749	0.035330	0.181430	0.103378	0.013121	0.005016	0.012828	0.021913	0.002183	0.001508	0.005219	0.000634	0.000691

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	33.1977	33.1977	0.0332	6.8700e-003	36.0744
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	33.9495	33.9495	0.0340	7.0200e-003	36.8914
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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					
Single Family Housing	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
Single Family Housing	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	2.58089e+006	33.9495	0.0340	7.0200e-003	36.8914
Total		**33.9495**	**0.0340**	**7.0200e-003**	**36.8914**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	2.52374e+006	33.1977	0.0332	6.8700e-003	36.0744
Total		**33.1977**	**0.0332**	**6.8700e-003**	**36.0744**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.7205	0.0507	2.3763	2.7000e-004		0.0150	0.0150		0.0150	0.0150	0.0000	30.9592	30.9592	4.2200e-003	5.0000e-004	31.2128
Unmitigated	2.7205	0.0507	2.3763	2.7000e-004		0.0150	0.0150		0.0150	0.0150	0.0000	30.9592	30.9592	4.2200e-003	5.0000e-004	31.2128

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	0.4042					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.2425					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	2.7400e-003	0.0234	9.9500e-003	1.5000e-004		1.8900e-003	1.8900e-003		1.8900e-003	1.8900e-003	0.0000	27.0901	27.0901	5.2000e-004	5.0000e-004	27.2511
Landscaping	0.0711	0.0273	2.3664	1.3000e-004		0.0131	0.0131		0.0131	0.0131	0.0000	3.8691	3.8691	3.7100e-003	0.0000	3.9617
Total	**2.7205**	**0.0507**	**2.3763**	**2.8000e-004**		**0.0150**	**0.0150**		**0.0150**	**0.0150**	**0.0000**	**30.9592**	**30.9592**	**4.2300e-003**	**5.0000e-004**	**31.2128**

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	0.4042					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.2425					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	2.7400e-003	0.0234	9.9500e-003	1.5000e-004		1.8900e-003	1.8900e-003		1.8900e-003	1.8900e-003	0.0000	27.0901	27.0901	5.2000e-004	5.0000e-004	27.2511
Landscaping	0.0711	0.0273	2.3664	1.3000e-004		0.0131	0.0131		0.0131	0.0131	0.0000	3.8691	3.8691	3.7100e-003	0.0000	3.9617
Total	**2.7205**	**0.0507**	**2.3763**	**2.8000e-004**		**0.0150**	**0.0150**		**0.0150**	**0.0150**	**0.0000**	**30.9592**	**30.9592**	**4.2300e-003**	**5.0000e-004**	**31.2128**

7.0 Water Detail

7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

Use Water Efficient Landscaping

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	9.3993	0.0274	0.0164	14.9747
Unmitigated	9.4361	0.0274	0.0164	15.0147

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	20.7841 / 13.103	9.4361	0.0274	0.0164	15.0147
Total		**9.4361**	**0.0274**	**0.0164**	**15.0147**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	20.7841 / 12.3038	9.3993	0.0274	0.0164	14.9747
Total		**9.3993**	**0.0274**	**0.0164**	**14.9747**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	77.7537	4.5951	0.0000	192.6314
Unmitigated	77.7537	4.5951	0.0000	192.6314

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	383.04	77.7537	4.5951	0.0000	192.6314
Total		**77.7537**	**4.5951**	**0.0000**	**192.6314**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	383.04	77.7537	4.5951	0.0000	192.6314

Total		**77.7537**	**4.5951**	**0.0000**	**192.6314**

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

CO2_RUNEX	CO2_IDLEX	CO2_STREX	CH4_RUNEX	CH4_IDLEX	CH4_STREX	PM10_RUNEX	PM10_IDLEX	PM10_STREX	PM10_PMTW	PM10_PMBW	PM2_5_RUNE	PM2_5_IDLEX	PM2_5_STRE	PM2_5_PMT\	PM2_5_PMB\	N2O_RUNEX	N2O_IDLEX	N2O_STREX
1932.221009	0	44.4895006	0.075015	0	0.000278	0.000991	0	0.000413	0.02	0.06174	0.000911	0	0.00038	0.005	0.02646	0.131065483	0	0.003748
1358.491205	10794.61362	0	0.001114	0.21094	0	0.025106	0.026264	0	0.035503	0.060888	0.02402	0.025128	0	0.008876	0.026095	0.213535899	1.696763	0
3050.439314	3863.928904	0	3.300001	1.205852	0	0.004143	0.02016	0	0.036	0.06174	0.003964	0.019288	0	0.009	0.02646	0.621852009	0.787687	0
1647.887542	515.3795707	36.71622919	0.008672	0.272045	0.036586	0.001347	0	0.000442	0.012	0.13034	0.001239	0	0.000407	0.003	0.05586	0.016050413	0.008029	0.0298
972.5574824	886.4204903	0	0.000511	0.003568	0	0.007639	0.004136	0	0.012	0.13034	0.007308	0.003957	0	0.003	0.05586	0.152872493	0.139333	0
7020426.181	0	26191.87127	272.5545	0	0.163614	3.600646	0	0.2434	72.66693	224.3228	3.310662	0	0.223797	18.16673	96.13835	476.2061601	0	2.206345
6399677632	422145628.5	0	5247.256	8249.256	0	118269.5	1027.114	0	167251.3	286836	113153.2	982.6817	0	41812.83	122929.7	1005940.203	66355.41	0
205244381.9	6377001.877	0	222035.8	1990.13	0	278.7828	33.27261	0	2422.208	4154.087	266.7228	31.83325	0	605.5521	1780.323	41840.40991	1299.994	0
608927452.8	3567285.145	5084782.453	3204.304	1883.007	5066.754	497.8253	0	61.25222	4434.242	48163.25	457.732	0	56.31916	1108.56	20641.39	5930.94901	55.57277	4126.96
2913843003	44656718.97	0	1531.561	179.7683	0	22886.6	208.3592	0	35952.76	390506.9	21896.54	199.3457	0	8988.19	167360.1	458015.5424	7019.414	0
1,243.92	4,860.43	4.85	0.03	0.13	0.00	0.02	0.01	0.00	0.03	0.09	0.02	0.01	0.00	0.01	0.04	0.19	0.76	0.00

