AIR QUALITY AND GREENHOUSE GAS ANALYSIS

WESTBURY RESIDENTIAL PROJECT

CITY OF RANCHO CUCAMONGA

SAN BERNARDINO COUNTY, CALIFORNIA

LSA

March 2020

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SAN BERNARDINO COUNTY, CALIFORNIA

Prepared for:
Stratham Company
2201 Dupont Drive, Suite 300
Irvine, California 92612

Prepared by:

LSA
20 Executive Park, Suite 200Irvine, California 92614-4731
(949) 553-0666

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LSA

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EXECUTIVE SUMMARY

LSA has prepared this Air Quality and Greenhouse Gas Analysis for the proposed Westbury Residential development project (project) in the City of Rancho Cucamonga (City), County of San Bernardino, California. This Air Quality and Greenhouse Gas Analysis provides a discussion of the proposed project, the physical setting of the project area, and the regulatory framework for air quality. The report provides data on existing air quality and evaluates potential air quality impacts associated with the proposed project. Modeled air emissions are consistent with the trip generation estimates developed for the proposed project in the *Draft Westbury Transportation Impact Study* (Fehr & Peers, 2018).

Emissions with regional effects during project construction, calculated with the California Emissions Estimator Model (CalEEMod; Version 2016.3.2), would not exceed criteria pollutant thresholds established by the South Coast Air Quality Management District (SCAQMD). Compliance with SCAQMD Rules and Regulations during construction will reduce construction-related air quality impacts from fugitive dust emissions and construction equipment emissions. Standard dust suppression measures have been identified for short-term construction to meet the SCAQMD emissions thresholds. The proposed project would also not exceed the localized significance thresholds (LSTs) for construction activities.

Pollutant emissions from project operations, also calculated with CalEEMod, would not exceed the SCAQMD mass daily thresholds for any criteria pollutants. LSTs would not be exceeded by long-term emissions from project operation. Historical air quality data show that existing carbon monoxide (CO) levels for the project area and the general vicinity do not exceed either State of California (State) or federal ambient air quality standards. The proposed project would not result in any significant impact in CO concentrations at intersections in the project vicinity.

The proposed project is located in San Bernardino County, which has been found to have serpentine and ultramafic rock in its soil (California Department of Conservation [DOC] 2000). However, according to the California Geological Survey, no such rock has been identified in the project vicinity. Therefore, the potential risk for naturally occurring asbestos during project construction is small and would be less than significant.

In September 2010, SCAQMD proposed an analysis methodology using a tiered approach for the evaluation of greenhouse gas (GHG) emissions for development projects. The applicable tier for this mixed-use development project is Tier 3 (if GHG emissions are less than 3,000 metric tons of carbon dioxide equivalent per year (MT CO_2e/yr), project-level and cumulative GHG emissions are less than significant). GHG emissions from the proposed project would not exceed this SCAQMD Tier 3 GHG threshold and would thus be less than significant.

While the proposed mixed-use development will require a Development Code and Zoning Map Amendment to change the zoning designation, land use tables, and figures from Community Commercial (CC) District to Mixed Use (MU) District, the proposed use of the site is consistent with the City's General Plan designation of mixed-use. The City's General Plan is consistent with the Southern California Association of Governments' (SCAG) Regional Comprehensive Plan Guidelines

and the SCAQMD Air Quality Management Plan (AQMP). Therefore, the proposed project is consistent with the General Plans and the regional AQMP. The project would comply with all applicable Rancho Cucamonga General Plan and Sustainable Community Action Plan policies.

This evaluation was prepared in conformance with appropriate standards, using procedures and methodologies in the SCAQMD *CEQA Air Quality Handbook* (1993) and associated updates. Air quality data posted on the respective websites of the California Air Resources Board (CARB) and the United States Environmental Protection Agency (EPA) are included to document the local air quality environment.

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LIST OF ABBREVIATIONS AND ACRONYMS

°F	degrees Fahrenheit
°C	degrees Celsius
µg/m^3	micrograms per cubic meter
AAQS	ambient air quality standards
AB	Assembly Bill
AQMP	Air Quality Management Plan
Basin	South Coast Air Basin
CAA	Clean Air Act
CAAQS	California ambient air quality standards
CalEEMod	California Emissions Estimator Model
Cal/EPA	California Environmental Protection Agency
CalRecycle	California Department of Resources Recycling and Recovery
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCAA	California Clean Air Act
CEC	California Energy Commission
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CFCs	chlorofluorocarbons
CH_4	methane
City	City of Rancho Cucamonga
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
County	San Bernardino County
DOC	Department of Conservation
EO	Executive Order
EPA	United States Environmental Protection Agency
ft	foot/feet

GCC	global climate change
GHG	greenhouse gas
GWP	global warming potential
H_2S	hydrogen sulfide
HFCs	hydrofluorocarbons
IPCC	Intergovernmental Panel on Climate Change
lbs/day	pounds per day
LM	Low Medium (density District)
LOS	level of service
LST	localized significance threshold
m	meter(s)
mg/m^3	milligrams per cubic meter
mi	mile(s)
MMT	million metric tons
MMT CO_2e	million metric tons of carbon dioxide equivalent
MMT CO_2e/yr	million metric tons of carbon dioxide equivalent per year
mph	miles per hour
MPO	Metropolitan Planning Organization
MT	metric tons
MT CO_2e	metric tons of carbon dioxide equivalent
MT CO_2e/yr	metric tons of carbon dioxide equivalent per year
MU	Mixed Use (District)
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NHTSA	National Highway Traffic Safety Administration
NO	nitric oxide
NO_2	nitrogen dioxide
NO_X	nitrogen oxides
O_3	ozone (or smog)
OPR	Governor's Office of Planning and Research
PFCs	perfluorocarbons

PM	particulate matter
PM_{10}	particulate matter less than 10 microns in size
$PM_{2.5}$	particulate matter less than 2.5 microns in size
ppm	parts per million
ROCs	reactive organic compounds
ROGs	reactive organic gases
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
sf	square foot/feet
SF_6	sulfur hexafluoride
SIP	State Implementation Plan
SO_2	sulfur dioxide
SO_X	sulfur oxides
SRA	Source Receptor Area
State	State of California
TWh	terawatt hour
UNFCCC	United Nations Framework Convention on Climate Change
Update	First Update to the Climate Change Scoping Plan
VMT	vehicle miles traveled
VOCs	volatile organic compounds
Working Group	GHG CEQA Significance Threshold Stakeholder Working Group

PROJECT DESCRIPTION

INTRODUCTION

This Air Quality and Greenhouse Gas Analysis has been prepared to evaluate the potential air quality impacts and mitigation measures associated with the proposed Westbury Residential development project (project) in the City of Rancho Cucamonga (City), in San Bernardino County (County), California. This report provides a project-specific Air Quality and Greenhouse Gas Analysis by examining the impacts of the proposed project on adjacent sensitive uses, as well as the impacts of the proposed project on the regional air quality. This report also evaluates emissions reduction measures that would be required as part of the project design. Guidelines identified by the South Coast Air Quality Management District (SCAQMD) in its *CEQA Air Quality Handbook* (SCAQMD 1993) and associated updates were followed in this Air Quality and Greenhouse Gas Analysis.

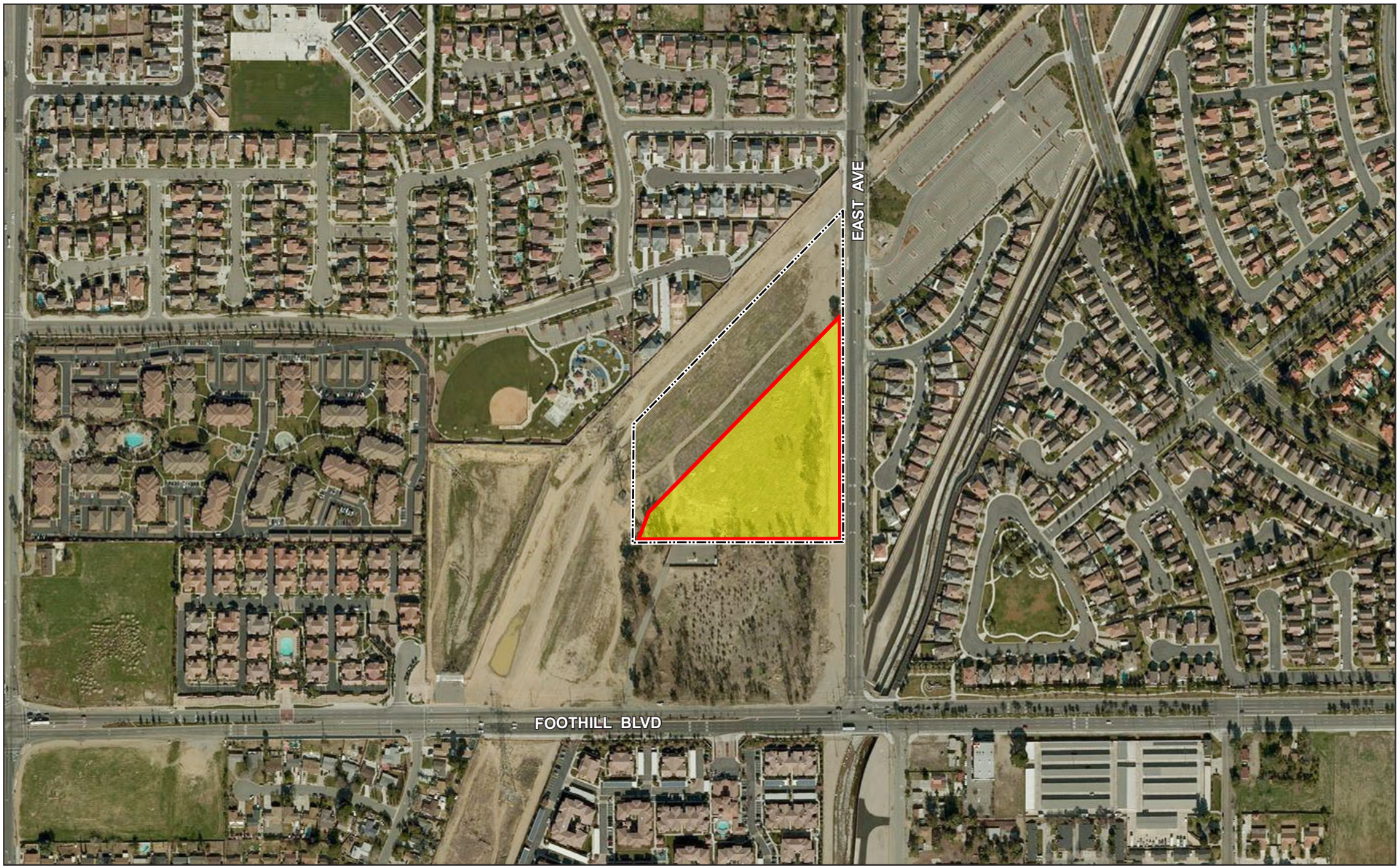
PROJECT LOCATION AND DESCRIPTION

The 11.45-acre project site is located on the west side of East Avenue and north of Foothill Boulevard. The site is made up of 3.76 acres of developable land that is unencumbered by easements, 2.03 acres encumbered by a Southern California Gas Company easement, and 5.65 acres encumbered by a Southern California Edison easement. Figure 1 shows the project location, the overall 11.45-acre project site outline, and the 3.76-acre developable area outline.

The project involves the construction of a two- and three-story mixed-use development made up of 131 residential units (72 one-bedroom and 59 two-bedroom units), four commercial ready units (305 square feet [sf] each) that are attached to one-bedroom residential units, and a 1,592 sf commercial space. The commercial ready spaces are designed to be used as a commercial space or as a second bedroom for the attached residential unit. The 1,592 sf commercial space is located within the single-story leasing office/recreation building. Figure 2 illustrates the site plan.

EXISTING SENSITIVE LAND USES IN THE PROJECT AREA

To the north, across multiple utility easements, lies single-family residential development within the Low Medium (LM) District of the Etiwanda Specific Plan. To the south is vacant land that is approved for a 193-unit mixed-use development within the Mixed Use (MU) District. To the east, across East Avenue, lies single-family development within the City of Fontana. To the west are multiple utility easements and a City park, Garcia Park. In addition, a Cucamonga Valley Water District pumping station is located along the southern property line.



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LEGEND

Project Limits

Project Area of Development

FIGURE 1

N

0 250 500

FEET

SOURCE: Bing Aerial (2019)

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Westbury Residential Project

Project Location

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FIGURE 2

N

0 55 110
FEET

SOURCE: Architects Orange

I:\STR1901\G\Site Plan.cdr (6/5/2019)

Westbury Residential Project
Site Plan

PROJECT SETTING

REGIONAL AIR QUALITY

The project site is located in the City of Rancho Cucamonga, in San Bernardino County, California, which is part of the South Coast Air Basin (Basin) and is under the jurisdiction of SCAQMD. Both the State of California and the federal government have established health-based ambient air quality standards (AAQS) for seven air pollutants. As detailed in Table A, these pollutants include ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter less than 10 microns in size (PM_{10}), particulate matter less than 2.5 microns in size ($PM_{2.5}$), and lead (Pb). In addition, the State has set standards for sulfates, hydrogen sulfide (H_2S), 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.

Table B summarizes the primary health effects and sources of common air pollutants. Because the concentration standards were set at a level that protects public health with an adequate margin of safety (United States Environmental Protection Agency [EPA]), these health effects would not occur unless the standards are exceeded by a large margin or for a prolonged period of time. State AAQS are typically more stringent than federal AAQS. Among the pollutants, O_3 and particulate matter ($PM_{2.5}$ and PM_{10}) are considered pollutants with regional effects, while the others have more localized effects.

The California Clean Air Act (CCAA) provides SCAQMD and other air districts with the authority to manage transportation activities and indirect sources. Indirect sources of pollution include any facility, building, structure, or installation, or combination thereof, that attracts or generates mobile source emissions of any pollutant. In addition, local air quality districts also manage area source emissions that are generated when minor sources collectively emit a substantial amount of pollution (e.g., motor vehicles at an intersection, at a mall, and on highways). SCAQMD also regulates stationary sources of pollution throughout its jurisdictional area. The California Air Resources Board (CARB) regulates direct emissions from motor vehicles.

Climate/Meteorology

Air quality in the planning area is not only affected by various emission sources (e.g., mobile and industry), but also by atmospheric conditions (e.g., wind speed, wind direction, temperature, and rainfall). The combination of topography, low mixing height, abundant sunshine, and emissions from the second-largest urban area in the United States gives the Basin some of the worst air pollution problems in the nation.

Table A: Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[1]		National Standards[2]		
		Concentration[3]	Method[4]	Primary[3,5]	Secondary[3,6]	Method[7]
Ozone (O_3)[8]	1-Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8-Hour	0.070 ppm (137 µg/m^3)		0.070 ppm (137 µg/m^3)		
Respirable Particulate Matter (PM_{10})[9]	24-Hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		—		
Fine Particulate Matter ($PM_{2.5}$)[9]	24-Hour	—	—	35 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	12.0 µg/m^3	15 µg/m^3	
Carbon Monoxide (CO)	1-Hour	20 ppm (23 mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m^3)	—	Non-Dispersive Infrared Photometry (NDIR)
	8-Hour	9.0 ppm (10 mg/m^3)		9 ppm (10 mg/m^3)	—	
	8-Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		—	—	
Nitrogen Dioxide (NO_2)[10]	1-Hour	0.18 ppm (339 µg/m^3)	Gas Phase Chemiluminescence	100 ppb (188 µg/m^3)	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)		53 ppb (100 µg/m^3)	Same as Primary Standard	
Sulfur Dioxide (SO_2)[11]	1-Hour	0.25 ppm (655 µg/m^3)	Ultraviolet Fluorescence	75 ppb (196 µg/m^3)	—	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)
	3-Hour	—		—	0.5 ppm (1300 µg/m^3)	
	24-Hour	0.04 ppm (105 µg/m^3)		0.14 ppm (for certain areas)[11]	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas)[11]	—	
Lead[12,13]	30-Day Average	1.5 µg/m^3	Atomic Absorption	—	—	High-Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m^3 (for certain areas)[13]	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 µg/m^3		
Visibility-Reducing Particles[14]	8-Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24-Hour	25 µg/m^3	Ion Chromatography			
Hydrogen Sulfide	1-Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride[12]	24-Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			

Source: CARB. Ambient Air Quality Standards (2016).

The footnotes for this table are provided on the following page.

Footnotes:

1 California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, and particulate matter (PM_{10}, $PM_{2.5}$, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

2 National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once per year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over 3 years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m^3 is equal to or less than 1. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, is equal to or less than the standard. Contact the EPA for further clarification and current national policies.

3 Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume or micromoles of pollutant per mole of gas.

4 Any equivalent measurement method which can be shown to the satisfaction of CARB to give equivalent results at or near the level of the air quality standard may be used.

5 National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

6 National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

7 Reference method as described by the EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the EPA.

8 On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

9 On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 µg/m^3 to 12.0 µg/m^3. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 µg/^{3}, as was the annual secondary standard of 15 µg/m^3. The existing 24-hour PM_{10} standards (primary and secondary) of 150 µg/m^3 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

10 To attain the 1-hour standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards, the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

11 On June 2, 2010, the new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until 1 year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.
Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard, the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

12 The CARB has identified lead and vinyl chloride as "toxic air contaminants" with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

13 The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5 µg/m^3 as a quarterly average) remains in effect until 1 year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standards are approved.

14 In 1989, the CARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

°C = degrees Celsius
µg/m^3 = micrograms per cubic meter
CARB = California Air Resources Board
EPA = United States Environmental Protection Agency
mg/m^3 = milligrams per cubic meter
ppb = parts per billion
ppm = parts per million

Table B: Summary of Health Effects of the Major Criteria Air Pollutants

Pollutant	Health Effects	Examples of Sources
Particulate matter ($PM_{2.5}$ and PM_{10}: less than or equal to 2.5 or 10 microns, respectively)	• Hospitalizations for worsened heart diseases • Emergency room visits for asthma • Premature death	• Cars and trucks (especially diesel) • Fireplaces, woodstoves • Windblown dust from roadways, agriculture, and construction
Ozone (O_3)	• Cough, chest tightness • Difficulty taking a deep breath • Worsened asthma symptoms • Lung inflammation	• Precursor sources:[1] motor vehicles, industrial emissions, and consumer products
Carbon monoxide (CO)	• Chest pain in heart patients[2] • Headaches, nausea[2] • Reduced mental alertness[2] • Death at very high levels[2]	• Any source that burns fuel, such as cars, trucks, construction and farming equipment, and residential heaters and stoves
Nitrogen dioxide (NO_2)	• Increased response to allergens	• See CO sources
Toxic air contaminants	• Cancer • Chronic eye, lung, or skin irritation • Neurological and reproductive disorders	• Cars and trucks (especially diesel) • Industrial sources, such as chrome platers • Neighborhood businesses, such as dry cleaners and service stations • Building materials and products

Source: CARB. Fact Sheet: Air Pollution and Health. Website: www.arb.ca.gov/research//fs/fs1/fs1.htm (accessed March 2020).

[1] Ozone is not generated directly from these sources. Rather, chemicals emitted by these precursor sources react with sunlight to form ozone in the atmosphere.

