Appendix C-1

Option 1: Air Quality and Greenhouse Gas Analysis

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AIR QUALITY/GREENHOUSE GAS ASSESSMENT

for the

Garden Gate Tower Project

San José, California

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JN 161936

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SYMBOLS, ABBREVIATIONS, AND ACRONYMS

AB	Assembly Bill
ABAG	Association of Bay Area Governments
ACM	Asbestos Containing Materials
ADAM	Aerometric Data Analysis and Measurement System
APN	Assessor's Parcel Number
APS	Alternative Planning Strategy
ATCM	Airborne Toxic Control Measure
BAAQMD	Bay Area Air Quality Management District
Basin	San Francisco Bay Area Air Basin
BAU	business as usual
CAAQS	California Ambient Air Quality Standards
CAFE	corporate average fleet fuel economy
CalEEMod	California Emissions Estimator Model
CAP	Clean Air Plan
CARB	California Air Resources Board
CAT	Climate Action Team
CCAA	California Clean Air Act
CCR	California Code of Regulations
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CFCs	Chlorofluorocarbons
CF_6	Tetrafluoromethane
C_2F_6	Hexafluoroethane
CH_4	Methane
CMP	Congestion Management Plan
CO	carbon monoxide
CO_2	carbon dioxide

CO_2eq	carbon dioxide equivalent
CPUC	California Public Utilities Commission
CRLF	California Red-legged Frog
CWIB	California Workforce Investment Board
EPA	U.S. Environmental Protection Agency
FCAA	Federal Clean Air Act
GCJC	Green Collar Jobs Council
GHG	greenhouse gas
GWP	Global Warming Potential
H_2O	water vapor
HCFCs	Hydrochlorofluorocarbons
HFCs	Hydrofluorocarbons
IPCC	International Panel for Climate Change
lbs	pounds
LCFS	Low Carbon Fuel Standard
LTMP	Long Term Management Plan
MMT	million metric tons
mpg	miles per gallon
MPO	metropolitan planning organization
MTC	Metropolitan Transportation Commission
$MTCO_2eq$	metric tons of carbon dioxide equivalents
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NOA	naturally occurring asbestos
NO_2	nitrogen dioxide
NO_X	nitrogen oxides
NRCS	Natural Resources Conservation Service
O_3	ozone
OPR	Office of Planning and Research

OSA	Open Space Authority
PFCs	Perfluorocarbons
PM	particulate matter
PM_{10}	particulate matter less than 10 microns in diameter
$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
ppm	parts per million
PST	Pacific Standard Time
ROG	Reactive Organic Gasses
RPS	Renewable Portfolio Standard
RTP	Regional Transportation Plan
S&WPP	Stream and Watershed Protection Program
SB	Senate Bill
SCVWD	Santa Clara Valley Water District
SCS	Sustainable Community Strategy
SF_6	Sulfur hexafluoride
SIP	State Implementation Plan
SMP	Stream Maintenance Program
SO_2	sulfur dioxide
SO_X	sulfur oxides
SRCC	San Rafael Corporate Center
TAC	toxic air contaminant
UNFCCC	United Nations Framework Convention on Climate Change
$\mu g/m^3$	micrograms per cubic meter
UV-B	ultraviolet B rays
VOC	Volatile Organic Compound

EXECUTIVE SUMMARY

The purpose of this Air Quality/Greenhouse Gas Assessment is to evaluate potential short- and long-term air quality and greenhouse gas (GHG) impacts resulting from implementation of the proposed Garden Gate Tower Project ("project" or "proposed project").

The proposed project is located at 600 South 1st Street, in the City of San José, California. The project site is located south of East Reed Street and east of South 1st Street, within approximately 86 feet north of Interstate 280 (I-280) and approximately 0.5 miles east of State Route 87 (SR-87). The Garden Gate Tower project proposes to demolish the existing two buildings to construct a mixed-use 27-story high rise tower. The 513,333-square foot tower would consist of 290 condominium units and 5,000 square feet of retail space on the ground floor. Other residential features would include three penthouse suites, a pool, common terrace, and an amenity area. The vehicular parking garage is planned from four levels below grade and would include 232 assigned residential parking spaces with five accessible spaces, eight electric vehicle charging stations, and 73 bicycle racks. Vehicular parking would be accessible from South 1st Street and parking in the 3rd and 4th levels would be accessed through the alley off East Reed Street.

Temporary Impacts. Construction emissions from project implementation would not exceed established Bay Area Air Quality Management District (BAAQMD) thresholds. The project would result in less than significant impacts for short-term construction emissions.

Long-Term Impacts. The analysis has demonstrated that project implementation would result in less than significant long-term regional and localized air quality impacts. Carbon monoxide hot-spots impacts would also be less than significant. The proposed project would result in less than significant impacts for all long-term operational emissions.

Cumulative Impacts. The proposed project would not result in long-term air quality impacts, as emissions would not exceed the BAAQMD adopted operational thresholds. Additionally, adherence to BAAQMD rules and regulations would alleviate potential impacts related to cumulative conditions on a project-by-project basis. The project would not result in significant operational emissions of criteria pollutants.

Greenhouse Gas Impacts. The proposed project would result in less than significant GHG emission impacts with implementation of the project's sustainable design features. Additionally, the project would not conflict with a plan, policy, or regulation adopted for the purposes of reducing GHG emissions.

The project site is located within the Downtown land use designation (created in place of the Core Area designation as part of the Envision 2040 General Plan) and was analyzed within the San Jose Downtown Strategy 2000 Environmental Impact Report.

1.0 INTRODUCTION

The purpose of this Air Quality/Greenhouse Gas Assessment is to evaluate potential short- and long-term noise impacts resulting from implementation of the proposed Garden Gate Tower Project ("project" or "proposed project") in the City of San José (City).

1.1 PROJECT LOCATION

The proposed project is located at 600 South 1st Street, in the City of San José, California. The project site is located south of East Reed Street and east of South 1st Street, within approximately 86 feet north of Interstate 280 (I-280) and approximately 0.5 miles east of State Route 87 (SR-87); refer to Exhibit 1, *Regional Location*, and Exhibit 2, *Site Vicinity*.

1.2 PROJECT DESCRIPTION

The Garden Gate Tower project proposes to demolish the existing two buildings to construct a mixed-use 27-story high rise tower. The 513,333-square foot tower would consist of 290 condominium units and 5,000 square feet of retail space on the ground floor; refer to Exhibit 3, *Site Plan*. Other residential features would include three penthouse suites, a pool, common terrace, and an amenity area. The vehicular parking garage is planned from four levels below grade and would include 232 assigned residential parking spaces with five accessible spaces, eight electric vehicle charging stations, and 73 bicycle racks. Vehicular parking would be accessible from South 1st Street and parking in the 3rd and 4th levels would be accessed through the alley off East Reed Street.

The project site is located within the Downtown land use designation (created in place of the Core Area designation as part of the Envision 2040 General Plan) and was analyzed within the San Jose Downtown Strategy 2000 Environmental Impact Report.

GARDEN GATE TOWER PROJECT
AIR QUALITY/GREENHOUSE GAS ASSESSMENT

Regional Location

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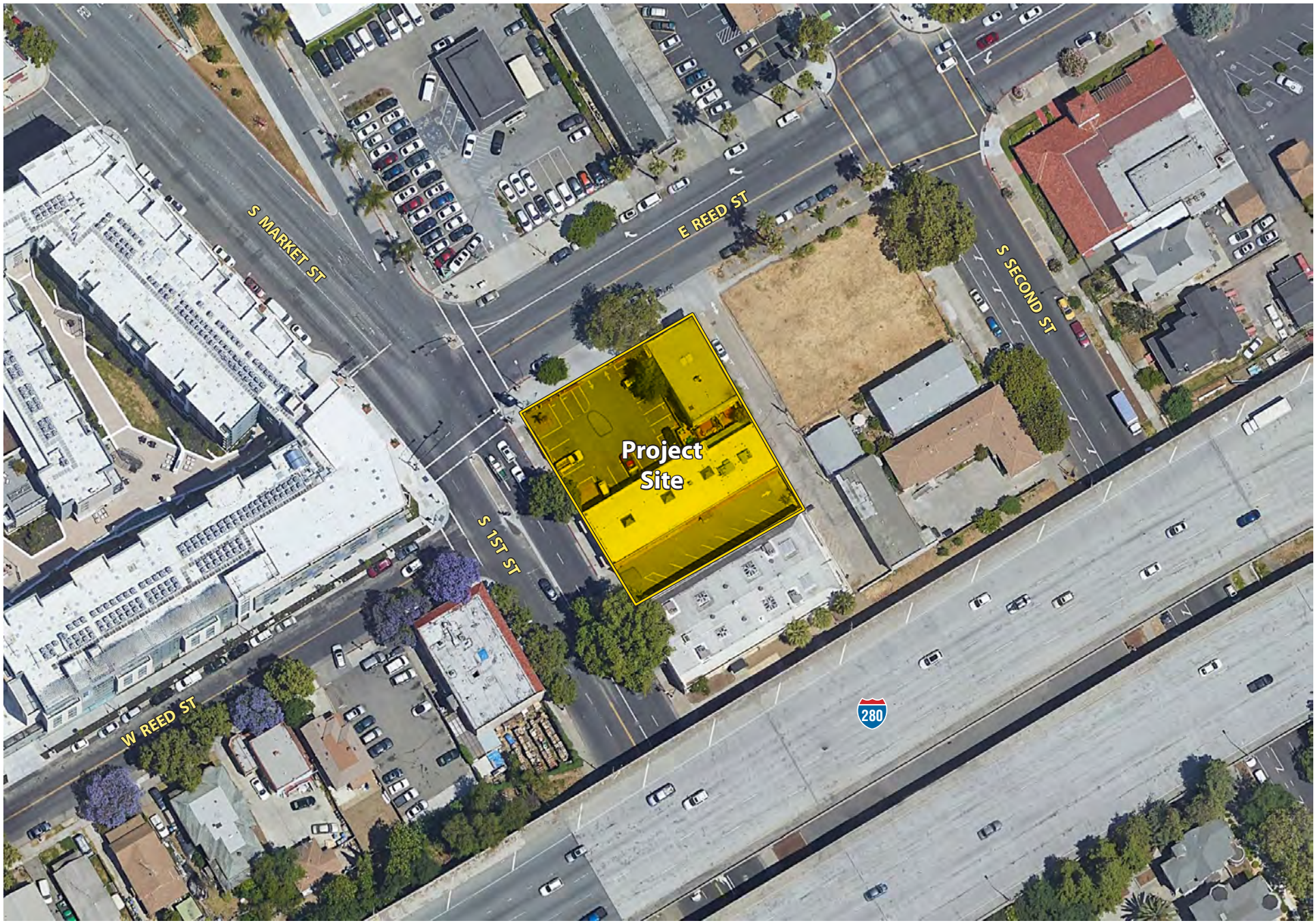
0 10 20 miles
APPROXIMATE

01/21/18 JN 161936 MAS

Exhibit 1



Source: Google Earth Pro, January 2018

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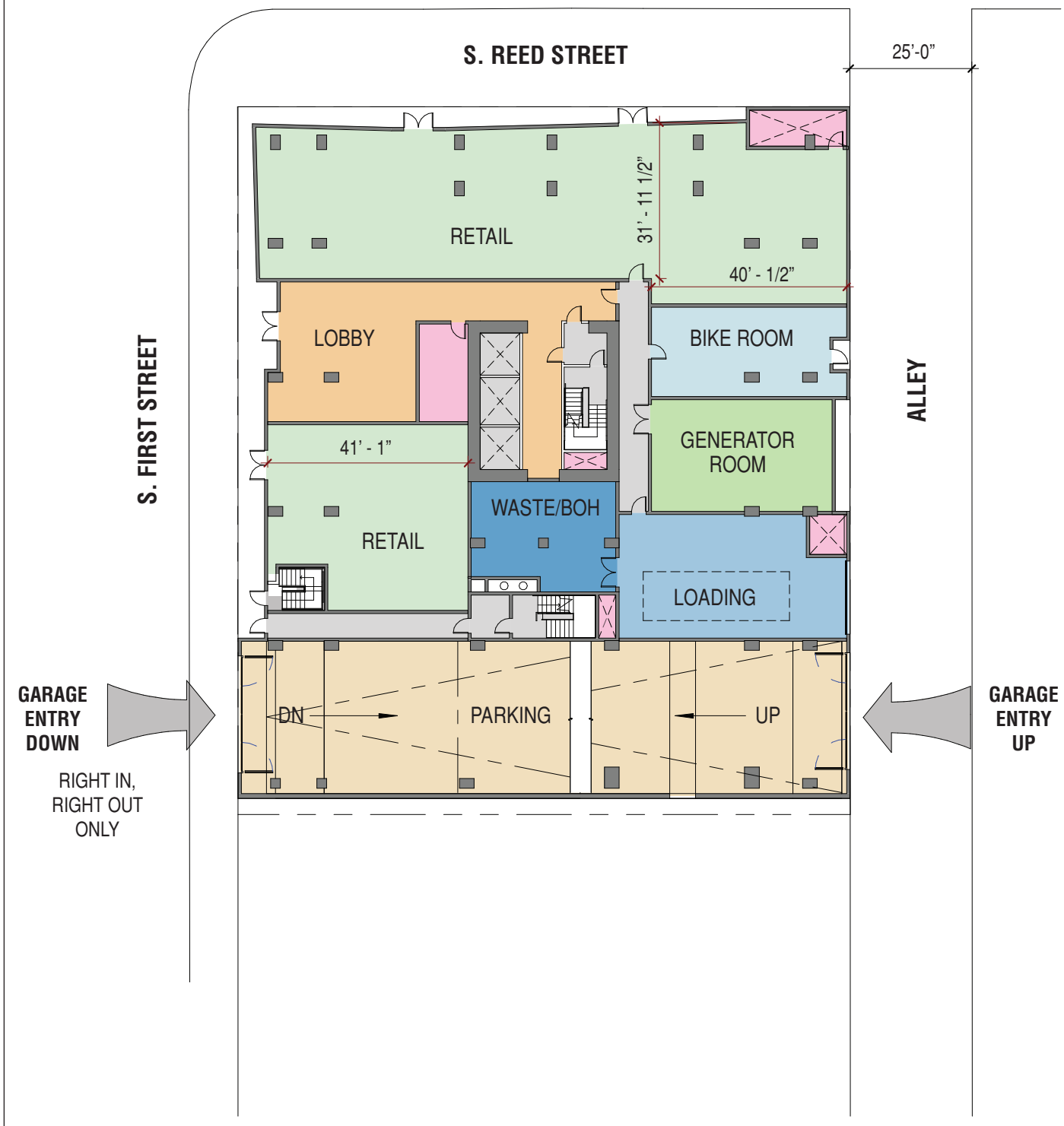
GARDEN GATE TOWER PROJECT • AIR QUALITY/GREENHOUSE GAS ASSESSMENT

Site Vicinity

Exhibit 2



Source: C2K Architecture, Inc.

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GARDEN GATE TOWER PROJECT • AIR QUALITY/GREENHOUSE GAS ASSESSMENT

Conceptual Site Plan

Exhibit 3

2.0 ENVIRONMENTAL SETTING

The California Air Resources Board (CARB) divides the State into 15 air basins that share similar meteorological and topographical features. The project site is located within the San Francisco Bay Area Air Basin (Basin). This Basin comprises all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo and Santa Clara counties, the southern portion of Sonoma County, and the southwestern portion of Solano County. Air quality in this area is determined by such natural factors as topography, meteorology and climate, in addition to the presence of existing air pollution sources and ambient conditions. These factors along with applicable regulations are discussed below.

CLIMATE

The project is located within the Santa Clara County sector of the Basin. The Basin includes San Mateo, Santa Clara, Alameda, Contra Costa, Napa, and Marin Counties. Santa Clara County is bounded by the Bay to the north and by mountains to the east, south and west. Temperatures are warm on summer days and cool on summer nights, and winter temperatures are fairly mild. At the northern end of the county, mean maximum temperatures are in the low-80's during the summer and the high-50's during the winter, and mean minimum temperatures range from the high-50's in the summer to the low-40's in the winter. Further inland, where the moderating effect of the Bay is not as strong, temperature extremes are greater. For example, in San Martin, located 27 miles south of the San José Airport, temperatures can be more than 10 degrees warmer on summer afternoons and more than 10 degrees cooler on winter nights. Winds in the county are greatly influenced by the terrain, resulting in a prevailing flow that roughly parallels the county's northwest-southeast axis.

A north-northwesterly sea breeze flows through the county during the afternoon and early evening, and a light south-southeasterly drainage flow occurs during the late evening and early morning. In the summer the southern end of the county sometimes becomes a "convergence zone," when air flowing from the Monterey Bay gets channeled northward into the southern end of the county and meets with the prevailing north northwesterly winds. Wind speeds are greatest in the spring and summer and weakest in the fall and winter. Nighttime and early morning hours frequently have calm winds in all seasons, while summer afternoons and evenings are quite breezy. Strong winds are rare, associated mostly with the occasional winter storm.

The air pollution potential of the Santa Clara County is high. High summer temperatures, stable air and mountains surrounding the county combine to promote ozone formation. In addition to the many local sources of pollution, ozone precursors from San Francisco, San Mateo and Alameda Counties are carried by prevailing winds to the Santa Clara County. The county tends to channel pollutants to the southeast. In addition, on summer days with low level inversions, ozone can be recirculated by southerly drainage flows in the late evening and early morning and by the prevailing northwesterlies in the afternoon. A similar recirculation pattern occurs in the winter, affecting levels of carbon monoxide and particulate matter. This movement of the air up and down the county increases the impact of the pollutants significantly. Pollution sources are

plentiful and complex in this subregion. The Santa Clara County has a high concentration of industry at the northern end, in the Silicon County. Some of these industries are sources of air toxics as well as criteria air pollutants. In addition, Santa Clara County's large population and many work-site destinations generate the highest mobile source emissions of any subregion in the Basin.

3.0 STATE AND FEDERAL AMBIENT AIR QUALITY STANDARDS

3.1 AMBIENT AIR QUALITY STANDARDS

CARB and the U.S. Environmental Protection Agency (EPA) establish ambient air quality standards for major pollutants at thresholds intended to protect public health. The standards for some pollutants are based on other values such as protection of crops or avoidance of nuisance conditions. Table 1, *State and National Ambient Air Quality Standards and Attainment Status for the San Francisco Bay Area Basin*, summarizes the State California Ambient Air Quality Standards (CAAQS) and the Federal National Ambient Air Quality Standards (NAAQS).

Table 1
State and National Ambient Air Quality Standards and Attainment Status for the San Francisco Bay Area Basin

Pollutant	Averaging Time	California Standards		National Standards	
		Concentration	Attainment Status	Concentration	Attainment Status
Ozone (O_3)	8 Hours	0.070 ppm (137µg/m³)	No information available	0.070 ppm	N
	1 Hour	0.09 ppm (180 µg/m³)	N	No standard	Not applicable
Carbon Monoxide (CO)	8 Hours	9.0 ppm (10 mg/m³)	A	9 ppm (10 mg/m³)	U/A
	1 Hour	20 ppm (23 mg/m³)	A	35 ppm (40 mg/m³)	U/A
Nitrogen Dioxide (NO_2)	1 Hour	0.18 ppm (339 µg/m³)	A	No standard	Not applicable
	Annual Arithmetic Mean	0.030 ppm (57 µg/m³)	No information available	0.053 ppm (100 µg/m³)	U/A
Sulfur Dioxide (SO_2)	24 Hours	0.04 ppm (105 µg/m³)	A	0.14 ppm (365/µg/m³)	A
	1 Hour	0.25 ppm (665 µg/m³)	A	No standard	Not applicable
	Annual Arithmetic Mean	No standard	Not applicable	0.030 ppm (80/µg/m³)	A
Particulate Matter (PM_{10})	Annual Arithmetic Mean	20 µg/m³	N	No standard	Not applicable
	24 Hours	50 µg/m³	N	150 µg/m³	U
Particulate Matter – Fine ($PM_{2.5}$)	Annual Arithmetic Mean	12 µg/m³	N	15 µg/m³	N
	24 Hours	No standard	Not applicable	35 µg/m³	N
Sulfates	24 Hours	25 µg/m³	U	No standard	Not applicable
Lead	30-Day Average	1.5 µg/m³	A	No standard	Not applicable
	Calendar Quarter	No standard	Not applicable	1.5 µg/m³	A
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m³)	U	No standard	Not applicable
Vinyl Chloride (chloroethene)	24 Hours	0.01 ppm (26 µg/m³)	No information available	No standard	Not applicable
Visibility-Reducing Particles	8 Hours (10:00 to 18:00 PST)	Extinction coefficient of 0.23 per kilometer	U	No standard	Not applicable

Source: BAAQMD 2017 (http://www.baaqmd.gov/research-and-data/air-quality-standards-and-attainment-status).
A=attainment; N=nonattainment; U=unclassified
mg/m3=milligrams per cubic meter; ppm=parts per million; ppb=parts per billion; µg/m3=micrograms per cubic meter

CARB designates all areas within the State as either attainment (having air quality better than the CAAQS) or nonattainment (having a pollution concentration that exceeds the CAAQS more than once in three years). Likewise, the EPA designates all areas of the U.S. as either being in attainment of the NAAQS or nonattainment if pollution concentrations exceed the NAAQS. Because attainment/nonattainment is pollutant-specific, an area may be classified as nonattainment for one pollutant and attainment for another. Similarly, because the State and national standards differ, an area could be classified as attainment for the Federal standard of a pollutant while it may be nonattainment for the State standard of the same pollutant. Some areas are unclassified, which means no monitoring data are available. Unclassified areas are considered to be in attainment. The project site lies within the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). The attainment status of BAAQMD for CAAQS and NAAQS for the area where the proposed project is located is shown in Table 1 and is discussed in more detail below under Section 3.2, *Ambient Air Monitoring*.

3.2 AMBIENT AIR MONITORING

CARB monitors ambient air quality at approximately 250 air monitoring stations across the state. Air quality monitoring stations usually measure pollutant concentrations ten feet aboveground level; therefore, air quality is often referred to in terms of ground-level concentrations. The closest air monitoring station to the project site is the San José Monitoring Station located at 158 East Jackson Street, San José, California. Local air quality data from 2014 to 2016 is provided in Table 2, *Summary of Air Quality Data*. This table lists the monitored maximum concentrations and number of exceedances of Federal/State air quality standards for each year.

Ozone. Ozone (O_3) occurs in two layers of the atmosphere. The layer surrounding the earth's surface is the troposphere. The troposphere extends approximately 10 miles above ground level, where it meets the second layer, the stratosphere. The stratospheric (the "good" ozone) layer extends upward from about ten to 30 miles and protects life on earth from the sun's harmful ultraviolet rays (UV-B). "Bad" ozone is a photochemical pollutant, and needs volatile organic compounds (VOCs), Nitrogen Oxides (NO_X) and sunlight to form; therefore, VOCs and NO_X are ozone precursors. Significant ozone formation generally requires an adequate amount of precursors in the atmosphere and several hours in a stable atmosphere with strong sunlight.

Many respiratory ailments, as well as cardiovascular disease, are aggravated by exposure to high ozone levels. Ozone also damages natural ecosystems (such as forests and foothill plant communities) and damages agricultural crops and some man-made materials (such as rubber, paint and plastics). Societal costs from ozone damage include increased healthcare costs, the loss of human and animal life, accelerated replacement of industrial equipment and reduced crop yields.