Attachment 2: 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.[17] 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.[18] This HRA used the 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.[19] 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 and duration of exposure. 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 for residential exposures, 95th percentile breathing rates are used for the third trimester and infant exposures, and 80th percentile breathing rates for child and adult exposures. For children at schools and daycare facilities, BAAQMD recommends using the 95th percentile breathing rates. Additionally, CARB and the BAAQMD recommend the use of a residential exposure duration of

[17] 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.
[18] CARB, 2015. *Risk Management Guidance for Stationary Sources of Air Toxics*. July 23.
[19] BAAQMD, 2016. *BAAQMD Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines*. December 2016.

30 years for sources with long-term emissions (e.g., roadways). For workers, assumed to be adults, a 25-year exposure period is recommended by the BAAQMD.

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

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

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

Where:

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

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

Where:

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

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

Parameter	***Exposure Type →***	**Infant**		**Child**		**Adult**
	Age Range →	**3rd Trimester**	**0<2**	**2 < 9**	**2 < 16**	**16 - 30**
DPM Cancer Potency Factor $(mg/kg\text{-}day)^{-1}$		1.10E+00	1.10E+00	1.10E+00	1.10E+00	1.10E+00
Daily Breathing Rate (L/kg-day) 80th Percentile Rate		273	758	631	572	261
Daily Breathing Rate (L/kg-day) 95th Percentile Rate		361	1,090	861	745	335
Inhalation Absorption Factor		1	1	1	1	1
Averaging Time (years)		70	70	70	70	70
Exposure Duration (years)		0.25	2	14	14	14
Exposure Frequency (days/year)		350	350	350	350	350
Age Sensitivity Factor		10	10	3	3	1
Fraction of Time at Home		0.85-1.0	0.85-1.0	0.72-1.0	0.72-1.0	0.73

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 3: Construction and Operation Health Risk Calculations

Morgan Hill Fry's Site

DPM Emissions and Modeling Emission Rates - Unmitigated

Construction Year	Construction Area	DPM (ton/year)	Area Source	DPM Emissions (lb/yr)	DPM Emissions (lb/hr)	DPM Emissions (g/s)	Modeled Area (m^2)	DPM Emission Rate ($g/s/m^2$)
Industrial Project								
2021	Industrial Warehouse	0.3387	DPM_IND	677.4	0.20621	2.60E-02	241,632	1.08E-07
2022	Industrial Warehouse	0.0727	DPM_IND	145.4	0.04426	5.58E-03	241,632	2.31E-08
Master Plan Buildout								
2021	Industrial Commercial	0.1253	DPM_C	250.6	0.07629	9.61E-03	16,555	5.81E-07
2021	Industrial Office	0.0901	DPM_I	180.2	0.05486	6.91E-03	241,632	2.86E-08
2022	Industrial Commercial	0.0007	DPM_C	1.5	0.00045	5.68E-05	16,555	3.43E-09
2022	Industrial Office	0.0062	DPM_I	12.4	0.00377	4.76E-04	241,632	1.97E-09
2021	Residential	0.1595	DPM-R	319.0	0.09711	1.22E-02	114,162	1.07E-07
2022	Residential	0.1037	DPM-R	207.4	0.06314	7.96E-03	114,162	6.97E-08
2023	Residential	0.0061	DPM-R	12.2	0.00371	4.68E-04	114,162	4.10E-09
Total		***0.9030***		***1806.1***	***0.5498***	***0.0693***		

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

PM2.5 Fugitive Dust Emissions for Modeling - Unmitigated

Construction Year	Construction Area	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 $g/s/m^2$
Industrial Project								
2021	Industrial Warehouse	FUG_IND	0.2683	536.6	0.16335	2.06E-02	241,632	8.52E-08
2022	Industrial Warehouse	FUG_IND	0.0087	17.4	0.00530	6.67E-04	241,632	2.76E-09
Master Plan Buildout								
2021	Industrial Commercial	FUG_C	0.0390	78.0	0.02374	2.99E-03	16,555	1.81E-07
2021	Industrial Office	FUG_I	0.0111	22.2	0.00676	8.52E-04	241,632	3.52E-09
2022	Industrial Commercial	FUG_C	0.0000	0.0	0.00000	0.00E+00	16,555	0.00E+00
2022	Industrial Office	FUG_I	0.0001	0.1	0.00003	3.84E-06	241,632	1.59E-11
2021	Residential	FUG-R	0.1867	373.4	0.11367	1.43E-02	114,162	1.25E-07
2022	Residential	FUG-R	0.0080	16.0	0.00487	6.14E-04	114,162	5.38E-09
2023	Residential	FUG-R	0.0002	0.4	0.00012	1.53E-05	114,162	1.34E-10
Total			***0.52205***	***1044.1***	***0.3178***	***0.0400***		