[2] Health effects from CO exposure occur at levels considerably higher than ambient.

CARB = California Air Resources Board

CO = carbon monoxide

The annual average temperature varies little throughout the Basin, ranging from the low to middle 60s, measured in degrees Fahrenheit (°F). With a more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas. The climatological station closest to the site is the Fontana Kaiser Monitoring Station.[1] The monthly average maximum temperature recorded at this station ranged from 66.8°F in January to 95.0°F in July, with an annual average maximum of 79.4°F. The monthly average minimum temperature recorded at this station ranged from 44.0°F in January to 62.9°F in August, with an annual average minimum of 52.3°F. These levels are still representative of the project area. January is typically the coldest month, and August is typically the warmest month in this area of the Basin.

The majority of annual rainfall in the Basin occurs between November and April. Summer rainfall is minimal and is generally limited to scattered thundershowers in coastal regions and slightly heavier showers in the eastern portion of the Basin and along the coastal side of the mountains. Average monthly rainfall at the Fontana Kaiser Monitoring Station varied from 3.65 inches in January to 0.34 inch or less between May and October, with an annual total of 15.32 inches. Patterns in monthly and yearly rainfall totals are unpredictable due to fluctuations in the weather.

[1] Western Regional Climate Center. 2016. Recent Climate in the West. Website: http://www.wrcc.dri.edu, accessed February 2018.

The Basin experiences a persistent temperature inversion (increasing temperature with increasing altitude) as a result of the Pacific high. This inversion limits the vertical dispersion of air contaminants, holding them relatively near the ground. As the sun warms the ground and the lower air layer, the temperature of the lower air layer approaches the temperature of the base of the inversion (upper) layer until the inversion layer finally breaks, allowing vertical mixing with the lower layer. This phenomenon is observed in mid-afternoon to late afternoon on hot summer days when the smog appears to clear up suddenly. Winter inversions frequently break by midmorning.

Winds in the project area blow predominantly from the south-southwest, with relatively low velocities. Wind speeds in the project area average about 5 miles per hour (mph). Summer wind speeds average slightly higher than winter wind speeds. Low average wind speeds, together with a persistent temperature inversion, limit the vertical dispersion of air pollutants throughout the Basin. Strong, dry, north or northeasterly winds, known as Santa Ana winds, occur during the fall and winter months, dispersing air contaminants. The Santa Ana conditions tend to last for several days at a time.

The combination of stagnant wind conditions and low inversions produces the greatest pollutant concentrations. On days of no inversion or high wind speeds, ambient air pollutant concentrations are the lowest. During periods of low inversions and low wind speeds, air pollutants generated in urbanized areas are transported predominantly on shore into Riverside and San Bernardino Counties. In the winter, the greatest pollution problems are CO and nitrogen oxides (NO_X) because of extremely low inversions and air stagnation during the night and early morning hours. In the summer, the longer daylight hours and brighter sunshine combine to cause a reaction between hydrocarbons and NO_X to form photochemical smog.

Description of Global Climate Change and its Sources

Earth's natural warming process is known as the "greenhouse effect." This greenhouse effect compares the Earth and the atmosphere surrounding it to a greenhouse with glass panes. The glass allows solar radiation (sunlight) into Earth's atmosphere but prevents radiated heat from escaping, thus warming Earth's atmosphere. Greenhouse gases (GHGs) keep the average surface temperature of the Earth to approximately 60°F. However, excessive concentrations of GHGs in the atmosphere can result in increased global mean temperatures, with associated adverse climatic and ecological consequences (IPCC 2013).

Scientists refer to the global warming context of the past century as the "enhanced greenhouse effect" to distinguish it from the natural greenhouse effect (Pew Center 2006). While the increase in temperature is known as "global warming," the resulting change in weather patterns is known as "global climate change." Global climate change is evidenced in changes to global temperature rise, warming oceans, shrinking ice sheets, glacial retreat, decreased snow cover, sea level rise, declining Arctic sea ice, extreme weather events, and ocean acidification (IPCC 2013).

Higher temperatures, which are conducive to air pollution formation, could worsen air quality in California. While climate change may increase the concentration of ground-level ozone, the magnitude of the effect, and therefore its indirect effects, is uncertain. If higher temperatures are accompanied by drier conditions, the potential for large wildfires could increase, which in turn

would exacerbate air quality. Additionally, severe heat accompanied by drier conditions and poor air quality could increase the number of heat-related deaths, illnesses, and asthma attacks throughout the state (California Department of Public Health 2013). However, if higher temperatures are accompanied by wetter rather than drier conditions, the rains would temporarily clear the air of particulate pollution and reduce the incidence of large wildfires, thus reducing the pollution associated with wildfires.

GHGs are present in the atmosphere naturally, are released by natural sources, or are formed from secondary reactions taking place in the atmosphere. The gases that are widely seen as the principal contributors to human-induced global climate change (GCC) are the following:[1]

- Carbon dioxide (CO_2)
- Methane (CH_4)
- Nitrous oxide (N_2O)
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs)
- Sulfur hexafluoride (SF_6)

Over the last 200 years, human activities have caused substantial quantities of GHGs to be released into the atmosphere. These extra emissions are increasing GHG concentrations in the atmosphere and enhancing the natural greenhouse effect, which are causing global warming. Although GHGs produced by human activities include naturally occurring GHGs (e.g., CO_2, CH_4, and N_2O), some gases (e.g., HFCs, PFCs, and SF_6) are completely new to the atmosphere. Water vapor is a GHG but is generally excluded from the list of GHGs because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes (e.g., oceanic evaporation). For the purposes of this air quality study, the term "GHGs" will refer collectively to the six gases identified in the bulleted list provided above.

These GHGs vary considerably in terms of global warming potential (GWP), which is a concept developed to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. GWP is based on several factors, including the relative effectiveness of a gas in absorbing infrared radiation and the length of time that the gas remains in the atmosphere ("atmospheric lifetime"). The GWP of each gas is measured relative to CO_2, the most abundant GHG. The definition of GWP for a particular GHG is the ratio of heat trapped by one unit mass of the GHG to the ratio of heat trapped by one unit mass of CO_2 over a specified time period. GHG emissions are typically measured in terms of metric tons[2] of "CO_2 equivalents" (MT CO_2e). For example, N_2O is 265 times more potent at contributing to global warming than CO_2. Table C identifies the GWP for each GHG analyzed in this report. The EPA and CARB (and the CalEEMod air quality model) use GWP values from the 2007 Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report. The IPCC has published the 2013 IPCC Fifth Assessment Report with updated GWP values.

1 The GHGs listed are consistent with the definition in Assembly Bill 32 (Government Code 38505), as discussed later in this section.

2 A metric ton is equivalent to approximately 1.1 tons.

Table C: Global Warming Potential for Selected Greenhouse Gases

Pollutant	Lifetime (Years)	Global Warming Potential (100-year)[1]
Carbon Dioxide (CO_2)	~100[2]	1
Methane (CH_4)	12	25–34
Nitrous Oxide (N_2O)	114–121	265–310

Source: CARB. *California's Climate Change Scoping Plan* (2017a) and IPCC.

[1] The 100-year global warming potential estimates are from Section 8.7.1.2 of The Global Warming Potential Concept in the IPCC 2013 *Fifth Assessment Report* (AR5). Website: www.ipcc.ch/report/ar5/wg1/ (accessed February 2018). The EPA and CARB use GWP values from the 2007 IPCC Fourth Assessment Report (AR4).

[2] CO_2 has a variable atmospheric lifetime and cannot be readily approximated as a single number.

CARB = California Air Resources Board
CO_2 = carbon dioxide
EPA = United States Environmental Protection Agency
GWP = global warming potential
IPCC = Intergovernmental Panel on Climate Change

The following discussion summarizes the characteristics of the six primary GHGs.

Carbon Dioxide

In the atmosphere, carbon generally exists in its oxidized form, as CO_2. Natural sources of CO_2 include the respiration (breathing) of humans, animals, and plants; volcanic outgassing; decomposition of organic matter; and evaporation from the oceans. Human-caused sources of CO_2 include the combustion of fossil fuels and wood, waste incineration, mineral production, and deforestation. The Earth maintains a natural carbon balance, and when concentrations of CO_2 are upset, the system gradually returns to its natural state through natural processes. Natural changes to the carbon cycle work slowly, especially compared to the rapid rate at which humans are adding CO_2 to the atmosphere. Natural removal processes (e.g., photosynthesis by land- and ocean-dwelling plant species) cannot keep pace with this extra input of human-made CO_2, consequently, the gas is building up in the atmosphere. The concentration of CO_2 in the atmosphere has risen from about 280 parts per million (ppm) prior to the Industrial Revolution to more than 400 ppm currently (NOAA 2016).

Methane

CH_4 is produced when organic matter decomposes in environments lacking sufficient oxygen. Natural sources of CH_4 include fires, geologic processes, and bacteria that produce CH_4 in a variety of settings (most notably, wetlands) (University of New Hampshire 2010). Anthropogenic sources include rice cultivation, livestock, landfills and waste treatment, biomass burning, and fossil fuel combustion (e.g., the burning of coal, oil, and natural gas). As with CO_2, the major removal process of atmospheric CH_4—a chemical breakdown in the atmosphere—cannot keep pace with source emissions, and CH_4 concentrations in the atmosphere are increasing.

Nitrous Oxide

N_2O is produced naturally by a wide variety of biological sources, particularly microbial action in soils and water. Tropical soils and oceans account for the majority of natural source emissions. N_2O is also a product of the reaction that occurs between nitrogen and oxygen during fuel combustion. Both

mobile and stationary combustion sources emit N_2O. The quantity of N_2O emitted varies according to the type of fuel, technology, and pollution control device used, as well as maintenance and operating practices. Agricultural soil management and fossil fuel combustion are the primary sources of human-generated N_2O emissions in California.

Hydrofluorocarbons, Perfluorocarbons, and Sulfur Hexafluoride

HFCs are primarily used as substitutes for O_3-depleting substances regulated under the Montreal Protocol.[1] PFCs and SF_6 are emitted from various industrial processes, including aluminum smelting, semiconductor manufacturing, electric power transmission and distribution, and magnesium casting. There is no aluminum or magnesium production in the State; however, the rapid growth in the semiconductor industry, which is active in the State, has led to greater use of PFCs. However, there are no known project-related emissions of these three GHGs; therefore, these substances are not discussed further in this analysis.

Greenhouse Gas Emissions Sources and Inventories

An emissions inventory that identifies and quantifies the primary human-generated sources and sinks of GHGs is a well-recognized and useful tool for addressing climate change. This section summarizes the latest information on national, State, and local GHG emission inventories. However, because GHGs persist for a long time in the atmosphere (Table C), accumulate over time, and are generally well mixed, their impact on the atmosphere and climate cannot be tied to a specific point of emission.

United States Emissions

In 2017, the United States emitted approximately 6.5 billion MT CO_2e. Total United States emissions increased by 1.6 percent from 1990 to 2017, and emissions decreased from 2016 to 2017 by 0.3 percent. The decrease in total GHG emissions between 2016 and 2017 was driven in part by a decrease in CO_2 emissions from fossil fuel combustion. The decrease in CO_2 emissions from fossil fuel combustion was a result of multiple factors, including a continued shift from coal to natural gas, increased use of renewables in the electric-power sector, and milder weather that contributed to less overall electricity use. Relative to 1990, the baseline for this inventory, gross emissions in 2017 were higher by 1.6 percent, down from a high of 15.7 percent above 1990 levels in 2007. Overall, net emissions in 2017 were 12.7 percent below 2005 levels (EPA 2020).

State of California Emissions

According to CARB emission inventory estimates, the State emitted approximately 424.1 million metric tons of CO_2e (MMT CO_2e) emissions in 2017. This is a decrease of 5 MMT CO_2e from 2016 and 7 MMT CO_2e below the State's 2020 GHG target (CARB 2020).

[1] The Montreal Protocol is an international treaty that was approved on January 1, 1989, and was designated to protect the O_3 layer by phasing out the production of several groups of halogenated hydrocarbons that are believed to be responsible for O_3 depletion and are also potent GHGs.

CARB estimates that transportation was the source of approximately 41 percent of the State's GHG emissions in 2017, followed by electricity generation (both in-state and out-of-state) at 15 percent and industrial sources at 24 percent. The remaining sources of GHG emissions were residential and commercial activities at 12 percent and agriculture at 8 percent (CARB 2020).

Air Pollution Constituents and Attainment Status

CARB coordinates and oversees both State and federal air pollution control programs in the State. CARB oversees activities of local air quality management agencies and maintains air quality monitoring stations throughout the State in conjunction with the EPA and local air districts. CARB has divided the State into 15 air basins based on meteorological and topographical factors of air pollution. Data collected at these stations are used by CARB and EPA to classify air basins as attainment, nonattainment, nonattainment-transitional, or unclassified, based on air quality data for the most recent 3 calendar years compared with the AAQS.

Attainment areas may be:

- Attainment/unclassified ("unclassifiable" in some lists), which have never violated the air quality standard of interest or do not have enough monitoring data to establish attainment or nonattainment status;

- Attainment-maintenance (National Ambient Air Quality Standards [NAAQS] only), which violated a NAAQS that is currently in use (was nonattainment) in or after 1990, but now attains the standard and is officially re-designated as attainment by the EPA with a maintenance State Implementation Plan (SIP); or

- Attainment (usually only for California Ambient Air Quality Standards [CAAQS], but sometimes for NAAQS), which have adequate monitoring data to show attainment, have never been nonattainment, or, for NAAQS, have completed the official maintenance period.

Nonattainment areas are imposed with additional restrictions as required by the EPA. The air quality data are also used to monitor progress in attaining air quality standards. Table D lists the attainment status for the criteria pollutants in the Basin.

Ozone

O_3 (smog) is formed by photochemical reactions between NO_X and volatile organic compounds (VOCs) rather than being directly emitted. O_3 is a pungent, colorless gas typical of Southern California smog. Elevated O_3 concentrations result in reduced lung function, particularly during vigorous physical activity. This health problem is particularly acute in sensitive receptors (e.g., the sick, the elderly, and young children). O_3 levels peak during summer and early fall.

Table D: Attainment Status of Criteria Pollutants in the South Coast Air Basin

Pollutant	State	Federal
O_3	Nonattainment (1-hour) Nonattainment (8-hour)	Extreme Nonattainment (1-hour) Extreme Nonattainment (8-hour)
PM_{10}	Nonattainment (24-hour) Nonattainment (Annual)	Attainment/Maintenance (24-hour)
$PM_{2.5}$	Nonattainment (Annual)	Serious Nonattainment (24-hour) Moderate Nonattainment (Annual)
CO	Attainment (1-hour) Attainment (8-hour)	Attainment/Maintenance (1-hour) Attainment/Maintenance (8-hour)
NO_2	Attainment (1-hour) Attainment (Annual)	Unclassified/Attainment (1-hour) Attainment/Maintenance (Annual)
SO_2	Attainment (1-hour) Attainment (24-hour)	Unclassified/Attainment (1-hour) Unclassified/Attainment (Annual)
Lead	Attainment[1] (30-day average)	Attainment[1] (3-month rolling)
All Others	Attainment/Unclassified	N/A

Source 1: SCAQMD. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) Attainment Status for South Coast Air Basin Website: www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/naaqs-caaqs-feb2016.pdf (accessed February 2018).

Source 2: EPA. Nonattainment Areas for Criteria Pollutants (Green Book). Website: www.epa.gov/green-book (accessed February 2018).

[1] The Los Angeles County portion of the Basin is in nonattainment for lead.

CO = carbon monoxide
EPA = United States Environmental Protection Agency
N/A = not applicable
NO_2 = nitrogen dioxide
O_3 = ozone
PM_{10} = particulate matter less than 10 microns in diameter
$PM_{2.5}$ = particulate matter less than 2.5 microns in diameter
SCAQMD = South Coast Air Quality Management District
SO_2 = sulfur dioxide

Carbon Monoxide

CO is formed by the incomplete combustion of fossil fuels, almost entirely from automobiles. CO is a colorless, odorless gas that can cause dizziness, fatigue, and impairments to central nervous system functions.

Nitrogen Oxides

NO_2, a reddish-brown gas, and nitric oxide (NO), a colorless, odorless gas, are formed from fuel combustion under high temperature or pressure. These compounds are referred to as nitrogen oxides, or NO_X. NO_X is a primary component of the photochemical smog reaction. NO_2 also contributes to other pollution problems, including a high concentration of fine particulate matter ($PM_{2.5}$), poor visibility, and acid deposition (i.e., acid rain). NO_2 decreases lung function and may reduce resistance to infection.

Sulfur Dioxide

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

Lead

Lead is found in old paints and coatings, plumbing, and a variety of other materials. Once in the bloodstream, lead can cause damage to the brain, nervous system, and other body systems. Children are highly susceptible to the effects of lead.

Particulate Matter

Particulate matter is the term used for a mixture of solid particles and liquid droplets found in the air. Coarse particles (PM_{10}) derive from a variety of sources, including windblown dust and grinding operations. Fuel combustion and resultant exhaust from power plants and diesel buses and trucks are primarily responsible for $PM_{2.5}$ levels. Fine particles can also be formed in the atmosphere through chemical reactions. PM_{10} can accumulate in the respiratory system and aggravate health problems (e.g., asthma). The EPA's scientific review concluded that $PM_{2.5}$, which penetrates deeply into the lungs, is more likely than PM_{10} to contribute to the health effects listed in a number of recently published community epidemiological studies at concentrations that extend well below those allowed by the current PM_{10} standards. These health effects include premature death and increased hospital admissions and emergency room visits (primarily among the elderly and individuals with cardiopulmonary disease); increased respiratory symptoms and disease (children and individuals with cardiopulmonary disease [e.g., asthma]); decreased lung function (particularly in children and individuals with asthma); and alterations in lung tissue and structure and in respiratory tract defense mechanisms.

Volatile Organic Compounds

Volatile organic compounds (VOCs; also known as reactive organic gases [ROGs], and reactive organic compounds [ROCs]) are formed from the combustion of fuels and the evaporation of organic solvents. VOCs are not defined as criteria pollutants, however, because VOCs accumulate in the atmosphere more quickly during the winter, when sunlight is limited and photochemical reactions are slower, they are a prime component of the photochemical smog reaction.

Sulfates

Sulfates occur in combination with metal and/or hydrogen ions. In California, emissions of sulfur compounds occur primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur. This sulfur is oxidized to SO_2 during the combustion process and subsequently is converted to sulfate compounds in the atmosphere. The conversion of SO_2 to sulfates takes place comparatively rapidly and completely in urban areas of the State due to regional meteorological features.

Hydrogen Sulfide

H_2S is a colorless gas with the odor of rotten eggs. H_2S is formed during bacterial decomposition of sulfur-containing organic substances. In addition, H_2S can be present in sewer gas and some natural gas and can be emitted as the result of geothermal energy exploitation. In 1984, a CARB committee concluded that the ambient standard for H_2S is adequate to protect public health and to significantly reduce odor annoyance.

Visibility-Reducing Particles

Visibility-reducing particles consist of suspended particulate matter, which is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size, and chemical composition, and can be made up of many different materials (e.g., metals, soot, soil, dust, and salt). The statewide standard is intended to limit the frequency and severity of visibility impairment due to regional haze.