Table 2
Summary of Air Quality Data

Pollutant	California Standard	Federal Primary Standard	Year	Maximum[2] Concentration	Days (Samples) State/Federal Std. Exceeded
Ozone (O_3)[1] (1-hour)	0.09 ppm for 1 hour	NA[5]	2014 2015 2016	0.089 ppm 0.094 0.087	0/0 0/0 0/0
Ozone (O_3)[1] (8-hour)	0.07 ppm for 8 hours	0.070 ppm for 8 hours	2014 2015 2016	0.066 ppm 0.081 0.067	0/0 2/2 0/0
Carbon Monoxide (CO)[2] (1-hour)	20 ppm for 1 hour	35 ppm for 1 hour	2014 2015 2016	2.43 ppm 2.43 1.95	0/0 0/0 0/0
Nitrogen Dioxide[1] (NO_2)[1]	0.18 ppm for 1 hour	0.100 ppm For 1 hour	2014 2015 2016	0.058 ppm 0.049 0.051	0/0 0/0 0/0
Fine Particulate Matter[1] ($PM_{2.5}$)[2, 4]	No Separate Standard	35 µg/m[2] for 24 hours	2014 2015 2016	60.4 µg/m[2] 49.4 22.7	NA/2 NA/2 NA/0
Particulate Matter[1] (PM_{10})[3, 4]	50 µg/m[2] for 24 hours	150 µg/m[2] for 24 hours	2014 2015 2016	54.7 µg/m[2] 58.0 41.0	1/0 1/0 0/0

Source: Aerometric Data Analysis and Measurement System (ADAM), summaries from 2014 to 2016, http://www.arb.ca.gov/adam.

ppm = parts per million; NM = not measured; NA = not applicable; µg/m[3] = micrograms per cubic meter; PM_{10} = particulate matter 10 microns in diameter or less; $PM_{2.5}$ = particulate matter 2.5 microns in diameter or less.

Notes:
1. Data collected from the San José Monitoring Station located at 158 East Jackson Street, San José, California 95112.
2. Data collected from San José Monitoring Station via CARB Air Quality and Meteorological Information System (AQMIS) Database: https://www.arb.ca.gov/aqmis2/aqmis2.php.
3. Maximum concentration is measured over the same period as the California Standards.
4. PM_{10} exceedances are based on State thresholds established prior to amendments adopted on June 20, 2002.
5. PM_{10} and $PM_{2.5}$ exceedances are derived from the number of samples exceeded, not days.
6. The Federal standard was revoked in June 2005.

Carbon Monoxide. Carbon monoxide (CO) is an odorless, colorless toxic gas that is emitted by mobile and stationary sources as a result of incomplete combustion of hydrocarbons or other carbon-based fuels. In cities, automobile exhaust can cause as much as 95 percent of all CO emissions. At high concentrations, CO can reduce the oxygen-carrying capacity of the blood and cause headaches, dizziness, and unconsciousness.

Nitrogen Dioxide. Nitrogen oxides (NO_X) are a family of highly reactive gases that are a primary precursor to the formation of ground-level O_3, and react in the atmosphere to form acid rain. NO_2 (often used interchangeably with NO_X) is a reddish-brown gas that can cause breathing difficulties at high levels. Peak readings of NO_2 occur in areas that have a high concentration of combustion sources (e.g., motor vehicle engines, power plants, refineries, and other industrial operations).

NO_2 can irritate and damage the lungs, and lower resistance to respiratory infections such as influenza. The health effects of short-term exposure are still unclear. However, continued or frequent exposure to NO_2 concentrations that are typically much higher than those normally

found in the ambient air may increase acute respiratory illnesses in children and increase the incidence of chronic bronchitis and lung irritation. Chronic exposure to NO_2 may aggravate eyes and mucus membranes and cause pulmonary dysfunction.

Coarse Particulate Matter (PM_{10}). PM_{10} refers to suspended particulate matter, which is smaller than ten microns or ten one-millionths of a meter. PM_{10} arises from sources such as road dust, diesel soot, combustion products, construction operations, and dust storms. PM_{10} scatters light and significantly reduces visibility. In addition, these particulates penetrate the lungs and can potentially damage the respiratory tract. On June 19, 2003, CARB adopted amendments to the statewide 24-hour particulate matter standards based upon requirements set forth in the Children's Environmental Health Protection Act (Senate Bill 25).

Fine Particulate Matter ($PM_{2.5}$). Due to recent increased concerns over health impacts related to fine particulate matter (particulate matter 2.5 microns in diameter or less), both State and Federal $PM_{2.5}$ standards have been created. Particulate matter impacts primarily affect infants, children, the elderly, and those with pre-existing cardiopulmonary disease. In 1997, the EPA announced new $PM_{2.5}$ standards. Industry groups challenged the new standard in court and the implementation of the standard was blocked. However, upon appeal by the EPA, the U.S. Supreme Court reversed this decision and upheld the EPA's new standards.

On June 20, 2002, CARB adopted amendments for statewide annual ambient particulate matter air quality standards. These standards were revised/established due to increasing concerns by CARB that previous standards were inadequate, as almost everyone in California is exposed to levels at or above the current State standards during some parts of the year, and the statewide potential for significant health impacts associated with particulate matter exposure was determined to be large and wide-ranging.

Reactive Organic Gases and Volatile Organic Compounds. Hydrocarbons are organic gases that are formed solely of hydrogen and carbon. There are several subsets of organic gases including reactive organic gases (ROGs) and volatile organic compounds (VOCs). Both ROGs and VOCs are emitted from the incomplete combustion of hydrocarbons or other carbon-based fuels. The major sources of hydrocarbons are combustion engine exhaust, oil refineries, and oil-fueled power plants; other common sources are petroleum fuels, solvents, dry cleaning solutions, and paint (via evaporation).

3.3 GLOBAL CLIMATE CHANGE GASES

The natural process through which heat is retained in the troposphere is called the "greenhouse effect."[1] The greenhouse effect traps heat in the troposphere through a threefold process as follows: short wave radiation emitted by the Sun is absorbed by the Earth; the Earth emits a portion of this energy in the form of long wave radiation; and GHGs in the upper atmosphere

[1] The troposphere is the bottom layer of the atmosphere, which varies in height from the Earth's surface to 10 to 12 kilometers.

absorb this long wave radiation and emit this long wave radiation into space and toward the Earth. This "trapping" of the long wave (thermal) radiation emitted back toward the Earth is the underlying process of the greenhouse effect.

The most abundant GHGs are water vapor and carbon dioxide (CO_2). Many other trace gases have greater ability to absorb and re-radiate long wave radiation; however, these gases are not as plentiful. For this reason, and to gauge the potency of GHGs, scientists have established a Global Warming Potential (GWP) for each GHG based on its ability to absorb and re-radiate long wave radiation.

GHGs include, but are not limited to, the following:[2]

- *Water Vapor (H_2O)*. Although water vapor has not received the scrutiny of other GHGs, it is the primary contributor to the greenhouse effect. Natural processes, such as evaporation from oceans and rivers, and transpiration from plants, contribute 90 percent and 10 percent of the water vapor in our atmosphere, respectively. The primary human related source of water vapor comes from fuel combustion in motor vehicles; however, this is not believed to contribute a significant amount (less than one percent) to atmospheric concentrations of water vapor. The Intergovernmental Panel on Climate Change (IPCC) has not determined a GWP for water vapor.

- *Carbon Dioxide (CO_2)*. Carbon dioxide is primarily generated by fossil fuel combustion in stationary and mobile sources. Due to the emergence of industrial facilities and mobile sources in the past 250 years, CO_2 emissions from fossil fuel combustion increased by a total of 5.6 percent between 1990 and 2015.[3] Carbon dioxide is the most widely emitted GHG and is the reference gas (Global Warming Potential of 1) for determining Global Warming Potentials for other GHGs.

- *Methane (CH_4)*. Methane is emitted from biogenic sources, incomplete combustion in forest fires, landfills, manure management, and leaks in natural gas pipelines. In the United States, the top three sources of methane are landfills, natural gas systems, and enteric fermentation (the digestive process in animals with a rumen, typically cattle, causing methane gas). Methane is the primary component of natural gas, which is used for space and water heating, steam production, and power generation. The GWP of methane is 25.

[2] All Global Warming Potentials are given as 100-year Global Warming Potential. Unless noted otherwise, all Global Warming Potentials were obtained from the IPCC. (Intergovernmental Panel on Climate Change, *Climate Change, Climate Change 2007: Synthesis Report. Contribution of Working Groups I, II, and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, 2007).*

[3] U.S. Environmental Protection Agency, "*Inventory of United States Greenhouse Gas Emissions and Sinks 1990 to 2015,"* April 15, 2017.

- *Nitrous Oxide (N_2O)*. Nitrous oxide is produced by both natural and human related sources. Primary human related sources include agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuel, adipic acid production (for the industrial production of nylon), and nitric acid production (for rocket fuel, woodworking, and as a chemical reagent). The GWP of nitrous oxide is 298.

- *Hydrofluorocarbons (HFCs)*. HFCs are typically used as refrigerants for both stationary refrigeration and mobile air conditioning. The use of HFCs for cooling and foam blowing is increasing, as the continued phase out of Chlorofluorocarbons (CFCs) and HCFCs gains momentum. The 100-year Global Warming Potential of HFCs range from 124 for HFC-152 to 14,800 for HFC-23.[4]

- *Perfluorocarbons (PFCs)*. PFCs are compounds consisting of carbon and fluorine, and are primarily created as a byproduct of aluminum production and semiconductor manufacturing. Perfluorocarbons are potent GHGs with a GWP several thousand times that of carbon dioxide, depending on the specific PFC. Another area of concern regarding PFCs is their long atmospheric lifetime (up to 50,000 years). The GWP of PFCs range from 7,390 to 12,200.[5]

- *Sulfur hexafluoride (SF_6)*. SF_6 is a colorless, odorless, nontoxic, nonflammable gas. Sulfur hexafluoride is the most potent GHG that has been evaluated by the IPCC with a Global Warming Potential of 22,800.[6] However, its global warming contribution is not as high as the Global Warming Potential would indicate due to its low mixing ratio compared to carbon dioxide (4 parts per trillion [ppt] in 1990 versus 365 parts per million [ppm], respectively).[7]

In addition to the six major GHGs discussed above (excluding water vapor), many other compounds have the potential to contribute to the greenhouse effect. Some of these substances were previously identified as stratospheric ozone (O_3) depletors; therefore, their gradual phase out is currently in effect. The following is a listing of these compounds:

- *Hydrochlorofluorocarbons (HCFCs)*. HCFCs are solvents, similar in use and chemical composition to CFCs. The main uses of HCFCs are for refrigerant products and air conditioning systems. As part of the Montreal Protocol, all developed countries that adhere to the Montreal Protocol are subject to a consumption cap and gradual phase out of HCFCs. The United States is scheduled to achieve a 100 percent reduction to the cap

[4] Ibid.

[5] U.S. Environmental Protection Agency, Overview of Greenhouse Gas Emissions, April 14, 2017, https://www.epa.gov/ghgemissions/overview-greenhouse-gases#f-gases, accessed on January 22, 2018.

[6] Ibid.

[7] Ibid.

by 2030. The 100-year GWP of HCFCs range from 90 for HCFC-123 to 1,800 for HCFC-142b.[8]

- *1,1,1 trichloroethane*. 1,1,1 trichloroethane or methyl chloroform is a solvent and degreasing agent commonly used by manufacturers. The GWP of methyl chloroform is 146 times that of CO_2 (CO_2 has a GWP of 1).[9]

- *Chlorofluorocarbons (CFCs)*. CFCs are used as refrigerants, cleaning solvents, and aerosols spray propellants. CFCs were also part of the EPA's Final Rule (57 FR 3374) for the phase out of O_3 depleting substances. Currently, CFCs have been replaced by HFCs in cooling systems and a variety of alternatives for cleaning solvents. Nevertheless, CFCs remain suspended in the atmosphere contributing to the greenhouse effect. CFCs are potent GHGs with 100-year GWPs ranging from 3,800 for CFC 11 to 14,400 for CFC 13.[10]

3.4 SENSITIVE RECEPTORS

Sensitive populations are more susceptible to the effects of air pollution than is the general population. Sensitive populations (sensitive receptors) that are in proximity to localized sources of toxics and CO are of particular concern. Land uses considered sensitive receptors include residences, schools, playgrounds, childcare centers, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. Table 3, *Sensitive Receptors*, lists the distances and locations of sensitive receptors within the project vicinity. The distances depicted in Table 3 are based on the distance from the project site to the outdoor activity area of the closest receptor.

[8] Intergovernmental Panel on Climate Change, *Climate Change 2007: Working Group I: The Physical Science Basis, 2.10.2, Direct Global Warming Potentials*, 2007, https://www.ipcc.ch/publications_and_data/ar4/wg1/en/ch2s2-10-2.html, accessed January 22, 2018.

[9] Ibid.

[10] Ibid.

Table 3
Sensitive Receptors

Type	Name	Distance from Project Site (feet) [1]	Direction from Project Site	Location
Residential	Residential Uses	103	North	45 East Reed Street, San José, CA 95112
		25	East	610 South 2nd Street, San José, CA 95112
		81	West	2 Pierce Avenue, San José, CA 95110
		80	West	601 South 1st Street, San José, CA 95113
Schools	Notre Dame High School	360	North	596 South 2nd Street, San José, CA 95112
	Lowell Elementary School	1,705	Northeast	625 South 7th Street, San José, CA 95112
	Rocketship Mateo Sheedy Elementary School	1,911	Southwest	788 Locust Street, San José, CA 95110
	Washington Elementary School	1,956	Southwest	100 Oak Street, San José, CA 95110
	Sacred Heart School	2,963	Southwest	325 Willow Street, San José, CA 95110
Places of Worship	First Christian Church	3,558	Northeast	80 South 5th Street, San José, CA 95112
	The Church of Jesus Christ of Latter-day Saints	3,896	Northeast	66 South 7th Street, San José, CA 95135
	Lima-Campagna-Alameda Mission Chapel	235	East	600 South 2nd Street, San José, CA 95112
	Sacred Heart of Jesus Parish	2,963	Southwest	325 Willow Street, San José, CA 95110
	San José Word of Faith	4,268	Southwest	873 Delmas Avenue, San José, CA 95125
	Star of David Church	4,274	Southwest	520 West Virginia Street, San José, CA 95125
	Cathedral Basilica of St. Joseph	3,168	Northwest	80 South Market Street, San José, CA 95113
	St. Paul's United Methodist Church	2,994	Northeast	405 South 10th Street, San José, CA 95112
Parks	Parque De Los Pobladores	218	Northwest	Along South Market Street, San José, CA 95110
	Bestor Art Park	2,725	Southeast	955 South 6th Street, San José, CA 95112
	Cadwallader Park	2,980	Southeast	Along South 1st Street, San José, CA 95110
	Guadalupe River Park	2,011	Northwest	438 Coleman Avenue, San José, CA 95110

Note:
1 – Distances are measured from the exterior boundaries of the proposed building and parking structure within the project site.
Source: Google Earth, 2017.

4.0 REGULATORY SETTING

4.1 FEDERAL

Clean Air Act. The Clean Air Act (CAA) of 1970 and the CAA Amendments of 1971 required the EPA to establish NAAQS, with states retaining the option to adopt more stringent standards or to include other specific pollutants. On April 2, 2007, the Supreme Court found that carbon dioxide is an air pollutant covered by the CAA; however, no NAAQS have been established for carbon dioxide.

These standards are the levels of air quality considered safe, with an adequate margin of safety, to protect the public health and welfare. They are designed to protect those "sensitive receptors" most susceptible to further respiratory distress such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

The EPA has classified air basins (or portions thereof) as being in attainment, nonattainment, or unclassified for each criteria air pollutant, based on whether or not the NAAQS have been achieved. If an area is designated unclassified, it is because inadequate air quality data were available as a basis for a nonattainment or attainment designation. Table 1 lists the federal attainment status of the Basin for the criteria pollutants.

National Emissions Standards for Hazardous Air Pollutants Program. Under federal law, 188 substances are listed as hazardous air pollutants (HAPs). Major sources of specific HAPs are subject to the requirements of the National Emissions Standards for Hazardous Air Pollutants (NESHAPS) program. The EPA is establishing regulatory schemes for specific source categories and requires implementation of Maximum Achievable Control Technologies (MACTs) for major sources of HAPs in each source category. State law has established the framework for California's TAC identification and control program, which is generally more stringent than the federal program and is aimed at HAPs that are a problem in California. The state has formally identified 244 substances as TACs and is adopting appropriate control measures for each. Once adopted at the state level, each air district will be required to adopt a measure that is equally or more stringent.

4.2 STATE

California Air Toxics "Hot Spots" Information and Assessment Act (AB 2588). The California Air Toxics "Hot Spots" Information and Assessment Act (AB 2588) is a state-wide program enacted in 1987. AB 2588 requires facilities that exceed recommended Office of Environmental Health Hazard Assessment (OEHHA) levels to reduce risks to acceptable levels.

Typically, land development projects generate diesel emissions from construction vehicles during the construction phase, as well as some diesel emissions from small trucks during the operational phase. Diesel exhaust is mainly composed of particulate matter and gases, which contain potential cancer-causing substances. Emissions from diesel engines currently include over 40 substances that are listed by EPA as hazardous air pollutants and by CARB as toxic air contaminants. On August 27, 1998, CARB identified particulate matter in diesel exhaust as a TAC, based on data linking diesel particulate emissions to increased risks of lung cancer and respiratory disease.

In September 2000, CARB adopted a comprehensive diesel risk reduction plan to reduce emissions from both new and existing diesel-fueled engines and vehicles. The goal of the plan is to reduce diesel PM emissions and the associated health risk by 75 percent in 2010 and by 85 percent by 2020. As part of this plan, CARB identified Airborne Toxic Control Measures (ATCM) for mobile and stationary emissions sources. Each ATCM is codified in the California Code of Regulations, including the ATCM to limit diesel-fueled commercial motor vehicle idling, which puts limits on idling time for large diesel engines (13 CCR Chapter 10 Section 2485).

California Clean Air Act. The California Clean Air Act (CCAA) allows states to adopt ambient air quality standards and other regulations provided that they are at least as stringent as federal standards. CARB, a part of the California Environmental Protection Agency, is responsible for the coordination and administration of both federal and state air pollution control programs within California, including setting the California ambient air quality standards. CARB also conducts research, compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB establishes emissions standards for motor vehicles sold in California, consumer products (such as hairspray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions. CARB also has primary responsibility for the development of California's State Implementation Plan (SIP), for which it works closely with the federal government and the local air districts.

In addition to standards set for the six criteria pollutants, 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 populace with a reasonable margin of safety. Further, in addition to primary and secondary ambient air quality standards, the State has established a set of episode criteria for ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, and particulate matter. These criteria refer to episode levels representing periods of short-term exposure to air pollutants that actually threaten public health. Table 1 above lists the state attainment status of the Basin for the criteria pollutants.

California State Implementation Plan. The federal Clean Air Act (and its subsequent amendments) requires each state to prepare an air quality control plan referred to as the SIP. The SIP is a living document that is periodically modified to reflect the latest emissions inventories, plans, and rules and regulations of air basins as reported by the agencies with jurisdiction over them. The CAA Amendments dictate that states containing areas violating the national ambient

air quality standards revise their SIPs to include extra control measures to reduce air pollution. The SIP includes strategies and control measures to attain the NAAQS by deadlines established by the Clean Air Act. The EPA has the responsibility to review all State Implementation Plans to determine if they conform to the requirements of the CAA.

State law makes CARB the lead agency for all purposes related to the SIP. Local air districts and other agencies prepare SIP elements and submit them to CARB for review and approval. CARB then forwards SIP revisions to the EPA for approval and publication in the Federal Register. As discussed below, the *BAAQMD Final 2017 Clean Air Plan* (Clean Air Plan) is the SIP for the Basin.

Senate Bill 1889, Accidental Release Prevention Law/California Accidental Release Prevention Program. Senate Bill (SB) 1889 required California to implement a new federally mandated program governing the accidental airborne release of chemicals promulgated under Section 112 of the Clean Air Act. Effective January 1, 1997, the California Accidental Release Prevention Law (CalARP) replaced the previous California Risk Management and Prevention Program and incorporated the mandatory federal requirements. CalARP addresses facilities that contain specified hazardous materials, known as regulated substances, which if involved in an accidental release, could result in adverse offsite consequences. CalARP defines regulated substances as chemicals that pose a threat to public health and safety or the environment because they are highly toxic, flammable, or explosive.

4.3 REGIONAL

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

The BAAQMD is the regional agency with jurisdiction over the nine-county region located in the Basin. The Association of Bay Area Governments (ABAG), Metropolitan Transportation Commission (MTC), county transportation agencies, cities and counties, and various nongovernmental organizations also join in the efforts to improve air quality through a variety of programs. These programs include the adoption of regulations and policies, as well as implementation of extensive education and public outreach programs.

In general, the Bay Area experiences low concentrations of most pollutants when compared to federal standards, except for O3 and particulate matter, for which standards are exceeded periodically. With respect to federal standards, the Bay Area's attainment status for 8-hour ozone is classified as nonattainment and nonattainment for $PM_{2.5}$. As a designated nonattainment area for the federal 8-hour ozone standard and $PM_{2.5}$ standard, preparation of a SIP is required. In response to the EPA's designation of the Basin for the previous nonattainment 8-hour federal ozone standard, the BAAQMD, ABAG, and MTC were required to develop an ozone attainment plan to meet this standard. The *1999 Ozone Attainment Plan* was prepared and adopted by these agencies in June 1999 and this federal plan was updated in 2001.

The BAAQMD, in cooperation with the MTC and ABAG, prepared the Clean Air Plan to address nonattainment of the national 8-hour ozone standard and nonattainment of the national $PM_{2.5}$ standard in the Basin. The Clean Air Plan defines a control strategy that the BAAQMD and its partners will implement to (1) reduce emissions and decrease ambient concentrations of harmful pollutants; (2) safeguard public health by reducing exposure to air pollutants that pose the greatest health risk, with an emphasis on protecting the communities most heavily impacted by air pollution; and (3) reduce greenhouse gas (GHG) emissions to protect the climate. It is important to note that in addition to updating the previously prepared ozone plan, the newly adopted Clean Air Plan also serves as a multipollutant plan to protect public health and the climate. In its dual role as an update to the state ozone plan and a multipollutant plan, the Clean Air Plan addresses four categories of pollutants:

- Ground-level ozone and its key precursors, ROG and NOx
- Particulate matter: primary $PM_{2.5}$, as well as precursors to secondary $PM_{2.5}$
- Air toxics
- Greenhouse gases

The BAAQMD adopted their updated CEQA Air Quality Guidelines to assist lead agencies in evaluating air quality impacts of projects and plans proposed in the Basin. These guidelines provide BAAQMD-recommended procedures for evaluating potential air quality and GHG impacts during the environmental review process consistent with CEQA requirements. In addition to providing new thresholds for GHG emissions, the 2017 update provided updated significance thresholds for criteria pollutants and superseded the BAAQMD's previous CEQA guidance titled.

4.4 GLOBAL CLIMATE CHANGE REGULATORY PROGRAMS

FEDERAL

To date, no national standards have been established for nationwide GHG reduction targets, nor have any regulations or legislation been enacted specifically to address climate change and GHG emissions reduction at the project level. Various efforts have been promulgated at the federal level to improve fuel economy and energy efficiency to address climate change and its associated effects.

Energy Independence and Security Act of 2007. The Energy Independence and Security Act of 2007 (December 2007), among other key measures, requires the following, which would aid in the reduction of national GHG emissions:

- Increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022.

- Set a target of 35 miles per gallon for the combined fleet of cars and light trucks by model year 2020, and direct the National Highway Traffic Safety Administration (NHTSA) to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks.