Operation Hours

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

DPM Emissions and Modeling Emission Rates - Mitigated

Construction Year	Construction Area	DPM (ton/year)	Area Source	DPM Emissions (lb/yr)	DPM Emissions (lb/hr)	DPM Emissions (g/s)	Modeled Area (m^2)	DPM Emission Rate ($g/s/m^2$)
Industrial Project								
2021	Industrial Warehouse	0.0282	DPM_IND	56.4	0.01717	2.16E-03	241,632	8.95E-09
2022	Industrial Warehouse	0.0127	DPM_IND	25.4	0.00773	9.74E-04	241,632	4.03E-09
Master Plan Buildout								
2021	Industrial Commercial	0.0104	DPM_C	20.8	0.00633	7.98E-04	16,555	4.82E-08
2021	Industrial Office	0.0040	DPM_I	7.9	0.00240	3.03E-04	241,632	1.25E-09
2022	Industrial Commercial	0.0000	DPM_C	0.1	0.00002	3.07E-06	16,555	1.85E-10
2022	Industrial Office	0.0003	DPM_I	0.6	0.00019	2.45E-05	241,632	1.02E-10
2021	Residential	0.0116	DPM-R	23.2	0.00706	8.90E-04	114,162	7.79E-09
2022	Residential	0.0111	DPM-R	22.2	0.00676	8.52E-04	114,162	7.46E-09
2023	Residential	0.0004	DPM-R	0.9	0.00026	3.30E-05	114,162	2.89E-10
Total		***0.0787***		***157.5***	***0.0479***	***0.0060***		

Operation Hours

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

PM2.5 Fugitive Dust Emissions for Modeling - Mmitigated

Construction Year	Construction Area	Area Source	PM2.5 Emissions (ton/year)	(lb/yr)	(lb/hr)	(g/s)	Modeled Area (m^2)	PM2.5 Emission Rate $g/s/m^2$
Industrial Project								
2021	Industrial Warehouse	FUG_IND	0.0841	168.2	0.05120	6.45E-03	241,632	2.67E-08
2022	Industrial Warehouse	FUG_IND	0.0087	17.4	0.00530	6.67E-04	241,632	2.76E-09
Master Plan Buildout								
2021	Industrial Commercial	FUG_C	0.0179	35.8	0.01090	1.37E-03	16,555	8.29E-08
2021	Industrial Office	FUG_I	0.0048	9.6	0.00293	3.69E-04	241,632	1.53E-09
2022	Industrial Commercial	FUG_C	0.0000	0.0	0.00000	0.00E+00	16,555	0.00E+00
2022	Industrial Office	FUG_I	0.0001	0.1	0.00003	3.84E-06	241,632	1.59E-11
2021	Residential	FUG-R	0.0767	153.4	0.04670	5.88E-03	114,162	5.15E-08
2022	Residential	FUG-R	0.0080	16.0	0.00487	6.14E-04	114,162	5.38E-09
2023	Residential	FUG-R	0.0002	0.4	0.00013	1.61E-05	114,162	1.41E-10
Total			***0.20047***	***400.9***	***0.1221***	***0.0154***		

Operation Hours

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

Fry's Site-Defined Industrial Project-DPM/PM2.5 Modeling Information
AERMOD Risk Modeling Parameters and Maximum Concentrations
Unmitigated Emissions
Off-Site Residential Receptors (1.5 meter receptor heights)

Receptor Information

Number of Receptors	210
Receptor Height =	1.5 meters
Receptor spacing =	at specific residential locations

Meteorological Conditions

San Martin Airport Hourly Data	2013-2017
Land Use Classification	Urban
Wind speed =	variable
Wind direction =	variable

MEI Maximum Concentrations

Emission Period	DPM Concentration ($\mu g/m^3$)
2021 - Construction	0.08979
2022 - Construction	0.01920
2023 - Construction	0.00000
2023 on - Operation	0.00119

Fry's Site -Master Plan Build Out - DPM/PM2.5 Modeling Information
AERMOD Risk Modeling Parameters and Maximum Concentrations
Construction & Operation Impacts - Unmitigated Emissions
Off-Site Residential Receptors (1.5 meter receptor heights)

Receptor Information

Number of Receptors	210
Receptor Height =	1.5 meters
Receptor spacing =	at specific residential locations

Meteorological Conditions

San Martin Airport Hourly Data	2013-2017
Land Use Classification	Urban
Wind speed =	variable
Wind direction =	variable

MEI Maximum Concentrations

Emission Period	DPM Concentration ($\mu g/m^3$)
2021 - Construction	0.12296
2022 - Construction	0.02400
2023 - Construction	0.00018
2023 on - Operation	0.00119

Morgan Hill Fry's Site - Defined Industrial Project
Maximum DPM Cancer Risk Calculations From Construction - Unmitigated
Off-Site Residential Receptors (1.5 meter receptor heights)
Residential Exposure (30-year)

Cancer Risk Calculation Method

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

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

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

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

10^{-6} = Conversion factor

Values

Cancer Potency Factors $(mg/kg\text{-}day)^{-1}$

TAC	CPF
DPM	1.10E+00

	Infant/Child			Adult
Age -->	3rd Trimester	0 - <2	2 - 16	16 - 70
Parameter				
ASF	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