REGIONAL AIR QUALITY IMPROVEMENT

Criteria Pollutants

As previously discussed, the project is under the jurisdiction of the SCAQMD, which is responsible for formulating and implementing the Air Quality Management Plan (AQMP) for the Basin to bring the area into compliance with federal and State air quality standards. Air quality in the Basin has improved as a result of the development of SCAQMD rules and control programs and the development and application of cleaner technology. O_3, NO_X, VOCs, and CO have been generally decreasing since 1975. The levels of PM_{10} and $PM_{2.5}$ in the air have decreased since 1975, and direct emissions of $PM_{2.5}$ have decreased, although direct emissions of PM_{10} have shown little change. Figure 3 shows the O_3 trend in the Basin.

Toxic Air Contaminants Trends

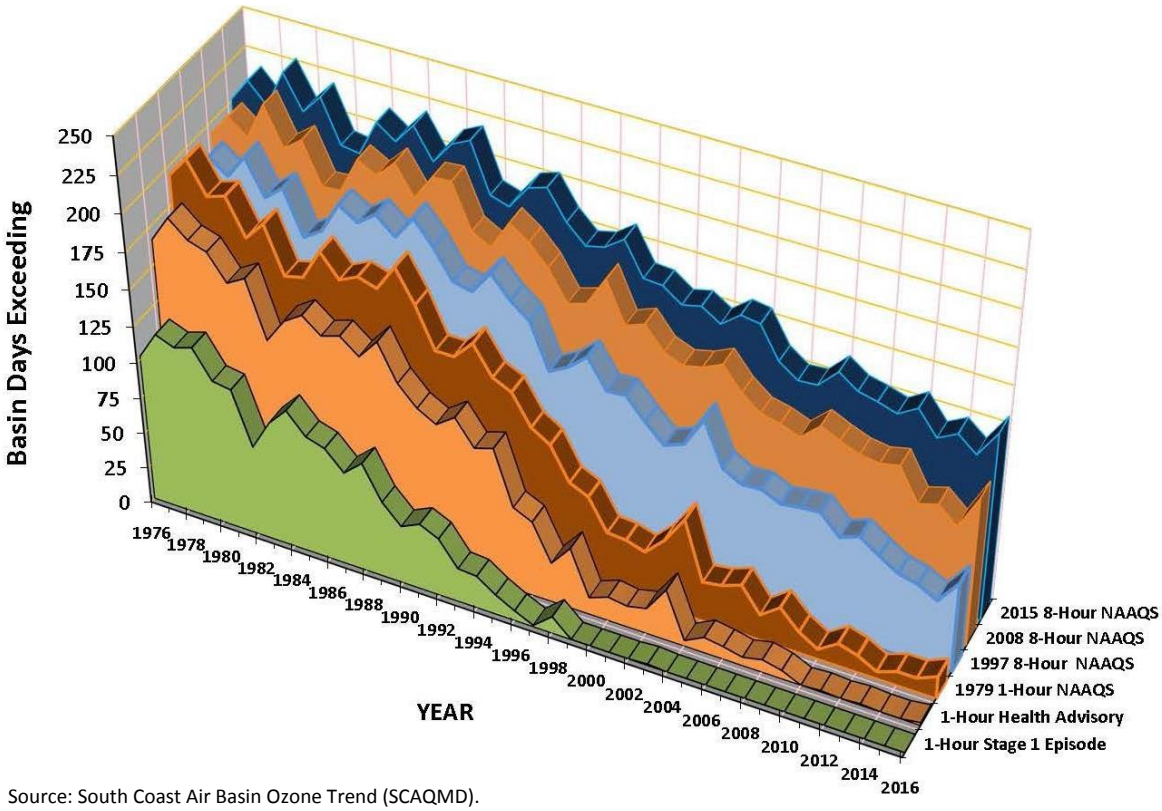
In 1984, CARB adopted regulations to reduce toxic air contaminant (TAC) emissions from mobile and stationary sources and consumer products. A CARB study showed that the ambient concentration and emissions of the seven TACs responsible for the most cancer risk from airborne exposure have declined by 76 percent between 1990 and 2012 (Propper et al. 2015). Concentrations of diesel PM, the most important TAC, have declined by 68 percent between 1990 and 2012, despite a 31 percent increase in State population and an 81 percent increase in diesel vehicle miles traveled (VMT), as shown on Figure 4. The study also found that the significant reductions in cancer risk to California residents from the implementation of air toxics controls are likely to continue.

Cancer Risk Trends

According to CARB, cancer risk in the Basin has declined since 1990. The SCAQMD study *Multiple Air Toxics Exposure Study in the South Coast Air Basin* (MATES) *IV* (SCAQMD 2015) showed a decrease in cancer risk of more than 55 percent since MATES III, published in 2005.

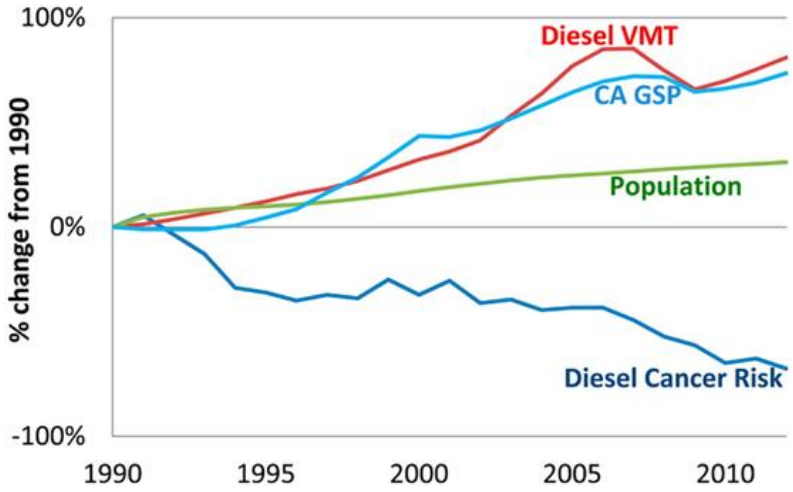
LOCAL AIR QUALITY

SCAQMD, together with CARB, maintains ambient air quality monitoring stations in the Basin. The air quality monitoring station closest to the site is the Fontana-Arrow Highway Monitoring Station, which monitors all criteria air pollutants. The air quality trends from this station are used to represent the ambient air quality in the project area. The ambient air quality data in Table E show that the NO_2, SO_2, 24-hour PM_{10}, annual average $PM_{2.5}$, and CO levels are below the applicable State and/or federal standards, and the annual average State $PM_{2.5}$, annual average State PM_{10}, 24-hour State PM_{10}, and 24-hour $PM_{2.5}$ levels exceed the federal and/or State standards.



Source: South Coast Air Basin Ozone Trend (SCAQMD).

Figure 3: South Coast Air Basin Ozone Trend



Source: Ambient and Emission Trends of Toxic Air Contaminants in California (Propper et al. 2015).

Figure 4: California Population, Gross State Product, Diesel Cancer Risk, Diesel Vehicle Miles Traveled

Table E: Ambient Air Quality Monitored in the Project Vicinity (from the Fontana-Arrow Highway Monitoring Station)

Pollutant	Standard	2016	2017	2018
Carbon Monoxide (CO)				
Maximum 1-hr concentration (ppm)		1.7	1.2	1.9
Number of days exceeded:	State: > 20 ppm	0	0	0
	Federal: > 35 ppm	0	0	0
Maximum 8-hr concentration (ppm)		1	0.9	1.1
Number of days exceeded:	State: ≥ 9.0 ppm	0	0	0
	Federal: ≥ 9.0 ppm	0	0	0
Ozone (O_3)				
Maximum 1-hr concentration (ppm)		0.139	0.137	0.141
Number of days exceeded:	State: > 0.09 ppm	34	33	38
Maximum 8-hr concentration (ppm)		0.105	0.118	0.111
Number of days exceeded:	State: > 0.07 ppm	49	49	69
	Federal: > 0.07 ppm	49	49	69
Coarse Particulates (PM_{10})				
Maximum 24-hr concentration (µg/m^3)		94.0	75.3	64.1
Number of days exceeded:	State: > 50 µg/m^3	14	8	8
	Federal: > 150 µg/m^3	0	0	0
Annual arithmetic average concentration (µg/m^3)		37.9	31.5	34.4
Exceeded for the year:	State: > 20 µg/m^3	Yes	Yes	Yes
Fine Particulates ($PM_{2.5}$)				
Maximum 24-hr concentration (µg/m^3)		58.8	39.2	29.2
Number of days exceeded:	Federal: > 35 µg/m^3	1	1	0
Annual arithmetic average concentration (µg/m^3)		12.3	12.0	11.1
Exceeded for the year:	State: > 12 µg/m^3	Yes	No	No
	Federal: > 15 µg/m^3	No	No	No
Nitrogen Dioxide (NO_2)				
Maximum 1-hr concentration (ppm)		0.07	0.07	0.06
Number of days exceeded:	State: > 0.18 ppm	0	0	0
Annual arithmetic average concentration (ppm)		0.018	0.018	0.018
Exceeded for the year:	State: > 0.030 ppm	No	No	No
	Federal: > 0.053 ppm	No	No	No
Sulfur Dioxide (SO_2)				
Maximum 24-hr concentration (ppm)		0.006	0.003	0.003
Number of days exceeded:	State: > 0.04 ppm	0	0	0
	Federal: > 0.14 ppm	0	0	0
Annual arithmetic average concentration (ppm)		0.001	0.001	0.001
Exceeded for the year:	Federal: > 0.030 ppm	No	No	No

Source 1: EPA. AirData: Website: www.epa.gov/outdoor-air-quality-data/air-quality-index-report (accessed March 2020).
Source 2: CARB. iADAM: Air Quality Data Statistics. Website: www.arb.ca.gov/(accessed March 2020).
µg/m^3 = micrograms per cubic meter
CARB = California Air Resources Board
EPA – United States Environmental Protection Agency
hr = hour
ND = no data available
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
ppm = parts per million

The State 1-hour O_3 standard was exceeded up to 36 times per year in the past 3 years. The State and federal 8-hour O_3 standards were exceeded 49 to 57 days per year in the past 3 years.

REGULATORY SETTINGS

Federal Regulations/Standards

Pursuant to the federal Clean Air Act (CAA) of 1970, the EPA established the NAAQS. The NAAQS were established for six major pollutants, termed "criteria" pollutants. Criteria pollutants are defined as those pollutants for which the federal and State governments have established AAQS, or criteria, for outdoor concentrations in order to protect public health.

The EPA has designated the Southern California Association of Governments (SCAG) as the Metropolitan Planning Organization responsible for ensuring compliance with the requirements of the CAA for the Basin.

The United States has historically had a voluntary approach to reducing GHG emissions; however, on April 2, 2007, the United States Supreme Court ruled that the EPA has the authority to regulate CO_2 emissions under the CAA. The Supreme Court ruled that GHGs fit within the CAA's definition of a pollutant and that the EPA did not have a valid rationale for not regulating GHGs. In December 2009, the EPA issued an endangerment finding for GHGs under the CAA.

On December 7, 2009, the EPA Administrator signed a final action under the CAA, finding that six GHGs (i.e., CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6) constitute a threat to public health and welfare, and that the combined emissions from motor vehicles cause and contribute to GCC.

In 2012, EPA and the National Highway Traffic Safety Administration promulgated new rules to set GHG emission and fuel economy standards for new motor vehicles. The rules created requirements for model years 2017–2021 and 2022–2025, which would become more stringent each year, achieving greater GHG reductions over time. In 2018, the agencies issued a proposed rule, the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule, to freeze the standards at 2020 levels through 2026, rather than tightening them each year. The final SAFE rule has not yet been published. However, the agencies have finalized a portion of the rule that revokes California's authority to set motor vehicle regulations that are more climate-protective than the federal requirements, including GHG emissions standards that 15 other states have adopted and a zero-emission vehicle mandate embraced by 12 other states.

State Regulations/Standards

In 1967, the State Legislature passed the Mulford-Carrell Act, which combined two Department of Health bureaus (i.e., the Bureau of Air Sanitation and the Motor Vehicle Pollution Control Board) to establish CARB. Since its formation, CARB has worked with the public, the business sector, and local governments to find solutions to the State's air pollution problems. California adopted the CCAA in 1988. CARB administers the CAAQS for the 10 air pollutants designated in the CCAA. These 10 State air pollutants are the 6 criteria pollutants designated by the federal CAA as well as 4 others (i.e., visibility-reducing particulates, H_2S, sulfates, and vinyl chloride).

The California Global Warming Solutions Act of 2006, widely known as Assembly Bill (AB) 32, requires CARB to develop and enforce regulations for the reporting and verification of statewide GHG emissions. CARB was directed to set a statewide GHG emissions limit and set a timeline for

adopting a scoping plan for achieving GHG reductions in a technologically and economically feasible manner.

The heart of the bill is the requirement that statewide GHG emissions be reduced to 1990 levels by 2020. The bill requires CARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG reductions.

In 2016, the Legislature passed, and Governor Jerry Brown signed, Senate Bill (SB) 32 and AB 197. SB 32 affirms the importance of addressing climate change by codifying into statute the GHG emissions reductions target of at least 40 percent below 1990 levels by 2030 contained in Governor Brown's April 2015 Executive Order B-30-15. SB 32 builds on AB 32 and keeps California on the path toward achieving the State's 2050 objective of reducing emissions to 80 percent below 1990 levels, consistent with an IPCC analysis of the emissions trajectory that would stabilize atmospheric GHG concentrations at 450 ppm CO_2e and reduce the likelihood of catastrophic impacts from climate change. The companion bill to SB 32, AB 197, provides additional direction to CARB related to the adoption of strategies to reduce GHG emissions.

In December 2017, CARB adopted "California's 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Target" (CARB 2017), which describes the actions the State will take to achieve the SB 32 climate goal of reducing GHG emissions at least 40 percent below 1990 levels by 2030. The 2017 Scoping Plan includes input from a range of State agencies and is the result of a 2-year development process, including extensive public and stakeholder outreach, designed to ensure that California's climate and air quality efforts continue to improve public health and drive development of a more sustainable economy. It outlines an approach that cuts across economic sectors to combine GHG reductions with reductions of smog-causing pollutants, while also safeguarding public health and economic goals. The 2017 Scoping Plan reflects the direction from the Legislature on the Cap-and-Trade Program, as described in AB 398, the need to extend key existing emissions reductions programs, and acknowledges the parallel actions required under AB 617 to strengthen monitoring and reduce air pollution at the community level.

The actions identified in the 2017 Scoping Plan can reduce overall GHG emissions in California and deliver strong policy signals that will continue to drive investment and certainty in a low-carbon economy. The 2017 Scoping Plan builds upon the successful framework established by the original Scoping Plan and the 2014 Scoping Plan, while also identifying new, technologically feasibility and cost-effective strategies to ensure that California meets its GHG reduction targets in a way that promotes and rewards innovation, continues to foster economic growth, and delivers improvements to the environment and public health, including in disadvantaged communities.

Although the 2017 Scoping Plan does not impose any specific mandates or policies that specifically apply to individual development projects such as the proposed project, the Scoping Plan encourages local municipalities to update building codes and establish sustainable development practices for accommodating future growth. Key policies that involve the residential and commercial building sectors that are indirectly applicable to the proposed Project include the implementation of SB 275 (promoting infill development and high density housing in high quality transit areas), implementing green building practices (i.e., the California Green Building Standards Code), energy efficiency and water conservation policies, and waste diversion efforts.

Senate Bill 97 and CEQA Guidelines

In August 2007, the Legislature adopted SB 97, requiring the Office of Planning and Research (OPR) to prepare and transmit new CEQA guidelines for the mitigation of GHG emissions or the effects of GHG emissions to the California Natural Resources Agency. OPR submitted its proposed guidelines to the Secretary for Natural Resources on April 13, 2009, and the CEQA Guidelines amendments were adopted on December 30, 2009 and became effective on March 18, 2010.

The CEQA Guidelines amendments do not specify a threshold of significance for GHG emissions or prescribe assessment methodologies or specific mitigation measures. Instead, the amendments encourage lead agencies to consider many factors in performing a CEQA analysis but rely on the lead agencies in making their own significance determinations based upon substantial evidence. The CEQA Guidelines amendments also encourage public agencies to make use of programmatic mitigation plans and programs from which to tier when they perform individual project analyses.

The CEQA Guidelines amendments require a lead agency to make a good-faith effort based on the extent possible on scientific and factual data to describe, calculate or estimate the amount of GHG emissions resulting from a project. The CEQA Guidelines amendments give discretion to the lead agency whether to (1) use a model or methodology to quantify GHG emissions resulting from a project and which model or methodology to use and/or (2) rely on a qualitative analysis or performance-based standards. The California Natural Resources Agency is required to periodically update the guidelines to incorporate new information or criteria established by CARB pursuant to AB 32.

California Green Building Standards

The California Green Building Standards Code, which is Part 11 of the California Code of Regulations, is commonly referred to as the CALGreen Code. The first edition of the CALGreen Code was released in 2008 and contained only voluntary standards. The 2016 CALGreen Code was updated in 2016, became effective on January 1, 2017, and applies to non-residential and residential developments. The CALGreen Code contains requirements for construction site selection, stormwater control during construction, construction waste reduction, indoor water use reduction, material selection, natural resource conservation, site irrigation conservation, and more. The CALGreen Code provides for design options allowing the designer to determine how best to achieve compliance for a given site or building condition. The CALGreen Code also requires building commissioning, which is a process for the verification that all building systems, such as heating and cooling equipment and lighting systems, function at their maximum efficiency.

Regional Air Quality Planning Framework

SCAG is a council of governments for Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura Counties. SCAG is a regional planning agency and a forum for regional issues relating to transportation, the economy and community development, and the environment. Although SCAG is not an air quality management agency, it is responsible for developing transportation, land use, and energy conservation measures that affect air quality.

On April 7, 2016, the Regional Council of SCAG adopted the *2016–2040 Regional Transportation Plan/Sustainable Communities Strategy: A Plan for Mobility, Accessibility, Sustainability, and High Quality of Life* (2016–2040 RTP/SCS). The 2016–2040 RTP/SCS is an update to the 2012–2035 RTP/SCS that further integrates land use and transportation in certain areas so that the region as a whole can grow smartly and sustainably. Between 2015 and 2040, the region is anticipated to experience increases in population, households, and jobs. The 2016–2040 RTP/SCS includes land use strategies, based on local general plans, as well as input from local governments to achieve the AB 32 State-mandated reductions in GHG emissions through decreases in regional per capita VMT. The 2016–2040 RTP/SCS includes transportation network improvements and encourages more compact, infill, walkable, and mixed-use development strategies to accommodate new region's growth and to accommodate increases in population, households, employment, and travel demand.

South Coast Air Quality Management District

The SCAQMD is the agency principally responsible for comprehensive air pollution control in the Basin. To that end, the SCAQMD, a regional agency, works directly with SCAG, county transportation commissions and local governments, and cooperates actively with State and federal government agencies. The SCAQMD develops air quality-related rules and regulations, establishes permitting requirements, inspects emissions sources, and provides regulatory enforcement through such measures as educational programs or fines, when necessary.