- Prescribe or revise standards affecting regional efficiency for heating and cooling products and procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances.

U.S. Environmental Protection Agency Endangerment Finding. The EPA's authority to regulate GHG emissions stems from the U.S. Supreme Court decision in *Massachusetts v. EPA* (2007). The Supreme Court ruled that GHGs meet the definition of air pollutants under the existing Clean Air Act and must be regulated if these gases could be reasonably anticipated to endanger public health or welfare. Responding to the Court's ruling, the EPA finalized an endangerment finding in December 2009. Based on scientific evidence it found that six GHGs (carbon dioxide [CO_2], methane [CH_4], nitrous oxide [N_2O], hydrofluorocarbons [HFCs], perfluorocarbons [PFCs], and sulfur hexafluoride [SF_6]) constitute a threat to public health and welfare. Thus, it is the Supreme Court's interpretation of the existing Act and the EPA's assessment of the scientific evidence that form the basis for the EPA's regulatory actions.

Federal Vehicle Standards. In response to the U.S. Supreme Court ruling discussed above, the George W. Bush Administration issued Executive Order 13432 in 2007 directing the EPA, the Department of Transportation, and the Department of Energy to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. In 2009, the NHTSA issued a final rule regulating fuel efficiency and GHG emissions from cars and light-duty trucks for model year 2011, and in 2010, the EPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012–2016.

In 2010, President Barack Obama issued a memorandum directing the Department of Transportation, Department of Energy, EPA, and NHTSA to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, the EPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model years 2017–2025 light-duty vehicles. The proposed standards projected to achieve 163 grams per mile of CO_2 in model year 2025, on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon if this level were achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017–2021, and NHTSA intends to set standards for model years 2022–2025 in a future rulemaking. On January 12, 2017, the EPA finalized its decision to maintain the current GHG emissions standards for model years 2022–2025 cars and light trucks.

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011, the EPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014–2018. The standards for CO_2 emissions and fuel consumption are

tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the EPA, this regulatory program will reduce GHG emissions and fuel consumption for the affected vehicles by 6 to 23 percent over the 2010 baselines.

In August 2016, the EPA and NHTSA announced the adoption of the phase two program related to the fuel economy and GHG standards for medium- and heavy-duty trucks. The phase two program will apply to vehicles with model year 2018 through 2027 for certain trailers, and model years 2021 through 2027 for semi-trucks, large pickup trucks, vans, and all types and sizes of buses and work trucks. The final standards are expected to lower CO_2 emissions by approximately 1.1 billion metric tons and reduce oil consumption by up to 2 billion barrels over the lifetime of the vehicles sold under the program.

Clean Power Plan and New Source Performance Standards for Electric Generating Units. On October 23, 2015, the EPA published a final rule (effective December 22, 2015) establishing the carbon pollution emission guidelines for existing stationary sources: electric utility generating units (80 FR 64510–64660), also known as the Clean Power Plan. These guidelines prescribe how states must develop plans to reduce GHG emissions from existing fossil-fuel-fired electric generating units. The guidelines establish CO_2 emission performance rates representing the best system of emission reduction for two subcategories of existing fossil-fuel-fired electric generating units: (1) fossil-fuel-fired electric utility steam-generating units and (2) stationary combustion turbines. Concurrently, the EPA published a final rule (effective October 23, 2015) establishing standards of performance for GHG emissions from new, modified, and reconstructed stationary sources: electric utility generating units (80 FR 64661–65120). The rule prescribes CO_2 emission standards for newly constructed, modified, and reconstructed affected fossil-fuel-fired electric utility generating units. The U.S. Supreme Court stayed implementation of the Clean Power Plan pending resolution of several lawsuits. Additionally, in March 2017, President Trump directed the EPA Administrator to review the Clean Power Plan in order to determine whether it is consistent with current executive policies concerning GHG emissions, climate change, and energy.

Presidential Executive Order 13783. Presidential Executive Order 13783, Promoting Energy Independence and Economic Growth (March 28, 2017), orders all federal agencies to apply cost-benefit analyses to regulations of GHG emissions and evaluations of the social cost of carbon, nitrous oxide, and methane.

STATE

Various statewide and local initiatives to reduce California's contribution to GHG emissions have raised awareness that, even though the various contributors to and consequences of global climate change are not yet fully understood, global climate change is occurring, and that there is a real potential for severe adverse environmental, social, and economic effects in the long term. Every nation emits GHGs and as a result makes an incremental cumulative contribution to global climate change; therefore, global cooperation will be required to reduce the rate of GHG

emissions enough to slow or stop the human-caused increase in average global temperatures and associated changes in climatic conditions.

Executive Order S-1-07. Executive Order S-1-07 proclaims that the transportation sector is the main source of GHG emissions in California, generating more than 40 percent of statewide emissions. It establishes a goal to reduce the carbon intensity of transportation fuels sold in California by at least ten percent by 2020. This order also directs CARB to determine whether this Low Carbon Fuel Standard (LCFS) could be adopted as a discrete early-action measure as part of the effort to meet the mandates in Assembly Bill (AB) 32.

Executive Order S-3-05. Executive Order S-3-05 set forth a series of target dates by which statewide emissions of GHGs would be progressively reduced, as follows:

- By 2010, reduce GHG emissions to 2000 levels;
- By 2020, reduce GHG emissions to 1990 levels; and
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

The Executive Order directed the secretary of the California Environmental Protection Agency (Cal/EPA) to coordinate a multi-agency effort to reduce GHG emissions to the target levels. The secretary will also submit biannual reports to the governor and California Legislature describing the progress made toward the emissions targets, the impacts of global climate change on California's resources, and mitigation and adaptation plans to combat these impacts. To comply with the executive order, the secretary of Cal/EPA created the California Climate Action Team (CAT), made up of members from various State agencies and commissions. The team released its first report in March 2006. The report proposed to achieve the targets by building on the voluntary actions of California businesses, local governments, and communities and through State incentive and regulatory programs.

Executive Order B-30-15. Executive Order B-30-15 added the interim target to reduce statewide GHG emissions 40 percent below 1990 levels by 2030.

Executive Order S-13-08. Executive Order S-13-08 seeks to enhance the State's management of climate impacts including sea level rise, increased temperatures, shifting precipitation, and extreme weather events by facilitating the development of State's first climate adaptation strategy. This will result in consistent guidance from experts on how to address climate change impacts in the State of California.

Executive Order S-14-08. Executive Order S-14-08 expands the State's Renewable Energy Standard to 33 percent renewable power by 2020. Additionally, Executive Order S-21-09 (signed on September 15, 2009) directs CARB to adopt regulations requiring 33 percent of electricity sold in the State come from renewable energy by 2020. CARB adopted the "Renewable Electricity Standard" on September 23, 2010, which requires 33 percent renewable energy by 2020 for most publicly owned electricity retailers.

Executive Order S-20-04. Executive Order S-20-04, the California Green Building Initiative, (signed into law on December 14, 2004), establishes a goal of reducing energy use in State-owned buildings by 20 percent from a 2003 baseline by 2015. It also encourages the private commercial sector to set the same goal. The initiative places the California Energy Commission (CEC) in charge of developing a building efficiency benchmarking system, commissioning and retro-commissioning (commissioning for existing commercial buildings) guidelines, and developing and refining building energy efficiency standards under Title 24 to meet this goal.

Executive Order S-21-09. Executive Order S-21-09, 33 percent Renewable Energy for California, directs CARB to adopt regulations to increase California's Renewable Portfolio Standard (RPS) to 33 percent by 2020. This builds upon SB 1078 (2002) which established the California RPS program, requiring 20 percent renewable energy by 2017, and SB 107 (2006) which advanced the 20 percent deadline to 2010, a goal which was expanded to 33 percent by 2020 in the 2005 Energy Action Plan II.

Assembly Bill 32 (California Global Warming Solutions Act of 2006). California passed the California Global Warming Solutions Act of 2006 (AB 32; California Health and Safety Code Division 25.5, Sections 38500 - 38599). AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and establishes a cap on statewide GHG emissions. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. AB 32 specifies that regulations adopted in response to AB 1493 should be used to address GHG emissions from vehicles. However, AB 32 also includes language stating that if the AB 1493 regulations cannot be implemented, then CARB should develop new regulations to control vehicle GHG emissions under the authorization of AB 32.

Assembly Bill 1493. AB 1493 (also known as the Pavley Bill) requires that CARB develop and adopt, by January 1, 2005, regulations that achieve "the maximum feasible reduction of GHG emitted by passenger vehicles and light-duty trucks and other vehicles determined by CARB to be vehicles whose primary use is noncommercial personal transportation in the State."

To meet the requirements of AB 1493, CARB approved amendments to the California Code of Regulations (CCR) in 2004 by adding GHG emissions standards to California's existing standards for motor vehicle emissions. Amendments to CCR Title 13, Sections 1900 and 1961 and adoption of 13 CCR Section 1961.1 require automobile manufacturers to meet fleet-average GHG emissions limits for all passenger cars, light-duty trucks within various weight criteria, and medium-duty weight classes for passenger vehicles (i.e., any medium-duty vehicle with a gross vehicle weight rating less than 10,000 pounds that is designed primarily to transport people), beginning with the 2009 model year. Emissions limits are reduced further in each model year through 2016. When fully phased in, the near-term standards will result in a reduction of about 22 percent in GHG emissions compared to the emissions from the 2002 fleet, while the mid-term standards will result in a reduction of about 30 percent.

Assembly Bill 3018. AB 3018 established the Green Collar Jobs Council (GCJC) under the California Workforce Investment Board (CWIB). The GCJC will develop a comprehensive approach to address California's emerging workforce needs associated with the emerging green economy. This bill will ignite the development of job training programs in the clean and green technology sectors.

Senate Bill 97. SB 97, signed in August 2007 (Chapter 185, Statutes of 2007; PRC Sections 21083.05 and 21097), acknowledges that climate change is a prominent environmental issue that requires analysis under CEQA. This bill directs the Governor's Office of Planning and Research (OPR), which is part of the State Natural Resources Agency, to prepare, develop, and transmit to CARB guidelines for the feasible mitigation of GHG emissions (or the effects of GHG emissions), as required by CEQA.

OPR published a technical advisory recommending that CEQA lead agencies make a good-faith effort to estimate the quantity of GHG emissions that would be generated by a proposed project. Specifically, based on available information, CEQA lead agencies should estimate the emissions associated with project-related vehicular traffic, energy consumption, water usage, and construction activities to determine whether project-level or cumulative impacts could occur, and should mitigate the impacts where feasible. OPR requested CARB technical staff to recommend a method for setting CEQA thresholds of significance as described in CEQA Guidelines Section 15064.7 that will encourage consistency and uniformity in the CEQA analysis of GHG emissions throughout the State.

The Natural Resources Agency adopted the CEQA Guidelines Amendments prepared by OPR, as directed by SB 97. On February 16, 2010, the Office of Administration Law approved the CEQA Guidelines Amendments, and filed them with the Secretary of State for inclusion in the California Code of Regulations. The CEQA Guidelines Amendments became effective on March 18, 2010.

Senate Bill 375. SB 375, signed in September 2008 (Chapter 728, Statutes of 2008), aligns regional transportation planning efforts, regional GHG reduction targets, and land use and housing allocation. SB 375 requires Metropolitan Planning Organizations (MPOs) to adopt a sustainable communities strategy (SCS) or alternative planning strategy (APS) that will prescribe land use allocation in that MPOs regional transportation plan. CARB, in consultation with MPOs, will provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every eight years but can be updated every four years if advancements in emissions technologies affect the reduction strategies to achieve the targets. CARB is also charged with reviewing each MPO's SCS or APS for consistency with its assigned targets. If MPOs do not meet the GHG reduction targets, transportation projects may not be eligible for funding programmed after January 1, 2012.

Senate Bills 1078 and 107. SB 1078 (Chapter 516, Statutes of 2002) requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. SB 107 (Chapter 464, Statutes of 2006) changed the target date to 2010.

Senate Bill 1368. SB 1368 (Chapter 598, Statutes of 2006) is the companion bill of AB 32 and was signed into law in September 2006. SB 1368 required the California Public Utilities Commission (CPUC) to establish a performance standard for baseload generation of GHG emissions by investor-owned utilities by February 1, 2007. SB 1368 also required the CEC to establish a similar standard for local publicly owned utilities by June 30, 2007. These standards could not exceed the GHG emissions rate from a baseload combined-cycle, natural gas fired plant. Furthermore, the legislation states that all electricity provided to California, including imported electricity, must be generated by plants that meet the standards set by CPUC and CEC.

Senate Bill 32 (SB 32). Signed into law in September 2016, SB 32 codifies the 2030 GHG reduction target in Executive Order B-30-15 (40 percent below 1990 levels by 2030). The bill authorizes CARB to adopt an interim GHG emissions level target to be achieved by 2030. CARB also must adopt rules and regulations in an open public process to achieve the maximum, technologically feasible, and cost-effective GHG reductions.

CARB Scoping Plan

On December 11, 2008, CARB adopted its Scoping Plan, which functions as a roadmap to achieve GHG reductions in California required by AB 32 through subsequently enacted regulations. CARB's Scoping Plan contains the main strategies California will implement to reduce CO_2eq[11] emissions by 174 million metric tons (MT), or approximately 30 percent, from the State's projected 2020 emissions level of 596 million MT CO_2eq under a business as usual (BAU)[12] scenario. This is a reduction of 42 million MT CO_2eq, or almost ten percent, from 2002 to 2004 average emissions, but requires the reductions in the face of population and economic growth through 2020.

CARB's Scoping Plan calculates 2020 BAU emissions as the emissions that would be expected to occur in the absence of any GHG reduction measures. The 2020 BAU emissions estimate was derived by projecting emissions from a past baseline year using growth factors specific to each of the different economic sectors (e.g., transportation, electrical power, commercial and residential, industrial, etc.). CARB used three-year average emissions, by sector, for 2002 to 2004 to forecast emissions to 2020. The measures described in CARB's Scoping Plan are intended to reduce the projected 2020 BAU to 1990 levels, as required by AB 32.

AB 32 requires CARB to update the Scoping Plan at least once every five years. CARB adopted the first major update to the Scoping Plan on May 22, 2014. The updated Scoping Plan summarizes recent science related to climate change, including anticipated impacts to California and the levels of GHG reduction necessary to likely avoid risking irreparable damage. It identifies the actions California has already taken to reduce GHG emissions and focuses on areas

[11] Carbon Dioxide Equivalent (CO_2eq) - A metric measure used to compare the emissions from various greenhouse gases based upon their global warming potential.

[12] "Business as Usual" refers to emissions that would be expected to occur in the absence of GHG reductions. See http://www.arb.ca.gov/cc/inventory/data/bau.htm. Note that there is significant controversy as to what BAU means. In determining the GHG 2020 limit, CARB used the above as the "definition." It is broad enough to allow for design features to be counted as reductions.

where further reductions could be achieved to help meet the 2020 target established by AB 32. The Scoping Plan update also looks beyond 2020 toward the 2050 goal, established in Executive Order S-3-05, and observes that "a mid-term statewide emission limit will ensure that the State stays on course to meet our long-term goal." The Scoping Plan update did not establish or propose any specific post-2020 goals, but identified such goals adopted by other governments or recommended by various scientific and policy organizations.

In December 2017, CARB approved the *California's 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Target*. This update focuses on implementation of a 40 percent reduction in GHGs by 2030 compared to 1990 levels. To achieve this the updated Scoping Plan draws on a decade of successful programs that addresses the major sources of climate changing gases in every sector of the economy:

- *More Clean Cars and Trucks:* The plan sets out far-reaching programs to incentivize the sale of millions of zero-emission vehicles, drive the deployment of zero-emission trucks, and shift to a cleaner system of handling freight statewide.

- *Increased Renewable Energy:* California's electric utilities are ahead of schedule meeting the requirement that 33 percent of electricity come from renewable sources by 2020. The Scoping Plan guides utilities to 50 percent renewables, as required under SB 350.

- *Slashing Super-Pollutants:* The plan calls for a significant cut in super-pollutants such as methane and HFC refrigerants, which are responsible for as much as 40 percent of global warming.

- *Cleaner Industry and Electricity:* California's renewed cap-and-trade program extends the declining cap on emissions from utilities and industries and the carbon allowance auctions. The auctions will continue to fund investments in clean energy and efficiency, particularly in disadvantaged communities.

- *Cleaner Fuels:* The Low Carbon Fuel Standard will drive further development of cleaner, renewable transportation fuels to replace fossil fuels.

- *Smart Community Planning:* Local communities will continue developing plans which will further link transportation and housing policies to create sustainable communities.

- *Improved Agriculture and Forests:* The Scoping Plan also outlines innovative programs to account for and reduce emissions from agriculture, as well as forests and other natural lands.

Achieving the 2030 target under the updated Scoping Plan will also spur the transformation of the California economy and fix its course securely on achieving an 80 percent reduction in GHG emissions by 2050, consistent with the global consensus of the scale of reductions needed to

stabilize atmospheric GHG concentrations at 450 ppm carbon dioxide equivalent, and reduce the likelihood of catastrophic climate change. Currently, global levels are at just above 400 ppm.

LOCAL

County of Santa Clara

Santa Clara County Climate Action Plan 2009. The Santa Clara County Climate Action Plan (CAP) focuses on County operations, facilities and employee actions that will reduce not only GHG emissions but also energy and water consumption, solid waste and fuel consumption. These are areas of opportunity for the County to make a difference, set a good example, and in many cases, save money. The GHG emission reduction goals require a change from "business as usual" to attain them. The goals were to stop increasing the amount of emissions by 2010, decrease emissions by 10 percent every 5 years from 2010 – 2050, and reach an 80 percent reduction by 2050. The CAP is being issued in the context of legislative and regulatory action at the federal and state level. California's climate change goals are set forth in AB 32, the Global Warming Solutions Act of 2006. This legislation requires a reduction of California GHG emissions to 1990 levels by 2020. In December 2008, CARB approved the Climate Change Scoping Plan Document required by AB 32. The Scoping Plan Document, which provides a roadmap for California to reduce its GHG emissions, recognizes the importance of development and implementation of Climate Action Plans by California cities and counties. Executive Order S-03-05 goes even further by requiring statewide reductions in GHG emissions to 80 percent below 1990 by the year 2050.

City of San José

Greenhouse Gas Reduction Strategy. The City of San José adopted a Greenhouse Gas Reduction Strategy on November 1, 2011, to be consistent with the implementation requirements of AB 32. AB32 requires the State of California as a whole to reduce GHG emissions to 1990 levels by the year 2020. The Greenhouse Gas Reduction Strategy seeks to reduce GHG emissions within the City through a number of sustainable actions, including minimizing car travel, building site locations that optimize solar installation potential either for heating water or for electricity generation, planting trees to help mitigate heat island effects, and providing access to safe, pedestrian friendly sidewalks, trails and bike paths, as well as mass transit.

5.0 POTENTIAL AIR QUALITY AND GREENHOUSE GAS IMPACTS

CEQA THRESHOLDS

The environmental analysis in this section is patterned after the Initial Study Checklist recommended by the *CEQA Guidelines*, as amended. The issues presented in the Initial Study Checklist have been utilized as thresholds of significance in this section. Accordingly, a project may create a significant environmental impact if it causes one or more of the following to occur:

- Conflict with or obstruct implementation of the applicable air quality plan (refer to Impact Statement AQ-1);
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation (refer to Impact Statement AQ-2);
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable Federal or State ambient air quality standard (including releasing emissions that exceed quantitative thresholds for O_3 precursors (refer to Impact Statement AQ-3);
- Expose sensitive receptors to substantial pollutant concentrations (refer to Impact Statement AQ-4);
- Create objectionable odors affecting a substantial number of people (refer to Impact Statement AQ-5);
- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment (refer to Impact Statement GHG-1); and
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases (refer to Impact Statement GHG-2).

Based on these standards and thresholds, the effects of the proposed project have been categorized as either a "less than significant impact" or a "potentially significant impact." Mitigation measures are recommended for potentially significant impacts.

AIR QUALITY THRESHOLDS

The BAAQMD's *CEQA Air Quality Handbook* provides significance thresholds for both construction and operation of projects. If the BAAQMD thresholds are exceeded, a potentially significant impact could result. However, ultimately the lead agency determines the thresholds of significance for impacts. If a project proposes development in excess of the established

thresholds, as outlined in Table 4, *Bay Area Air Quality Management District Emissions Thresholds*, a significant air quality impact may occur and additional analysis is warranted to fully assess the significance of impacts.

Table 4
Bay Area Air Quality Management District Emissions Thresholds

Phase	Pollutant (lbs/day)			
	ROG	NO_X	PM_{10}	$PM_{2.5}$
Construction	54	54	82	54
Operational	54	54	82	54
Source: Bay Area Air Quality Management District, *2017 CEQA Guidelines*, 2017.				

It should be noted that a quantitative CO impact analysis is required by BAAQMD (comparing project emissions to the CAAQS), if none of the following are met:

- Project is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, regional transportation plan, and local congestion management agency plans.

- The project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour.

- The project traffic would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway).

GREENHOUSE GAS EMISSIONS THRESHOLDS

The BAAQMD's approach to developing a threshold of significance for GHG emissions is to identify the emissions level for which a project would not be expected to substantially conflict with existing California legislation adopted to reduce statewide GHG emissions needed to move us towards climate stabilization. If a project would generate GHG emissions above the threshold level, it would be considered to contribute considerably to a significant cumulative impact. Stationary-source projects include land uses that would accommodate processes and equipment that emit GHG emissions and would require an Air District permit to operate. If annual emissions of operational-related GHGs exceed these levels, the proposed project would result in a cumulatively considerable contribution to a cumulatively significant impact to global climate change.

Table 5, *BAAQMD GHG Thresholds*, presents the project-level thresholds for GHG emissions. It should be noted that the BAAQMD does not have an adopted threshold of significance for construction-related GHG emissions. However, the BAAQMD recommends quantification and disclosure of construction GHG emissions. The BAAQMD also recommends that the Lead Agency should make a determination on the significance of these construction generated GHG emission impacts in relation to meeting AB 32 GHG reduction goals, as required by the Public Resources Code, Section 21082.2. The Lead Agency is encouraged to incorporate best management practices to reduce GHG emissions during construction, as feasible and applicable.

Table 5
BAAQMD GHG Thresholds

Project Type	Construction-Related	Operational-Related
Projects other than Stationary Sources[1]	None	Compliance with Qualified Climate Action Plan OR 1,100 $MTCO_2eq/yr.$ OR 4.6 $MTCO_2eq/SP^2/yr.$
Stationary Sources[1]	None	10,000 $MTCO_2eq/yr.$
$MTCO_2eq/yr.$ = metric tons of carbon dioxide equivalent per year		
Notes: 1: According to the BAAQMD CEQA Guidelines, a stationary source project is one that includes land uses that would accommodate processes and equipment that emit GHG emissions and would require a BAAQMD permit to operate. Projects other than stationary sources are land use development projects including residential, commercial, industrial, and public uses that do not require a BAAQMD permit to operate. 2: SP = service population (residents + employees)		
Source: BAAQMD, *Options and Justification Report*, October 2009 and BAAQMD, *CEQA Air Quality Guidelines*, May 2017.		

METHODOLOGY

This air quality impact analysis considers construction and operational impacts associated with the proposed project. Construction equipment, trucks, worker vehicles, and ground-disturbing activities associated with project construction would generate emissions of criteria air pollutants and precursors. Construction-related and operational emissions are evaluated consistent with methodologies outlined in the BAAQMD CEQA Guidelines for assessing and mitigating air quality impacts. The project's construction-related exhaust emissions (associated with the proposed improvements) are compared to the daily criteria pollutant emissions significance thresholds in order to determine the significance of a project's impact on regional air quality.