				Maximum - Exposure Information			
Exposure Year	Year	Exposure Duration (years)	Age	Age Sensitivity Factor	Annual DPM Conc. (ug/m3)	DPM Cancer Risk (per million)	Maximum Total PM2.5
1	2021	0.25	-0.25 - 0*	10	0.0898	1.22	
1	2021	1	1	10	0.0898	14.75	0.1692
2	2022	1	2	10	0.0192	3.15	0.0218
3	2023	1	3	3	0.0012	0.03	0.0060
4	2024	1	4	3	0.0012	0.03	0.0060
5	2025	1	5	3	0.0012	0.03	0.0060
6	2026	1	6	3	0.0012	0.03	0.0060
7	2027	1	7	3	0.0012	0.03	0.0060
8	2028	1	8	3	0.0012	0.03	0.0060
9	2029	1	9	3	0.0012	0.03	0.0060
10	2030	1	10	3	0.0012	0.03	0.0060
11	2031	1	11	3	0.0012	0.03	0.0060
12	2032	1	12	3	0.0012	0.03	0.0060
13	2033	1	13	3	0.0012	0.03	0.0060
14	2034	1	14	3	0.0012	0.03	0.0060
15	2035	1	15	3	0.0012	0.03	0.0060
16	2036	1	16	3	0.0012	0.03	0.0060
17	2037	1	17	1	0.0012	0.003	0.0060
18	2038	1	18	1	0.0012	0.003	0.0060
19	2039	1	19	1	0.0012	0.003	0.0060
20	2040	1	20	1	0.0012	0.003	0.0060
21	2041	1	22	1	0.0012	0.003	0.0060
22	2042	1	23	1	0.0012	0.003	0.0060
23	2043	1	24	1	0.0012	0.003	0.0060
24	2044	1	25	1	0.0012	0.003	0.0060
25	2045	1	26	1	0.0012	0.003	0.0060
26	2046	1	27	1	0.0012	0.003	0.0060
27	2047	1	28	1	0.0012	0.003	0.0060
28	2048	1	29	1	0.0012	0.003	0.0060
29	2049	1	29	1	0.0012	0.003	0.0060
30	2050	1	29	1	0.0012	0.003	0.0060
Total Increased Cancer Risk						**19.60**	

* Third trimester of pregnancy

Morgan Hill Fry's Site -Master Plan Build Out
Maximum DPM Cancer Risk Calculations From Construction & Operation- Unmitigated
Off-Site Residential Receptors (1.5 meter receptor heights)
Residential Exposure (30-year)

Cancer Risk Calculation Method

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

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

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

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

10^{-6} = Conversion factor

Values

Cancer Potency Factors $(mg/kg\text{-}day)^{-1}$

TAC	CPF
DPM	1.10E+00

	Infant/Child			Adult
Age -->	3rd Trimester	0 - <2	2 - 16	16 - 70
Parameter				
ASF	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

				Maximum - Exposure Information			
Exposure Year	Year	Exposure Duration (years)	Age	Age Sensitivity Factor	Annual DPM Conc. (ug/m3)	DPM Cancer Risk (per million)	Maximum Total PM2.5
1	2021	0.25	-0.25 - 0*	10	0.1230	1.67	
1	2021	1	1	10	0.1230	20.20	0.2125
2	2022	1	2	10	0.0240	3.94	0.0519
3	2023	1	3	3	0.0014	0.04	0.0062
4	2024	1	4	3	0.0012	0.03	0.0060
5	2025	1	5	3	0.0012	0.03	0.0060
6	2026	1	6	3	0.0012	0.03	0.0060
7	2027	1	7	3	0.0012	0.03	0.0060
8	2028	1	8	3	0.0012	0.03	0.0060
9	2029	1	9	3	0.0012	0.03	0.0060
10	2030	1	10	3	0.0012	0.03	0.0060
11	2031	1	11	3	0.0012	0.03	0.0060
12	2032	1	12	3	0.0012	0.03	0.0060
13	2033	1	13	3	0.0012	0.03	0.0060
14	2034	1	14	3	0.0012	0.03	0.0060
15	2035	1	15	3	0.0012	0.03	0.0060
16	2036	1	16	3	0.0012	0.03	0.0060
17	2037	1	17	1	0.0012	0.003	0.0060
18	2038	1	18	1	0.0012	0.003	0.0060
19	2039	1	19	1	0.0012	0.003	0.0060
20	2040	1	20	1	0.0012	0.003	0.0060
21	2041	1	22	1	0.0012	0.003	0.0060
22	2042	1	23	1	0.0012	0.003	0.0060
23	2043	1	24	1	0.0012	0.003	0.0060
24	2044	1	25	1	0.0012	0.003	0.0060
25	2045	1	26	1	0.0012	0.003	0.0060
26	2046	1	27	1	0.0012	0.003	0.0060
27	2047	1	28	1	0.0012	0.003	0.0060
28	2048	1	29	1	0.0012	0.003	0.0060
29	2049	1	29	1	0.0012	0.003	0.0060
30	2050	1	29	1	0.0012	0.003	0.0060
Total Increased Cancer Risk						**26.29**	