Regional Air Quality Management Plan

SCAQMD and SCAG are responsible for formulating and implementing the Air Quality Management Plan (AQMP) for the Basin. The main purpose of an AQMP is to bring the area into compliance with federal and State air quality standards. SCAQMD prepares a new AQMP every 3 years, updating the previous plan and 20-year horizon.

The latest plan is the 2016 AQMP (SCAQMD 2017), which incorporates the latest scientific and technological information and planning assumptions, including the 2016-2040 RTP/SCS and updated emission inventory methodologies for various source categories. The 2016 AQMP includes the integrated strategies and measures needed to meet the NAAQS, implementation of new technology measures, and demonstrations of attainment of the 1-hour and 8-hour ozone NAAQS as well as the latest 24-hour and annual $PM_{2.5}$ standards. Key elements of the 2016 AQMP include the following:

- Calculation and credit for co-benefits from other planning efforts (e.g., climate, energy, and transportation);
- A strategy with fair-share emission reductions at the federal, State, and local levels;
- Investment in strategies and technologies meeting multiple air quality objectives;
- Identification of new partnerships and significant funding for incentives to accelerate deployment of zero and near-zero technologies;
- Enhanced socioeconomic assessment, including an expanded environmental justice analysis;
- Attainment of the 24-hour $PM_{2.5}$ standard in 2019 with no additional measures;

- Attainment of the annual $PM_{2.5}$ standard by 2025 with implementation of a portion of the ozone strategy;
- Attainment of the 1-hour ozone standard by 2022 with no reliance on "black box" future technology (CAA Section 182(e)(5) measures).

SCAQMD adopts rules and regulations to implement portions of the AQMP. Several of these rules may apply to project construction or operation. For example, SCAQMD Rule 403 requires the implementation of the best-available fugitive dust control measure during active construction periods capable of generating fugitive dust emissions from on-site earth-moving activities, construction/activities, and construction equipment travel on paved and unpaved roads.

Although SCAQMD is responsible for regional air quality planning efforts, it does not have the authority to directly regulate the air quality issues associated with new development projects within the Basin, such as the proposed project. Instead, SCAQMD published the *CEQA Air Quality Handbook* (SCAQMD 1993) to assist lead agencies, as well as consultants, project proponents, and other interested parties in evaluating potential air quality impacts of projects proposed in the Basin. The *CEQA Air Quality Handbook* provides standards, methodologies, and procedures for conducting air quality analyses in Environmental Impact Reports and was used extensively in the preparation of this analysis. SCAQMD is currently in the process of replacing the *CEQA Air Quality Handbook* (1993) with the *Air Quality Analysis Guidance Handbook* (SCAQMD 2020).

To assist the CEQA practitioner in conducting an air quality analysis in the interim while the replacement *Air Quality Analysis Guidance Handbook* is being prepared, supplemental guidance/information is provided on the SCAQMD website and includes (1) on-road vehicle emission factors, (2) background CO concentrations, (3) localized significance thresholds (LSTs), (4) mitigation measures and control efficiencies, (5) mobile-source toxics analysis, (6) off-road mobile-source emission factors, (7) $PM_{2.5}$ significance thresholds and calculation methodology, and (8) updated SCAQMD Air Quality Significance Thresholds. SCAQMD also recommends using approved models to calculate emissions from land use projects, such as the California Emissions Estimator Model (CalEEMod). These recommendations were followed in the preparation of this analysis.

The following SCAQMD rules and regulations would apply to the proposed project:

- **Rule 402 – Nuisance:** Air contaminants shall not cause injury, detriment, nuisance, or annoyance to any considerable number of persons.
- **Rule 403 – Fugitive Dust:** Fugitive dust from any active operation, open storage pile, or disturbed surface area shall not remain visible in the atmosphere beyond the property line of the emission source.
- **Rule 445 – Wood Burning Devices:** No person shall permanently install a wood-burning device into any new development.

- **Rule 1113 – Architectural Coatings:** All architectural coatings shall comply with the Table of Standards listed in the rule, primarily 50 grams of VOC per liter of coating for material used on this project.

- **Rule 1303 – New Source Review Requirements:** Best Available Control Technology (BACT) shall be implemented as described.

Local Regulations

City of Rancho Cucamonga General Plan

Rancho Cucamonga adopted their General Plan and certified the Environmental Impact Report on May 19, 2010. The following General Plan policies would apply to this analysis:

- **GP Policy LU-3.4:** Promote development that is sustainable in its use of land and that limits impacts to natural resources, energy, and air and water quality.

    - **Implementation Action(s):** Adopt a sustainable development program that incorporates green building standards.

- **GP Policy CM-6.3:** Maintain consistency with the South Coast Air Quality Management District air quality mandates, SANBAG's Congestion Management and Nexus Programs, and SCAG's Regional Mobility Plan requirements.

    - **Implementation Action(s):** Continue to review and participate in the implementation and update of regional air quality and transportation plans.

- **GP Policy PS-10.1:** Pursue efforts to reduce air pollution and greenhouse gas emissions by implementing effective energy conservation and efficiency measures and promoting the use of renewable energy (e.g., solar, wind, biomass, cogeneration, and hydroelectric power).

    - **Implementation Action(s):** Adopt a formal green building program or create one based on a national model, such as LEED, GreenPoint Rated, and/or other programs into the City's codes.

- **GP Policy PS-10.2:** Integrate air quality planning with land use, economic development, and transportation planning.

    - **Implementation Action(s):** Implement, review, and interpret the General Plan and future development proposals in a manner consistent with the Air Quality Management Plan and SB375 to meet standards and reduce overall emissions from mobile and stationary sources.

- **GP Policy PS-10.3:** Consider surrounding land uses when locating sensitive receptors such as schools, hospitals, and residential uses so they are not unreasonably exposed to uses that generate pollutants considered detrimental to human health.

    - **Implementation Action(s):** Same action as identified for PS-10.2.

- **GP Policy PS-10.4:** Require projects that generate potentially significant levels of air pollutants to incorporate the best available air quality mitigation into the project design, as appropriate.
    - **Implementation Action(s):** Same action as identified for PS-10.2.
- **GP Policy PS-10.5:** Avoid placing sensitive land uses adjacent to heavy industrial areas.
    - **Implementation Action(s):** Same action as identified for PS-10.2
- **GP Policy PS-11.3:** Support programs that increase ridesharing, reduce pollutants generated by vehicle use, and meet the transportation control measures recommended by SCAQMD in the most recent Clean Air Plan.
    - **Implementation Action(s):** Coordinate with the Chamber to provide educational materials and incentives for businesses that engage in carpooling, transit, flexible work schedules, etc. to reduce the use of individual vehicles.
- **GP Policy PS-11.4:** Support regional and local transportation and housing programs that reduce vehicle emissions by decreasing vehicle miles traveled (VMT).
    - **Implementation Action(s):** Continue to require development proposal compliance with the City's adopted Transportation Demand Management (TDM) ordinance.

Rancho Cucamonga Sustainable Community Action Plan

The City of Rancho Cucamonga adopted a Sustainable Community Action Plan on April 5, 2017. This plan is focused on City-wide measures to advance environmental sustainability and reduce greenhouse gas emissions. However, the following policies would apply to this analysis:

- **LU 1.1:** Support new, diverse housing opportunities within walking distance of businesses, employment, and mixed-use areas.
- **LU 1.2:** Support building multifamily and mixed-use development in areas identified by the General Plan.

THRESHOLDS OF SIGNIFICANCE

Certain air districts, (e.g., SCAQMD), have created guidelines and requirements to conduct air quality analyses. SCAQMD's current guidelines, the *CEQA Air Quality Handbook* (SCAQMD 1993) with associated updates and City guidelines were followed in this assessment of air quality impacts for the proposed project.

Based on the State CEQA Guidelines, Appendix G, Public Resources Code Sections 15000–15387, a project would normally be considered to have a significant effect on air quality if the project would violate any CAAQS, contribute substantially to an existing air quality violation, expose sensitive receptors to substantial pollutant concentrations, or conflict with adopted environmental plans and goals of the community in which it is located.

POLLUTANTS WITH REGIONAL EFFECTS

SCAQMD has established daily emissions thresholds for construction and operation of a proposed project in the Basin. The emissions thresholds were established based on the attainment status of the Basin with regard to air quality standards for specific criteria pollutants. Because the concentration standards were set at a level that protects public health with an adequate margin of safety (SCAQMD 2017), these emissions thresholds are regarded as conservative and would overstate an individual project's contribution to health risks.

Regional Emissions Thresholds for Construction and Operational Emissions

Table F lists the CEQA significance thresholds for construction and operational emissions established for the Basin.

Table F: Regional Thresholds for Construction and Operational Emissions

Emissions Source	Pollutant Emissions Thresholds (lbs/day)					
	VOCs	NO_X	CO	PM_{10}	$PM_{2.5}$	SO_X
Construction	75	100	550	150	55	150
Operations	55	55	550	150	55	150

Source: SCAQMD. Air Quality Significance Threholds. (1993).

CO = carbon monoxide
lbs/day = pounds per day
NO_X = nitrogen oxides
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
SO_X = sulfur oxides
VOCs = volatile organic compounds

Projects in the Basin with construction or operation-related emissions that exceed any of their respective emission thresholds would be considered significant under SCAQMD guidelines. These thresholds, which SCAQMD developed and which apply throughout the Basin, apply as both project and cumulative thresholds. If a project exceeds these standards, it is considered to have a project-specific and cumulative impact.

Local Microscale CO Concentration Standards

The significance of localized CO project impacts under CEQA depends on whether ambient CO levels in the vicinity of the project are above or below State and federal CO standards. Because ambient CO levels are below the standards throughout the Basin, a project would be considered to have a significant CO impact if project emissions result in an exceedance of one or more of the 1-hour or 8-hour standards. The following are applicable local emission concentration standards for CO:

- California State 1-hour CO standard of 20 ppm
- California State 8-hour CO standard of 9 ppm

Localized Impacts Analysis

SCAQMD published its *Final Localized Significance Threshold Methodology* in June 2003 and updated it in July 2008 (SCAQMD 2008), recommending that all air quality analyses include an assessment of both construction and operational impacts on the air quality of nearby sensitive receptors. Localized significance thresholds (LSTs) represent the maximum on-site emissions from a project site of up to 5 acres that are not expected to result in an exceedance of the NAAQS or CAAQS, as shown in Table A. LSTs are based on the ambient concentrations of that pollutant within the project Source Receptor Area (SRA) and the distance to the nearest sensitive receptor. For this project, the appropriate SRA for the LST analysis is the Northwest San Bernardino Valley area (SRA 32).

If the total acreage disturbed during construction is less than or equal to 5 acres per day, then the SCAQMD's screening look-up tables can be used to determine if a project has the potential to result in a significant impact. In the case of CO and NO_2, because ambient levels are below the NAAQS and CAAQS, a project is considered to have a significant impact if project emissions result in an exceedance of one or more of these standards. If ambient levels already exceed a State or federal standard, then project emissions are considered significant if they increase ambient concentrations by a measurable amount. This would apply to PM_{10} and $PM_{2.5}$, both of which are nonattainment pollutants (SCAQMD 2006). For these two, the significance criteria are the pollutant concentration thresholds presented in SCAQMD Rules 403 and 1303. The Rule 403 threshold of 10.4 µg/m^3 applies to construction emissions. The Rule 1303 threshold of 2.5 µg/m^3 applies to operational activities.

The total area of the proposed project is 3.76 acres. Based on SCAQMD methodology[1] and the construction equipment planned, it is possible that the entire 3.76 acres could be disturbed on a peak day; thus, the 2- and 5-acre construction thresholds have been interpolated to derive 3.76-acre LSTs for construction emissions. For operational LST impacts, the SCAQMD guidance specifies that only on-site emissions are to be included. On-site operational emissions would primarily occur from stationary sources. While vehicle emissions are the largest source of project-related operational emissions, only a small portion would occur on the site. Based on anticipated travel routes, it is estimated that less than 5 percent of the overall vehicle travel would occur on site. A total of 5 percent is considered conservative because the following average trip lengths are assumed from

[1] South Coast Air Quality Management District (SCAQMD). 2018. *Fact Sheet for Applying CalEEMod to Localized Significance Thresholds*. Website: www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/caleemod-guidance.pdf, accessed February 2018.

the CalEEMod defaults: (1) 14.7 miles for home to work, (2) 5.9 miles for home to shopping, and (3) 8.7 miles for other types of trips. The average on-site distance driven is unlikely to be even 1,000 ft, which is approximately 2 percent of the total miles traveled. Considering the total trip length included in the CalEEMod, the 5 percent assumption is conservative.

Sensitive receptors include residences, schools, hospitals, and similar uses that are sensitive to adverse air quality. The closest existing sensitive receptors are residences across East Avenue, approximately 80 feet (ft) from the project construction boundary. Thus, the emissions thresholds shown in Table G would apply during project construction and operation.

Table G: LSTs for a 3.76-Acre Site in the Northwest San Bernardino Valley SRA at 80 Feet (25 Meters)

Scenario	Emissions Threshold (lbs/day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Construction	229	1,796	12	7
Operational	229	1,796	3	2

Source: SCAQMD. *Final Localized Significance Threshold Methodology* (2003, revised 2008).

CO = carbon monoxide
lbs/day = pounds per day
LST = local significance threshold
NO_X = nitrogen oxides
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
SCAQMD = South Coast Air Quality Management District

GLOBAL CLIMATE CHANGE

State CEQA Guidelines Section 15064(b) provides that the "determination of whether a project may have a significant effect on the environment calls for careful judgment on the part of the public agency involved, based to the extent possible on scientific and factual data," and further states that an "ironclad definition of significant effect is not always possible because the significance of an activity may vary with the setting."

The City has adopted Appendix G of the *State CEQA Guidelines* as the significance threshold for GHG emissions. A project would normally have a significant effect on the environment if it would:

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or

- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

On December 30, 2009, the Natural Resources Agency adopted amendments to the *State CEQA Guidelines* that became effective on March 18, 2010. The amendments to the *State CEQA Guidelines* include new requirements to evaluate GHG emissions. Pursuant to the amended *State CEQA Guidelines,* a lead agency should consider the following when assessing the significance of impacts from GHG emissions on the environment:

1. The extent to which the project may increase (or reduce) GHG emissions compared to the existing environmental setting;

2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and

3. The extent to which the project complies with regulations or requirements adopted to implement an adopted statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

Currently, there is no statewide GHG emissions threshold that has been used to determine potential GHG emissions impacts of a project. Significance thresholds and threshold methodology are still being developed and revised by air quality districts in the State. While the City adopted a Sustainable Community Action Plan in 2017, it is not a qualified Climate Action Plan that can be used to determine emissions significance. Therefore, this environmental issue remains unsettled and must be evaluated on a case-by-case basis until such time as SCAQMD adopts significance thresholds and GHG emissions impact methodology. Therefore, SCAQMD thresholds, when adopted, would apply to future development in the City.

To provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents, SCAQMD convened a GHG CEQA Significance Threshold Stakeholder Working Group (Working Group).[1] Based on the last Working Group meeting (Meeting No. 15) held in September 2010, SCAQMD proposed an analysis methodology using a tiered approach for the evaluation of GHG emissions for development projects where SCAQMD is not the lead agency (SCAQMD 2010). The applicable tier for this mixed-use development project is Tier 3 (if GHG emissions are less than 3,000 metric tons of carbon dioxide equivalent per year (MT CO_2e/yr), project-level and cumulative GHG emissions are less than significant).

[1] SCAQMD. 2018. *Greenhouse Gases (GHG) CEQA Significance Thresholds*. Website: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/ghg-significance-thresholds/, accessed February 2018.

IMPACTS AND MITIGATION

Air pollutant emissions associated with the project would occur over the short term from construction activities (e.g., fugitive dust from site preparation and grading), and emissions from equipment exhaust. Long-term regional emissions would be associated with project-related vehicular trips and due to energy consumption (e.g., electricity usage) by the proposed project.

CONSTRUCTION IMPACTS

Equipment Exhaust and Related Construction Activities

Construction activities produce combustion emissions from various sources (e.g., grading, site preparation, utility engines, tenant improvements, and motor vehicles transporting the construction crew). Exhaust emissions from construction activities envisioned on site would vary daily as construction activity levels change. The use of construction equipment on site would result in localized exhaust emissions. Table H lists the tentative project construction schedule for the proposed project based on an expected September 2020 start date and June 2022 completion date

Table H: Tentative Project Construction Schedule

Phase Name	Phase Start Date	Phase End Date	Number of Days/Week	Total Number of Days
Site Preparation	9/1/2020	9/7/2020	5	5
Grading	9/8/2020	9/28/2020	5	15
Building Construction	9/29/2020	2/14/2022	5	360
Paving	2/15/2022	3/10/2022	5	18
Architectural Coatings	3/11/2022	6/10/2022	5	66

Source: Estimated from site plan, assuming a September 2020 start and a June 2022 finish (2020).
CalEEMod = California Emissions Estimator Model

Table I lists the estimated construction equipment that would be used during project construction as estimated by CalEEMod default values.

The most recent version of the California Emissions Estimator Model (CalEEMod; Version 2016.3.2) was used to calculate the construction emissions. The construction emissions are shown in Table J. The emissions rates shown in the table are from the CalEEMod output tables listed as “Mitigated Construction,” even though the only measures that have been applied to the analysis are the required construction emissions control measures or standard conditions. They are also the combination of the on- and off-site emissions.

Because no exceedances of any criteria pollutants are expected, no significant impacts would occur for project construction. Standard measures are discussed later in this report. Details of the emission factors and other assumptions are included in Appendix A.

Table I: Diesel Construction Equipment Utilized by Construction Phase

Construction Phase	Off-Road Equipment Type	Off-Road Equipment Unit Amount	Hours Used per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	3	8	247	0.4
	Tractors/Loaders/Backhoes	4	8	97	0.37
Grading	Excavators	1	8	158	0.38
	Graders	1	8	187	0.41
	Rubber Tired Dozers	1	8	247	0.4
	Tractors/Loaders/Backhoes	3	8	97	0.37
Building Construction	Cranes	1	7	231	0.29
	Forklifts	3	8	89	0.2
	Generator Sets	1	8	84	0.74
	Tractors/Loaders/Backhoes	3	7	97	0.37
	Welders	1	8	46	0.45
Paving	Cement and Mortar Mixers	2	6	9	0.56
	Pavers	1	8	130	0.42
	Paving Equipment	2	6	132	0.36
	Rollers	2	6	80	0.38
	Tractors/Loaders/Backhoes	1	8	97	0.37
Architectural Coating	Air Compressors	1	6	78	0.48

Source: Compiled by LSA (March 2020).