The BAAQMD CEQA Guidelines also provide significance thresholds for criteria pollutant and precursor emissions associated with project operations. Construction and Operational emissions associated with the project are estimated using the California Emissions Estimator Model (CalEEMod).

5.1 AIR QUALITY IMPACTS

AQ-1 *CONFLICT WITH OR OBSTRUCT IMPLEMENTATION OF THE APPLICABLE AIR QUALITY PLAN?*

Level of Significance Before Mitigation: *Less Than Significant Impact.*

The most recently adopted air quality plan in the Basin is the Clean Air Plan. The Clean Air Plan outlines how the San Francisco Bay Area will attain air quality standards, reduce population exposure and protect public health, and reduce GHG emissions.

The Clean Air Plan assumptions for projected air emissions and pollutants in San José are based on the *Envision San José 2040 General Plan* Land Use and Transportation Designation Map which designates the project zoning as "Downtown". As such, the proposed project would not significantly affect regional vehicle miles traveled pursuant to the CEQA Guidelines (Section 15206) because of its consistency with adopted land use plans in the City of San José. In addition, the proposed project would not have the potential to exceed the level of population or housing foreseen in regional planning efforts.

As described below in Impact Statements AQ-2 and AQ-3, construction and operational air quality emissions generated by the proposed project would not exceed the BAAQMD's emissions thresholds. These thresholds are established to identify projects that have the potential to generate a substantial amount of criteria air pollutants. Because the proposed project would not exceed these thresholds, the proposed project would not be considered by the BAAQMD to be a substantial emitter of criteria air pollutants, and would not contribute to any non-attainment areas in the Basin. Therefore, the project would be in compliance with the Clean Air Plan and impacts would be less than significant in this regard.

Mitigation Measures: No mitigation measures are required.

Level of Significance After Mitigation: *Less Than Significant Impact.*

AQ-2 *VIOLATE ANY AIR QUALITY STANDARDS OR CONTRIBUTE SUBSTANTIALLY TO AN EXISTING OR PROJECTED AIR QUALITY VIOLATION?*

Level of Significance Before Mitigation: *Potentially Significant Impact.*

SHORT-TERM CONSTRUCTION IMPACTS

Short-term air quality impacts are predicted to occur during grading and construction activities associated with implementation of the proposed project. Temporary air emissions would result from the following activities:

- Particulate (fugitive dust) emissions from grading activities; and
- Exhaust emissions from the construction equipment and the motor vehicles of the construction crew.

Construction activities would include demolition, grading, building construction, paving, and application of architectural coatings. Site grading would require approximately 31,500 cubic yards of soil export. Emissions for each construction phase have been quantified based upon the phase durations and equipment types. The analysis of daily construction emissions have been prepared utilizing the California Emissions Estimator Model (CalEEMod); refer to Appendix A, *Air Quality/Greenhouse Gas Emissions Data*. Table 6, *Short-Term Construction Emissions*, presents the anticipated daily short-term construction emissions. It should be noted that although the project would result in construction emissions below BAAQMD thresholds, Basic Construction Mitigation Measures would be implemented during construction including dust control procedures (watering, covering/stabilizing disturbed areas, limiting on-site vehicle speeds, etc.) to further reduce emissions; refer to Mitigation Measure AQ-1.

Table 6
Short-Term Construction Emissions

Emissions Source	Pollutant (pounds/day)[1,2]					
	ROG	NO_X	PM_{10} (exhaust)	$PM_{2.5}$ (exhaust)	PM_{10} (fugitive)	$PM_{2.5}$ (fugitive)
2018						
Unmitigated Emissions	3.80	45.53	1.94	1.81	7.63	3.73
Mitigated Emissions	3.80	45.53	1.94	1.81	3.73	1.62
BAAQMD Thresholds	*54*	*54*	*82*	*54*	*N/A*	*N/A*
Is Threshold Exceeded After Mitigation?	*No*	*No*	*No*	*No*	*N/A*	*N/A*
2019						
Unmitigated Emissions	4.05	42.59	1.70	1.59	7.63	3.73
Mitigated Emissions	4.05	42.59	1.70	1.59	3.73	1.62
BAAQMD Thresholds	*54*	*54*	*82*	*54*	*N/A*	*N/A*
Is Threshold Exceeded After Mitigation?	*No*	*No*	*No*	*No*	*N/A*	*N/A*
2020						
Unmitigated Emissions	45.87	31.71	1.46	1.38	2.77	0.74
Mitigated Emissions	45.87	31.71	1.46	1.38	2.63	0.71
BAAQMD Thresholds	*54*	*54*	*82*	*54*	*N/A*	*N/A*
Is Threshold Exceeded After Mitigation?	*No*	*No*	*No*	*No*	*N/A*	*N/A*

ROG = reactive organic gases; NO_X = nitrogen oxides; PM_{10} = particulate matter 10 microns in diameter or less; $PM_{2.5}$ = particulate matter 2.5 microns in diameter or less; N/A = not applicable

Notes:
1. Emissions were calculated using CalEEMod, version 2016.3.2.
2. The reduction/credits for construction emission mitigations are based on mitigation included in CalEEMod and as typically required by the BAAQMD (Basic Control Measures and Regulation 6: Particulate Matter and Visible Emissions). The mitigation includes the following: replace ground cover on disturbed areas quickly, water exposed surfaces twice daily, and proper loading/unloading of mobile and other construction equipment.
3. The BAAQMD construction thresholds only apply to exhaust. Fugitive emissions are considered less than significant with implementation of the BAAQMD Basic Construction Mitigation Measures (included as Mitigation Measure AQ-1)

Refer to Appendix A, *Air Quality/Greenhouse Gas Emissions Data*, for assumptions used in this analysis.

Fugitive Dust Emissions

Construction activities are a source of fugitive dust (also known as PM_{10} and $PM_{2.5}$) emissions that may have a substantial, temporary impact on local air quality. Fugitive dust is often a nuisance to those living and working within the vicinity of the project site. Fugitive dust emissions are associated with demolition, land clearing, ground excavation, cut and fill operations, and truck travel on unpaved roadways. Fugitive dust emissions also vary substantially from day to day, depending on the level of activity, the specific operations, and weather conditions.

PM_{10} and $PM_{2.5}$ are both emitted during construction activities and as a result of wind erosion over exposed soil surfaces. Clearing and grading activities comprise the major sources of construction dust emissions, but traffic and general disturbance of the soil also generates significant dust emissions. PM_{10} and $PM_{2.5}$ emissions can vary greatly depending on the level of activity, the specific operations taking place, the equipment being operated, local soils, weather conditions, and other factors making quantification difficult. The highest potential for construction dust impacts would occur during the dry late spring, summer, and early fall months when soils are dry. Despite this variability in emissions, experience has shown that there are a number of feasible control measures that can be reasonably implemented to significantly reduce PM_{10} and $PM_{2.5}$ emissions from construction activities. The BAAQMD recommends the implementation of all Basic Construction Mitigation Measures, whether or not construction-related emissions exceed applicable significance thresholds; refer to Mitigation Measure AQ-1.

ROG Emissions[13]

In addition to gaseous and particulate emissions, the application of asphalt and surface coatings creates ROG emissions, which are O_3 precursors. In accordance with the methodology prescribed by the BAAQMD, the ROG emissions associated with paving have been quantified with CalEEMod. Architectural coatings were also quantified with CalEEMod based upon the size of the building. As indicated in Table 6, the project would result in a maximum of 53.10 lbs/day of ROG emissions during construction activities. As such, construction ROG emissions would not exceed the BAAQMD threshold of 54 lbs/day. Therefore, a less than significant impact would occur with regard to ROG emissions. It should be noted that all Basic Construction Mitigation Measures would be implemented during construction to further reduce ROG emissions; refer to Mitigation Measure AQ-1.

Construction Equipment and Worker Vehicle Exhaust

Exhaust emission factors for typical diesel-powered heavy equipment are based on the CalEEMod program defaults. Variables factored into estimating the total construction emissions include: level of activity, length of construction period, number of pieces/types of equipment in

[13] ROGs and VOCs are subsets of organic gases that are emitted from the incomplete combustion of hydrocarbons or other carbon-based fuels. Although they represent slightly different subsets of organic gases, they are used interchangeably for the purposes of this analysis.

use, site characteristics, weather conditions, number of construction personnel, and the amount of materials to be transported on- or off-site.

Exhaust emissions from construction activities include emissions associated with the transport of machinery and supplies to and from the project site, emissions produced on-site as the equipment is used, and emissions from trucks transporting materials and workers to and from the site. Emitted pollutants would include ROG, NO_X, PM_{10}, and $PM_{2.5}$. As seen in Table 6, BAAQMD thresholds would not be exceeded during construction activities associated with the proposed project. Although construction pollutant emissions associated with the proposed project would be below BAAQMD thresholds, Basic Construction Mitigation Measures and NO_X reduction measures would be implemented to further reduce emissions; refer to Mitigation Measure AQ-1. A less than significant impact would occur in this regard.

Naturally Occurring Asbestos

Pursuant to guidance issued by the Governor's Office of Planning and Research, State Clearinghouse, Lead Agencies are encouraged to analyze potential impacts related to naturally occurring asbestos (NOA). Naturally occurring asbestos can be released from serpentinite and ultramafic rocks when the rock is broken or crushed. At the point of release, the asbestos fibers may become airborne, causing air quality and human health hazards. These rocks have been commonly used for unpaved gravel roads, landscaping, fill projects, and other improvement projects in some localities. Asbestos may be released to the atmosphere due to vehicular traffic on unpaved roads, during grading for development projects, and at quarry operations.

Serpentinite and/or ultramafic rock are known to be present in 44 of California's 58 counties. These rocks are particularly abundant in the counties associated with the Sierra Nevada foothills, the Klamath Mountains, and Coast Ranges. CARB has established two airborne toxic control measures (ATCMs) that address NOA. The first one regulates surfacing materials and amends an older ATCM for asbestos-containing serpentine. The second ATCM, which applies to construction, grading, quarrying, and surface mining operations, requires more stringent dust control measures at these operations. The requirements for road construction and maintenance differ somewhat from those for general construction and grading (e.g., development of a shopping center). Other requirements of the proposed ATCM address post-construction stabilization of disturbed areas. These areas must be revegetated, paved, or covered with at least three inches of non-asbestos-containing material. NOA-containing material may be transported if the loads are adequately wetted or covered with tarps.

According to the Department of Conservation Division of Mines and Geology, the project site is located in an area where naturally occurring asbestos is likely to be present.[14] In order to reduce impacts from NOA to a less than significant level, the BAAQMD requires compliance with the

[14] Department of Conservation Division of Mines and Geology, *A General Location Guide for Ultramafic Rocks in California – Areas More Likely to Contain Naturally Occurring Asbestos Report*, August 2000.

CARB ATCMs that address NOA (ATCM 93105 and 93106). Compliance with ATCM 93105 and 93106 would ensure that NOA impacts would be less than significant.

Construction Odors

Potential odors could arise from the diesel construction equipment used on-site, as well as from architectural coatings and asphalt off-gassing. Odors generated from the referenced sources are common in the man-made environment and are not known to be substantially offensive to adjacent receptors. Additionally, odors generated during construction activities would be temporary. Therefore, construction odors are not considered to be a significant impact.

Total Daily Construction Emissions

In accordance with the BAAQMD Guidelines, CalEEMod was utilized to model construction emissions for ROG, NO_X, PM_{10}, and $PM_{2.5}$. Construction would occur over an approximate 26 month period, with the greatest amount of fugitive dust emissions being generated during the grading and building construction stages of construction. Additionally, the greatest amount of ROG emissions would typically occur during the final stages of development due to the application of architectural coatings.

As indicated in Table 6, the proposed project would not result in an exceedance of any BAAQMD thresholds for ROG, NO_X, PM_{10}, and $PM_{2.5}$. Therefore, a less than significant impact would occur. However, it should be noted that Mitigation Measure AQ-1 would be implemented during construction to further reduce emissions and comply with BAAQMD's guidelines.

LONG-TERM OPERATIONAL IMPACTS

Mobile Source Emissions

Mobile sources are emissions from motor vehicles, including tailpipe and evaporative emissions. Depending upon the pollutant being discussed, the potential air quality impact may be of either regional or local concern. For example, ROG, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ are all pollutants of regional concern (NO_X and ROG react with sunlight to form O_3 [photochemical smog], and wind currents readily transport SO_X, PM_{10}, and $PM_{2.5}$). However, CO tends to be a localized pollutant, dispersing rapidly at the source.

Project-generated vehicle emissions have been estimated using the CalEEMod model. Trip generation rates associated with the project were based on traffic data within the *600 South First Street – Garden Gate Tower Traffic Operational Analysis Memorandum* (Traffic Memorandum) for the proposed project, prepared by Kimley-Horn (dated November 15, 2017). Table 7, *Long-Term Operational Air Emissions*, presents the anticipated mobile source emissions. As shown in Table 7, operational emissions generated by the proposed project would not exceed established BAAQMS thresholds for ROG, NO_X, PM_{10}, and/or $PM_{2.5}$.

Table 7
Long-Term Operational Air Emissions

Emissions Source	Pollutant (pounds/day)[1]			
	ROG	NO_X	PM_{10}	$PM_{2.5}$
Long-Term Emissions				
Area Source Emissions	14.07	2.07	0.28	0.28
Energy Emissions	0.06	0.55	0.04	0.04
Mobile Emissions	2.99	9.85	6.30	1.73
Total Project Mitigated Emissions[2]	17.12	12.48	6.61	2.05
BAAQMD Threshold	*54*	*54*	*82*	*54*
Is Threshold Exceeded? (Significant Impact?)	*No*	*No*	*No*	*No*

Notes:
1. Based on CalEEMod modeling results, worst-case seasonal emissions for area, energy, and mobile emissions have been modeled. Refer to Appendix A, *Air Quality/Greenhouse Gas Emissions Data*, for assumptions used in this analysis.
2. Total project mitigated emissions include use of natural gas hearths only per BAAQMD Regulation 6, Rule 3 (Wood-Burning Devices) and a 20 percent exceedance of Title 24 energy efficiency standards.

Area Source Emissions

Area source emissions would be generated due to an increased demand for natural gas associated with the development of the proposed project. The primary use of natural gas producing area source emissions by the project would be for consumer products, architectural coating, and landscaping. As shown in Table 7, mitigated area source emissions from the proposed project would not exceed BAAQMD thresholds for ROG, NO_X, PM_{10}, or $PM_{2.5}$.

Energy Source Emissions

Energy source emissions would be generated as a result of electricity usage associated with the proposed project. The primary use of electricity by the project would be for ventilation, lighting, appliances, and electronics. As shown in Table 7, energy source emissions from the proposed project would not exceed BAAQMD thresholds for ROG, NO_X, PM_{10}, or $PM_{2.5}$.

Conclusion

As indicated in Table 7, mitigated operational emissions from the proposed project would not exceed BAAQMD thresholds. If stationary sources, such as backup generators, are installed on-site, they would be required to obtain the applicable permits from BAAQMD for operation of such equipment. The BAAQMD is responsible for issuing permits for the operation of stationary sources in order to reduce air pollution, and to attain and maintain the national and California ambient air quality standards in the Basin. Backup generators would be used only in emergency situations, and would not contribute a substantial amount of emissions capable of exceeding BAAQMD thresholds. Thus, operational air quality impacts would be less than significant.

Mitigation Measures/Standard Permit Conditions:

The Downtown Strategy Final PEIR identified measures that would reduce emission during all construction phases. Consistent with the certified Downtown Strategy Final PEIR and City General Plan policies, the project shall implement the following standard permit conditions during all phases of construction on the project site to reduce emissions:

AQ-1 Prior to issuance of any Grading or Demolition Permit, the City Engineer or Chief Building Official shall confirm that the Grading Plan, Building Plans, and specifications stipulate that the following BAAQMD Basic Construction Mitigation Measures shall be implemented:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- 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.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.
- 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.
- 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.
- 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.
- 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 BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.

(Mitigation Measure AQ-1 correlates with Mitigation Measures AIR-1 in the San Jose Downtown Strategy 2000 Final EIR. This mitigation measure includes updates to reflect the latest practices and recommendations from the BAAQMD).

The project would be required to implement the measures listed above as conditions of approval. These measures will be placed on project plan documents prior to issuance of any grading permits for the project. The proposed project, therefore, would not result in a significant air quality impact due to construction dust emissions.

Level of Significance After Mitigation: *Less Than Significant Impact With Mitigation Incorporated.*

AQ-3 ***RESULT IN A CUMULATIVELY CONSIDERABLE NET INCREASE OF ANY CRITERIA POLLUTANT FOR WHICH THE REGION IS NONATTAINMENT FOR FEDERAL OR STATE STANDARDS?***

Level of Significance Before Mitigation: *Potentially Significant Impact.*

Cumulative Short-Term Emissions

The Basin is designated nonattainment for O_3, PM_{10}, and $PM_{2.5}$ for state standards, and nonattainment for O_3 and $PM_{2.5}$ for federal standards (refer to Table 1). As discussed above, the project's construction-related emissions by themselves would not have the potential to exceed the BAAQMD significance thresholds for criteria pollutants.

Since these thresholds indicate whether an individual project's emissions have the potential to affect cumulative regional air quality, it can be expected that the project-related construction emissions would not be cumulatively considerable. The BAAQMD recommended Basic Construction Mitigation Measures are recommended for all projects whether or not construction-related emissions exceed the thresholds of significance. Compliance with BAAQMD construction-related mitigation requirements are considered to reduce cumulative impacts at a Basin-wide level. Therefore, construction emissions associated with the proposed project would not result in a cumulatively considerable contribution to significant cumulative air quality impacts.

Cumulative Long-Term Emissions

The BAAQMD has not established separate significance thresholds for cumulative operational emissions. The nature of air emissions is largely a cumulative impact. As a result, 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. The BAAQMD developed the operational thresholds of significance based on the level above which a project's individual emissions would result in a cumulatively considerable contribution to the Basin's existing air quality conditions. Therefore, a project that exceeds the BAAQMD operational thresholds would also be a cumulatively considerable contributor to a significant cumulative impact. As depicted in Table 7, the proposed project's operational emissions would not exceed BAAQMD thresholds. Therefore, operational emissions associated with the proposed project would not result in a cumulatively considerable contribution to significant cumulative air quality impacts.

Mitigation Measures: No mitigation measures are required. Refer to Mitigation Measures AQ-1 above.

Level of Significance After Mitigation: *Less Than Significant Impact With Mitigation Incorporated.*

AQ-4 *EXPOSE SENSITIVE RECEPTORS TO SUBSTANTIAL POLLUTANT CONCENTRATIONS?*

Level of Significance Before Mitigation: *Less Than Significant Impact*

Sensitive receptors are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis. The closest sensitive receptors are the existing residential uses approximately 25 feet to the east of the project site.

Localized Carbon Monoxide Hotspots

The Basin is designated as attainment for carbon monoxide (CO). Emissions and ambient concentrations of CO have decreased dramatically in the Basin with the introduction of the catalytic converter in 1975. No exceedances of the CAAQS or NAAQS for CO have been recorded at nearby monitoring stations since 1991. As a result, the BAAQMD screening criteria notes that CO impacts may be determined to be less than significant if a project is consistent with the applicable congestion management plan (CMP) and would not increase traffic volumes at local intersections to more than 24,000 vehicles per hour for locations in heavily urban areas, where "urban canyons" formed by buildings tend to reduce air circulation. Based on the scope of the proposed project (construction of a 513,333 square-foot mixed-use tower), traffic would increase along surrounding roadways during long-term operational activities. However, according to the Traffic Memorandum for the proposed project, the project would generate approximately 1,653 net daily trips. Therefore, the project would not generate a significant number of vehicle trips and effects related to CO concentrations would be less than significant.

Parking Structure Hotspots

Carbon monoxide concentrations are a function of vehicle idling time, meteorological conditions, and traffic flow. Therefore, parking structures (and particularly subterranean parking structures) tend to be of concern regarding CO hotspots, as they are enclosed spaces with frequent cars operating in cold start mode. Approximately 232 parking spaces would be constructed within the Garden Gate Tower parking garage. The proposed project would be required to comply with the ventilation requirements of the 215 International Mechanical Code (Section 404 [Enclosed Parking Garages]), which requires that mechanical ventilation systems for enclosed parking

garages operate automatically by means of carbon monoxide detectors in conjunction with nitrogen dioxide detectors. Section 404.2 requires a minimum air flow rate of 0.05 cubic feet per second per square foot and the system shall be capable of producing a ventilation airflow rate of 0.75 cubic feet per second per square foot of floor area.[15] Impacts in regards to parking structure CO hotspots would be less than significant.

Mitigation Measures: No mitigation measures are required.

Level of Significance After Mitigation: *Less Than Significant Impact***.**

AQ-5 ***CREATE OBJECTIONABLE ODORS AFFECTING A SUBSTANTIAL NUMBER OF PEOPLE?***

Level of Significance Before Mitigation: *Less Than Significant Impact*

According to the BAAQMD, land uses associated with odor complaints typically include wastewater treatment plants, landfills, confined animal facilities, composting stations, food manufacturing plants, refineries, and chemical plants. The project does not include any uses identified by the BAAQMD as being associated with odors.

Construction activity associated with the project may generate detectable odors from heavy-duty equipment exhaust. Construction-related odors would be short-term in nature and cease upon project completion. Any impacts to existing adjacent land uses would be short-term and are considered less than significant.

Mitigation Measures: No mitigation measures are required.

Level of Significance After Mitigation: *Less Than Significant Impact.*

5.2 GREENHOUSE GAS IMPACTS

PROJECT RELATED SOURCES OF GREENHOUSE GASES

GHG-1 ***GENERATE GREENHOUSE GAS EMISSIONS, EITHER DIRECTLY OR INDIRECTLY, THAT MAY HAVE A SIGNIFICANT IMPACT ON THE ENVIRONMENT?***

Level of Significance Before Mitigation: *Less Than Significant Impact*

Project-related GHG emissions would include emissions from direct and indirect sources. The proposed project would result in direct and indirect emissions of CO_2, N_2O, and CH_4, and would

[15] International Code Council, *International Mechanical Code*, *Chapter 4 Ventilation*, 2015. https://codes.iccsafe.org/public/document/IMC2015/chapter-4-ventilation, accessed August 15, 2018.

not result in other GHGs that would facilitate a meaningful analysis. Therefore, this analysis focuses on these three forms of GHG emissions. Direct project-related GHG emissions include emissions from construction activities, area sources, and mobile sources, while indirect sources include emissions from electricity consumption, water demand, and solid waste generation. Operational GHG estimations are based on energy emissions from natural gas usage and automobile emissions. CalEEMod relies upon trip data within the Traffic Memorandum and project specific land use data to calculate emissions. Table 8, *Estimated Greenhouse Gas Emissions*, presents the estimated CO_2, N_2O, and CH_4 emissions of the proposed project. CalEEMod outputs are contained within Appendix A. It is noted that the GHG emissions shown in Table 8 are mitigated emissions as a result of project design features that were input into CalEEMod. Project design features that were input in CalEEMod included installation of natural gas hearths (no wood burning hearths) and a 20 percent exceedance of Title 24 energy efficiency standards.