* Third trimester of pregnancy

Fry's Site -Master Plan Build Out - DPM/PM2.5 Modeling Information
AERMOD Risk Modeling Parameters and Maximum Concentrations
Construction & Operation Impacts - Mitigated Emissions
Off-Site Residential Receptors (1.5 meter receptor heights)

Receptor Information

Number of Receptors	210
Receptor Height =	1.5 meters
Receptor spacing =	at specific residential locations

Meteorological Conditions

San Martin Airport Hourly Data	2013-2017
Land Use Classification	Urban
Wind speed =	variable
Wind direction =	variable

MEI Maximum Concentrations

Emission Period	DPM Concentration ($\mu g/m^3$)
2021 - Construction	0.0092
2022 - Construction	0.00377
2023 - Construction	0.00001
2023 on - Operation	0.00119

Morgan Hill Fry's Site -Master Plan Build Out
Maximum DPM Cancer Risk Calculations From Construction & Operation - Mitigated
Off-Site Residential Receptors (1.5 meter receptor heights)
Residential Exposure (30-year)

Cancer Risk Calculation Method

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

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

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

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

10^{-6} = Conversion factor

Values

Cancer Potency Factors $(mg/kg\text{-}day)^{-1}$

TAC	CPF
DPM	1.10E+00

	Infant/Child			Adult
Age -->	3rd Trimester	0 - <2	2 - 16	16 - 70
Parameter				
ASF	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

				Maximum - Exposure Information			
Exposure Year	Year	Exposure Duration (years)	Age	Age Sensitivity Factor	Annual DPM Conc. (ug/m3)	DPM Cancer Risk (per million)	Maximum Total PM2.5
1	2021	0.25	-0.25 - 0*	10	0.0092	0.13	
1	2021	1	1	10	0.0092	1.51	0.2125
2	2022	1	2	10	0.0038	0.62	0.0519
3	2023	1	3	3	0.0012	0.03	0.0062
4	2024	1	4	3	0.0012	0.03	0.0060
5	2025	1	5	3	0.0012	0.03	0.0060
6	2026	1	6	3	0.0012	0.03	0.0060
7	2027	1	7	3	0.0012	0.03	0.0060
8	2028	1	8	3	0.0012	0.03	0.0060
9	2029	1	9	3	0.0012	0.03	0.0060
10	2030	1	10	3	0.0012	0.03	0.0060
11	2031	1	11	3	0.0012	0.03	0.0060
12	2032	1	12	3	0.0012	0.03	0.0060
13	2033	1	13	3	0.0012	0.03	0.0060
14	2034	1	14	3	0.0012	0.03	0.0060
15	2035	1	15	3	0.0012	0.03	0.0060
16	2036	1	16	3	0.0012	0.03	0.0060
17	2037	1	17	1	0.0012	0.003	0.0060
18	2038	1	18	1	0.0012	0.003	0.0060
19	2039	1	19	1	0.0012	0.003	0.0060
20	2040	1	20	1	0.0012	0.003	0.0060
21	2041	1	22	1	0.0012	0.003	0.0060
22	2042	1	23	1	0.0012	0.003	0.0060
23	2043	1	24	1	0.0012	0.003	0.0060
24	2044	1	25	1	0.0012	0.003	0.0060
25	2045	1	26	1	0.0012	0.003	0.0060
26	2046	1	27	1	0.0012	0.003	0.0060
27	2047	1	28	1	0.0012	0.003	0.0060
28	2048	1	29	1	0.0012	0.003	0.0060
29	2049	1	29	1	0.0012	0.003	0.0060
30	2050	1	29	1	0.0012	0.003	0.0060
Total Increased Cancer Risk						**2.74**	

* Third trimester of pregnancy

Morgan Hill Frys Site
2023 Truck Emissions - DPM

Road Segment	Road Segment ID	Road Segment Length (ft)	Road Segment Length (m)	Modeled Road Width (ft)	Initial[a] Vertical Height (m)	Initial[a] Vertical Dispersion (m)	Release[a] Height (m)	Percent of Daily Trucks (%)	No. of Daily Trucks	Travel Speed (mph)	DPM[b] Emission Factor (g/veh-mi)	Truck Travel DPM Emissions Daily (g/day)	Daily (lb/day)	Hourly (lb/hr)	Annual (lb/year)
Off-Site															
Depaul Dr. - Ingress															
Depaul Dr - 1	IN1_DPM	404	123	12	6.8	3.16	3.4	100%	193	20	0.00579	0.085	0.00019	7.84E-06	0.07
Depaul Dr - 2	IN2_DPM	519	158	12	6.8	3.16	3.4	87%	167	20	0.00579	0.095	0.00021	8.77E-06	0.08
Depaul Dr - 3	IN3_DPM	746	227	12	6.8	3.16	3.4	59%	114	20	0.00579	0.093	0.00020	8.54E-06	0.07
Depaul Dr. - Egress															
Depaul Dr - 1	OUT1_DPM	1524	465	12	6.8	3.16	3.4	59%	114	20	0.00579	0.190	0.00042	1.74E-05	0.15
Depaul Dr - 2	OUT2_DPM	747	228	12	6.8	3.16	3.4	87%	167	20	0.00579	0.137	0.00030	1.26E-05	0.11
Depaul Dr - 3	OUT3_DPM	972	296	12	6.8	3.16	3.4	100%	193	20	0.00579	0.205	0.00045	1.89E-05	0.17
Cochrane Road Inbound	CHRIN_DPM	731	223	12	6.8	3.16	3.4	100%	193	25	0.00541	0.144	0.00032	1.33E-05	0.12
Cochrane Road Outbound	CHROUT_DPM	757	231	12	6.8	3.16	3.4	100%	193	25	0.00541	0.149	0.00033	1.37E-05	0.12
On-Site															
Building 1 Truck Route	BLDG1_DPM	1,707	520	12	6.8	3.16	3.4	13.0%	25	15	0.00704	0.057	0.00013	5.23E-06	0.05
Building 2 - Truck Route	BLDG2_DPM	2362.8	720	12	6.8	3.16	3.4	28.0%	54	15	0.00704	0.170	0.00037	1.56E-05	0.14
Building 3 Truck Route - East	BLDG3_E_DPM	1657.6	505	12	6.8	3.16	3.4	29.5%	57	15	0.00704	0.125	0.00028	1.15E-05	0.10
Building 3 Truck Route - West	BLDG3_W_DPM	3,115	949	12	6.8	3.16	3.4	29.5%	57	15	0.00704	0.236	0.00052	2.17E-05	0.19