Table J: Short-Term Regional Construction Emissions

Construction Phase	Total Regional Pollutant Emissions (lbs/day)							
	VOC	NO_X	CO	SO_X	Fugitive PM_{10}	Exhaust PM_{10}	Fugitive $PM_{2.5}$	Exhaust $PM_{2.5}$
Site Preparation	4	42	22	<1	7	2	4	2
Grading	3	26	17	<1	3	1	1	1
Building Construction	3	23	23	<1	2	1	<1	1
Paving	2	11	13	<1	<1	<1	<1	<1
Architectural Coating	47	2	3	<1	<1	<1	<1	<1
Peak Daily	**47**	**42**	**23**	**<1**	**9**		**6**	
SCAQMD Thresholds	**75**	**100**	**550**	**150**	**150**		**55**	
Significant Emissions?	**No**	**No**	**No**	**No**	**No**		**No**	

Source: Compiled by LSA (March 2020).
CO = carbon monoxide
lbs/day = pounds per day
NO_X = nitrogen oxides
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
SCAQMD = South Coast Air Quality Management District
SO_X = sulfur oxides
VOC = volatile organic compounds

Fugitive Dust

Fugitive dust emissions are generally associated with land clearing and exposure of soils to the air and wind, as well as cut-and-fill grading operations. Dust generated during construction varies substantially on a project-by-project basis, depending on the level of activity, the specific operations, and weather conditions at the time of construction. The proposed project will be required to comply with SCAQMD Rule 403 to control fugitive dust.

Table J lists total construction emissions (i.e., fugitive-dust emissions and construction-equipment exhausts) that have incorporated the following Rule 403 measures that would be implemented to significantly reduce PM_{10} emissions from construction. The Rule 403 measures that were incorporated in the CalEEMod analysis are as follows:

- Water active sites at least twice daily (locations, where grading is to occur, will be thoroughly watered prior to earthmoving).
- Cover all trucks hauling dirt, sand, soil, or other loose materials, or maintain at least 2 ft (0.6 m) of freeboard (vertical space between the top of the load and the top of the trailer) in accordance with the requirements of California Vehicle Code Section 23114.
- Reduce traffic speeds on all unpaved roads to 15 mph or less.

Architectural Coatings

Architectural coatings contain VOCs that are part of the O_3 precursors. Based on the proposed project, it is estimated that application of the architectural coatings for the proposed peak construction day would result in peak emissions of 47 pounds per day (lbs/day) of VOC. Therefore, VOC emissions from architectural coating application would not exceed the SCAQMD VOC threshold of 75 lbs/day.

Localized Impacts Analysis

Table K shows that the construction emission rates would not exceed the LSTs for the existing residences across East Avenue approximately 80 ft from the closest construction operations.

Table K: Construction Localized Impacts Analysis

Emissions Sources	Pollutant Emissions (lbs/day)			
	NO_X	**CO**	**PM_{10}**	**$PM_{2.5}$**
On-Site Emissions	42	22	9	6
LST Thresholds	**229**	**1,796**	**12**	**7**
Significant Emissions?	**No**	**No**	**No**	**No**

Source: Compiled by LSA (March 2020).
Note: Source Receptor Area – Northwest San Bernardino Valley, 3.76 acres, receptors at 80 feet
CO = carbon monoxide
lbs/day = pounds per day
LST = local significance threshold
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size

Odors from Construction Activities

Heavy-duty equipment in the project area during construction would emit odors, primarily from the equipment exhaust. However, the construction produced odors would cease to occur after individual construction is completed. No other sources of objectionable odors have been identified for the proposed project, and no mitigation measures are required.

SCAQMD Rule 402 regarding nuisances states: "A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property." The proposed uses are not anticipated to emit any objectionable odors. Therefore, objectionable odors posing a health risk to potential on-site and existing off-site uses would not occur as a result of the proposed project.

Naturally Occurring Asbestos

The proposed project is in San Bernardino County, which is among the counties found to have serpentine and ultramafic rock in their soils (California Department of Conservation 2020). However, according to the California Geological Survey, no such rock has been identified in the project vicinity. Therefore, the potential risk for naturally occurring asbestos during project construction is small and less than significant.

Construction Health Risks

The off-road diesel construction equipment during grading and excavation activities emits most of the toxic air contaminant (TAC) emissions during the Project construction. Based on the SCAQMD methodology, health effects from carcinogenic TACs are usually described in terms of "Individual Cancer Risk", which is the likelihood that a person exposed to concentrations of TACs over a 70-year lifetime will contract cancer, based on the use of standard risk-assessment. California regulations limit idling from both on-road and offroad diesel-powered equipment. CARB enforces idling limitations and compliance with diesel fleet regulations.

- Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes [California Code of Regulations, Title 13, sections 2449(d)(3) and 2485]. Provide clear signage that posts this requirement for workers at the entrances to the site.

- Provide current certificate(s) of compliance for CARB's In-Use Off-Road Diesel-Fueled Fleets Regulation [California Code of Regulations, Title 13, sections 2449 and 2449.1].

Because the construction duration would last less than two years, and the phases that requires the most heavy-duty diesel vehicle usage (e.g., grading) would last for a much shorter period of time (e.g., less than a month), the Project construction would not result in a long-term (i.e., 70-year) substantial source of TAC emissions. In addition, the SCAQMD CEQA guidance does not require a health risk assessment for short-term construction emissions. It is therefore not necessary or meaningful to evaluate long-term cancer impacts from construction activities, which occur over a relatively short duration. There would also be no residual emissions after construction. As such, the Project's construction TAC emission impact would be less than significant.

Construction Emissions Conclusions

Tables J and K show that daily regional construction emissions would not exceed the daily thresholds of any criteria pollutant emission thresholds established by SCAQMD; thus, during construction, there would be no localized impacts.

LONG-TERM REGIONAL AIR QUALITY IMPACTS

Operational Emissions

Long-term air pollutant emission impacts are those associated with stationary sources and mobile sources involving any project-related changes. The proposed project would result in net increases in both stationary and mobile-source emissions. The area source emission categories include both stationary and off-road mobile sources. Stationary sources in CalEEMod include consumer products, whereas off-road mobile sources include off-road equipment such as landscaping equipment.[1]

Based on trip generation factors provided in the traffic impact analysis prepared for the proposed project (Fehr & Peers 2018), the project would generate 1,035 daily trips. These trips were entered in CalEEMod and the fleet mixes adjusted to represent the expected vehicle mix for each land use (see Appendix A). The modeling is compliant with SCAQMD Rule 445 and assumes there would be no woodstoves and all fireplaces would be natural gas fueled. The long-term operational emissions associated with the proposed project are shown in Table L.

Table L: Opening Year Regional Operational Emissions

Source	Pollutant Emissions (lbs/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area	3	2	12	<1	<1	<1
Energy	<1	<1	<1	<1	<1	<1
Mobile	2	2	23	<1	8	2
Total Project Emissions	**5**	**4**	**35**	**<1**	**8**	**2**
SCAQMD Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Significant?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Compiled by LSA (March 2020).
CO = carbon monoxide
lbs/day = pounds per day
NO_x = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SCAQMD = South Coast Air Quality Management District
SO_x = sulfur oxides
VOC = volatile organic compounds

Table L shows that the project related emissions of criteria pollutants would not exceed the corresponding SCAQMD daily emission thresholds. Therefore, project-related long-term air quality impacts would be less than significant.

Localized Impacts Analysis

Table M shows the calculated emissions for the proposed operational activities compared with the appropriate LSTs. By design, the localized impacts analysis only includes on-site sources; however, the CalEEMod outputs do not separate on-site and off-site emissions for operations. For a worst-case scenario assessment, the emissions shown in Table M include all on-site project-related stationary sources and 5 percent of the project-related new mobile sources, which, as explained

[1] CARB. 2013. More Information on Areawide Source Categories. Page last reviewed February 11, 2013. Website: https://www.arb.ca.gov/ei /areasrc/moreareainfo.htm, accessed February 2018.

Table M: Long-Term Operational Localized Impacts Analysis

Emissions Sources	Pollutant Emissions (lbs/day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
On-Site Emissions	2	13	<1	<1
LST Thresholds	**229**	**1,796**	**3**	**2**
Significant Emissions?	**No**	**No**	**No**	**No**

Source: Compiled by LSA (March 2020).
Note: Source Receptor Area – Northwest San Bernardino Valley, 3.76 acres, receptors at 80 feet, on-site traffic 5 percent of total.
CO = carbon monoxide
lbs/day = pounds per day
LST = localized significance thresholds
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size

in the Thresholds section, is a conservative estimate of the amount of project-related vehicle traffic that would occur on site.

Table M shows that the operational emission rates would not exceed the LSTs for the existing residences across East Avenue approximately 80 ft from the project site. Therefore, the proposed operational activity would not result in a locally significant air quality impact.

Greenhouse Gas Emissions

This section evaluates potential significant impacts to GCC that could result from implementation of the proposed project. Because it is not possible to tie specific GHG emissions to actual changes in climate, this evaluation focuses on the project's emission of GHGs.

GHG Emissions Background

Emissions estimates for the proposed project are discussed below. Bearing in mind that CEQA does not require "perfection" but instead "adequacy, completeness, and a good faith effort at full disclosure," the analysis below is based on methodologies and information available to the City and the applicant at the time this analysis was prepared. Estimation of GHG emissions in the future does not account for all changes in technology that may reduce such emissions; therefore, the estimates are based on past performance and represent a scenario that is worse than that which is likely to be encountered (after energy-efficient technologies have been implemented). While information is presented below to assist the public and decision-makers in understanding the project's potential contribution to GCC impacts, the information available to the City is not sufficiently detailed to allow a direct comparison between particular project characteristics and particular climate change impacts or between any particular proposed mitigation measure and any reduction in climate change impacts.

Construction and operation of the proposed project would generate GHG emissions, with the majority of energy consumption (and associated generation of GHG emissions) occurring during the project's operation (as opposed to during its construction). Typically, more than 80 percent of the total energy consumption takes place during the use of buildings and less than 20 percent of energy is consumed during construction (UNEP 2007). Overall, the following activities associated with the proposed project could directly or indirectly contribute to the generation of GHG emissions:

- **Construction Activities:** During construction of the project, GHGs would be emitted through the operation of construction equipment and from worker and vendor vehicles, each of which typically uses fossil-based fuels to operate. The combustion of fossil-based fuels creates GHGs (e.g., CO_2, CH_4, and N_2O). Furthermore, CH_4 is emitted during the fueling of heavy equipment.

- **Gas, Electricity, and Water Use:** Natural gas use results in the emission of two GHGs: CH_4 (the major component of natural gas) and CO_2 (from the combustion of natural gas). Electricity use can result in GHG production if the electricity is generated by combusting fossil fuel. California's water conveyance system is energy-intensive. Water-related electricity use is 48 terawatt hours per year and accounts for nearly 20 percent of California's total electricity consumption. (CEC 2018).

- **Solid Waste Disposal:** Solid waste generated by the project could contribute to GHG emissions in a variety of ways. Landfilling and other methods of disposal use energy for transporting and managing the waste, and they produce additional GHGs to varying degrees. Landfilling, the most common waste management practice, results in the release of CH_4 from the anaerobic decomposition of organic materials. CH_4 is 25 times more potent a GHG than CO_2. However, landfill CH_4 can also be a source of energy. In addition, many materials in landfills do not decompose fully, and the carbon that remains is sequestered in the landfill and not released into the atmosphere.

- **Motor Vehicle Use:** Transportation associated with the proposed project would result in GHG emissions from the combustion of fossil fuels in daily automobile and truck trips.

Table N lists the annual GHG emissions for each of the planned construction phases based on the results from CalEEMod. Rather than examine the significance of these GHG emissions, SCAQMD has directed that the construction emissions be amortized over the lifetime of the project and then combined with the operational GHG emissions to determine significance. In the absence of project-specific information, SCAQMD suggests assuming a project lifetime of 30 years.

Table N: Construction Greenhouse Gas Emissions

Construction Phase		Total Regional Pollutant Emissions (MT/yr)			
		CO_2	CH_4	N_2O	CO_2e
2020	Site Preparation	9	<1	0	9
	Grading	21	<1	0	21
	Building Construction	151	<1	0	152
2021	Building Construction	574	<1	0	576
2022	Building Construction	67	<1	0	68
	Paving	16	<1	0	17
	Architectural Coating	17	<1	0	17
Total Construction Emissions		**855**	**<1**	**0**	**860**
Amortized over 30 years		**29**	**<1**	**0**	**29**

Source: Compiled by LSA (March 2020).
CH_4 = methane
CO_2 = carbon dioxide
CO_2e = carbon dioxide equivalent
MT/yr = metric tons per year
N_2O = nitrous oxide

Long-term operation of the proposed project would generate GHG emissions from area and mobile sources and indirect emissions from stationary sources associated with energy consumption. Mobile-source emissions of GHGs would result from project-generated vehicle trips. Area-source emissions would be associated with activities including landscaping and maintenance of the proposed project, natural gas for heating, and other sources. Increases in stationary-source emissions would also occur at off-site utility providers as a result of demand for electricity, natural gas, and water by the proposed project.

The GHG emission estimates presented in Table O shows the emissions associated with the level of development envisioned by the proposed project at opening. Area sources include consumer products and landscaping. Energy sources include natural gas consumption for heating and cooking.

Table O: Operational Greenhouse Gas Emissions

Source	Pollutant Emissions (MT/yr)					
	Bio-CO_2	**NBio-CO_2**	**Total CO_2**	**CH_4**	**N_2O**	**CO_2e**
Construction emissions amortized over 30 years	0	29	29	<1	0	29
Operational Emissions						
Area Sources	0	34	34	<1	<1	34
Energy Sources	0	172	172	<1	<1	173
Mobile Sources	0	996	996	<1	0	997
Waste Sources	13	0	13	1	0	32
Water Usage	1	28	30	<1	<1	34
Total Project Emissions	**14**	**1,259**	**1,273**	**1**	<1	**1,299**
SCAQMD Threshold for Mixed-Use Projects						**3,000**
Significant?						**No**

Source: Compiled by LSA (March 2020).
Note: Numbers in table may not appear to add up correctly due to rounding of all numbers.
Bio-CO_2 = biologically generated carbon dioxide
CH_4 = methane
CO_2 = carbon dioxide
CO_2e = carbon dioxide equivalent
MT/yr = metric tons per year
N_2O = nitrous oxide
NBio-CO_2 = Non-biologically generated carbon dioxide

Appendix A includes the CalEEMod output sheets documenting the GHG emissions. As shown in Table M, the project would result in total GHG emissions of 1,299 MT CO_2e/yr.

Energy/Natural Gas Use

Buildings represent 39 percent of the United States' primary energy usage and 70 percent of its electricity consumption (United States Department of Energy 2012). The proposed project would increase the demand for electricity and natural gas due to the increased building area and number of residents. The project would indirectly result in GHG emissions from off-site electricity generation at power plants and on-site natural gas consumption (173 MT CO_2e/yr).

Area Sources

Area sources of GHG emissions include consumer products, hearths, and landscaping. The project would result in increased GHG emissions from area sources (34 MT CO_2e/yr).

Water Use

Water-related energy use consumes 19 percent of California's electricity every year (CEC 2005). Energy use and related GHG emissions are based on electricity used for water supply and conveyance, water treatment, water distribution, and wastewater treatment. The project would indirectly result in increased GHG emissions from the off-site electricity generation at power plants and on-site natural gas consumption (34 MT CO_2e/yr).

Solid Waste Disposal

The proposed project would also generate solid waste during the operation phase of the project. Default solid waste generation rates in CalEEMod were used to estimate solid waste emissions related to the project. The project would indirectly result in GHG emissions from solid waste treatment at treatment plants (32 MT CO_2e/yr).

Mobile Sources

Mobile sources (vehicle trips and associated VMT) are the largest source of GHG emissions in California and represent approximately 39 percent of annual CO_2 emissions generated in the State. Like most land use development projects, VMT is the most direct indicator of CO_2 emissions from the proposed project, and associated CO_2 emissions function as the best indicator of total GHG emissions. Emissions from vehicle exhaust would comprise 77 percent of the project's total CO_2e emissions. The project would directly result in GHG emissions from mobile sources (997 MT CO_2e/yr). Emissions from vehicle exhaust are controlled by the State and federal governments and are outside the control of the City.

The non-mobile source GHG emissions are primarily associated with building heating systems and increased regional power plant electricity generation due to the project's electrical demands. The proposed project would comply with existing State and federal regulations regarding the energy efficiency of buildings, appliances, and lighting, which would minimize the project's electricity demand. The new buildings constructed in accordance with current energy efficiency standards would be more energy-efficient than older buildings. The 2019 California Building Standards Code (California Code of Regulations Title 24) has been enforced in California since January 1, 2020.

The project would also comply with all applicable Rancho Cucamonga General Plan and Sustainable Community Action Plan policies. None of these policies include provisions for determining the effect of compliance, so this analysis does not attempt to determine the reduction in GHG emissions that would result from compliance with these plans. However, as shown in Table O, even without including the GHG emissions reductions that would result from compliance with these plans the project-related GHG emissions would be well below the SCAQMD threshold.

At present, there is a federal ban on chlorofluorocarbons (CFCs); therefore, it is assumed the project would not generate emissions of CFCs. The project may emit a small amount of HFCs from leakage and service of refrigeration and air-conditioning equipment and from disposal at the end of the life of the equipment. However, the details regarding refrigerants to be used at the project site are unknown at this time. PFCs and SF_6 are typically used in industrial applications, neither of which

would be used on the project site. Therefore, the project is not anticipated to contribute significant emissions of these additional GHGs.

As Table O shows, the proposed project would generate 1,299 MT CO_2e/yr, less than the SCAQMD Tier 3 threshold of 3,000 MT CO_2e/yr for mixed-use projects; thus, project-level GHG emissions would be less than significant.

LONG-TERM MICROSCALE (CARBON MONOXIDE HOT SPOT) ANALYSIS

Vehicular trips associated with the proposed project would contribute to congestion at intersections and along roadway segments in the project vicinity. Localized air quality impacts could occur when emissions from vehicular traffic increase as a result of the proposed project. The primary mobile-source pollutant of local concern is CO, a direct function of vehicle idling time and, thus, of traffic flow conditions. CO transport is extremely limited; under normal meteorological conditions, it disperses rapidly with distance from the source. However, under certain extreme meteorological conditions, CO concentrations near a congested roadway or intersection may reach unhealthful levels, affecting local sensitive receptors (e.g., residents, schoolchildren, the elderly, and hospital patients). Typically, high CO concentrations are associated with roadways or intersections operating at unacceptable levels of service or with extremely high traffic volumes. In areas with high ambient background CO concentrations, modeling is recommended to determine a project's effect on local CO levels.

An assessment of project-related impacts on localized ambient air quality requires that future ambient air quality levels be projected. Existing CO concentrations in the immediate project vicinity are not available. Ambient CO levels monitored at the Fontana-Arrow Highway Monitoring Station, the closest station with complete monitored CO data, showed a highest recorded 1-hour concentration of 2.8 ppm (the State standard is 20 ppm) and a highest 8-hour concentration of 1.2 ppm (the State standard is 9 ppm) during the past 3 years (Table E). The highest CO concentrations would normally occur during peak traffic hours; hence, CO impacts calculated under peak traffic conditions represent a worst-case analysis.

Reduced speeds and vehicular congestion at intersections result in increased CO emissions. As described in the *Draft Westbury Transportation Impact Study* (Fehr & Peers 2018), all study area intersections currently operate at a satisfactory level of service (LOS). With the addition of the proposed project in the existing setting and all future scenarios, vehicle speeds and vehicular congestion at all study area intersections surrounding the project site would continue to operate at satisfactory LOS.