Table 8
Estimated Greenhouse Gas Emissions

Source	CO_2	CH_4		N_2O		Total $MTCO_2eq$[3]
	MT/yr[1]	MT/yr[1]	$MTCO_2eq$[2]	MT/yr[1]	$MTCO_2eq$[2]	
Direct Emissions						
Construction (total of 1,822.47 $MTCO_2eq$ amortized over 30 years)	56.58	0.01	0.20	0.00	0.00	56.79
Area Source	15.11	0.00	0.09	0.00	0.06	15.26
Mobile Source	1,069.29	0.04	1.08	0.00	0.00	1,070.36
Total Direct Emissions[3]	1,140.98	0.06	1.37	0.00	0.06	1,142.42
Indirect Emissions						
Energy	633.59	0.03	0.64	0.01	2.08	636.31
Solid Waste	28.14	1.66	41.58	0.00	0.00	69.73
Water Demand	48.80	0.63	15.74	0.02	4.53	69.08
Total Indirect Emissions[3]	710.53	2.32	57.97	0.02	6.61	775.11
Total Project-Related Emissions[3]	*1,917.53 $MTCO_2eq$*					
Total Service Population Emissions[4]	*1.9 $MTCO_2eq/SP$*					
Threshold of Significance	*4.6 $MTCO_2eq/SP$*					
Project Exceed Thresholds?	*No*					

Notes:
1. Emissions calculated using CalEEMod 2016.3.2. Emissions incorporate reductions from design features such as the downtown infill locations, increase in density, and increase in diversity as the project involves a mixed-use project with 290 dwelling units on an approximately 0.5-acre site in Downtown San Jose.
2. Carbon dioxide equivalent values calculated using the U.S. EPA Website, *Greenhouse Gas Equivalencies Calculator*, https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator, accessed August 2018.
3. Totals may be slightly off due to rounding.
4. Service population emissions are based on a service population of 970 assuming one trip is made to and from the project site by the anticipated total daily trips associated with number of residents and employees (1,940). The service population also conservatively assumes only a single occupant for each trip.
5. The project's total service population emissions were calculated by dividing the total proposed project-related emissions (1,917.53 $MTCO_2eq/yr$) by the service population (970); therefore, 1,917.53/970 = 1.8.

Refer to Appendix A, *Air Quality/Greenhouse Gas Emissions Data*, for detailed model input/output data.

Direct Project-Related Sources of Greenhouse Gases

- *Construction Emissions.* Construction GHG emissions are typically summed and amortized over the lifetime of the project (assumed to be 30 years), then added to the operational emissions. As seen in Table 8, the proposed project would result in 56.79

$MTCO_2eq$/yr (amortized over 30 years), which represents a total of approximately 1,703.56 $MTCO_2eq$ from construction activities. It is noted that the BAAQMD has not adopted thresholds for GHGs associated with construction activities.

- *Area Source*. Area source emissions were calculated using CalEEMod and project-specific land use data. As noted in Table 8, the proposed project would result in 15.26 $MTCO_2eq$/yr from area source GHG emissions.

- *Mobile Source*. CalEEMod relies upon trip data within the Traffic Memorandum and project specific land use data to calculate mobile source emissions. The project would directly result in 1,070.36 $MTCO_2eq$/yr of mobile source-generated GHG emissions; refer to Table 8.

Indirect Project-Related Sources of Greenhouse Gases

- *Energy Consumption*. Energy consumption emissions were calculated using CalEEMod and project-specific land use data. Electricity would be provided to the project site via Pacific Gas and Electric Company (PG&E). The project would indirectly result in 636.31 $MTCO_2eq$/year due to energy consumption; refer to Table 8.

- *Solid Waste*. Solid waste associated with operations of the proposed project would result in 69.73 $MTCO_2eq$/year; refer to Table 8.

- *Water Demand*. The project operations would result in a demand of approximately 19 million gallons of water per year. Emissions from indirect energy impacts due to water supply would result in 69.08 $MTCO_2eq$/year; refer to Table 8.

Total Project-Related Sources of Greenhouse Gases

As shown in Table 8, the total amount of project-related GHG emissions from direct and indirect sources combined would total 1,917.53 $MTCO_2eq$/yr. The project's service population would be made up of the residents and employees associated with the residential condominiums and retail space of the Garden Gate Tower. In order to conservatively estimate the service population, the number of potential project-related daily vehicle trips is divided by two to account for each service population member making one trip to and one trip from the project site (i.e., each project resident and employee would count for two trips). According to the Traffic Memorandum provided by Kimley-Horn, the proposed project would generate approximately 1,940 daily trips. The total number of daily trips is divided by two (970 trips per day) to derive the service population. Therefore, the project service population is 970. As shown in Table 8, dividing the GHG emissions by the project's service population would result in approximately 1.9 $MTCO_2eq$ per service population per year, which is below the BAAQMD significance thresholds (4.6 $MTCO_2eq$ per service population per year). Therefore, the project's contribution of GHG emissions would be less than significant.

Mitigation Measures: No mitigation measures are required.

Level of Significance After Mitigation: *Less Than Significant Impact.*

PLAN CONSISTENCY

GHG-2 ***CONFLICT WITH AN APPLICABLE PLAN, POLICY, OR REGULATION ADOPTED FOR THE PURPOSE OF REDUCING THE EMISSIONS OF GREENHOUSE GASES?***

2017 Clean Air Plan: Spare the Air, Cool the Climate

The BAAQMD 2017 *Clean Air Plan* (CAP) contains specific goals, actions, and implementation measures to achieve GHG reduction targets for 2030 and 2050 and provides a regional climate protection strategy that will put the Bay Area on a pathway to achieve those GHG reduction targets. The CAP calls for sustainable actions to reduce GHGs including: limiting fossil fuel combustion by increasing efficiency, accelerating low carbon buildings, supporting more energy choices, making buildings more efficient, implementing pricing measures to reduce travel demand. The proposed project consists of sustainable design features that would exceed Title 24 energy efficiency standards by 20 percent and would also be required to comply with the California Green Building Standards (CalGreen). As such, the proposed project would include sustainable features that would comply with the CAP's sustainable actions for reducing GHG emissions. As noted above, the project would result in operational GHG emissions below the BAAQMD thresholds. Further, the project is consistent with the City's designation for the site under the General Plan; thus, the projected GHG emissions in the CAP for the project site would not exceed expectations.

City of San José Greenhouse Gas Reduction Strategy

The City of San José adopted a Greenhouse Gas Reduction Strategy on November 1, 2011, to be consistent with the implementation requirements of AB 32. The City of San José also adopted the Envision San José General Plan Supplemental EIR in December 2015 to include and update the greenhouse gas emissions analysis in the Envision San José General Plan Final EIR. The Greenhouse Gas Reduction Strategy seeks to reduce GHG emissions within the City through a number of sustainable actions, including minimizing car travel, building site locations that optimize solar installation potential either for heating water or for electricity generation, planting trees to help mitigate heat island effects, and providing access to safe, pedestrian friendly sidewalks, trails and bike paths, as well as mass transit. This GHG Reduction Strategy was prepared in accordance with the BAAQMD CEQA Guidelines, and in conformance with CEQA Guidelines Section 15183.5, which specifically addresses GHG Reduction Plans.

The Greenhouse Gas Reduction Strategy includes both mandatory measures for all projects and other measures which are considered voluntary. Voluntary measures could be incorporated in the project as mitigation measures or conditions of approval for proposed projects, at the

discretion of the City. Compliance with the mandatory measures and any voluntary measures required by the City would ensure an individual project's consistency with the GHG Reduction Strategy. The proposed project is consistent with the Land Use/Transportation Diagram designation of Downtown. The proposed project incorporates applicable mandatory measures of the GHG Reduction Strategy, including connections to existing bike and pedestrian facilities and planting and retention of trees to reduce energy use. The project is required to be LEED certified per the City of San José Green Building Ordinance and City Council Policy 6-32, which requires the incorporation of environmentally conscious site and architectural design, including planting new landscaping, trees, and pedestrian connections. Additionally, the project will be required to incorporate bicycle and pedestrian facilities and connections into the project as part of the design review and Building Permit process, consistent with City standards and requirements.

As noted above, the project would not exceed BAAQMD thresholds for GHG emissions during construction or operation. In addition, the project includes sustainable design features, and would not develop a land use not already anticipated for in the City's General Plan that would introduce new significant sources of GHG emissions. Therefore, the project would not conflict with the City's Greenhouse Gas Reduction Strategy. A less than significant impact would occur in this regard.

Mitigation Measures: No mitigation measures are required.

Level of Significance After Mitigation: *Less Than Significant Impact.*

6.0 REFERENCES

6.1 LIST OF PREPARERS

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Danielle Regimbal, Environmental Specialist
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6.3 WEB SITES/PROGRAMS

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APPENDIX A: AIR QUALITY/ GREENHOUSE GAS EMISSIONS DATA

Garden Gate Tower - Santa Clara County, Summer

Garden Gate Tower

Santa Clara County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	232.00	Space	2.09	92,800.00	0
Condo/Townhouse High Rise	290.00	Dwelling Unit	4.53	513,333.00	829
Strip Mall	5.00	1000sqft	0.11	5,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Per project description.

Construction Phase - Anticipated schedule

Off-road Equipment -

Off-road Equipment - anticipated equipment

Off-road Equipment - anticipated equipment

Off-road Equipment - anticipated equipment

Off-road Equipment - anticipated equipment

Trips and VMT -

Demolition - Per AQ Questionnaire.

Grading - Per project description.

Vehicle Trips - Per traffic study.

Construction Off-road Equipment Mitigation - BAAQMD Basic Control Measures/Standard Permit Conditions

Area Mitigation -

Energy Mitigation - Per AQ Questionnaire.

Mobile Land Use Mitigation - project density is 290 du on 0.5 acre site, downtown infill with mix of uses

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	175.00
tblConstructionPhase	NumDays	230.00	453.00
tblConstructionPhase	NumDays	20.00	22.00
tblConstructionPhase	NumDays	20.00	88.00
tblConstructionPhase	NumDays	20.00	22.00
tblConstructionPhase	PhaseEndDate	12/6/2019	12/31/2020
tblConstructionPhase	PhaseEndDate	10/11/2019	12/25/2020
tblConstructionPhase	PhaseEndDate	10/26/2018	10/30/2018
tblConstructionPhase	PhaseEndDate	11/23/2018	3/1/2019
tblConstructionPhase	PhaseEndDate	11/8/2019	4/2/2019
tblConstructionPhase	PhaseStartDate	11/9/2019	5/1/2020
tblConstructionPhase	PhaseStartDate	11/24/2018	4/3/2019
tblConstructionPhase	PhaseStartDate	10/27/2018	10/31/2018
tblConstructionPhase	PhaseStartDate	10/12/2019	3/2/2019
tblGrading	AcresOfGrading	0.00	0.50
tblGrading	MaterialExported	0.00	31,500.00
tblLandUse	LandUseSquareFeet	290,000.00	513,333.00

tblOffRoadEquipment	OffRoadEquipmentType		Crushing/Proc. Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Signal Boards
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Signal Boards
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblVehicleTrips	WD_TR	4.18	6.00
tblVehicleTrips	WD_TR	44.32	40.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2018	3.7977	45.1458	24.1010	0.0705	7.6311	1.9415	9.5192	3.7267	1.8076	5.4880	0.0000	7,232.6391	7,232.6391	1.0770	0.0000	7,258.6341
2019	3.9755	42.2351	28.2885	0.0700	7.6312	1.7019	9.3330	3.7267	1.5868	5.3135	0.0000	7,146.0634	7,146.0634	1.0304	0.0000	7,171.8239
2020	45.7976	31.5110	30.0929	0.0721	2.7744	1.4641	4.2386	0.7431	1.3795	2.1226	0.0000	7,102.5159	7,102.5159	0.9218	0.0000	7,125.5614
Maximum	**45.7976**	**45.1458**	**30.0929**	**0.0721**	**7.6312**	**1.9415**	**9.5192**	**3.7267**	**1.8076**	**5.4880**	**0.0000**	**7,232.6391**	**7,232.6391**	**1.0770**	**0.0000**	**7,258.6341**

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	lb/day										lb/day					
2018	3.7977	45.1458	24.1010	0.0705	3.7301	1.9415	5.6182	1.6187	1.8076	3.3801	0.0000	7,232.6390	7,232.6390	1.0770	0.0000	7,258.6341
2019	3.9755	42.2351	28.2885	0.0700	3.7302	1.7019	5.4320	1.6188	1.5868	3.2056	0.0000	7,146.0634	7,146.0634	1.0304	0.0000	7,171.8239
2020	45.7976	31.5110	30.0929	0.0721	2.6327	1.4641	4.0969	0.7083	1.3795	2.0878	0.0000	7,102.5159	7,102.5159	0.9218	0.0000	7,125.5614
Maximum	**45.7976**	**45.1458**	**30.0929**	**0.0721**	**3.7302**	**1.9415**	**5.6182**	**1.6188**	**1.8076**	**3.3801**	**0.0000**	**7,232.6390**	**7,232.6390**	**1.0770**	**0.0000**	**7,258.6341**

	ROG	NOx	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**	**44.04**	**0.00**	**34.40**	**51.86**	**0.00**	**32.89**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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	lb/day										lb/day					
Area	133.1288	2.9145	181.6025	0.3048		22.5019	22.5019		22.5019	22.5019	2,427.5454	1,117.8379	3,545.3833	3.3641	0.1716	3,680.6187
Energy	0.0744	0.6358	0.2719	4.0600e-003		0.0514	0.0514		0.0514	0.0514		811.3749	811.3749	0.0156	0.0149	816.1965
Mobile	3.3016	11.4625	34.6433	0.1087	9.1857	0.1028	9.2885	2.4521	0.0964	2.5485		10,952.1325	10,952.1325	0.3825		10,961.6960
Total	**136.5048**	**15.0128**	**216.5176**	**0.4176**	**9.1857**	**22.6561**	**31.8418**	**2.4521**	**22.6497**	**25.1018**	**2,427.5454**	**12,881.3452**	**15,308.8906**	**3.7622**	**0.1865**	**15,458.5111**

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	lb/day										lb/day					
Area	14.0736	2.0738	24.7935	0.0127		0.2773	0.2773		0.2773	0.2773	0.0000	2,335.8379	2,335.8379	0.0861	0.0420	2,350.5160
Energy	0.0649	0.5548	0.2372	3.5400e-003		0.0449	0.0449		0.0449	0.0449		708.0814	708.0814	0.0136	0.0130	712.2891
Mobile	2.9851	9.3973	25.8571	0.0759	6.2120	0.0733	6.2853	1.6583	0.0687	1.7269		7,646.3586	7,646.3586	0.2899		7,653.6050
Total	**17.1235**	**12.0259**	**50.8877**	**0.0922**	**6.2120**	**0.3954**	**6.6074**	**1.6583**	**0.3908**	**2.0491**	**0.0000**	**10,690.2779**	**10,690.2779**	**0.3895**	**0.0550**	**10,716.4101**

	ROG	NOx	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	**87.46**	**19.90**	**76.50**	**77.93**	**32.37**	**98.25**	**79.25**	**32.37**	**98.27**	**91.84**	**100.00**	**17.01**	**30.17**	**89.65**	**70.50**	**30.68**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	10/1/2018	10/30/2018	5	22	
2	Grading	Grading	10/31/2018	3/1/2019	5	88	
3	Paving	Paving	3/2/2019	4/2/2019	5	22	
4	Building Construction	Building Construction	4/3/2019	12/25/2020	5	453	
5	Architectural Coating	Architectural Coating	5/1/2020	12/31/2020	5	175	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0.5

Acres of Paving: 2.09

Residential Indoor: 1,039,499; Residential Outdoor: 346,500; Non-Residential Indoor: 7,500; Non-Residential Outdoor: 2,500; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73

Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Crushing/Proc. Equipment	1	6.00	85	0.78
Grading	Signal Boards	2	8.00	6	0.82
Grading	Trenchers	1	6.00	78	0.50
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	0	8.00	187	0.41
Paving	Signal Boards	2		6	0.82
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	1	8.00	80	0.38
Building Construction	Cranes	2	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
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	36.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	9	23.00	0.00	3,938.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	10	249.00	47.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	50.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3508	0.0000	0.3508	0.0531	0.0000	0.0531			0.0000			0.0000
Off-Road	3.7190	38.3225	22.3040	0.0388		1.9386	1.9386		1.8048	1.8048		3,871.7665	3,871.7665	1.0667		3,898.4344
Total	**3.7190**	**38.3225**	**22.3040**	**0.0388**	**0.3508**	**1.9386**	**2.2893**	**0.0531**	**1.8048**	**1.8579**		**3,871.7665**	**3,871.7665**	**1.0667**		**3,898.4344**

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	lb/day										lb/day					
Hauling	0.0155	0.5252	0.1008	1.3300e-003	0.0286	2.1300e-003	0.0307	7.8400e-003	2.0300e-003	9.8700e-003		141.3535	141.3535	6.4800e-003		141.5154
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
Worker	0.0632	0.0415	0.5160	1.2900e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		128.6117	128.6117	3.8300e-003		128.7074

Total	**0.0787**	**0.5667**	**0.6168**	**2.6200e-003**	**0.1518**	**2.9300e-003**	**0.1547**	**0.0405**	**2.7700e-003**	**0.0433**		**269.9652**	**269.9652**	**0.0103**		**270.2229**

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	lb/day										lb/day					
Fugitive Dust					0.1300	0.0000	0.1300	0.0197	0.0000	0.0197			0.0000			0.0000
Off-Road	3.7190	38.3225	22.3040	0.0388		1.9386	1.9386		1.8048	1.8048	0.0000	3,871.7665	3,871.7665	1.0667		3,898.4344
Total	**3.7190**	**38.3225**	**22.3040**	**0.0388**	**0.1300**	**1.9386**	**2.0685**	**0.0197**	**1.8048**	**1.8245**	**0.0000**	**3,871.7665**	**3,871.7665**	**1.0667**		**3,898.4344**

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	lb/day										lb/day					
Hauling	0.0155	0.5252	0.1008	1.3300e-003	0.0273	2.1300e-003	0.0294	7.5200e-003	2.0300e-003	9.5500e-003		141.3535	141.3535	6.4800e-003		141.5154
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
Worker	0.0632	0.0415	0.5160	1.2900e-003	0.1168	8.0000e-004	0.1176	0.0311	7.4000e-004	0.0319		128.6117	128.6117	3.8300e-003		128.7074
Total	**0.0787**	**0.5667**	**0.6168**	**2.6200e-003**	**0.1441**	**2.9300e-003**	**0.1470**	**0.0386**	**2.7700e-003**	**0.0414**		**269.9652**	**269.9652**	**0.0103**		**270.2229**

3.3 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0686	0.0000	6.0686	3.3170	0.0000	3.3170			0.0000			0.0000
Off-Road	3.2164	30.7191	20.5531	0.0322		1.8288	1.8288		1.7046	1.7046		3,169.8095	3,169.8095	0.8568		3,191.2291
Total	**3.2164**	**30.7191**	**20.5531**	**0.0322**	**6.0686**	**1.8288**	**7.8973**	**3.3170**	**1.7046**	**5.0216**		**3,169.8095**	**3,169.8095**	**0.8568**		**3,191.2291**

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	lb/day										lb/day					
Hauling	0.4233	14.3631	2.7566	0.0363	1.3736	0.0581	1.4317	0.3595	0.0556	0.4151		3,865.6249	3,865.6249	0.1772		3,870.0536
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
Worker	0.0969	0.0636	0.7912	1.9800e-003	0.1889	1.2300e-003	0.1902	0.0501	1.1300e-003	0.0513		197.2046	197.2046	5.8700e-003		197.3514
Total	**0.5202**	**14.4267**	**3.5478**	**0.0383**	**1.5625**	**0.0594**	**1.6219**	**0.4096**	**0.0568**	**0.4664**		**4,062.8296**	**4,062.8296**	**0.1830**		**4,067.4050**

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	lb/day										lb/day					

Fugitive Dust					2.2484	0.0000	2.2484	1.2290	0.0000	1.2290			0.0000			0.0000
Off-Road	3.2164	30.7191	20.5531	0.0322		1.8288	1.8288		1.7046	1.7046	0.0000	3,169.8095	3,169.8095	0.8568		3,191.2291
Total	**3.2164**	**30.7191**	**20.5531**	**0.0322**	**2.2484**	**1.8288**	**4.0772**	**1.2290**	**1.7046**	**2.9336**	**0.0000**	**3,169.8095**	**3,169.8095**	**0.8568**		**3,191.2291**

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	lb/day										lb/day					
Hauling	0.4233	14.3631	2.7566	0.0363	1.3026	0.0581	1.3607	0.3421	0.0556	0.3977		3,865.6249	3,865.6249	0.1772		3,870.0536
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
Worker	0.0969	0.0636	0.7912	1.9800e-003	0.1791	1.2300e-003	0.1803	0.0477	1.1300e-003	0.0488		197.2046	197.2046	5.8700e-003		197.3514
Total	**0.5202**	**14.4267**	**3.5478**	**0.0383**	**1.4817**	**0.0594**	**1.5411**	**0.3898**	**0.0568**	**0.4466**		**4,062.8296**	**4,062.8296**	**0.1830**		**4,067.4050**

3.3 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0686	0.0000	6.0686	3.3170	0.0000	3.3170			0.0000			0.0000
Off-Road	2.9894	28.5333	20.3160	0.0322		1.6476	1.6476		1.5350	1.5350		3,126.5945	3,126.5945	0.8509		3,147.8672
Total	**2.9894**	**28.5333**	**20.3160**	**0.0322**	**6.0686**	**1.6476**	**7.7162**	**3.3170**	**1.5350**	**4.8520**		**3,126.5945**	**3,126.5945**	**0.8509**		**3,147.8672**

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	lb/day										lb/day					
Hauling	0.4019	13.6462	2.6612	0.0359	1.3737	0.0530	1.4267	0.3595	0.0507	0.4103		3,828.1140	3,828.1140	0.1743		3,832.4722
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
Worker	0.0875	0.0556	0.7038	1.9200e-003	0.1889	1.2000e-003	0.1901	0.0501	1.1100e-003	0.0512		191.3550	191.3550	5.1800e-003		191.4845
Total	**0.4894**	**13.7018**	**3.3650**	**0.0378**	**1.5626**	**0.0542**	**1.6168**	**0.4097**	**0.0519**	**0.4615**		**4,019.4689**	**4,019.4689**	**0.1795**		**4,023.9567**

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	lb/day										lb/day					
Fugitive Dust					2.2484	0.0000	2.2484	1.2290	0.0000	1.2290			0.0000			0.0000
Off-Road	2.9894	28.5333	20.3160	0.0322		1.6476	1.6476		1.5350	1.5350	0.0000	3,126.5945	3,126.5945	0.8509		3,147.8672
Total	**2.9894**	**28.5333**	**20.3160**	**0.0322**	**2.2484**	**1.6476**	**3.8960**	**1.2290**	**1.5350**	**2.7639**	**0.0000**	**3,126.5945**	**3,126.5945**	**0.8509**		**3,147.8672**

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	lb/day										lb/day					
Hauling	0.4019	13.6462	2.6612	0.0359	1.3027	0.0530	1.3557	0.3421	0.0507	0.3929		3,828.1140	3,828.1140	0.1743		3,832.4722
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
Worker	0.0875	0.0556	0.7038	1.9200e-003	0.1791	1.2000e-003	0.1803	0.0477	1.1100e-003	0.0488		191.3550	191.3550	5.1800e-003		191.4845
Total	**0.4894**	**13.7018**	**3.3650**	**0.0378**	**1.4817**	**0.0542**	**1.5360**	**0.3898**	**0.0519**	**0.4417**		**4,019.4689**	**4,019.4689**	**0.1795**		**4,023.9567**