[a] Line-area source parameters based on EPA 2015

[b] Emission factor from CT-EMFAC for running exhaust PM10 emissions for 2023

On-Site Diesel Truck Idle Emissions

Project Phase	Idle Area ID	Idle Area Length (m)	Idle Area Width (m)	Idle Area Size (m^2)	Release[a] Height (m)	Percent of Daily Trucks (%)	No. of Daily Trucks	Idle Emission Factor (g/veh-hr)	Idle Emissions (g/day)	Total Idle Emissions Daily (lb/day)	Hourly (lb/hr)	Annual (lb/year)
On-Site												
Building 1 Idle Area	IDLB1_DPM	100	5	498	4	13.0%	25	0.05207	0.2172	0.00048	1.99E-05	0.17
Building 2 - Idle Area North	IDLB2_N_DPM	120	5	587.2	4	14.0%	27	0.05207	0.2339	0.00052	2.15E-05	0.19
Building 2 - Idle Area South	IDLB2_S_DPM	120	5	610.7	4	14.0%	27	0.05207	0.2339	0.00052	2.15E-05	0.19
Building 3 Truck Route - East	IDLB3_E_DPM	350	5	1719.8	4	29.5%	57	0.05207	0.4928	0.00109	4.53E-05	0.40
Building 3 Truck Route - West	IDLB3_W_DPM	350	5	1779.9	4	29.5%	57	0.05207	0.4928	0.00109	4.53E-05	0.40

[b] Emission factor from CT-EMFAC for PM10 idle emissions for 2023

[a] Area source parameters based on EPA 2015

Truck Information

Truck Trips per day =	385
Total Trucks per day =	193
Operation Days =	365
Delivery Truck Hours (hrs/day) =	24

Truck Idle DPM Emission Information (2023)

Emission Factor @ 5 mph (g/mi) =	0.01041
HHDT Idle Emission Rate (g/hr) =	0.05207
Idle Time per Trip (min)	5
Idle Time per Truck (min)	10

Idle emission factor (g/hr) = EF @5 mph (g/mi) * 5 mph

References

EPA 2015 - *Transportation Conformity Guidance for Quantitative Hot-spot Analyses in PM2.5 and PM10 nonattainment and maintenance Areas* , November 2015

Morgan Hill Frys Site
2023 Truck Emissions - Fugitive PM2.5

Road Segment	Road Segment ID	Road Segment Length (ft)	Segment Length (m)	Modeled Road Width (ft)	Initial[a] Vertical Height (m)	Initial[a] Vertical Dispersion (m)	Release[a] Height (m)	Percent of Daily Trucks (%)	No. of Daily Trucks	Travel Speed (mph)	PM2.5[b] Emission Factor (g/veh-mi)	Truck Travel Fugitive PM2.5 Emissions Daily (g/day)	Daily (lb/day)	Hourly (lb/hr)	Annual (lb/year)
Off-Site															
Depaul Dr. - Ingress															
Depaul Dr - 1	IN1_FUG	404	123	12	6.8	3.16	3.4	100%	193	20	1.06185	15.653	0.03451	1.44E-03	12.60
Depaul Dr - 2	IN2_FUG	519	158	12	6.8	3.16	3.4	87%	167	20	1.06185	17.495	0.03857	1.61E-03	14.08
Depaul Dr - 3	IN3_FUG	746	227	12	6.8	3.16	3.4	59%	114	20	1.06185	17.035	0.03756	1.56E-03	13.71
Depaul Dr. - Egress															
Depaul Dr - 4	OUT1_FUG	1524	465	12	6.8	3.16	3.4	59%	114	20	1.06185	34.815	0.07675	3.20E-03	28.02
Depaul Dr - 5	OUT2_FUG	747	228	12	6.8	3.16	3.4	87%	167	20	1.06185	25.172	0.05549	2.31E-03	20.26
Depaul Dr - 6	OUT3_FUG	972	296	12	6.8	3.16	3.4	100%	193	20	1.06185	37.646	0.08300	3.46E-03	30.29
Cochrane Road Inbound	CHRIN_FUG	731	223	12	6.8	3.16	3.4	100%	193	25	1.06185	28.309	0.06241	2.60E-03	22.78
Cochrane Road Outbound	CHROUT_FUG	757	231	12	6.8	3.16	3.4	100%	193	25	1.06185	29.300	0.06460	2.69E-03	23.58
On-Site															
Building 1 Truck Route	BLDG1_FUG	1,707	520	12	6.8	3.16	3.4	13.0%	25	15	0.04437	0.359	0.00079	3.30E-05	0.29
Building 2 - Truck Route	BLDG2_FUG	2362.8	720	12	6.8	3.16	3.4	28.0%	54	15	0.04437	1.070	0.00236	9.83E-05	0.86
Building 3 Truck Route - East	BLDG3_E_FUG	1657.6	505	12	6.8	3.16	3.4	29.5%	57	15	0.04437	0.791	0.00174	7.27E-05	0.64
Building 3 Truck Route - West	BLDG3_W_FUG	3,115	949	12	6.8	3.16	3.4	29.5%	57	15	0.04437	1.487	0.00328	1.37E-04	1.20