Therefore, the project could be implemented in an existing setting with no significant peak-hour intersection impacts. Given the extremely low level of CO concentrations in the project area and the lack of traffic impacts at any surrounding intersections, project-related vehicles are not expected to contribute significantly to CO concentrations exceeding the State or federal CO standards. Because no CO hot spot would occur, there would be no project-related impacts on CO concentrations.

AIR QUALITY MANAGEMENT PLAN CONSISTENCY

A consistency determination plays an essential role in local agency project review by linking local planning and unique individual projects to the air quality plans. A consistency determination fulfills the CEQA goal of fully informing local agency decision-makers of the environmental costs of the project under consideration at a stage early enough to ensure that air quality concerns are addressed. Only new or amended General Plan elements, Specific Plans, and significantly unique projects need to undergo a consistency review due to the air quality plan strategy being based on projections from local General Plans.

The AQMP is based on regional growth projections developed by SCAG. The proposed project is a mixed-use development and is not defined as a regionally significant project under CEQA; therefore, it does not meet the SCAG's Intergovernmental Review criteria.

While the proposed mixed-use development will require a Development Code and Zoning Map Amendment to change the zoning designation, land use tables, and figures from Community Commercial (CC) District to Mixed Use (MU) District, the proposed use of the site is consistent with the City's General Plan designation of mixed-use. Additionally, the rezoning of the property from Commercial to Mixed Use would result in a less intensive use with regard to generation of vehicle trips and the mixeduse project would be consistent with the policies provided in SCAG's RTP/SCS that promote walkable communities (e.g., new residential located near transit stops along Foothill Boulevard and neighborhood stores). The City's General Plan is consistent with the SCAG Regional Comprehensive Plan Guidelines and the SCAQMD AQMP. Pursuant to the methodology provided in Chapter 12 of the 1993 SCAQMD *CEQA Air Quality Handbook*, consistency with the Basin 2016 AQMP is affirmed when a project (1) does not increase the frequency or severity of an air quality standards violation or cause a new violation and (2) is consistent with the growth assumptions in the AQMP. Consistency review is presented below:

1. The project would result in short-term construction and long-term pollutant emissions that are less than the CEQA significance emissions thresholds established by SCAQMD, as demonstrated above; therefore, the project would not result in an increase in the frequency or severity of any air quality standards violation and will not cause a new air quality standard violation.

2. The SCAQMD *CEQA Air Quality Handbook* indicates that consistency with AQMP growth assumptions must be analyzed for new or amended General Plan elements, Specific Plans, and significant projects. Significant projects include airports, electrical generating facilities, petroleum and gas refineries, designation of oil drilling districts, water ports, solid waste disposal sites, and offshore drilling facilities; therefore, the proposed project is not defined as significant.

Based on the consistency analysis presented above, the proposed project is consistent with the City's General Plan and the regional AQMP.

STANDARD CONDITIONS

Construction

The project is required to comply with regional rules that assist in reducing short-term air pollutant emissions. SCAQMD Rule 403 requires that fugitive dust be controlled with best-available control measures so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source (SCAQMD 2005). In addition, SCAQMD Rule 403 requires implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off site. Applicable dust suppression techniques from Rule 403 are summarized below. Implementation of these dust suppression techniques can reduce the fugitive dust generation (and thus, the PM_{10} component). Compliance with these rules would reduce impacts on nearby sensitive receptors (SCAQMD 2005). As shown in Table J, with the implementation of Rule 403 measures, dust emissions would be below SCAQMD thresholds.

The applicable Rule 403 measures are as follows:

- Apply nontoxic chemical soil stabilizers according to manufacturers' specifications to all inactive construction areas (previously graded areas inactive for 10 days or more).
- Water active sites at least twice daily (locations, where grading is to occur, will be thoroughly watered prior to earthmoving).
- Cover all trucks hauling dirt, sand, soil, or other loose materials, or maintain at least 2 ft (0.6 meter [m]) of freeboard (vertical space between the top of the load and the top of the trailer) in accordance with the requirements of California Vehicle Code Section 23114.
- Pave construction access roads at least 100 ft (30 m) onto the site from the main road.
- Reduce traffic speeds on all unpaved roads to 15 mph or less.

Operations

The proposed project is required to comply with Title 24 of the California Code of Regulations established by the CEC regarding energy conservation and green building standards, including the major energy efficiency measures that are now required in all homes. The project applicant shall incorporate the following in building plans as a project design feature:

- Solar photovoltaic systems shall be installed.
- Low-emission water heaters shall be used. Solar water heaters are encouraged.
- Exterior windows shall utilize window treatments for efficient energy conservation.

The 2019 Title 24 standards also encourage demand responsive technologies including battery storage and heat pump water heaters and building thermal envelope improvements through high performance attics, walls, and windows to improve comfort and energy savings.

These measures would result in reduced emissions during the construction and operation phases of the proposed project.

CUMULATIVE IMPACTS

The cumulative impacts analysis is based on projections in the regional AQMP. As described in the consistency analysis presented above, the proposed project is consistent with the growth assumptions in the City's General Plan and the regional AQMP. Further, the project does not increase the frequency or severity of an air quality standards violation or cause a new violation. Therefore, the proposed project would not result in a significant long-term cumulative impact.

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APPENDIX A

CALEEMOD PRINTOUTS

Westbury Residential Development Project
South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	1.22	1000sqft	0.03	1,220.00	0
Other Non-Asphalt Surfaces	0.09	Acre	0.09	3,920.40	0
Parking Lot	100.00	1000sqft	2.30	100,000.00	0
Apartments Low Rise	131.00	Dwelling Unit	1.30	131,000.00	375
Strip Mall	1.59	1000sqft	0.04	1,592.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Based on 131 residential units, four commercial ready units (represented by 1,220 sf of general office), and a 1,592 sf commercial space.

Construction Phase - Based on construction starting in Sept. 2020 and finishing in June 2022.

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Grading -

Architectural Coating - Assume architechtual coatings comply with SCAQMD Rule 1113.

Vehicle Trips - Based on the traffic study.

Woodstoves - Assume no woodstoves or wood-burning fireplaces and all residences have gas fireplaces.

Area Coating - Assume architechtual coatings comply with SCAQMD Rule 1113.

Energy Use - Assume all residences comply with 2019 CBC and Green Building codes. All energy use reduced by 50%.

Water And Wastewater - Assume all residences comply with 2019 CBC and Green Building codes. All water use reduced by 50%.

Land Use Change -

Sequestration - Estimated number of trees based on site plan.

Construction Off-road Equipment Mitigation - Dust control measures as required by SCAQMD Rule 403.

Mobile Land Use Mitigation -

Energy Mitigation -

Operational Off-Road Equipment -

Fleet Mix - Adjusted fleet mix to be appropriate for each land use.

Solid Waste -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	8.00	15.00
tblConstructionPhase	NumDays	230.00	360.00
tblConstructionPhase	NumDays	18.00	66.00
tblConstructionPhase	PhaseEndDate	9/17/2020	9/28/2020
tblConstructionPhase	PhaseEndDate	8/5/2021	2/14/2022
tblConstructionPhase	PhaseEndDate	8/31/2021	3/10/2022
tblConstructionPhase	PhaseEndDate	9/24/2021	6/10/2022
tblConstructionPhase	PhaseStartDate	9/18/2020	9/29/2020

tblConstructionPhase	PhaseStartDate	8/6/2021	2/15/2022
tblConstructionPhase	PhaseStartDate	9/1/2021	3/11/2022
tblEnergyUse	LightingElect	810.36	405.18
tblEnergyUse	LightingElect	3.66	1.83
tblEnergyUse	LightingElect	5.61	2.81
tblEnergyUse	NT24E	3,172.76	1,586.38
tblEnergyUse	NT24E	2.79	1.40
tblEnergyUse	NT24E	2.44	1.22
tblEnergyUse	NT24NG	6,030.00	3,015.00
tblEnergyUse	NT24NG	0.30	0.15
tblEnergyUse	T24E	877.14	438.57
tblEnergyUse	T24E	3.07	1.54
tblEnergyUse	T24E	4.58	2.29
tblEnergyUse	T24NG	9,544.50	4,772.25
tblEnergyUse	T24NG	3.47	1.74
tblEnergyUse	T24NG	1.92	0.96
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	111.35	131.00
tblFireplaces	NumberNoFireplace	13.10	0.00
tblFireplaces	NumberWood	6.55	0.00
tblFleetMix	HHD	0.03	0.00
tblFleetMix	HHD	0.03	0.00
tblFleetMix	HHD	0.03	0.02
tblFleetMix	LDA	0.55	0.80
tblFleetMix	LDA	0.55	0.84
tblFleetMix	LDA	0.55	0.81
tblFleetMix	LDT1	0.04	0.10
tblFleetMix	LDT1	0.04	0.08
tblFleetMix	LDT1	0.04	0.10
tblFleetMix	LDT2	0.20	0.08
tblFleetMix	LDT2	0.20	0.02

tblFleetMix	LDT2	0.20	0.02
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD1	0.02	0.02
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tblFleetMix	LHD2	5.8630e-003	0.00
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tblFleetMix	MCY	4.8030e-003	0.01
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tblFleetMix	MDV	0.12	0.02
tblFleetMix	MH	8.9600e-004	5.0000e-003
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tblFleetMix	MH	8.9600e-004	0.00
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tblFleetMix	MHD	0.02	0.00
tblFleetMix	MHD	0.02	0.00
tblFleetMix	OBUS	2.0870e-003	0.00
tblFleetMix	OBUS	2.0870e-003	0.00
tblFleetMix	OBUS	2.0870e-003	0.00
tblFleetMix	SBUS	7.0800e-004	0.00
tblFleetMix	SBUS	7.0800e-004	0.00
tblFleetMix	SBUS	7.0800e-004	0.00
tblFleetMix	UBUS	1.8180e-003	0.00
tblFleetMix	UBUS	1.8180e-003	0.00
tblFleetMix	UBUS	1.8180e-003	0.00
tblLandUse	LandUseSquareFeet	1,590.00	1,592.00
tblLandUse	LotAcreage	8.19	1.30
tblSequestration	NumberOfNewTrees	0.00	10.00

tblVehicleTrips	HO_TTP	40.60	40.00
tblVehicleTrips	HS_TTP	19.20	20.00
tblVehicleTrips	HW_TTP	40.20	40.00
tblVehicleTrips	ST_TR	7.16	7.32
tblVehicleTrips	ST_TR	42.04	37.75
tblVehicleTrips	SU_TR	6.07	7.32
tblVehicleTrips	SU_TR	20.43	37.75
tblVehicleTrips	WD_TR	6.59	7.32
tblVehicleTrips	WD_TR	11.03	16.19
tblVehicleTrips	WD_TR	44.32	37.75
tblWater	IndoorWaterUseRate	8,535,177.36	4,267,588.68
tblWater	IndoorWaterUseRate	216,835.17	108,417.59
tblWater	IndoorWaterUseRate	117,775.31	55,554.39
tblWater	OutdoorWaterUseRate	5,380,872.68	2,690,436.34
tblWater	OutdoorWaterUseRate	132,898.98	66,449.49
tblWater	OutdoorWaterUseRate	72,184.87	34,049.47
tblWoodstoves	NumberCatalytic	6.55	0.00
tblWoodstoves	NumberNoncatalytic	6.55	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.1258	1.0860	0.9608	2.0300e-003	0.1545	0.0540	0.2085	0.0662	0.0505	0.1167	0.0000	180.7147	180.7147	0.0314	0.0000	181.4983
2021	0.3351	2.7244	2.8956	6.4400e-003	0.2245	0.1274	0.3519	0.0602	0.1198	0.1800	0.0000	574.0459	574.0459	0.0839	0.0000	576.1442

2022	0.4826	0.4277	0.5394	1.1400e-003	0.0388	0.0200	0.0588	0.0104	0.0189	0.0292	0.0000	100.7012	100.7012	0.0153	0.0000	101.0829
Maximum	**0.4826**	**2.7244**	**2.8956**	**6.4400e-003**	**0.2245**	**0.1274**	**0.3519**	**0.0662**	**0.1198**	**0.1800**	**0.0000**	**574.0459**	**574.0459**	**0.0839**	**0.0000**	**576.1442**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.1258	1.0860	0.9608	2.0300e-003	0.0970	0.0540	0.1510	0.0357	0.0505	0.0861	0.0000	180.7146	180.7146	0.0314	0.0000	181.4982
2021	0.3351	2.7243	2.8956	6.4400e-003	0.2245	0.1274	0.3519	0.0602	0.1198	0.1800	0.0000	574.0456	574.0456	0.0839	0.0000	576.1438
2022	0.4826	0.4277	0.5394	1.1400e-003	0.0388	0.0200	0.0588	0.0104	0.0189	0.0292	0.0000	100.7011	100.7011	0.0153	0.0000	101.0828
Maximum	**0.4826**	**2.7243**	**2.8956**	**6.4400e-003**	**0.2245**	**0.1274**	**0.3519**	**0.0602**	**0.1198**	**0.1800**	**0.0000**	**574.0456**	**574.0456**	**0.0839**	**0.0000**	**576.1438**

	ROG	NOx	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**	**13.77**	**0.00**	**9.29**	**22.33**	**0.00**	**9.37**	**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	**9-1-2020**	**11-30-2020**	0.9145	0.9145
2	**12-1-2020**	**2-28-2021**	0.7799	0.7799
3	**3-1-2021**	**5-31-2021**	0.7683	0.7683
4	**6-1-2021**	**8-31-2021**	0.7672	0.7672
5	**9-1-2021**	**11-30-2021**	0.7609	0.7609
6	**12-1-2021**	**2-28-2022**	0.6551	0.6551
7	**3-1-2022**	**5-31-2022**	0.4677	0.4677
8	**6-1-2022**	**8-31-2022**	0.0522	0.0522
		Highest	0.9145	0.9145

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.5768	0.0428	1.3653	2.4000e-004		9.6700e-003	9.6700e-003		9.6700e-003	9.6700e-003	0.0000	33.6673	33.6673	2.7400e-003	5.8000e-004	33.9076
Energy	5.5200e-003	0.0472	0.0202	3.0000e-004		3.8100e-003	3.8100e-003		3.8100e-003	3.8100e-003	0.0000	172.2895	172.2895	5.9000e-003	2.0100e-003	173.0351
Mobile	0.3181	0.3589	4.0201	0.0110	1.2789	9.4600e-003	1.2884	0.3397	8.7400e-003	0.3484	0.0000	996.3289	996.3289	0.0412	0.0000	997.3599
Waste						0.0000	0.0000		0.0000	0.0000	12.8006	0.0000	12.8006	0.7565	0.0000	31.7130
Water						0.0000	0.0000		0.0000	0.0000	1.4059	28.2651	29.6710	0.1456	3.6500e-003	34.3983
Total	**0.9004**	**0.4488**	**5.4055**	**0.0116**	**1.2789**	**0.0229**	**1.3019**	**0.3397**	**0.0222**	**0.3619**	**14.2065**	**1,230.5508**	**1,244.7574**	**0.9519**	**6.2400e-003**	**1,270.4139**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.5768	0.0428	1.3653	2.4000e-004		9.6700e-003	9.6700e-003		9.6700e-003	9.6700e-003	0.0000	33.6673	33.6673	2.7400e-003	5.8000e-004	33.9076
Energy	5.5200e-003	0.0472	0.0202	3.0000e-004		3.8100e-003	3.8100e-003		3.8100e-003	3.8100e-003	0.0000	172.2895	172.2895	5.9000e-003	2.0100e-003	173.0351
Mobile	0.3181	0.3589	4.0201	0.0110	1.2789	9.4600e-003	1.2884	0.3397	8.7400e-003	0.3484	0.0000	996.3289	996.3289	0.0412	0.0000	997.3599
Waste						0.0000	0.0000		0.0000	0.0000	12.8006	0.0000	12.8006	0.7565	0.0000	31.7130
Water						0.0000	0.0000		0.0000	0.0000	1.4059	28.2651	29.6710	0.1456	3.6500e-003	34.3983
Total	**0.9004**	**0.4488**	**5.4055**	**0.0116**	**1.2789**	**0.0229**	**1.3019**	**0.3397**	**0.0222**	**0.3619**	**14.2065**	**1,230.5508**	**1,244.7574**	**0.9519**	**6.2400e-003**	**1,270.4139**

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

2.3 Vegetation

Vegetation

	CO2e
Category	MT
New Trees	7.0800
Total	**7.0800**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	9/1/2020	9/7/2020	5	5	
2	Grading	Grading	9/8/2020	9/28/2020	5	15	
3	Building Construction	Building Construction	9/29/2020	2/14/2022	5	360	
4	Paving	Paving	2/15/2022	3/10/2022	5	18	
5	Architectural Coating	Architectural Coating	3/11/2022	6/10/2022	5	66	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 7.5

Acres of Paving: 2.39

Residential Indoor: 265,275; Residential Outdoor: 88,425; Non-Residential Indoor: 4,218; Non-Residential Outdoor: 1,406; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	139.00	31.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	28.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0452	0.0000	0.0452	0.0248	0.0000	0.0248	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0102	0.1060	0.0538	1.0000e-004		5.4900e-003	5.4900e-003		5.0500e-003	5.0500e-003	0.0000	8.3577	8.3577	2.7000e-003	0.0000	8.4253
Total	**0.0102**	**0.1060**	**0.0538**	**1.0000e-004**	**0.0452**	**5.4900e-003**	**0.0507**	**0.0248**	**5.0500e-003**	**0.0299**	**0.0000**	**8.3577**	**8.3577**	**2.7000e-003**	**0.0000**	**8.4253**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-004	1.5000e-004	1.7100e-003	0.0000	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4449	0.4449	1.0000e-005	0.0000	0.4452
Total	**2.0000e-004**	**1.5000e-004**	**1.7100e-003**	**0.0000**	**4.9000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.4449**	**0.4449**	**1.0000e-005**	**0.0000**	**0.4452**

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					0.0176	0.0000	0.0176	9.6800e-003	0.0000	9.6800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0102	0.1060	0.0538	1.0000e-004		5.4900e-003	5.4900e-003		5.0500e-003	5.0500e-003	0.0000	8.3577	8.3577	2.7000e-003	0.0000	8.4252
Total	**0.0102**	**0.1060**	**0.0538**	**1.0000e-004**	**0.0176**	**5.4900e-003**	**0.0231**	**9.6800e-003**	**5.0500e-003**	**0.0147**	**0.0000**	**8.3577**	**8.3577**	**2.7000e-003**	**0.0000**	**8.4252**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-004	1.5000e-004	1.7100e-003	0.0000	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4449	0.4449	1.0000e-005	0.0000	0.4452
Total	**2.0000e-004**	**1.5000e-004**	**1.7100e-003**	**0.0000**	**4.9000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.4449**	**0.4449**	**1.0000e-005**	**0.0000**	**0.4452**

3.3 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0491	0.0000	0.0491	0.0253	0.0000	0.0253	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0182	0.1979	0.1204	2.2000e-004		9.5500e-003	9.5500e-003		8.7900e-003	8.7900e-003	0.0000	19.5441	19.5441	6.3200e-003	0.0000	19.7021