3.4 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2279	13.0032	12.7576	0.0202		0.6773	0.6773		0.6231	0.6231		1,997.3187	1,997.3187	0.6319		2,013.1170
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2279**	**13.0032**	**12.7576**	**0.0202**		**0.6773**	**0.6773**		**0.6231**	**0.6231**		**1,997.3187**	**1,997.3187**	**0.6319**		**2,013.1170**

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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	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
Worker	0.0685	0.0435	0.5508	1.5000e-003	0.1479	9.4000e-004	0.1488	0.0392	8.7000e-004	0.0401		149.7561	149.7561	4.0500e-003		149.8574
Total	**0.0685**	**0.0435**	**0.5508**	**1.5000e-003**	**0.1479**	**9.4000e-004**	**0.1488**	**0.0392**	**8.7000e-004**	**0.0401**		**149.7561**	**149.7561**	**4.0500e-003**		**149.8574**

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	lb/day										lb/day					
Off-Road	1.2279	13.0032	12.7576	0.0202		0.6773	0.6773		0.6231	0.6231	0.0000	1,997.3187	1,997.3187	0.6319		2,013.1170
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2279**	**13.0032**	**12.7576**	**0.0202**		**0.6773**	**0.6773**		**0.6231**	**0.6231**	**0.0000**	**1,997.3187**	**1,997.3187**	**0.6319**		**2,013.1170**

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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	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
Worker	0.0685	0.0435	0.5508	1.5000e-003	0.1402	9.4000e-004	0.1411	0.0373	8.7000e-004	0.0382		149.7561	149.7561	4.0500e-003		149.8574
Total	**0.0685**	**0.0435**	**0.5508**	**1.5000e-003**	**0.1402**	**9.4000e-004**	**0.1411**	**0.0373**	**8.7000e-004**	**0.0382**		**149.7561**	**149.7561**	**4.0500e-003**		**149.8574**

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.8022	26.3349	19.1702	0.0320		1.5127	1.5127		1.4177	1.4177		3,091.3894	3,091.3894	0.7895		3,111.1261
Total	**2.8022**	**26.3349**	**19.1702**	**0.0320**		**1.5127**	**1.5127**		**1.4177**	**1.4177**		**3,091.3894**	**3,091.3894**	**0.7895**		**3,111.1261**

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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2264	5.8520	1.4995	0.0130	0.3182	0.0424	0.3606	0.0916	0.0405	0.1321		1,377.2747	1,377.2747	0.0654		1,378.9086
Worker	0.9469	0.6019	7.6188	0.0208	2.0455	0.0130	2.0585	0.5426	0.0120	0.5546		2,071.6255	2,071.6255	0.0561		2,073.0277
Total	**1.1733**	**6.4539**	**9.1183**	**0.0338**	**2.3637**	**0.0554**	**2.4191**	**0.6342**	**0.0526**	**0.6867**		**3,448.9002**	**3,448.9002**	**0.1215**		**3,451.9363**

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	lb/day										lb/day					
Off-Road	2.8022	26.3349	19.1702	0.0320		1.5127	1.5127		1.4177	1.4177	0.0000	3,091.3894	3,091.3894	0.7895		3,111.1261
Total	**2.8022**	**26.3349**	**19.1702**	**0.0320**		**1.5127**	**1.5127**		**1.4177**	**1.4177**	**0.0000**	**3,091.3894**	**3,091.3894**	**0.7895**		**3,111.1261**

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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2264	5.8520	1.4995	0.0130	0.3046	0.0424	0.3470	0.0883	0.0405	0.1288		1,377.2747	1,377.2747	0.0654		1,378.9086
Worker	0.9469	0.6019	7.6188	0.0208	1.9388	0.0130	1.9519	0.5164	0.0120	0.5284		2,071.6255	2,071.6255	0.0561		2,073.0277
Total	**1.1733**	**6.4539**	**9.1183**	**0.0338**	**2.2434**	**0.0554**	**2.2988**	**0.6046**	**0.0526**	**0.6572**		**3,448.9002**	**3,448.9002**	**0.1215**		**3,451.9363**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5166	23.9036	18.6994	0.0320		1.3115	1.3115		1.2293	1.2293		3,042.0040	3,042.0040	0.7810		3,061.5287

Total	**2.5166**	**23.9036**	**18.6994**	**0.0320**		**1.3115**	**1.3115**		**1.2293**	**1.2293**		**3,042.0040**	**3,042.0040**	**0.7810**		**3,061.5287**

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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1826	5.2854	1.3386	0.0130	0.3182	0.0263	0.3445	0.0916	0.0252	0.1168		1,369.1048	1,369.1048	0.0601		1,370.6063
Worker	0.8655	0.5315	6.8483	0.0201	2.0455	0.0128	2.0582	0.5426	0.0118	0.5543		2,006.9559	2,006.9559	0.0491		2,008.1838
Total	**1.0481**	**5.8169**	**8.1869**	**0.0331**	**2.3637**	**0.0391**	**2.4028**	**0.6342**	**0.0369**	**0.6711**		**3,376.0607**	**3,376.0607**	**0.1092**		**3,378.7901**

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	lb/day										lb/day					
Off-Road	2.5166	23.9036	18.6994	0.0320		1.3115	1.3115		1.2293	1.2293	0.0000	3,042.0040	3,042.0040	0.7810		3,061.5287
Total	**2.5166**	**23.9036**	**18.6994**	**0.0320**		**1.3115**	**1.3115**		**1.2293**	**1.2293**	**0.0000**	**3,042.0040**	**3,042.0040**	**0.7810**		**3,061.5287**

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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1826	5.2854	1.3386	0.0130	0.3046	0.0263	0.3309	0.0883	0.0252	0.1135		1,369.1048	1,369.1048	0.0601		1,370.6063
Worker	0.8655	0.5315	6.8483	0.0201	1.9388	0.0128	1.9516	0.5164	0.0118	0.5281		2,006.9559	2,006.9559	0.0491		2,008.1838
Total	**1.0481**	**5.8169**	**8.1869**	**0.0331**	**2.2434**	**0.0391**	**2.2825**	**0.6046**	**0.0369**	**0.6416**		**3,376.0607**	**3,376.0607**	**0.1092**		**3,378.7901**

3.6 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	41.8170					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	**42.0592**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9928**

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	lb/day											lb/day					
Hauling	0.0000	0.0000	0.0000	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
Worker	0.1738	0.1067	1.3752	4.0400e-003	0.4107	2.5600e-003	0.4133	0.1090	2.3600e-003	0.1113		403.0032	403.0032	9.8600e-003		403.2498
Total	**0.1738**	**0.1067**	**1.3752**	**4.0400e-003**	**0.4107**	**2.5600e-003**	**0.4133**	**0.1090**	**2.3600e-003**	**0.1113**		**403.0032**	**403.0032**	**9.8600e-003**		**403.2498**

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	lb/day										lb/day					
Archit. Coating	41.8170					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
Total	**42.0592**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9928**

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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	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

Worker	0.1738	0.1067	1.3752	4.0400e-003	0.3893	2.5600e-003	0.3919	0.1037	2.3600e-003	0.1061		403.0032	403.0032	9.8600e-003		403.2498
Total	**0.1738**	**0.1067**	**1.3752**	**4.0400e-003**	**0.3893**	**2.5600e-003**	**0.3919**	**0.1037**	**2.3600e-003**	**0.1061**		**403.0032**	**403.0032**	**9.8600e-003**		**403.2498**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.9851	9.3973	25.8571	0.0759	6.2120	0.0733	6.2853	1.6583	0.0687	1.7269		7,646.3586	7,646.3586	0.2899		7,653.6050
Unmitigated	3.3016	11.4625	34.6433	0.1087	9.1857	0.1028	9.2885	2.4521	0.0964	2.5485		10,952.1325	10,952.1325	0.3825		10,961.6960

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse High Rise	1,740.00	1,249.90	994.70	3,611,104	2,442,073
Enclosed Parking with Elevator	0.00	0.00	0.00		
Strip Mall	200.00	210.20	102.15	288,723	195,254
Total	1,940.00	1,460.10	1,096.85	3,899,827	2,637,327

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
Condo/Townhouse High Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

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

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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	lb/day										lb/day					
NaturalGas Mitigated	0.0649	0.5548	0.2372	3.5400e-003		0.0449	0.0449		0.0449	0.0449		708.0814	708.0814	0.0136	0.0130	712.2891
NaturalGas Unmitigated	0.0744	0.6358	0.2719	4.0600e-003		0.0514	0.0514		0.0514	0.0514		811.3749	811.3749	0.0156	0.0149	816.1965

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	lb/day										lb/day					
Condo/Townhouse High Rise	6864.22	0.0740	0.6326	0.2692	4.0400e-003		0.0512	0.0512		0.0512	0.0512		807.5554	807.5554	0.0155	0.0148	812.3543
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	32.4658	3.5000e-004	3.1800e-003	2.6700e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		3.8195	3.8195	7.0000e-005	7.0000e-005	3.8422
Total		**0.0744**	**0.6358**	**0.2719**	**4.0600e-003**		**0.0514**	**0.0514**		**0.0514**	**0.0514**		**811.3749**	**811.3749**	**0.0156**	**0.0149**	**816.1965**

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	lb/day										lb/day					
Condo/Townhouse High Rise	5.99272	0.0646	0.5523	0.2350	3.5300e-003		0.0447	0.0447		0.0447	0.0447		705.0258	705.0258	0.0135	0.0129	709.2154
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.0259726	2.8000e-004	2.5500e-003	2.1400e-003	2.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		3.0556	3.0556	6.0000e-005	6.0000e-005	3.0738
Total		**0.0649**	**0.5548**	**0.2372**	**3.5500e-003**		**0.0448**	**0.0448**		**0.0448**	**0.0448**		**708.0814**	**708.0814**	**0.0136**	**0.0130**	**712.2891**

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	lb/day										lb/day					
Mitigated	14.0736	2.0738	24.7935	0.0127		0.2773	0.2773		0.2773	0.2773	0.0000	2,335.8379	2,335.8379	0.0861	0.0420	2,350.5160
Unmitigated	133.1288	2.9145	181.6025	0.3048		22.5019	22.5019		22.5019	22.5019	2,427.5454	1,117.8379	3,545.3833	3.3641	0.1716	3,680.6187

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	lb/day										lb/day					
Architectural Coating	2.0049					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	11.1252					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	119.2654	2.6366	157.5732	0.3036		22.3698	22.3698		22.3698	22.3698	2,427.5454	1,074.7059	3,502.2513	3.3220	0.1716	3,636.4330
Landscaping	0.7333	0.2779	24.0293	1.2700e-003		0.1321	0.1321		0.1321	0.1321		43.1321	43.1321	0.0422		44.1857
Total	**133.1288**	**2.9145**	**181.6025**	**0.3049**		**22.5019**	**22.5019**		**22.5019**	**22.5019**	**2,427.5454**	**1,117.8379**	**3,545.3833**	**3.3641**	**0.1716**	**3,680.6187**

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	lb/day										lb/day					
Architectural Coating	2.0049					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	11.1252					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.2102	1.7960	0.7642	0.0115		0.1452	0.1452		0.1452	0.1452	0.0000	2,292.7059	2,292.7059	0.0439	0.0420	2,306.3303
Landscaping	0.7333	0.2779	24.0293	1.2700e-003		0.1321	0.1321		0.1321	0.1321		43.1321	43.1321	0.0422		44.1857
Total	**14.0735**	**2.0738**	**24.7935**	**0.0127**		**0.2773**	**0.2773**		**0.2773**	**0.2773**	**0.0000**	**2,335.8379**	**2,335.8379**	**0.0861**	**0.0420**	**2,350.5160**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

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

Garden Gate Tower - Santa Clara County, Winter

Garden Gate Tower

Santa Clara County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	232.00	Space	2.09	92,800.00	0
Condo/Townhouse High Rise	290.00	Dwelling Unit	4.53	513,333.00	829
Strip Mall	5.00	1000sqft	0.11	5,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Per project description.

Construction Phase - Anticipated schedule

Off-road Equipment -

Off-road Equipment - anticipated equipment

Off-road Equipment - anticipated equipment

Off-road Equipment - anticipated equipment

Off-road Equipment - anticipated equipment

Trips and VMT -

Demolition - Per AQ Questionnaire.

Grading - Per project description.

Vehicle Trips - Per traffic study.

Construction Off-road Equipment Mitigation - BAAQMD Basic Control Measures/Standard Permit Conditions

Area Mitigation -

Energy Mitigation - Per AQ Questionnaire.

Mobile Land Use Mitigation - project density is 290 du on 0.5 acre site, downtown infill with mix of uses

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	175.00
tblConstructionPhase	NumDays	230.00	453.00
tblConstructionPhase	NumDays	20.00	22.00
tblConstructionPhase	NumDays	20.00	88.00
tblConstructionPhase	NumDays	20.00	22.00
tblConstructionPhase	PhaseEndDate	12/6/2019	12/31/2020
tblConstructionPhase	PhaseEndDate	10/11/2019	12/25/2020
tblConstructionPhase	PhaseEndDate	10/26/2018	10/30/2018
tblConstructionPhase	PhaseEndDate	11/23/2018	3/1/2019
tblConstructionPhase	PhaseEndDate	11/8/2019	4/2/2019
tblConstructionPhase	PhaseStartDate	11/9/2019	5/1/2020
tblConstructionPhase	PhaseStartDate	11/24/2018	4/3/2019
tblConstructionPhase	PhaseStartDate	10/27/2018	10/31/2018
tblConstructionPhase	PhaseStartDate	10/12/2019	3/2/2019
tblGrading	AcresOfGrading	0.00	0.50
tblGrading	MaterialExported	0.00	31,500.00
tblLandUse	LandUseSquareFeet	290,000.00	513,333.00

tblOffRoadEquipment	OffRoadEquipmentType		Crushing/Proc. Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Signal Boards
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Signal Boards
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblVehicleTrips	WD_TR	4.18	6.00
tblVehicleTrips	WD_TR	44.32	40.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2018	3.8021	45.5306	24.2866	0.0697	7.6311	1.9415	9.5204	3.7267	1.8076	5.4891	0.0000	7,153.7176	7,153.7176	1.0771	0.0000	7,179.9369
2019	4.0454	42.5915	27.9715	0.0693	7.6312	1.7029	9.3341	3.7267	1.5878	5.3145	0.0000	7,067.0702	7,067.0702	1.0388	0.0000	7,093.0410
2020	45.8734	31.7134	29.6758	0.0698	2.7744	1.4645	4.2390	0.7431	1.3799	2.1230	0.0000	6,871.7951	6,871.7951	0.9224	0.0000	6,894.8540
Maximum	**45.8734**	**45.5306**	**29.6758**	**0.0698**	**7.6312**	**1.9415**	**9.5204**	**3.7267**	**1.8076**	**5.4891**	**0.0000**	**7,153.7176**	**7,153.7176**	**1.0771**	**0.0000**	**7,179.9369**

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	lb/day										lb/day					
2018	3.8021	45.5306	24.2866	0.0697	3.7301	1.9415	5.6194	1.6187	1.8076	3.3812	0.0000	7,153.7176	7,153.7176	1.0771	0.0000	7,179.9369
2019	4.0454	42.5915	27.9715	0.0693	3.7302	1.7029	5.4330	1.6188	1.5878	3.2066	0.0000	7,067.0702	7,067.0702	1.0388	0.0000	7,093.0410
2020	45.8734	31.7134	29.6758	0.0698	2.6327	1.4645	4.0973	0.7083	1.3799	2.0882	0.0000	6,871.7951	6,871.7951	0.9224	0.0000	6,894.8540
Maximum	**45.8734**	**45.5306**	**29.6758**	**0.0698**	**3.7302**	**1.9415**	**5.6194**	**1.6188**	**1.8076**	**3.3812**	**0.0000**	**7,153.7176**	**7,153.7176**	**1.0771**	**0.0000**	**7,179.9369**

	ROG	NOx	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**	**44.04**	**0.00**	**34.40**	**51.86**	**0.00**	**32.88**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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	lb/day										lb/day					
Area	133.1288	2.9145	181.6025	0.3048		22.5019	22.5019		22.5019	22.5019	2,427.5454	1,117.8379	3,545.3833	3.3641	0.1716	3,680.6187
Energy	0.0744	0.6358	0.2719	4.0600e-003		0.0514	0.0514		0.0514	0.0514		811.3749	811.3749	0.0156	0.0149	816.1965
Mobile	2.8737	12.1375	34.6625	0.1013	9.1857	0.1035	9.2892	2.4521	0.0971	2.5491		10,201.9779	10,201.9779	0.3868		10,211.6467
Total	**136.0769**	**15.6878**	**216.5369**	**0.4102**	**9.1857**	**22.6568**	**31.8425**	**2.4521**	**22.6504**	**25.1024**	**2,427.5454**	**12,131.1907**	**14,558.7361**	**3.7664**	**0.1865**	**14,708.4618**

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	lb/day										lb/day					
Area	14.0736	2.0738	24.7935	0.0127		0.2773	0.2773		0.2773	0.2773	0.0000	2,335.8379	2,335.8379	0.0861	0.0420	2,350.5160
Energy	0.0649	0.5548	0.2372	3.5400e-003		0.0449	0.0449		0.0449	0.0449		708.0814	708.0814	0.0136	0.0130	712.2891
Mobile	2.5647	9.8478	26.9400	0.0707	6.2120	0.0740	6.2860	1.6583	0.0693	1.7276		7,120.3039	7,120.3039	0.2996		7,127.7938
Total	**16.7032**	**12.4765**	**51.9706**	**0.0870**	**6.2120**	**0.3961**	**6.6081**	**1.6583**	**0.3915**	**2.0497**	**0.0000**	**10,164.2232**	**10,164.2232**	**0.3993**	**0.0550**	**10,190.5990**

	ROG	NOx	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	**87.73**	**20.47**	**76.00**	**78.80**	**32.37**	**98.25**	**79.25**	**32.37**	**98.27**	**91.83**	**100.00**	**16.21**	**30.18**	**89.40**	**70.50**	**30.72**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	10/1/2018	10/30/2018	5	22	
2	Grading	Grading	10/31/2018	3/1/2019	5	88	
3	Paving	Paving	3/2/2019	4/2/2019	5	22	
4	Building Construction	Building Construction	4/3/2019	12/25/2020	5	453	
5	Architectural Coating	Architectural Coating	5/1/2020	12/31/2020	5	175	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0.5

Acres of Paving: 2.09

Residential Indoor: 1,039,499; Residential Outdoor: 346,500; Non-Residential Indoor: 7,500; Non-Residential Outdoor: 2,500; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73

Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Crushing/Proc. Equipment	1	6.00	85	0.78
Grading	Signal Boards	2	8.00	6	0.82
Grading	Trenchers	1	6.00	78	0.50
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	0	8.00	187	0.41
Paving	Signal Boards	2		6	0.82
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	1	8.00	80	0.38
Building Construction	Cranes	2	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
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	36.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	9	23.00	0.00	3,938.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	10	249.00	47.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	50.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3508	0.0000	0.3508	0.0531	0.0000	0.0531			0.0000			0.0000
Off-Road	3.7190	38.3225	22.3040	0.0388		1.9386	1.9386		1.8048	1.8048		3,871.7665	3,871.7665	1.0667		3,898.4344
Total	**3.7190**	**38.3225**	**22.3040**	**0.0388**	**0.3508**	**1.9386**	**2.2893**	**0.0531**	**1.8048**	**1.8579**		**3,871.7665**	**3,871.7665**	**1.0667**		**3,898.4344**

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	lb/day										lb/day					
Hauling	0.0159	0.5388	0.1094	1.3100e-003	0.0286	2.1700e-003	0.0308	7.8400e-003	2.0700e-003	9.9100e-003		139.0532	139.0532	6.8200e-003		139.2237
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
Worker	0.0672	0.0507	0.4840	1.1900e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		118.1667	118.1667	3.6000e-003		118.2568

Total	**0.0831**	**0.5894**	**0.5934**	**2.5000e-003**	**0.1518**	**2.9700e-003**	**0.1548**	**0.0405**	**2.8100e-003**	**0.0433**		**257.2199**	**257.2199**	**0.0104**		**257.4805**

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	lb/day										lb/day					
Fugitive Dust					0.1300	0.0000	0.1300	0.0197	0.0000	0.0197			0.0000			0.0000
Off-Road	3.7190	38.3225	22.3040	0.0388		1.9386	1.9386		1.8048	1.8048	0.0000	3,871.7665	3,871.7665	1.0667		3,898.4344
Total	**3.7190**	**38.3225**	**22.3040**	**0.0388**	**0.1300**	**1.9386**	**2.0685**	**0.0197**	**1.8048**	**1.8245**	**0.0000**	**3,871.7665**	**3,871.7665**	**1.0667**		**3,898.4344**

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	lb/day										lb/day					
Hauling	0.0159	0.5388	0.1094	1.3100e-003	0.0273	2.1700e-003	0.0295	7.5200e-003	2.0700e-003	9.5900e-003		139.0532	139.0532	6.8200e-003		139.2237
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
Worker	0.0672	0.0507	0.4840	1.1900e-003	0.1168	8.0000e-004	0.1176	0.0311	7.4000e-004	0.0319		118.1667	118.1667	3.6000e-003		118.2568
Total	**0.0831**	**0.5894**	**0.5934**	**2.5000e-003**	**0.1441**	**2.9700e-003**	**0.1471**	**0.0386**	**2.8100e-003**	**0.0414**		**257.2199**	**257.2199**	**0.0104**		**257.4805**

3.3 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0686	0.0000	6.0686	3.3170	0.0000	3.3170			0.0000			0.0000
Off-Road	3.2164	30.7191	20.5531	0.0322		1.8288	1.8288		1.7046	1.7046		3,169.8095	3,169.8095	0.8568		3,191.2291
Total	**3.2164**	**30.7191**	**20.5531**	**0.0322**	**6.0686**	**1.8288**	**7.8973**	**3.3170**	**1.7046**	**5.0216**		**3,169.8095**	**3,169.8095**	**0.8568**		**3,191.2291**

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	lb/day										lb/day					
Hauling	0.4359	14.7339	2.9913	0.0357	1.3736	0.0593	1.4329	0.3595	0.0567	0.4162		3,802.7191	3,802.7191	0.1865		3,807.3806
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
Worker	0.1030	0.0777	0.7422	1.8200e-003	0.1889	1.2300e-003	0.1902	0.0501	1.1300e-003	0.0513		181.1890	181.1890	5.5300e-003		181.3272
Total	**0.5389**	**14.8115**	**3.7334**	**0.0375**	**1.5625**	**0.0605**	**1.6230**	**0.4096**	**0.0579**	**0.4675**		**3,983.9081**	**3,983.9081**	**0.1920**		**3,988.7078**

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	lb/day										lb/day					

Fugitive Dust					2.2484	0.0000	2.2484	1.2290	0.0000	1.2290			0.0000			0.0000
Off-Road	3.2164	30.7191	20.5531	0.0322		1.8288	1.8288		1.7046	1.7046	0.0000	3,169.8095	3,169.8095	0.8568		3,191.2291
Total	**3.2164**	**30.7191**	**20.5531**	**0.0322**	**2.2484**	**1.8288**	**4.0772**	**1.2290**	**1.7046**	**2.9336**	**0.0000**	**3,169.8095**	**3,169.8095**	**0.8568**		**3,191.2291**

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	lb/day										lb/day					
Hauling	0.4359	14.7339	2.9913	0.0357	1.3026	0.0593	1.3619	0.3421	0.0567	0.3988		3,802.7191	3,802.7191	0.1865		3,807.3806
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
Worker	0.1030	0.0777	0.7422	1.8200e-003	0.1791	1.2300e-003	0.1803	0.0477	1.1300e-003	0.0488		181.1890	181.1890	5.5300e-003		181.3272
Total	**0.5389**	**14.8115**	**3.7334**	**0.0375**	**1.4817**	**0.0605**	**1.5422**	**0.3898**	**0.0579**	**0.4476**		**3,983.9081**	**3,983.9081**	**0.1920**		**3,988.7078**