[a] Line-area source parameters based on EPA 2015

[b] Emission factor from CT-EMFAC for 2023

Truck Information

Truck Trips per day =	385
Total Trucks per day =	193
Operation Days =	365
Delivery Truck Hours (hrs/day) =	24

Truck Fugitive PM2.5 Dust Emission Information (2023)

Truck Tire Wear Emission Factor (g/veh-mi) =	0.00671
Truck Brake Wear Emission Factor (g/veh-mi) =	0.0377
Truck Road Dust Emission Factor (g/veh-mi) =	1.0175
Total Tire & Brake Wear Emission Factor (g/veh-mi)	0.0444
Total PM2.5 Fugitive PM2.5 Emission Factor (g/veh-mi) =	1.0618

References

EPA 2015 - *Transportation Conformity Guidance for Quantitative Hot-spot Analyses in PM2.5 and PM10 nonattainment and maintenance Areas* , November 2015

Morgan Hill Fry's - Generator Emissions and AERMOD Modeling Parameters
Project Generators

DPM Emission Rates					
		DPM Emissions*			
	Generator	Ave Hourly	Ave Daily	Annual	
Generator Location	Horsepower	(lb/hr)	(lb/day)	(lb/yr)	(ton/yr)
Building 1	200	2.75E-04	0.0066	2.413	1.21E-03
Building 2	200	2.75E-04	0.0066	2.413	1.21E-03
Building 3	200	2.75E-04	0.0066	2.413	1.21E-03

* emissions calculated with CalEEMod 50 hours/year operation and load factor of 0.73

Modeling Information	
Model:	AERMOD
Source	Diesel Engine
Source Types	Point
Receptor Spacing	receptors at off-site residences
Meteorological Data	2013-2017 BAAQMD San Martin Airport data
Point Source Stack Parameters* **	
Generator engine size (hp)	200
Stack Height (ft)	12
Stack Diameter (ft)	0.6
Exhaust Gass Flowrate (ACFM)	8,923
Stack Exit Velocity (ft/sec)	149
Exhaust Temperature (F)	872

** Generator modeling parameters from *The San Francisco Community Risk Reduction Plan: Technical Support Document* BAAQMD, San Francisco Dept. of Public Health, and San Francisco Planning Dept., December 2012

Morgan Hill Fry's Site - Cancer Risks from Project Operation
Project Truck Traffic and Emergency Generator Operation
New Residential Receptors - 1.5 meter receptor heights

Cancer Risk Calculation Method

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

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

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

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

Values

Cancer Potency Factors $(mg/kg\text{-}day)^{-1}$

TAC	CPF
DPM	1.10E+00

	Infant/Child			Adult
Age -->	**3rd Trimester**	**0 - <2**	**2 - <16**	**16 - 30**
Parameter				
ASF	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
ED =	0.25	2	14	14
AT =	70	70	70	70
FAH =	0.85	0.72	0.72	0.73

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

MEI Cancer Risk From: Project Truck Traffic and Emergency Generator Operation

Exposure Duration (years)	Age	Age Sensitivity Factor	DPM Annual Conc (ug/m3)	DPM Cancer Risk (per million)
0.25	-0.25 - 0*	10	0.00139	0.02
2	1 - 2	10	0.00139	0.33
14	3 - 16	3	0.00139	0.36
14	17 - 30	1	0.00139	0.06
Total Increased Cancer Risk				**0.8**

* Third trimester of pregnancy

Maximum PM2.5 Concentration ($\mu g/m^3$) = 0.00773

Morgan Hill Fry's Site - Cancer Risks from Project Operation
Project Emergency Generator Operation
New Residential Receptors - 1.5 meter receptor heights

Cancer Risk Calculation Method

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

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

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

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

Values

Cancer Potency Factors $(mg/kg\text{-}day)^{-1}$

TAC	CPF
DPM	1.10E+00

	Infant/Child			Adult
Age -->	**3rd Trimester**	**0 - <2**	**2 - <16**	**16 - 30**
Parameter				
ASF	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
ED =	0.25	2	14	14
AT =	70	70	70	70
FAH =	0.85	0.72	0.72	0.73