Total	**0.0182**	**0.1979**	**0.1204**	**2.2000e-004**	**0.0491**	**9.5500e-003**	**0.0587**	**0.0253**	**8.7900e-003**	**0.0341**	**0.0000**	**19.5441**	**19.5441**	**6.3200e-003**	**0.0000**	**19.7021**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-004	3.9000e-004	4.2700e-003	1.0000e-005	1.2300e-003	1.0000e-005	1.2400e-003	3.3000e-004	1.0000e-005	3.4000e-004	0.0000	1.1122	1.1122	3.0000e-005	0.0000	1.1130
Total	**5.0000e-004**	**3.9000e-004**	**4.2700e-003**	**1.0000e-005**	**1.2300e-003**	**1.0000e-005**	**1.2400e-003**	**3.3000e-004**	**1.0000e-005**	**3.4000e-004**	**0.0000**	**1.1122**	**1.1122**	**3.0000e-005**	**0.0000**	**1.1130**

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					0.0192	0.0000	0.0192	9.8500e-003	0.0000	9.8500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0182	0.1979	0.1204	2.2000e-004		9.5500e-003	9.5500e-003		8.7900e-003	8.7900e-003	0.0000	19.5440	19.5440	6.3200e-003	0.0000	19.7021
Total	**0.0182**	**0.1979**	**0.1204**	**2.2000e-004**	**0.0192**	**9.5500e-003**	**0.0287**	**9.8500e-003**	**8.7900e-003**	**0.0186**	**0.0000**	**19.5440**	**19.5440**	**6.3200e-003**	**0.0000**	**19.7021**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-004	3.9000e-004	4.2700e-003	1.0000e-005	1.2300e-003	1.0000e-005	1.2400e-003	3.3000e-004	1.0000e-005	3.4000e-004	0.0000	1.1122	1.1122	3.0000e-005	0.0000	1.1130
Total	**5.0000e-004**	**3.9000e-004**	**4.2700e-003**	**1.0000e-005**	**1.2300e-003**	**1.0000e-005**	**1.2400e-003**	**3.3000e-004**	**1.0000e-005**	**3.4000e-004**	**0.0000**	**1.1122**	**1.1122**	**3.0000e-005**	**0.0000**	**1.1130**

3.4 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	0.0721	0.6523	0.5729	9.2000e-004		0.0380	0.0380		0.0357	0.0357	0.0000	78.7474	78.7474	0.0192	0.0000	79.2277
Total	**0.0721**	**0.6523**	**0.5729**	**9.2000e-004**		**0.0380**	**0.0380**		**0.0357**	**0.0357**	**0.0000**	**78.7474**	**78.7474**	**0.0192**	**0.0000**	**79.2277**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.5700e-003	0.1130	0.0285	2.7000e-004	6.6400e-003	5.5000e-004	7.2000e-003	1.9200e-003	5.3000e-004	2.4500e-003	0.0000	25.7858	25.7858	1.7200e-003	0.0000	25.8289

Worker	0.0210	0.0162	0.1793	5.2000e-004	0.0519	4.0000e-004	0.0523	0.0138	3.7000e-004	0.0141	0.0000	46.7226	46.7226	1.3500e-003	0.0000	46.7563
Total	**0.0246**	**0.1292**	**0.2078**	**7.9000e-004**	**0.0585**	**9.5000e-004**	**0.0595**	**0.0157**	**9.0000e-004**	**0.0166**	**0.0000**	**72.5085**	**72.5085**	**3.0700e-003**	**0.0000**	**72.5851**

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	0.0721	0.6523	0.5729	9.2000e-004		0.0380	0.0380		0.0357	0.0357	0.0000	78.7473	78.7473	0.0192	0.0000	79.2276
Total	**0.0721**	**0.6523**	**0.5729**	**9.2000e-004**		**0.0380**	**0.0380**		**0.0357**	**0.0357**	**0.0000**	**78.7473**	**78.7473**	**0.0192**	**0.0000**	**79.2276**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.5700e-003	0.1130	0.0285	2.7000e-004	6.6400e-003	5.5000e-004	7.2000e-003	1.9200e-003	5.3000e-004	2.4500e-003	0.0000	25.7858	25.7858	1.7200e-003	0.0000	25.8289
Worker	0.0210	0.0162	0.1793	5.2000e-004	0.0519	4.0000e-004	0.0523	0.0138	3.7000e-004	0.0141	0.0000	46.7226	46.7226	1.3500e-003	0.0000	46.7563
Total	**0.0246**	**0.1292**	**0.2078**	**7.9000e-004**	**0.0585**	**9.5000e-004**	**0.0595**	**0.0157**	**9.0000e-004**	**0.0166**	**0.0000**	**72.5085**	**72.5085**	**3.0700e-003**	**0.0000**	**72.5851**

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2481	2.2749	2.1631	3.5100e-003		0.1251	0.1251		0.1176	0.1176	0.0000	302.2867	302.2867	0.0729	0.0000	304.1099
Total	**0.2481**	**2.2749**	**2.1631**	**3.5100e-003**		**0.1251**	**0.1251**		**0.1176**	**0.1176**	**0.0000**	**302.2867**	**302.2867**	**0.0729**	**0.0000**	**304.1099**

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	0.0116	0.3935	0.0995	1.0100e-003	0.0255	8.0000e-004	0.0263	7.3600e-003	7.7000e-004	8.1200e-003	0.0000	98.2274	98.2274	6.3300e-003	0.0000	98.3857
Worker	0.0754	0.0560	0.6331	1.9200e-003	0.1990	1.5000e-003	0.2005	0.0529	1.3800e-003	0.0542	0.0000	173.5319	173.5319	4.6700e-003	0.0000	173.6486
Total	**0.0870**	**0.4495**	**0.7325**	**2.9300e-003**	**0.2245**	**2.3000e-003**	**0.2268**	**0.0602**	**2.1500e-003**	**0.0624**	**0.0000**	**271.7593**	**271.7593**	**0.0110**	**0.0000**	**272.0343**

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	0.2481	2.2749	2.1631	3.5100e-003		0.1251	0.1251		0.1176	0.1176	0.0000	302.2863	302.2863	0.0729	0.0000	304.1095

Total	**0.2481**	**2.2749**	**2.1631**	**3.5100e-003**		**0.1251**	**0.1251**		**0.1176**	**0.1176**	**0.0000**	**302.2863**	**302.2863**	**0.0729**	**0.0000**	**304.1095**

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	0.0116	0.3935	0.0995	1.0100e-003	0.0255	8.0000e-004	0.0263	7.3600e-003	7.7000e-004	8.1200e-003	0.0000	98.2274	98.2274	6.3300e-003	0.0000	98.3857
Worker	0.0754	0.0560	0.6331	1.9200e-003	0.1990	1.5000e-003	0.2005	0.0529	1.3800e-003	0.0542	0.0000	173.5319	173.5319	4.6700e-003	0.0000	173.6486
Total	**0.0870**	**0.4495**	**0.7325**	**2.9300e-003**	**0.2245**	**2.3000e-003**	**0.2268**	**0.0602**	**2.1500e-003**	**0.0624**	**0.0000**	**271.7593**	**271.7593**	**0.0110**	**0.0000**	**272.0343**

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0265	0.2420	0.2536	4.2000e-004		0.0125	0.0125		0.0118	0.0118	0.0000	35.9174	35.9174	8.6000e-003	0.0000	36.1325
Total	**0.0265**	**0.2420**	**0.2536**	**4.2000e-004**		**0.0125**	**0.0125**		**0.0118**	**0.0118**	**0.0000**	**35.9174**	**35.9174**	**8.6000e-003**	**0.0000**	**36.1325**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.3000e-003	0.0444	0.0112	1.2000e-004	3.0300e-003	8.0000e-005	3.1100e-003	8.7000e-004	8.0000e-005	9.5000e-004	0.0000	11.5638	11.5638	7.3000e-004	0.0000	11.5819
Worker	8.4100e-003	6.0000e-003	0.0694	2.2000e-004	0.0236	1.7000e-004	0.0238	6.2800e-003	1.6000e-004	6.4400e-003	0.0000	19.8728	19.8728	5.0000e-004	0.0000	19.8854
Total	**9.7100e-003**	**0.0504**	**0.0806**	**3.4000e-004**	**0.0267**	**2.5000e-004**	**0.0269**	**7.1500e-003**	**2.4000e-004**	**7.3900e-003**	**0.0000**	**31.4366**	**31.4366**	**1.2300e-003**	**0.0000**	**31.4673**

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	0.0265	0.2420	0.2536	4.2000e-004		0.0125	0.0125		0.0118	0.0118	0.0000	35.9174	35.9174	8.6000e-003	0.0000	36.1325
Total	**0.0265**	**0.2420**	**0.2536**	**4.2000e-004**		**0.0125**	**0.0125**		**0.0118**	**0.0118**	**0.0000**	**35.9174**	**35.9174**	**8.6000e-003**	**0.0000**	**36.1325**

Mitigated Construction Off-Site

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

Vendor	1.3000e-003	0.0444	0.0112	1.2000e-004	3.0300e-003	8.0000e-005	3.1100e-003	8.7000e-004	8.0000e-005	9.5000e-004	0.0000	11.5638	11.5638	7.3000e-004	0.0000	11.5819
Worker	8.4100e-003	6.0000e-003	0.0694	2.2000e-004	0.0236	1.7000e-004	0.0238	6.2800e-003	1.6000e-004	6.4400e-003	0.0000	19.8728	19.8728	5.0000e-004	0.0000	19.8854
Total	**9.7100e-003**	**0.0504**	**0.0806**	**3.4000e-004**	**0.0267**	**2.5000e-004**	**0.0269**	**7.1500e-003**	**2.4000e-004**	**7.3900e-003**	**0.0000**	**31.4366**	**31.4366**	**1.2300e-003**	**0.0000**	**31.4673**

3.5 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.7900e-003	0.0857	0.1098	1.7000e-004		4.3900e-003	4.3900e-003		4.0500e-003	4.0500e-003	0.0000	14.7383	14.7383	4.6300e-003	0.0000	14.8540
Paving	3.0100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0118**	**0.0857**	**0.1098**	**1.7000e-004**		**4.3900e-003**	**4.3900e-003**		**4.0500e-003**	**4.0500e-003**	**0.0000**	**14.7383**	**14.7383**	**4.6300e-003**	**0.0000**	**14.8540**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-004	5.0000e-004	5.8000e-003	2.0000e-005	1.9700e-003	1.0000e-005	1.9900e-003	5.2000e-004	1.0000e-005	5.4000e-004	0.0000	1.6603	1.6603	4.0000e-005	0.0000	1.6613
Total	**7.0000e-004**	**5.0000e-004**	**5.8000e-003**	**2.0000e-005**	**1.9700e-003**	**1.0000e-005**	**1.9900e-003**	**5.2000e-004**	**1.0000e-005**	**5.4000e-004**	**0.0000**	**1.6603**	**1.6603**	**4.0000e-005**	**0.0000**	**1.6613**

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	8.7900e-003	0.0857	0.1098	1.7000e-004		4.3900e-003	4.3900e-003		4.0500e-003	4.0500e-003	0.0000	14.7383	14.7383	4.6300e-003	0.0000	14.8540
Paving	3.0100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0118**	**0.0857**	**0.1098**	**1.7000e-004**		**4.3900e-003**	**4.3900e-003**		**4.0500e-003**	**4.0500e-003**	**0.0000**	**14.7383**	**14.7383**	**4.6300e-003**	**0.0000**	**14.8540**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-004	5.0000e-004	5.8000e-003	2.0000e-005	1.9700e-003	1.0000e-005	1.9900e-003	5.2000e-004	1.0000e-005	5.4000e-004	0.0000	1.6603	1.6603	4.0000e-005	0.0000	1.6613
Total	**7.0000e-004**	**5.0000e-004**	**5.8000e-003**	**2.0000e-005**	**1.9700e-003**	**1.0000e-005**	**1.9900e-003**	**5.2000e-004**	**1.0000e-005**	**5.4000e-004**	**0.0000**	**1.6603**	**1.6603**	**4.0000e-005**	**0.0000**	**1.6613**

3.6 Architectural Coating - 2022

Unmitigated Construction On-Site

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

Archit. Coating	0.4236					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.7500e-003	0.0465	0.0599	1.0000e-004		2.7000e-003	2.7000e-003		2.7000e-003	2.7000e-003	0.0000	8.4257	8.4257	5.5000e-004	0.0000	8.4395
Total	**0.4303**	**0.0465**	**0.0599**	**1.0000e-004**		**2.7000e-003**	**2.7000e-003**		**2.7000e-003**	**2.7000e-003**	**0.0000**	**8.4257**	**8.4257**	**5.5000e-004**	**0.0000**	**8.4395**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.6100e-003	2.5700e-003	0.0298	9.0000e-005	0.0101	7.0000e-005	0.0102	2.6900e-003	7.0000e-005	2.7600e-003	0.0000	8.5229	8.5229	2.1000e-004	0.0000	8.5282
Total	**3.6100e-003**	**2.5700e-003**	**0.0298**	**9.0000e-005**	**0.0101**	**7.0000e-005**	**0.0102**	**2.6900e-003**	**7.0000e-005**	**2.7600e-003**	**0.0000**	**8.5229**	**8.5229**	**2.1000e-004**	**0.0000**	**8.5282**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.4236					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.7500e-003	0.0465	0.0599	1.0000e-004		2.7000e-003	2.7000e-003		2.7000e-003	2.7000e-003	0.0000	8.4257	8.4257	5.5000e-004	0.0000	8.4394
Total	**0.4303**	**0.0465**	**0.0599**	**1.0000e-004**		**2.7000e-003**	**2.7000e-003**		**2.7000e-003**	**2.7000e-003**	**0.0000**	**8.4257**	**8.4257**	**5.5000e-004**	**0.0000**	**8.4394**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.6100e-003	2.5700e-003	0.0298	9.0000e-005	0.0101	7.0000e-005	0.0102	2.6900e-003	7.0000e-005	2.7600e-003	0.0000	8.5229	8.5229	2.1000e-004	0.0000	8.5282
Total	**3.6100e-003**	**2.5700e-003**	**0.0298**	**9.0000e-005**	**0.0101**	**7.0000e-005**	**0.0102**	**2.6900e-003**	**7.0000e-005**	**2.7600e-003**	**0.0000**	**8.5229**	**8.5229**	**2.1000e-004**	**0.0000**	**8.5282**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3181	0.3589	4.0201	0.0110	1.2789	9.4600e-003	1.2884	0.3397	8.7400e-003	0.3484	0.0000	996.3289	996.3289	0.0412	0.0000	997.3599
Unmitigated	0.3181	0.3589	4.0201	0.0110	1.2789	9.4600e-003	1.2884	0.3397	8.7400e-003	0.3484	0.0000	996.3289	996.3289	0.0412	0.0000	997.3599

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT

Apartments Low Rise	958.92	958.92	958.92	3,266,119	3,266,119
General Office Building	19.75	3.00	1.28	47,420	47,420
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Strip Mall	60.02	60.02	60.02	114,199	114,199
Total	1,038.69	1,021.94	1,020.22	3,427,738	3,427,738

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.00	20.00	40.00	86	11	3
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Strip Mall	16.60	8.40	6.90	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
Apartments Low Rise	0.804000	0.100500	0.080400	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.010100	0.000000	0.005000
General Office Building	0.843200	0.078400	0.019600	0.019600	0.019600	0.000000	0.000000	0.000000	0.000000	0.000000	0.019600	0.000000	0.000000
Other Non-Asphalt Surfaces	0.552111	0.043066	0.201891	0.118512	0.015605	0.005863	0.021387	0.031253	0.002087	0.001818	0.004803	0.000708	0.000896
Parking Lot	0.552111	0.043066	0.201891	0.118512	0.015605	0.005863	0.021387	0.031253	0.002087	0.001818	0.004803	0.000708	0.000896
Strip Mall	0.808100	0.101000	0.020200	0.020200	0.020200	0.000000	0.000000	0.020200	0.000000	0.000000	0.010100	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	117.6439	117.6439	4.8600e-003	1.0000e-003	118.0648
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	117.6439	117.6439	4.8600e-003	1.0000e-003	118.0648
NaturalGas Mitigated	5.5200e-003	0.0472	0.0202	3.0000e-004		3.8100e-003	3.8100e-003		3.8100e-003	3.8100e-003	0.0000	54.6456	54.6456	1.0500e-003	1.0000e-003	54.9703
NaturalGas Unmitigated	5.5200e-003	0.0472	0.0202	3.0000e-004		3.8100e-003	3.8100e-003		3.8100e-003	3.8100e-003	0.0000	54.6456	54.6456	1.0500e-003	1.0000e-003	54.9703

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					
Apartments Low Rise	1.02013e+006	5.5000e-003	0.0470	0.0200	3.0000e-004		3.8000e-003	3.8000e-003		3.8000e-003	3.8000e-003	0.0000	54.4380	54.4380	1.0400e-003	1.0000e-003	54.7615
General Office Building	2122.8	1.0000e-005	1.0000e-004	9.0000e-005	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.1133	0.1133	0.0000	0.0000	0.1140
Other Non-Asphalt Surfaces	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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	1767.12	1.0000e-005	9.0000e-005	7.0000e-005	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.0943	0.0943	0.0000	0.0000	0.0949
Total		**5.5200e-003**	**0.0472**	**0.0202**	**3.0000e-004**		**3.8200e-003**	**3.8200e-003**		**3.8200e-003**	**3.8200e-003**	**0.0000**	**54.6456**	**54.6456**	**1.0400e-003**	**1.0000e-003**	**54.9703**

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					
Apartments Low Rise	1.02013e+006	5.5000e-003	0.0470	0.0200	3.0000e-004		3.8000e-003	3.8000e-003		3.8000e-003	3.8000e-003	0.0000	54.4380	54.4380	1.0400e-003	1.0000e-003	54.7615

General Office Building	2122.8	1.0000e-005	1.0000e-004	9.0000e-005	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.1133	0.1133	0.0000	0.0000	0.1140
Other Non-Asphalt Surfaces	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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	1767.12	1.0000e-005	9.0000e-005	7.0000e-005	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.0943	0.0943	0.0000	0.0000	0.0949
Total		**5.5200e-003**	**0.0472**	**0.0202**	**3.0000e-004**		**3.8200e-003**	**3.8200e-003**		**3.8200e-003**	**3.8200e-003**	**0.0000**	**54.6456**	**54.6456**	**1.0400e-003**	**1.0000e-003**	**54.9703**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	318347	101.4322	4.1900e-003	8.7000e-004	101.7951
General Office Building	5819.4	1.8542	8.0000e-005	2.0000e-005	1.8608
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	35000	11.1518	4.6000e-004	1.0000e-004	11.1917
Strip Mall	10061.4	3.2058	1.3000e-004	3.0000e-005	3.2173
Total		**117.6439**	**4.8600e-003**	**1.0200e-003**	**118.0648**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	318347	101.4322	4.1900e-003	8.7000e-004	101.7951