3.3 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0686	0.0000	6.0686	3.3170	0.0000	3.3170			0.0000			0.0000
Off-Road	2.9894	28.5333	20.3160	0.0322		1.6476	1.6476		1.5350	1.5350		3,126.5945	3,126.5945	0.8509		3,147.8672
Total	**2.9894**	**28.5333**	**20.3160**	**0.0322**	**6.0686**	**1.6476**	**7.7162**	**3.3170**	**1.5350**	**4.8520**		**3,126.5945**	**3,126.5945**	**0.8509**		**3,147.8672**

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	lb/day										lb/day					
Hauling	0.4133	13.9902	2.8778	0.0353	1.3737	0.0541	1.4277	0.3595	0.0517	0.4113		3,764.6756	3,764.6756	0.1831		3,769.2523
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
Worker	0.0929	0.0680	0.6557	1.7700e-003	0.1889	1.2000e-003	0.1901	0.0501	1.1100e-003	0.0512		175.8002	175.8002	4.8500e-003		175.9215
Total	**0.5063**	**14.0582**	**3.5335**	**0.0371**	**1.5626**	**0.0553**	**1.6179**	**0.4097**	**0.0529**	**0.4625**		**3,940.4758**	**3,940.4758**	**0.1879**		**3,945.1738**

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	lb/day										lb/day					
Fugitive Dust					2.2484	0.0000	2.2484	1.2290	0.0000	1.2290			0.0000			0.0000
Off-Road	2.9894	28.5333	20.3160	0.0322		1.6476	1.6476		1.5350	1.5350	0.0000	3,126.5945	3,126.5945	0.8509		3,147.8672
Total	**2.9894**	**28.5333**	**20.3160**	**0.0322**	**2.2484**	**1.6476**	**3.8960**	**1.2290**	**1.5350**	**2.7639**	**0.0000**	**3,126.5945**	**3,126.5945**	**0.8509**		**3,147.8672**

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	lb/day										lb/day					
Hauling	0.4133	13.9902	2.8778	0.0353	1.3027	0.0541	1.3567	0.3421	0.0517	0.3939		3,764.6756	3,764.6756	0.1831		3,769.2523
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
Worker	0.0929	0.0680	0.6557	1.7700e-003	0.1791	1.2000e-003	0.1803	0.0477	1.1100e-003	0.0488		175.8002	175.8002	4.8500e-003		175.9215
Total	**0.5063**	**14.0582**	**3.5335**	**0.0371**	**1.4817**	**0.0553**	**1.5370**	**0.3898**	**0.0529**	**0.4427**		**3,940.4758**	**3,940.4758**	**0.1879**		**3,945.1738**

3.4 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2279	13.0032	12.7576	0.0202		0.6773	0.6773		0.6231	0.6231		1,997.3187	1,997.3187	0.6319		2,013.1170
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2279**	**13.0032**	**12.7576**	**0.0202**		**0.6773**	**0.6773**		**0.6231**	**0.6231**		**1,997.3187**	**1,997.3187**	**0.6319**		**2,013.1170**

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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	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
Worker	0.0727	0.0532	0.5131	1.3800e-003	0.1479	9.4000e-004	0.1488	0.0392	8.7000e-004	0.0401		137.5827	137.5827	3.8000e-003		137.6777
Total	**0.0727**	**0.0532**	**0.5131**	**1.3800e-003**	**0.1479**	**9.4000e-004**	**0.1488**	**0.0392**	**8.7000e-004**	**0.0401**		**137.5827**	**137.5827**	**3.8000e-003**		**137.6777**

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	lb/day										lb/day					
Off-Road	1.2279	13.0032	12.7576	0.0202		0.6773	0.6773		0.6231	0.6231	0.0000	1,997.3187	1,997.3187	0.6319		2,013.1170
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2279**	**13.0032**	**12.7576**	**0.0202**		**0.6773**	**0.6773**		**0.6231**	**0.6231**	**0.0000**	**1,997.3187**	**1,997.3187**	**0.6319**		**2,013.1170**

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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	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
Worker	0.0727	0.0532	0.5131	1.3800e-003	0.1402	9.4000e-004	0.1411	0.0373	8.7000e-004	0.0382		137.5827	137.5827	3.8000e-003		137.6777
Total	**0.0727**	**0.0532**	**0.5131**	**1.3800e-003**	**0.1402**	**9.4000e-004**	**0.1411**	**0.0373**	**8.7000e-004**	**0.0382**		**137.5827**	**137.5827**	**3.8000e-003**		**137.6777**

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.8022	26.3349	19.1702	0.0320		1.5127	1.5127		1.4177	1.4177		3,091.3894	3,091.3894	0.7895		3,111.1261
Total	**2.8022**	**26.3349**	**19.1702**	**0.0320**		**1.5127**	**1.5127**		**1.4177**	**1.4177**		**3,091.3894**	**3,091.3894**	**0.7895**		**3,111.1261**

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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2370	5.9348	1.7031	0.0127	0.3182	0.0430	0.3612	0.0916	0.0412	0.1328		1,342.9150	1,342.9150	0.0704		1,344.6757
Worker	1.0062	0.7356	7.0982	0.0191	2.0455	0.0130	2.0585	0.5426	0.0120	0.5546		1,903.2279	1,903.2279	0.0525		1,904.5415
Total	**1.2432**	**6.6704**	**8.8013**	**0.0318**	**2.3637**	**0.0561**	**2.4197**	**0.6342**	**0.0532**	**0.6873**		**3,246.1429**	**3,246.1429**	**0.1230**		**3,249.2172**

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	lb/day										lb/day					
Off-Road	2.8022	26.3349	19.1702	0.0320		1.5127	1.5127		1.4177	1.4177	0.0000	3,091.3894	3,091.3894	0.7895		3,111.1261
Total	**2.8022**	**26.3349**	**19.1702**	**0.0320**		**1.5127**	**1.5127**		**1.4177**	**1.4177**	**0.0000**	**3,091.3894**	**3,091.3894**	**0.7895**		**3,111.1261**

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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2370	5.9348	1.7031	0.0127	0.3046	0.0430	0.3476	0.0883	0.0412	0.1294		1,342.9150	1,342.9150	0.0704		1,344.6757
Worker	1.0062	0.7356	7.0982	0.0191	1.9388	0.0130	1.9519	0.5164	0.0120	0.5284		1,903.2279	1,903.2279	0.0525		1,904.5415
Total	**1.2432**	**6.6704**	**8.8013**	**0.0318**	**2.2434**	**0.0561**	**2.2994**	**0.6046**	**0.0532**	**0.6578**		**3,246.1429**	**3,246.1429**	**0.1230**		**3,249.2172**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5166	23.9036	18.6994	0.0320		1.3115	1.3115		1.2293	1.2293		3,042.0040	3,042.0040	0.7810		3,061.5287

Total	**2.5166**	**23.9036**	**18.6994**	**0.0320**		**1.3115**	**1.3115**		**1.2293**	**1.2293**		**3,042.0040**	**3,042.0040**	**0.7810**		**3,061.5287**

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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1922	5.3464	1.5251	0.0126	0.3182	0.0268	0.3449	0.0916	0.0256	0.1172		1,334.3493	1,334.3493	0.0647		1,335.9664
Worker	0.9206	0.6492	6.3456	0.0185	2.0455	0.0128	2.0582	0.5426	0.0118	0.5543		1,843.7608	1,843.7608	0.0457		1,844.9035
Total	**1.1128**	**5.9956**	**7.8707**	**0.0311**	**2.3637**	**0.0395**	**2.4032**	**0.6342**	**0.0373**	**0.6715**		**3,178.1100**	**3,178.1100**	**0.1104**		**3,180.8699**

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	lb/day										lb/day					
Off-Road	2.5166	23.9036	18.6994	0.0320		1.3115	1.3115		1.2293	1.2293	0.0000	3,042.0040	3,042.0040	0.7810		3,061.5287
Total	**2.5166**	**23.9036**	**18.6994**	**0.0320**		**1.3115**	**1.3115**		**1.2293**	**1.2293**	**0.0000**	**3,042.0040**	**3,042.0040**	**0.7810**		**3,061.5287**

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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1922	5.3464	1.5251	0.0126	0.3046	0.0268	0.3313	0.0883	0.0256	0.1138		1,334.3493	1,334.3493	0.0647		1,335.9664
Worker	0.9206	0.6492	6.3456	0.0185	1.9388	0.0128	1.9516	0.5164	0.0118	0.5281		1,843.7608	1,843.7608	0.0457		1,844.9035
Total	**1.1128**	**5.9956**	**7.8707**	**0.0311**	**2.2434**	**0.0395**	**2.2829**	**0.6046**	**0.0373**	**0.6420**		**3,178.1100**	**3,178.1100**	**0.1104**		**3,180.8699**

3.6 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	41.8170					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	**42.0592**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9928**

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	lb/day											lb/day					
Hauling	0.0000	0.0000	0.0000	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
Worker	0.1849	0.1304	1.2742	3.7200e-003	0.4107	2.5600e-003	0.4133	0.1090	2.3600e-003	0.1113		370.2331	370.2331	9.1800e-003		370.4625
Total	**0.1849**	**0.1304**	**1.2742**	**3.7200e-003**	**0.4107**	**2.5600e-003**	**0.4133**	**0.1090**	**2.3600e-003**	**0.1113**		**370.2331**	**370.2331**	**9.1800e-003**		**370.4625**

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	lb/day										lb/day					
Archit. Coating	41.8170					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
Total	**42.0592**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9928**

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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	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

Worker	0.1849	0.1304	1.2742	3.7200e-003	0.3893	2.5600e-003	0.3919	0.1037	2.3600e-003	0.1061		370.2331	370.2331	9.1800e-003		370.4625
Total	**0.1849**	**0.1304**	**1.2742**	**3.7200e-003**	**0.3893**	**2.5600e-003**	**0.3919**	**0.1037**	**2.3600e-003**	**0.1061**		**370.2331**	**370.2331**	**9.1800e-003**		**370.4625**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.5647	9.8478	26.9400	0.0707	6.2120	0.0740	6.2860	1.6583	0.0693	1.7276		7,120.3039	7,120.3039	0.2996		7,127.7938
Unmitigated	2.8737	12.1375	34.6625	0.1013	9.1857	0.1035	9.2892	2.4521	0.0971	2.5491		10,201.9779	10,201.9779	0.3868		10,211.6467

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse High Rise	1,740.00	1,249.90	994.70	3,611,104	2,442,073
Enclosed Parking with Elevator	0.00	0.00	0.00		
Strip Mall	200.00	210.20	102.15	288,723	195,254
Total	1,940.00	1,460.10	1,096.85	3,899,827	2,637,327

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
Condo/Townhouse High Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

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

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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	lb/day										lb/day					
NaturalGas Mitigated	0.0649	0.5548	0.2372	3.5400e-003		0.0449	0.0449		0.0449	0.0449		708.0814	708.0814	0.0136	0.0130	712.2891
NaturalGas Unmitigated	0.0744	0.6358	0.2719	4.0600e-003		0.0514	0.0514		0.0514	0.0514		811.3749	811.3749	0.0156	0.0149	816.1965

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	lb/day										lb/day					
Condo/Townhouse High Rise	6864.22	0.0740	0.6326	0.2692	4.0400e-003		0.0512	0.0512		0.0512	0.0512		807.5554	807.5554	0.0155	0.0148	812.3543
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	32.4658	3.5000e-004	3.1800e-003	2.6700e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		3.8195	3.8195	7.0000e-005	7.0000e-005	3.8422
Total		**0.0744**	**0.6358**	**0.2719**	**4.0600e-003**		**0.0514**	**0.0514**		**0.0514**	**0.0514**		**811.3749**	**811.3749**	**0.0156**	**0.0149**	**816.1965**

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	lb/day										lb/day					
Condo/Townhouse High Rise	5.99272	0.0646	0.5523	0.2350	3.5300e-003		0.0447	0.0447		0.0447	0.0447		705.0258	705.0258	0.0135	0.0129	709.2154
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.0259726	2.8000e-004	2.5500e-003	2.1400e-003	2.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		3.0556	3.0556	6.0000e-005	6.0000e-005	3.0738
Total		**0.0649**	**0.5548**	**0.2372**	**3.5500e-003**		**0.0448**	**0.0448**		**0.0448**	**0.0448**		**708.0814**	**708.0814**	**0.0136**	**0.0130**	**712.2891**

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	lb/day										lb/day					
Mitigated	14.0736	2.0738	24.7935	0.0127		0.2773	0.2773		0.2773	0.2773	0.0000	2,335.8379	2,335.8379	0.0861	0.0420	2,350.5160
Unmitigated	133.1288	2.9145	181.6025	0.3048		22.5019	22.5019		22.5019	22.5019	2,427.5454	1,117.8379	3,545.3833	3.3641	0.1716	3,680.6187

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	lb/day										lb/day					
Architectural Coating	2.0049					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	11.1252					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	119.2654	2.6366	157.5732	0.3036		22.3698	22.3698		22.3698	22.3698	2,427.5454	1,074.7059	3,502.2513	3.3220	0.1716	3,636.4330
Landscaping	0.7333	0.2779	24.0293	1.2700e-003		0.1321	0.1321		0.1321	0.1321		43.1321	43.1321	0.0422		44.1857
Total	**133.1288**	**2.9145**	**181.6025**	**0.3049**		**22.5019**	**22.5019**		**22.5019**	**22.5019**	**2,427.5454**	**1,117.8379**	**3,545.3833**	**3.3641**	**0.1716**	**3,680.6187**

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	lb/day										lb/day					
Architectural Coating	2.0049					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	11.1252					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.2102	1.7960	0.7642	0.0115		0.1452	0.1452		0.1452	0.1452	0.0000	2,292.7059	2,292.7059	0.0439	0.0420	2,306.3303
Landscaping	0.7333	0.2779	24.0293	1.2700e-003		0.1321	0.1321		0.1321	0.1321		43.1321	43.1321	0.0422		44.1857
Total	**14.0735**	**2.0738**	**24.7935**	**0.0127**		**0.2773**	**0.2773**		**0.2773**	**0.2773**	**0.0000**	**2,335.8379**	**2,335.8379**	**0.0861**	**0.0420**	**2,350.5160**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

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

Garden Gate Tower - Santa Clara County, Annual

Garden Gate Tower

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	232.00	Space	2.09	92,800.00	0
Condo/Townhouse High Rise	290.00	Dwelling Unit	4.53	513,333.00	829
Strip Mall	5.00	1000sqft	0.11	5,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Per project description.

Construction Phase - Anticipated schedule

Off-road Equipment -

Off-road Equipment - anticipated equipment

Off-road Equipment - anticipated equipment

Off-road Equipment - anticipated equipment

Off-road Equipment - anticipated equipment

Trips and VMT -

Demolition - Per AQ Questionnaire.

Grading - Per project description.

Vehicle Trips - Per traffic study.

Construction Off-road Equipment Mitigation - BAAQMD Basic Control Measures/Standard Permit Conditions

Area Mitigation -

Energy Mitigation - Per AQ Questionnaire.

Mobile Land Use Mitigation - project density is 290 du on 0.5 acre site, downtown infill with mix of uses

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	175.00
tblConstructionPhase	NumDays	230.00	453.00
tblConstructionPhase	NumDays	20.00	22.00
tblConstructionPhase	NumDays	20.00	88.00
tblConstructionPhase	NumDays	20.00	22.00
tblConstructionPhase	PhaseEndDate	12/6/2019	12/31/2020
tblConstructionPhase	PhaseEndDate	10/11/2019	12/25/2020
tblConstructionPhase	PhaseEndDate	10/26/2018	10/30/2018
tblConstructionPhase	PhaseEndDate	11/23/2018	3/1/2019
tblConstructionPhase	PhaseEndDate	11/8/2019	4/2/2019
tblConstructionPhase	PhaseStartDate	11/9/2019	5/1/2020
tblConstructionPhase	PhaseStartDate	11/24/2018	4/3/2019
tblConstructionPhase	PhaseStartDate	10/27/2018	10/31/2018
tblConstructionPhase	PhaseStartDate	10/12/2019	3/2/2019
tblGrading	AcresOfGrading	0.00	0.50
tblGrading	MaterialExported	0.00	31,500.00
tblLandUse	LandUseSquareFeet	290,000.00	513,333.00

tblOffRoadEquipment	OffRoadEquipmentType		Crushing/Proc. Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Signal Boards
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Signal Boards
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblVehicleTrips	WD_TR	4.18	6.00
tblVehicleTrips	WD_TR	44.32	40.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.1240	1.4281	0.7826	2.0000e-003	0.1732	0.0629	0.2361	0.0829	0.0586	0.1415	0.0000	184.7791	184.7791	0.0316	0.0000	185.5684
2019	0.4746	4.2912	3.3701	8.0300e-003	0.3920	0.1978	0.5898	0.1422	0.1852	0.3273	0.0000	727.5715	727.5715	0.1074	0.0000	730.2572
2020	4.1501	4.0084	3.6697	8.7800e-003	0.3293	0.1842	0.5135	0.0885	0.1733	0.2618	0.0000	785.0772	785.0772	0.1065	0.0000	787.7393
Maximum	**4.1501**	**4.2912**	**3.6697**	**8.7800e-003**	**0.3920**	**0.1978**	**0.5898**	**0.1422**	**0.1852**	**0.3273**	**0.0000**	**785.0772**	**785.0772**	**0.1074**	**0.0000**	**787.7393**

Mitigated Construction

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

Year	tons/yr										MT/yr					
2018	0.1240	1.4281	0.7826	2.0000e-003	0.0843	0.0629	0.1472	0.0360	0.0586	0.0947	0.0000	184.7790	184.7790	0.0316	0.0000	185.5683
2019	0.4746	4.2912	3.3701	8.0300e-003	0.2943	0.1978	0.4921	0.0930	0.1852	0.2781	0.0000	727.5711	727.5711	0.1074	0.0000	730.2568
2020	4.1501	4.0084	3.6697	8.7800e-003	0.3126	0.1842	0.4968	0.0844	0.1733	0.2577	0.0000	785.0767	785.0767	0.1065	0.0000	787.7388
Maximum	**4.1501**	**4.2912**	**3.6697**	**8.7800e-003**	**0.3126**	**0.1978**	**0.4968**	**0.0930**	**0.1852**	**0.2781**	**0.0000**	**785.0767**	**785.0767**	**0.1074**	**0.0000**	**787.7388**

	ROG	NOx	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**	**22.73**	**0.00**	**15.18**	**31.95**	**0.00**	**13.71**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**10-1-2018**	**12-31-2018**	1.5490	1.5490
2	**1-1-2019**	**3-31-2019**	1.1414	1.1414
3	**4-1-2019**	**6-30-2019**	1.1788	1.1788
4	**7-1-2019**	**9-30-2019**	1.2080	1.2080
5	**10-1-2019**	**12-31-2019**	1.2174	1.2174
6	**1-1-2020**	**3-31-2020**	1.0897	1.0897
7	**4-1-2020**	**6-30-2020**	2.0409	2.0409
8	**7-1-2020**	**9-30-2020**	2.5401	2.5401
		Highest	2.5401	2.5401

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	3.1314	0.0404	3.0840	1.9500e-003		0.1436	0.1436		0.1436	0.1436	13.2210	8.9521	22.1731	0.0247	8.7000e-004	23.0487

Energy	0.0136	0.1160	0.0496	7.4000e-004		9.3800e-003	9.3800e-003		9.3800e-003	9.3800e-003	0.0000	678.2729	678.2729	0.0272	7.5500e-003	681.2025
Mobile	0.4710	1.9402	5.4225	0.0167	1.4502	0.0168	1.4670	0.3882	0.0158	0.4040	0.0000	1,530.3878	1,530.3878	0.0560	0.0000	1,531.7878
Waste						0.0000	0.0000		0.0000	0.0000	28.1447	0.0000	28.1447	1.6633	0.0000	69.7273
Water						0.0000	0.0000		0.0000	0.0000	6.1119	42.6852	48.7971	0.6297	0.0152	69.0752
Total	**3.6160**	**2.0966**	**8.5561**	**0.0194**	**1.4502**	**0.1698**	**1.6200**	**0.3882**	**0.1688**	**0.5570**	**47.4776**	**2,260.2980**	**2,307.7756**	**2.4008**	**0.0236**	**2,374.8415**

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	2.4634	0.0350	2.1669	1.8000e-004		0.0127	0.0127		0.0127	0.0127	0.0000	15.1067	15.1067	3.6600e-003	2.1000e-004	15.2615
Energy	0.0119	0.1013	0.0433	6.5000e-004		8.1800e-003	8.1800e-003		8.1800e-003	8.1800e-003	0.0000	633.5878	633.5878	0.0256	6.9800e-003	636.3077
Mobile	0.4208	1.5812	4.1576	0.0117	0.9807	0.0120	0.9927	0.2625	0.0113	0.2738	0.0000	1,069.2895	1,069.2895	0.0430	0.0000	1,070.3647
Waste						0.0000	0.0000		0.0000	0.0000	28.1447	0.0000	28.1447	1.6633	0.0000	69.7273
Water						0.0000	0.0000		0.0000	0.0000	6.1119	42.6852	48.7971	0.6297	0.0152	69.0752
Total	**2.8961**	**1.7175**	**6.3678**	**0.0125**	**0.9807**	**0.0329**	**1.0136**	**0.2625**	**0.0321**	**0.2947**	**34.2566**	**1,760.6692**	**1,794.9258**	**2.3653**	**0.0224**	**1,860.7365**

	ROG	NOx	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	**19.91**	**18.08**	**25.58**	**35.56**	**32.37**	**80.63**	**37.43**	**32.37**	**80.96**	**47.10**	**27.85**	**22.10**	**22.22**	**1.48**	**5.20**	**21.65**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	10/1/2018	10/30/2018	5	22	
2	Grading	Grading	10/31/2018	3/1/2019	5	88	
3	Paving	Paving	3/2/2019	4/2/2019	5	22	
4	Building Construction	Building Construction	4/3/2019	12/25/2020	5	453	
5	Architectural Coating	Architectural Coating	5/1/2020	12/31/2020	5	175	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0.5

Acres of Paving: 2.09

Residential Indoor: 1,039,499; Residential Outdoor: 346,500; Non-Residential Indoor: 7,500; Non-Residential Outdoor: 2,500; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Crushing/Proc. Equipment	1	6.00	85	0.78
Grading	Signal Boards	2	8.00	6	0.82
Grading	Trenchers	1	6.00	78	0.50
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	0	8.00	187	0.41
Paving	Signal Boards	2		6	0.82
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	1	8.00	80	0.38
Building Construction	Cranes	2	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
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	36.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	9	23.00	0.00	3,938.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	10	249.00	47.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	50.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2018

Unmitigated Construction On-Site

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

Fugitive Dust					3.8600e-003	0.0000	3.8600e-003	5.8000e-004	0.0000	5.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0409	0.4216	0.2453	4.3000e-004		0.0213	0.0213		0.0199	0.0199	0.0000	38.6365	38.6365	0.0106	0.0000	38.9026
Total	**0.0409**	**0.4216**	**0.2453**	**4.3000e-004**	**3.8600e-003**	**0.0213**	**0.0252**	**5.8000e-004**	**0.0199**	**0.0204**	**0.0000**	**38.6365**	**38.6365**	**0.0106**	**0.0000**	**38.9026**