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

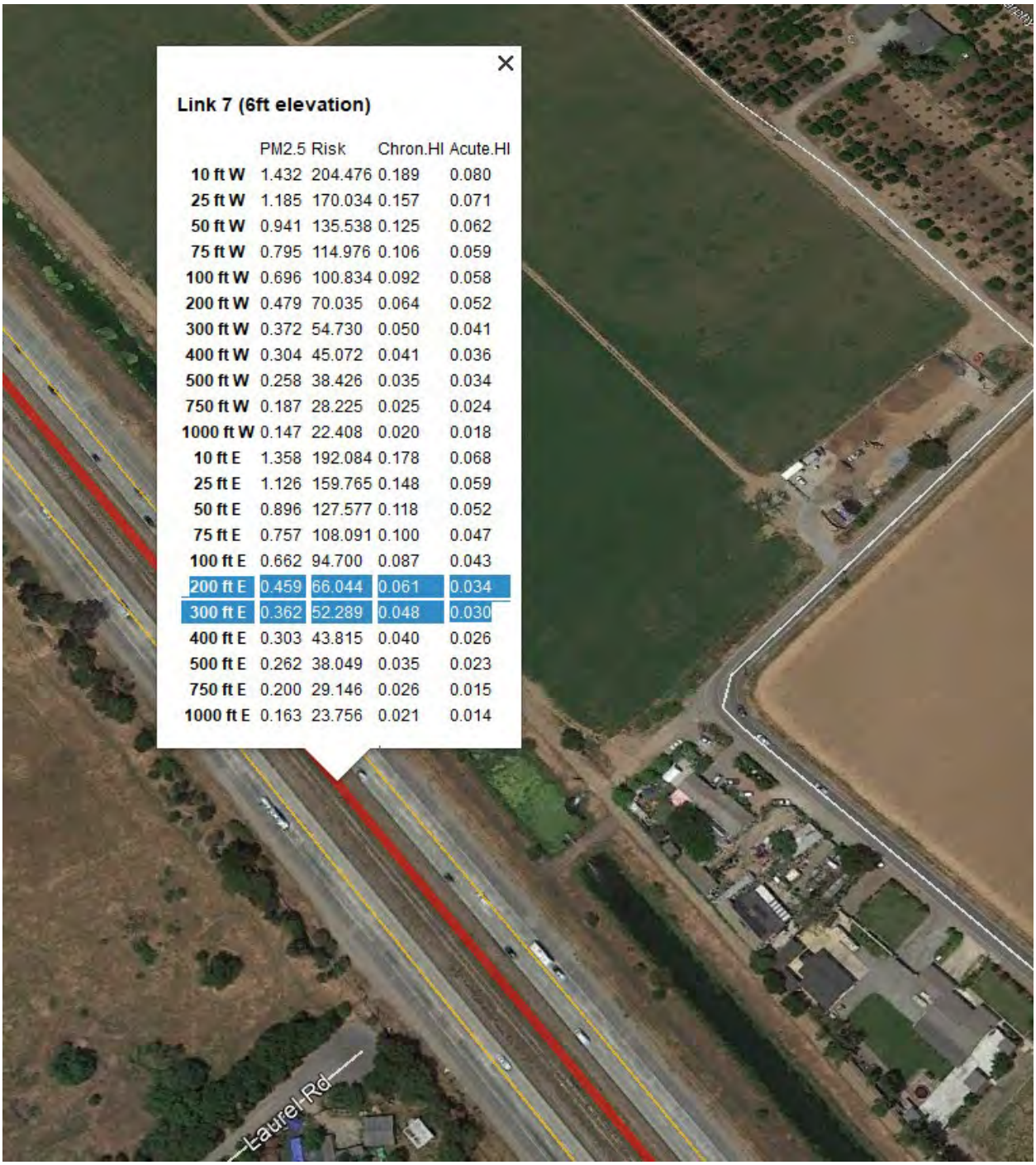
MEI Cancer Risk From: Project Emergency Generator Operation

Exposure Duration (years)	Age	Age Sensitivity Factor	DPM Annual Conc (ug/m3)	DPM Cancer Risk (per million)
0.25	-0.25 - 0*	10	0.00018	0.00
2	1 - 2	10	0.00018	0.04
14	3 - 16	3	0.00018	0.05
14	17 - 30	1	0.00018	0.01
Total Increased Cancer Risk				**0.1**

* Third trimester of pregnancy

Maximum PM2.5 Concentration $(\mu g/m^3)$ = 0.0002

Attachment 4: Screening Community Risk Calculations



Link 7 (6ft elevation)

	PM2.5	Risk	Chron.HI	Acute.HI
10 ft W	1.432	204.476	0.189	0.080
25 ft W	1.185	170.034	0.157	0.071
50 ft W	0.941	135.538	0.125	0.062
75 ft W	0.795	114.976	0.106	0.059
100 ft W	0.696	100.834	0.092	0.058
200 ft W	0.479	70.035	0.064	0.052
300 ft W	0.372	54.730	0.050	0.041
400 ft W	0.304	45.072	0.041	0.036
500 ft W	0.258	38.426	0.035	0.034
750 ft W	0.187	28.225	0.025	0.024
1000 ft W	0.147	22.408	0.020	0.018
10 ft E	1.358	192.084	0.178	0.068
25 ft E	1.126	159.765	0.148	0.059
50 ft E	0.896	127.577	0.118	0.052
75 ft E	0.757	108.091	0.100	0.047
100 ft E	0.662	94.700	0.087	0.043
200 ft E	0.459	66.044	0.061	0.034
300 ft E	0.362	52.289	0.048	0.030
400 ft E	0.303	43.815	0.040	0.026
500 ft E	0.262	38.049	0.035	0.023
750 ft E	0.200	29.146	0.026	0.015
1000 ft E	0.163	23.756	0.021	0.014