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	1.7000e-004	5.9000e-003	1.1500e-003	1.0000e-005	3.1000e-004	2.0000e-005	3.3000e-004	8.0000e-005	2.0000e-005	1.1000e-004	0.0000	1.4009	1.4009	7.0000e-005	0.0000	1.4026
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.6000e-004	5.1000e-004	5.2000e-003	1.0000e-005	1.3100e-003	1.0000e-005	1.3200e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.1939	1.1939	4.0000e-005	0.0000	1.1948
Total	**8.3000e-004**	**6.4100e-003**	**6.3500e-003**	**2.0000e-005**	**1.6200e-003**	**3.0000e-005**	**1.6500e-003**	**4.3000e-004**	**3.0000e-005**	**4.7000e-004**	**0.0000**	**2.5949**	**2.5949**	**1.1000e-004**	**0.0000**	**2.5974**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.4300e-003	0.0000	1.4300e-003	2.2000e-004	0.0000	2.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0409	0.4216	0.2453	4.3000e-004		0.0213	0.0213		0.0199	0.0199	0.0000	38.6364	38.6364	0.0106	0.0000	38.9026
Total	**0.0409**	**0.4216**	**0.2453**	**4.3000e-004**	**1.4300e-003**	**0.0213**	**0.0228**	**2.2000e-004**	**0.0199**	**0.0201**	**0.0000**	**38.6364**	**38.6364**	**0.0106**	**0.0000**	**38.9026**

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	1.7000e-004	5.9000e-003	1.1500e-003	1.0000e-005	2.9000e-004	2.0000e-005	3.1000e-004	8.0000e-005	2.0000e-005	1.0000e-004	0.0000	1.4009	1.4009	7.0000e-005	0.0000	1.4026
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.6000e-004	5.1000e-004	5.2000e-003	1.0000e-005	1.2400e-003	1.0000e-005	1.2500e-003	3.3000e-004	1.0000e-005	3.4000e-004	0.0000	1.1939	1.1939	4.0000e-005	0.0000	1.1948
Total	**8.3000e-004**	**6.4100e-003**	**6.3500e-003**	**2.0000e-005**	**1.5300e-003**	**3.0000e-005**	**1.5600e-003**	**4.1000e-004**	**3.0000e-005**	**4.4000e-004**	**0.0000**	**2.5949**	**2.5949**	**1.1000e-004**	**0.0000**	**2.5974**

3.3 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1345	0.0000	0.1345	0.0731	0.0000	0.0731	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0708	0.6758	0.4522	7.1000e-004		0.0402	0.0402		0.0375	0.0375	0.0000	63.2633	63.2633	0.0171	0.0000	63.6908
Total	**0.0708**	**0.6758**	**0.4522**	**7.1000e-004**	**0.1345**	**0.0402**	**0.1748**	**0.0731**	**0.0375**	**0.1106**	**0.0000**	**63.2633**	**63.2633**	**0.0171**	**0.0000**	**63.6908**

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	9.4300e-003	0.3228	0.0628	7.9000e-004	0.0292	1.2900e-003	0.0305	7.6600e-003	1.2300e-003	8.8900e-003	0.0000	76.6231	76.6231	3.6200e-003	0.0000	76.7135
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	2.0400e-003	1.5600e-003	0.0160	4.0000e-005	4.0100e-003	3.0000e-005	4.0400e-003	1.0700e-003	2.0000e-005	1.0900e-003	0.0000	3.6614	3.6614	1.1000e-004	0.0000	3.6641
Total	**0.0115**	**0.3243**	**0.0787**	**8.3000e-004**	**0.0332**	**1.3200e-003**	**0.0345**	**8.7300e-003**	**1.2500e-003**	**9.9800e-003**	**0.0000**	**80.2845**	**80.2845**	**3.7300e-003**	**0.0000**	**80.3776**

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					0.0498	0.0000	0.0498	0.0271	0.0000	0.0271	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0708	0.6758	0.4522	7.1000e-004		0.0402	0.0402		0.0375	0.0375	0.0000	63.2632	63.2632	0.0171	0.0000	63.6907
Total	**0.0708**	**0.6758**	**0.4522**	**7.1000e-004**	**0.0498**	**0.0402**	**0.0901**	**0.0271**	**0.0375**	**0.0646**	**0.0000**	**63.2632**	**63.2632**	**0.0171**	**0.0000**	**63.6907**

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	9.4300e-003	0.3228	0.0628	7.9000e-004	0.0277	1.2900e-003	0.0290	7.2900e-003	1.2300e-003	8.5200e-003	0.0000	76.6231	76.6231	3.6200e-003	0.0000	76.7135

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	2.0400e-003	1.5600e-003	0.0160	4.0000e-005	3.8100e-003	3.0000e-005	3.8300e-003	1.0200e-003	2.0000e-005	1.0400e-003	0.0000	3.6614	3.6614	1.1000e-004	0.0000	3.6641
Total	**0.0115**	**0.3243**	**0.0787**	**8.3000e-004**	**0.0315**	**1.3200e-003**	**0.0328**	**8.3100e-003**	**1.2500e-003**	**9.5600e-003**	**0.0000**	**80.2845**	**80.2845**	**3.7300e-003**	**0.0000**	**80.3776**

3.3 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1345	0.0000	0.1345	0.0731	0.0000	0.0731	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0658	0.6277	0.4470	7.1000e-004		0.0363	0.0363		0.0338	0.0338	0.0000	62.4008	62.4008	0.0170	0.0000	62.8253
Total	**0.0658**	**0.6277**	**0.4470**	**7.1000e-004**	**0.1345**	**0.0363**	**0.1708**	**0.0731**	**0.0338**	**0.1069**	**0.0000**	**62.4008**	**62.4008**	**0.0170**	**0.0000**	**62.8253**

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	8.9500e-003	0.3065	0.0606	7.8000e-004	0.0292	1.1800e-003	0.0304	7.6600e-003	1.1300e-003	8.7800e-003	0.0000	75.8700	75.8700	3.5600e-003	0.0000	75.9589
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	1.8400e-003	1.3700e-003	0.0141	4.0000e-005	4.0100e-003	3.0000e-005	4.0400e-003	1.0700e-003	2.0000e-005	1.0900e-003	0.0000	3.5525	3.5525	1.0000e-004	0.0000	3.5550
Total	**0.0108**	**0.3079**	**0.0747**	**8.2000e-004**	**0.0332**	**1.2100e-003**	**0.0344**	**8.7300e-003**	**1.1500e-003**	**9.8700e-003**	**0.0000**	**79.4225**	**79.4225**	**3.6600e-003**	**0.0000**	**79.5138**

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					0.0498	0.0000	0.0498	0.0271	0.0000	0.0271	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0658	0.6277	0.4470	7.1000e-004		0.0363	0.0363		0.0338	0.0338	0.0000	62.4007	62.4007	0.0170	0.0000	62.8253
Total	**0.0658**	**0.6277**	**0.4470**	**7.1000e-004**	**0.0498**	**0.0363**	**0.0861**	**0.0271**	**0.0338**	**0.0609**	**0.0000**	**62.4007**	**62.4007**	**0.0170**	**0.0000**	**62.8253**

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	8.9500e-003	0.3065	0.0606	7.8000e-004	0.0277	1.1800e-003	0.0289	7.2900e-003	1.1300e-003	8.4100e-003	0.0000	75.8700	75.8700	3.5600e-003	0.0000	75.9589
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	1.8400e-003	1.3700e-003	0.0141	4.0000e-005	3.8100e-003	3.0000e-005	3.8300e-003	1.0200e-003	2.0000e-005	1.0400e-003	0.0000	3.5525	3.5525	1.0000e-004	0.0000	3.5550
Total	**0.0108**	**0.3079**	**0.0747**	**8.2000e-004**	**0.0315**	**1.2100e-003**	**0.0327**	**8.3100e-003**	**1.1500e-003**	**9.4500e-003**	**0.0000**	**79.4225**	**79.4225**	**3.6600e-003**	**0.0000**	**79.5138**

3.4 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0135	0.1430	0.1403	2.2000e-004		7.4500e-003	7.4500e-003		6.8500e-003	6.8500e-003	0.0000	19.9313	19.9313	6.3100e-003	0.0000	20.0890
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0135**	**0.1430**	**0.1403**	**2.2000e-004**		**7.4500e-003**	**7.4500e-003**		**6.8500e-003**	**6.8500e-003**	**0.0000**	**19.9313**	**19.9313**	**6.3100e-003**	**0.0000**	**20.0890**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.2000e-004	5.4000e-004	5.5300e-003	2.0000e-005	1.5700e-003	1.0000e-005	1.5800e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.3901	1.3901	4.0000e-005	0.0000	1.3911
Total	**7.2000e-004**	**5.4000e-004**	**5.5300e-003**	**2.0000e-005**	**1.5700e-003**	**1.0000e-005**	**1.5800e-003**	**4.2000e-004**	**1.0000e-005**	**4.3000e-004**	**0.0000**	**1.3901**	**1.3901**	**4.0000e-005**	**0.0000**	**1.3911**

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	0.0135	0.1430	0.1403	2.2000e-004		7.4500e-003	7.4500e-003		6.8500e-003	6.8500e-003	0.0000	19.9313	19.9313	6.3100e-003	0.0000	20.0889

Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0135**	**0.1430**	**0.1403**	**2.2000e-004**		**7.4500e-003**	**7.4500e-003**		**6.8500e-003**	**6.8500e-003**	**0.0000**	**19.9313**	**19.9313**	**6.3100e-003**	**0.0000**	**20.0889**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.2000e-004	5.4000e-004	5.5300e-003	2.0000e-005	1.4900e-003	1.0000e-005	1.5000e-003	4.0000e-004	1.0000e-005	4.1000e-004	0.0000	1.3901	1.3901	4.0000e-005	0.0000	1.3911
Total	**7.2000e-004**	**5.4000e-004**	**5.5300e-003**	**2.0000e-005**	**1.4900e-003**	**1.0000e-005**	**1.5000e-003**	**4.0000e-004**	**1.0000e-005**	**4.1000e-004**	**0.0000**	**1.3901**	**1.3901**	**4.0000e-005**	**0.0000**	**1.3911**

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2732	2.5677	1.8691	3.1200e-003		0.1475	0.1475		0.1382	0.1382	0.0000	273.4350	273.4350	0.0698	0.0000	275.1807
Total	**0.2732**	**2.5677**	**1.8691**	**3.1200e-003**		**0.1475**	**0.1475**		**0.1382**	**0.1382**	**0.0000**	**273.4350**	**273.4350**	**0.0698**	**0.0000**	**275.1807**

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	0.0225	0.5787	0.1553	1.2600e-003	0.0301	4.1600e-003	0.0343	8.7100e-003	3.9800e-003	0.0127	0.0000	120.5435	120.5435	5.9800e-003	0.0000	120.6930
Worker	0.0882	0.0657	0.6782	1.8900e-003	0.1926	1.2700e-003	0.1938	0.0512	1.1700e-003	0.0524	0.0000	170.4483	170.4483	4.6400e-003	0.0000	170.5643
Total	**0.1107**	**0.6443**	**0.8336**	**3.1500e-003**	**0.2227**	**5.4300e-003**	**0.2281**	**0.0599**	**5.1500e-003**	**0.0651**	**0.0000**	**290.9918**	**290.9918**	**0.0106**	**0.0000**	**291.2573**

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	0.2732	2.5677	1.8691	3.1200e-003		0.1475	0.1475		0.1382	0.1382	0.0000	273.4347	273.4347	0.0698	0.0000	275.1804
Total	**0.2732**	**2.5677**	**1.8691**	**3.1200e-003**		**0.1475**	**0.1475**		**0.1382**	**0.1382**	**0.0000**	**273.4347**	**273.4347**	**0.0698**	**0.0000**	**275.1804**

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	0.0225	0.5787	0.1553	1.2600e-003	0.0289	4.1600e-003	0.0330	8.4000e-003	3.9800e-003	0.0124	0.0000	120.5435	120.5435	5.9800e-003	0.0000	120.6930
Worker	0.0882	0.0657	0.6782	1.8900e-003	0.1826	1.2700e-003	0.1838	0.0488	1.1700e-003	0.0499	0.0000	170.4483	170.4483	4.6400e-003	0.0000	170.5643
Total	**0.1107**	**0.6443**	**0.8336**	**3.1500e-003**	**0.2114**	**5.4300e-003**	**0.2169**	**0.0572**	**5.1500e-003**	**0.0623**	**0.0000**	**290.9918**	**290.9918**	**0.0106**	**0.0000**	**291.2573**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3246	3.0836	2.4122	4.1200e-003		0.1692	0.1692		0.1586	0.1586	0.0000	355.9961	355.9961	0.0914	0.0000	358.2810
Total	**0.3246**	**3.0836**	**2.4122**	**4.1200e-003**		**0.1692**	**0.1692**		**0.1586**	**0.1586**	**0.0000**	**355.9961**	**355.9961**	**0.0914**	**0.0000**	**358.2810**

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	0.0240	0.6904	0.1839	1.6500e-003	0.0399	3.4200e-003	0.0433	0.0115	3.2700e-003	0.0148	0.0000	158.5128	158.5128	7.2700e-003	0.0000	158.6945

Worker	0.1067	0.0767	0.8039	2.4200e-003	0.2548	1.6500e-003	0.2564	0.0678	1.5200e-003	0.0693	0.0000	218.4708	218.4708	5.3600e-003	0.0000	218.6048
Total	**0.1307**	**0.7670**	**0.9877**	**4.0700e-003**	**0.2946**	**5.0700e-003**	**0.2997**	**0.0793**	**4.7900e-003**	**0.0841**	**0.0000**	**376.9836**	**376.9836**	**0.0126**	**0.0000**	**377.2993**

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	0.3246	3.0836	2.4122	4.1200e-003		0.1692	0.1692		0.1586	0.1586	0.0000	355.9957	355.9957	0.0914	0.0000	358.2806
Total	**0.3246**	**3.0836**	**2.4122**	**4.1200e-003**		**0.1692**	**0.1692**		**0.1586**	**0.1586**	**0.0000**	**355.9957**	**355.9957**	**0.0914**	**0.0000**	**358.2806**

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	0.0240	0.6904	0.1839	1.6500e-003	0.0382	3.4200e-003	0.0416	0.0111	3.2700e-003	0.0144	0.0000	158.5128	158.5128	7.2700e-003	0.0000	158.6945
Worker	0.1067	0.0767	0.8039	2.4200e-003	0.2415	1.6500e-003	0.2432	0.0645	1.5200e-003	0.0660	0.0000	218.4708	218.4708	5.3600e-003	0.0000	218.6048
Total	**0.1307**	**0.7670**	**0.9877**	**4.0700e-003**	**0.2797**	**5.0700e-003**	**0.2848**	**0.0756**	**4.7900e-003**	**0.0804**	**0.0000**	**376.9836**	**376.9836**	**0.0126**	**0.0000**	**377.2993**

3.6 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.6590					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0212	0.1473	0.1603	2.6000e-004		9.7100e-003	9.7100e-003		9.7100e-003	9.7100e-003	0.0000	22.3410	22.3410	1.7300e-003	0.0000	22.3842
Total	**3.6802**	**0.1473**	**0.1603**	**2.6000e-004**		**9.7100e-003**	**9.7100e-003**		**9.7100e-003**	**9.7100e-003**	**0.0000**	**22.3410**	**22.3410**	**1.7300e-003**	**0.0000**	**22.3842**

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	0.0145	0.0104	0.1095	3.3000e-004	0.0347	2.2000e-004	0.0349	9.2300e-003	2.1000e-004	9.4300e-003	0.0000	29.7565	29.7565	7.3000e-004	0.0000	29.7748
Total	**0.0145**	**0.0104**	**0.1095**	**3.3000e-004**	**0.0347**	**2.2000e-004**	**0.0349**	**9.2300e-003**	**2.1000e-004**	**9.4300e-003**	**0.0000**	**29.7565**	**29.7565**	**7.3000e-004**	**0.0000**	**29.7748**

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	3.6590					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0212	0.1473	0.1603	2.6000e-004		9.7100e-003	9.7100e-003		9.7100e-003	9.7100e-003	0.0000	22.3409	22.3409	1.7300e-003	0.0000	22.3842
Total	**3.6802**	**0.1473**	**0.1603**	**2.6000e-004**		**9.7100e-003**	**9.7100e-003**		**9.7100e-003**	**9.7100e-003**	**0.0000**	**22.3409**	**22.3409**	**1.7300e-003**	**0.0000**	**22.3842**

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	0.0145	0.0104	0.1095	3.3000e-004	0.0329	2.2000e-004	0.0331	8.7900e-003	2.1000e-004	8.9900e-003	0.0000	29.7565	29.7565	7.3000e-004	0.0000	29.7748
Total	**0.0145**	**0.0104**	**0.1095**	**3.3000e-004**	**0.0329**	**2.2000e-004**	**0.0331**	**8.7900e-003**	**2.1000e-004**	**8.9900e-003**	**0.0000**	**29.7565**	**29.7565**	**7.3000e-004**	**0.0000**	**29.7748**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.4208	1.5812	4.1576	0.0117	0.9807	0.0120	0.9927	0.2625	0.0113	0.2738	0.0000	1,069.2895	1,069.2895	0.0430	0.0000	1,070.3647
Unmitigated	0.4710	1.9402	5.4225	0.0167	1.4502	0.0168	1.4670	0.3882	0.0158	0.4040	0.0000	1,530.3878	1,530.3878	0.0560	0.0000	1,531.7878

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse High Rise	1,740.00	1,249.90	994.70	3,611,104	2,442,073
Enclosed Parking with Elevator	0.00	0.00	0.00		
Strip Mall	200.00	210.20	102.15	288,723	195,254
Total	1,940.00	1,460.10	1,096.85	3,899,827	2,637,327

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
Condo/Townhouse High Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

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

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	516.3570	516.3570	0.0234	4.8300e-003	518.3803
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	543.9407	543.9407	0.0246	5.0900e-003	546.0720
NaturalGas Mitigated	0.0119	0.1013	0.0433	6.5000e-004		8.1800e-003	8.1800e-003		8.1800e-003	8.1800e-003	0.0000	117.2308	117.2308	2.2500e-003	2.1500e-003	117.9275
NaturalGas Unmitigated	0.0136	0.1160	0.0496	7.4000e-004		9.3800e-003	9.3800e-003		9.3800e-003	9.3800e-003	0.0000	134.3322	134.3322	2.5700e-003	2.4600e-003	135.1305

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Condo/Townhouse High Rise	2.50544e+006	0.0135	0.1155	0.0491	7.4000e-004		9.3300e-003	9.3300e-003		9.3300e-003	9.3300e-003	0.0000	133.6999	133.6999	2.5600e-003	2.4500e-003	134.4944
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	11850	6.0000e-005	5.8000e-004	4.9000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.6324	0.6324	1.0000e-005	1.0000e-005	0.6361
Total		**0.0136**	**0.1160**	**0.0496**	**7.4000e-004**		**9.3700e-003**	**9.3700e-003**		**9.3700e-003**	**9.3700e-003**	**0.0000**	**134.3322**	**134.3322**	**2.5700e-003**	**2.4600e-003**	**135.1305**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Condo/Townhouse High Rise	2.18734e+006	0.0118	0.1008	0.0429	6.4000e-004		8.1500e-003	8.1500e-003		8.1500e-003	8.1500e-003	0.0000	116.7249	116.7249	2.2400e-003	2.1400e-003	117.4186
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	9480	5.0000e-005	4.6000e-004	3.9000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.5059	0.5059	1.0000e-005	1.0000e-005	0.5089
Total		**0.0118**	**0.1013**	**0.0433**	**6.4000e-004**		**8.1900e-003**	**8.1900e-003**		**8.1900e-003**	**8.1900e-003**	**0.0000**	**117.2308**	**117.2308**	**2.2500e-003**	**2.1500e-003**	**117.9275**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse High Rise	1.27252e+006	370.1915	0.0167	3.4600e-003	371.6420
Enclosed Parking with Elevator	543808	158.2000	7.1500e-003	1.4800e-003	158.8199
Strip Mall	53450	15.5492	7.0000e-004	1.5000e-004	15.6101
Total		**543.9407**	**0.0246**	**5.0900e-003**	**546.0720**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e

Land Use	kWh/yr	MT/yr			
Condo/Townhouse High Rise	1.25322e+006	364.5760	0.0165	3.4100e-003	366.0046
Enclosed Parking with Elevator	471053	137.0347	6.2000e-003	1.2800e-003	137.5716
Strip Mall	50690	14.7463	6.7000e-004	1.4000e-004	14.8041
Total		**516.3570**	**0.0234**	**4.8300e-003**	**518.3802**

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	2.4634	0.0350	2.1669	1.8000e-004		0.0127	0.0127		0.0127	0.0127	0.0000	15.1067	15.1067	3.6600e-003	2.1000e-004	15.2615
Unmitigated	3.1314	0.0404	3.0840	1.9500e-003		0.1436	0.1436		0.1436	0.1436	13.2210	8.9521	22.1731	0.0247	8.7000e-004	23.0487

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	0.3659					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.0304					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.6691	0.0154	0.9214	1.8300e-003		0.1317	0.1317		0.1317	0.1317	13.2210	5.4305	18.6515	0.0213	8.7000e-004	19.4411
Landscaping	0.0660	0.0250	2.1626	1.1000e-004		0.0119	0.0119		0.0119	0.0119	0.0000	3.5216	3.5216	3.4400e-003	0.0000	3.6076
Total	**3.1314**	**0.0404**	**3.0840**	**1.9400e-003**		**0.1436**	**0.1436**		**0.1436**	**0.1436**	**13.2210**	**8.9521**	**22.1731**	**0.0247**	**8.7000e-004**	**23.0487**

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	0.3659					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.0304					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.1700e-003	0.0100	4.2600e-003	6.0000e-005		8.1000e-004	8.1000e-004		8.1000e-004	8.1000e-004	0.0000	11.5851	11.5851	2.2000e-004	2.1000e-004	11.6539
Landscaping	0.0660	0.0250	2.1626	1.1000e-004		0.0119	0.0119		0.0119	0.0119	0.0000	3.5216	3.5216	3.4400e-003	0.0000	3.6076
Total	**2.4634**	**0.0350**	**2.1669**	**1.7000e-004**		**0.0127**	**0.0127**		**0.0127**	**0.0127**	**0.0000**	**15.1067**	**15.1067**	**3.6600e-003**	**2.1000e-004**	**15.2615**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	48.7971	0.6297	0.0152	69.0752
Unmitigated	48.7971	0.6297	0.0152	69.0752

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse High Rise	18.8947 / 11.9119	47.8655	0.6176	0.0149	67.7538
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.370363 / 0.226996	0.9316	0.0121	2.9000e-004	1.3214
Total		**48.7971**	**0.6297**	**0.0152**	**69.0752**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse High Rise	18.8947 / 11.9119	47.8655	0.6176	0.0149	67.7538

Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.370363 / 0.226996	0.9316	0.0121	2.9000e-004	1.3214
Total		**48.7971**	**0.6297**	**0.0152**	**69.0752**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	28.1447	1.6633	0.0000	69.7273
Unmitigated	28.1447	1.6633	0.0000	69.7273

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse High Rise	133.4	27.0790	1.6003	0.0000	67.0871
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000

Strip Mall	5.25	1.0657	0.0630	0.0000	2.6402
Total		**28.1447**	**1.6633**	**0.0000**	**69.7273**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse High Rise	133.4	27.0790	1.6003	0.0000	67.0871
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	5.25	1.0657	0.0630	0.0000	2.6402
Total		**28.1447**	**1.6633**	**0.0000**	**69.7273**

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

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