General Office Building	5819.4	1.8542	8.0000e-005	2.0000e-005	1.8608
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	35000	11.1518	4.6000e-004	1.0000e-004	11.1917
Strip Mall	10061.4	3.2058	1.3000e-004	3.0000e-005	3.2173
Total		**117.6439**	**4.8600e-003**	**1.0200e-003**	**118.0648**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.5768	0.0428	1.3653	2.4000e-004		9.6700e-003	9.6700e-003		9.6700e-003	9.6700e-003	0.0000	33.6673	33.6673	2.7400e-003	5.8000e-004	33.9076
Unmitigated	0.5768	0.0428	1.3653	2.4000e-004		9.6700e-003	9.6700e-003		9.6700e-003	9.6700e-003	0.0000	33.6673	33.6673	2.7400e-003	5.8000e-004	33.9076

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	0.0424					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Consumer Products	0.4903					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	3.1800e-003	0.0272	0.0116	1.7000e-004		2.2000e-003	2.2000e-003		2.2000e-003	2.2000e-003	0.0000	31.4580	31.4580	6.0000e-004	5.8000e-004	31.6449
Landscaping	0.0410	0.0156	1.3537	7.0000e-005		7.4800e-003	7.4800e-003		7.4800e-003	7.4800e-003	0.0000	2.2093	2.2093	2.1400e-003	0.0000	2.2627
Total	**0.5768**	**0.0428**	**1.3653**	**2.4000e-004**		**9.6800e-003**	**9.6800e-003**		**9.6800e-003**	**9.6800e-003**	**0.0000**	**33.6673**	**33.6673**	**2.7400e-003**	**5.8000e-004**	**33.9076**

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	0.0424					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4903					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	3.1800e-003	0.0272	0.0116	1.7000e-004		2.2000e-003	2.2000e-003		2.2000e-003	2.2000e-003	0.0000	31.4580	31.4580	6.0000e-004	5.8000e-004	31.6449
Landscaping	0.0410	0.0156	1.3537	7.0000e-005		7.4800e-003	7.4800e-003		7.4800e-003	7.4800e-003	0.0000	2.2093	2.2093	2.1400e-003	0.0000	2.2627
Total	**0.5768**	**0.0428**	**1.3653**	**2.4000e-004**		**9.6800e-003**	**9.6800e-003**		**9.6800e-003**	**9.6800e-003**	**0.0000**	**33.6673**	**33.6673**	**2.7400e-003**	**5.8000e-004**	**33.9076**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			

Mitigated	29.6710	0.1456	3.6500e-003	34.3983
Unmitigated	29.6710	0.1456	3.6500e-003	34.3983

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	4.26759 / 2.69044	28.5830	0.1402	3.5200e-003	33.1354
General Office Building	0.108418 / 0.0664495	0.7194	3.5600e-003	9.0000e-005	0.8351
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.0555544 /	0.3686	1.8200e-003	5.0000e-005	0.4279
Total		**29.6710**	**0.1456**	**3.6600e-003**	**34.3983**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	4.26759 / 2.69044	28.5830	0.1402	3.5200e-003	33.1354
General Office Building	0.108418 / 0.0664495	0.7194	3.5600e-003	9.0000e-005	0.8351
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000

Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.0555544 /	0.3686	1.8200e-003	5.0000e-005	0.4279
Total		**29.6710**	**0.1456**	**3.6600e-003**	**34.3983**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	12.8006	0.7565	0.0000	31.7130
Unmitigated	12.8006	0.7565	0.0000	31.7130

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	60.26	12.2322	0.7229	0.0000	30.3049
General Office Building	1.13	0.2294	0.0136	0.0000	0.5683
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000

Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	1.67	0.3390	0.0200	0.0000	0.8399
Total		**12.8006**	**0.7565**	**0.0000**	**31.7130**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	60.26	12.2322	0.7229	0.0000	30.3049
General Office Building	1.13	0.2294	0.0136	0.0000	0.5683
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	1.67	0.3390	0.0200	0.0000	0.8399
Total		**12.8006**	**0.7565**	**0.0000**	**31.7130**

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

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	7.0800	0.0000	0.0000	7.0800

11.2 Net New Trees

Species Class

	Number of Trees	Total CO2	CH4	N2O	CO2e
		MT			
Miscellaneous	10	7.0800	0.0000	0.0000	7.0800
Total		**7.0800**	**0.0000**	**0.0000**	**7.0800**

Westbury Residential Development Project
South Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	1.22	1000sqft	0.03	1,220.00	0
Other Non-Asphalt Surfaces	0.09	Acre	0.09	3,920.40	0
Parking Lot	100.00	1000sqft	2.30	100,000.00	0
Apartments Low Rise	131.00	Dwelling Unit	1.30	131,000.00	375
Strip Mall	1.59	1000sqft	0.04	1,592.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Based on 131 residential units, four commercial ready units (represented by 1,220 sf of general office), and a 1,592 sf commercial space.

Construction Phase - Based on construction starting in Sept. 2020 and finishing in June 2022.

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Grading -

Architectural Coating - Assume architechtual coatings comply with SCAQMD Rule 1113.

Vehicle Trips - Based on the traffic study.

Woodstoves - Assume no woodstoves or wood-burning fireplaces and all residences have gas fireplaces.

Area Coating - Assume architechtual coatings comply with SCAQMD Rule 1113.

Energy Use - Assume all residences comply with 2019 CBC and Green Building codes. All energy use reduced by 50%.

Water And Wastewater - Assume all residences comply with 2019 CBC and Green Building codes. All water use reduced by 50%.

Land Use Change -

Sequestration - Estimated number of trees based on site plan.

Construction Off-road Equipment Mitigation - Dust control measures as required by SCAQMD Rule 403.

Mobile Land Use Mitigation -

Energy Mitigation -

Operational Off-Road Equipment -

Fleet Mix - Adjusted fleet mix to be appropriate for each land use.

Solid Waste -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	8.00	15.00
tblConstructionPhase	NumDays	230.00	360.00
tblConstructionPhase	NumDays	18.00	66.00
tblConstructionPhase	PhaseEndDate	9/17/2020	9/28/2020
tblConstructionPhase	PhaseEndDate	8/5/2021	2/14/2022
tblConstructionPhase	PhaseEndDate	8/31/2021	3/10/2022
tblConstructionPhase	PhaseEndDate	9/24/2021	6/10/2022
tblConstructionPhase	PhaseStartDate	9/18/2020	9/29/2020

tblConstructionPhase	PhaseStartDate	8/6/2021	2/15/2022
tblConstructionPhase	PhaseStartDate	9/1/2021	3/11/2022
tblEnergyUse	LightingElect	810.36	405.18
tblEnergyUse	LightingElect	3.66	1.83
tblEnergyUse	LightingElect	5.61	2.81
tblEnergyUse	NT24E	3,172.76	1,586.38
tblEnergyUse	NT24E	2.79	1.40
tblEnergyUse	NT24E	2.44	1.22
tblEnergyUse	NT24NG	6,030.00	3,015.00
tblEnergyUse	NT24NG	0.30	0.15
tblEnergyUse	T24E	877.14	438.57
tblEnergyUse	T24E	3.07	1.54
tblEnergyUse	T24E	4.58	2.29
tblEnergyUse	T24NG	9,544.50	4,772.25
tblEnergyUse	T24NG	3.47	1.74
tblEnergyUse	T24NG	1.92	0.96
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	111.35	131.00
tblFireplaces	NumberNoFireplace	13.10	0.00
tblFireplaces	NumberWood	6.55	0.00
tblFleetMix	HHD	0.03	0.00
tblFleetMix	HHD	0.03	0.00
tblFleetMix	HHD	0.03	0.02
tblFleetMix	LDA	0.55	0.80
tblFleetMix	LDA	0.55	0.84
tblFleetMix	LDA	0.55	0.81
tblFleetMix	LDT1	0.04	0.10
tblFleetMix	LDT1	0.04	0.08
tblFleetMix	LDT1	0.04	0.10
tblFleetMix	LDT2	0.20	0.08
tblFleetMix	LDT2	0.20	0.02

tblFleetMix	LDT2	0.20	0.02
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD2	5.8630e-003	0.00
tblFleetMix	LHD2	5.8630e-003	0.00
tblFleetMix	LHD2	5.8630e-003	0.00
tblFleetMix	MCY	4.8030e-003	0.01
tblFleetMix	MCY	4.8030e-003	0.02
tblFleetMix	MCY	4.8030e-003	0.01
tblFleetMix	MDV	0.12	0.00
tblFleetMix	MDV	0.12	0.02
tblFleetMix	MDV	0.12	0.02
tblFleetMix	MH	8.9600e-004	5.0000e-003
tblFleetMix	MH	8.9600e-004	0.00
tblFleetMix	MH	8.9600e-004	0.00
tblFleetMix	MHD	0.02	0.00
tblFleetMix	MHD	0.02	0.00
tblFleetMix	MHD	0.02	0.00
tblFleetMix	OBUS	2.0870e-003	0.00
tblFleetMix	OBUS	2.0870e-003	0.00
tblFleetMix	OBUS	2.0870e-003	0.00
tblFleetMix	SBUS	7.0800e-004	0.00
tblFleetMix	SBUS	7.0800e-004	0.00
tblFleetMix	SBUS	7.0800e-004	0.00
tblFleetMix	UBUS	1.8180e-003	0.00
tblFleetMix	UBUS	1.8180e-003	0.00
tblFleetMix	UBUS	1.8180e-003	0.00
tblLandUse	LandUseSquareFeet	1,590.00	1,592.00
tblLandUse	LotAcreage	8.19	1.30
tblSequestration	NumberOfNewTrees	0.00	10.00

tblVehicleTrips	HO_TTP	40.60	40.00
tblVehicleTrips	HS_TTP	19.20	20.00
tblVehicleTrips	HW_TTP	40.20	40.00
tblVehicleTrips	ST_TR	7.16	7.32
tblVehicleTrips	ST_TR	42.04	37.75
tblVehicleTrips	SU_TR	6.07	7.32
tblVehicleTrips	SU_TR	20.43	37.75
tblVehicleTrips	WD_TR	6.59	7.32
tblVehicleTrips	WD_TR	11.03	16.19
tblVehicleTrips	WD_TR	44.32	37.75
tblWater	IndoorWaterUseRate	8,535,177.36	4,267,588.68
tblWater	IndoorWaterUseRate	216,835.17	108,417.59
tblWater	IndoorWaterUseRate	117,775.31	55,554.39
tblWater	OutdoorWaterUseRate	5,380,872.68	2,690,436.34
tblWater	OutdoorWaterUseRate	132,898.98	66,449.49
tblWater	OutdoorWaterUseRate	72,184.87	34,049.47
tblWoodstoves	NumberCatalytic	6.55	0.00
tblWoodstoves	NumberNoncatalytic	6.55	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

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					
2020	4.1572	42.4719	23.3081	0.0508	18.2675	2.1990	20.4664	9.9840	2.0230	12.0071	0.0000	4,988.6486	4,988.6486	1.1978	0.0000	5,006.7187
2021	2.5699	20.7803	22.5151	0.0502	1.7521	0.9762	2.7282	0.4692	0.9177	1.3868	0.0000	4,931.2581	4,931.2581	0.7094	0.0000	4,948.9927

2022	13.1506	18.7783	21.8723	0.0496	1.7521	0.8255	2.5775	0.4692	0.7765	1.2456	0.0000	4,869.7771	4,869.7771	0.6996	0.0000	4,887.2659
Maximum	**13.1506**	**42.4719**	**23.3081**	**0.0508**	**18.2675**	**2.1990**	**20.4664**	**9.9840**	**2.0230**	**12.0071**	**0.0000**	**4,988.6486**	**4,988.6486**	**1.1978**	**0.0000**	**5,006.7187**

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					
2020	4.1572	42.4719	23.3081	0.0508	7.2470	2.1990	9.4460	3.9263	2.0230	5.9494	0.0000	4,988.6486	4,988.6486	1.1978	0.0000	5,006.7187
2021	2.5699	20.7803	22.5151	0.0502	1.7521	0.9762	2.7282	0.4692	0.9177	1.3868	0.0000	4,931.2581	4,931.2581	0.7094	0.0000	4,948.9927
2022	13.1506	18.7783	21.8723	0.0496	1.7521	0.8255	2.5775	0.4692	0.7765	1.2456	0.0000	4,869.7771	4,869.7771	0.6996	0.0000	4,887.2659
Maximum	**13.1506**	**42.4719**	**23.3081**	**0.0508**	**7.2470**	**2.1990**	**9.4460**	**3.9263**	**2.0230**	**5.9494**	**0.0000**	**4,988.6486**	**4,988.6486**	**1.1978**	**0.0000**	**5,006.7187**

	ROG	NOx	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**	**50.62**	**0.00**	**42.76**	**55.46**	**0.00**	**41.38**	**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	3.5005	2.2979	11.7545	0.0144		0.2355	0.2355		0.2355	0.2355	0.0000	2,793.6005	2,793.6005	0.0720	0.0509	2,810.5566
Energy	0.0303	0.2586	0.1105	1.6500e-003		0.0209	0.0209		0.0209	0.0209		330.0628	330.0628	6.3300e-003	6.0500e-003	332.0241
Mobile	1.8949	1.7841	23.2814	0.0639	7.1931	0.0523	7.2454	1.9076	0.0483	1.9559		6,365.1526	6,365.1526	0.2555		6,371.5388

Total	**5.4256**	**4.3406**	**35.1464**	**0.0800**	**7.1931**	**0.3087**	**7.5018**	**1.9076**	**0.3047**	**2.2123**	**0.0000**	**9,488.8158**	**9,488.8158**	**0.3338**	**0.0569**	**9,514.1195**

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	3.5005	2.2979	11.7545	0.0144		0.2355	0.2355		0.2355	0.2355	0.0000	2,793.6005	2,793.6005	0.0720	0.0509	2,810.5566
Energy	0.0303	0.2586	0.1105	1.6500e-003		0.0209	0.0209		0.0209	0.0209		330.0628	330.0628	6.3300e-003	6.0500e-003	332.0241
Mobile	1.8949	1.7841	23.2814	0.0639	7.1931	0.0523	7.2454	1.9076	0.0483	1.9559		6,365.1526	6,365.1526	0.2555		6,371.5388
Total	**5.4256**	**4.3406**	**35.1464**	**0.0800**	**7.1931**	**0.3087**	**7.5018**	**1.9076**	**0.3047**	**2.2123**	**0.0000**	**9,488.8158**	**9,488.8158**	**0.3338**	**0.0569**	**9,514.1195**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	9/1/2020	9/7/2020	5	5	
2	Grading	Grading	9/8/2020	9/28/2020	5	15	
3	Building Construction	Building Construction	9/29/2020	2/14/2022	5	360	
4	Paving	Paving	2/15/2022	3/10/2022	5	18	
5	Architectural Coating	Architectural Coating	3/11/2022	6/10/2022	5	66	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 7.5

Acres of Paving: 2.39

Residential Indoor: 265,275; Residential Outdoor: 88,425; Non-Residential Indoor: 4,218; Non-Residential Outdoor: 1,406; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	139.00	31.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	28.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216		3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**4.0765**	**42.4173**	**21.5136**	**0.0380**	**18.0663**	**2.1974**	**20.2637**	**9.9307**	**2.0216**	**11.9523**		**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

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	0.0807	0.0546	0.7336	2.0700e-003	0.2012	1.5300e-003	0.2027	0.0534	1.4100e-003	0.0548		205.8905	205.8905	5.9300e-003		206.0389
Total	**0.0807**	**0.0546**	**0.7336**	**2.0700e-003**	**0.2012**	**1.5300e-003**	**0.2027**	**0.0534**	**1.4100e-003**	**0.0548**		**205.8905**	**205.8905**	**5.9300e-003**		**206.0389**

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					7.0458	0.0000	7.0458	3.8730	0.0000	3.8730			0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216	0.0000	3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**4.0765**	**42.4173**	**21.5136**	**0.0380**	**7.0458**	**2.1974**	**9.2433**	**3.8730**	**2.0216**	**5.8946**	**0.0000**	**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

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	0.0807	0.0546	0.7336	2.0700e-003	0.2012	1.5300e-003	0.2027	0.0534	1.4100e-003	0.0548		205.8905	205.8905	5.9300e-003		206.0389
Total	**0.0807**	**0.0546**	**0.7336**	**2.0700e-003**	**0.2012**	**1.5300e-003**	**0.2027**	**0.0534**	**1.4100e-003**	**0.0548**		**205.8905**	**205.8905**	**5.9300e-003**		**206.0389**

3.3 Grading - 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					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000

Off-Road	2.4288	26.3859	16.0530	0.0297		1.2734	1.2734		1.1716	1.1716		2,872.4851	2,872.4851	0.9290		2,895.7106
Total	**2.4288**	**26.3859**	**16.0530**	**0.0297**	**6.5523**	**1.2734**	**7.8258**	**3.3675**	**1.1716**	**4.5390**		**2,872.4851**	**2,872.4851**	**0.9290**		**2,895.7106**

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	0.0673	0.0455	0.6114	1.7200e-003	0.1677	1.2800e-003	0.1689	0.0445	1.1800e-003	0.0456		171.5755	171.5755	4.9400e-003		171.6991
Total	**0.0673**	**0.0455**	**0.6114**	**1.7200e-003**	**0.1677**	**1.2800e-003**	**0.1689**	**0.0445**	**1.1800e-003**	**0.0456**		**171.5755**	**171.5755**	**4.9400e-003**		**171.6991**

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					2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000			0.0000
Off-Road	2.4288	26.3859	16.0530	0.0297		1.2734	1.2734		1.1716	1.1716	0.0000	2,872.4851	2,872.4851	0.9290		2,895.7106
Total	**2.4288**	**26.3859**	**16.0530**	**0.0297**	**2.5554**	**1.2734**	**3.8288**	**1.3133**	**1.1716**	**2.4849**	**0.0000**	**2,872.4851**	**2,872.4851**	**0.9290**		**2,895.7106**

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	0.0673	0.0455	0.6114	1.7200e-003	0.1677	1.2800e-003	0.1689	0.0445	1.1800e-003	0.0456		171.5755	171.5755	4.9400e-003		171.6991
Total	**0.0673**	**0.0455**	**0.6114**	**1.7200e-003**	**0.1677**	**1.2800e-003**	**0.1689**	**0.0445**	**1.1800e-003**	**0.0456**		**171.5755**	**171.5755**	**4.9400e-003**		**171.6991**

3.4 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	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**		**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

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	0.1029	3.2650	0.7942	7.9100e-003	0.1984	0.0162	0.2145	0.0571	0.0155	0.0726		845.6531	845.6531	0.0541		847.0062
Worker	0.6235	0.4215	5.6654	0.0160	1.5537	0.0119	1.5655	0.4121	0.0109	0.4230		1,589.9325	1,589.9325	0.0458		1,591.0780
Total	**0.7264**	**3.6865**	**6.4596**	**0.0239**	**1.7521**	**0.0280**	**1.7801**	**0.4692**	**0.0264**	**0.4955**		**2,435.5856**	**2,435.5856**	**0.1000**		**2,438.0842**

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	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**	**0.0000**	**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

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	0.1029	3.2650	0.7942	7.9100e-003	0.1984	0.0162	0.2145	0.0571	0.0155	0.0726		845.6531	845.6531	0.0541		847.0062
Worker	0.6235	0.4215	5.6654	0.0160	1.5537	0.0119	1.5655	0.4121	0.0109	0.4230		1,589.9325	1,589.9325	0.0458		1,591.0780
Total	**0.7264**	**3.6865**	**6.4596**	**0.0239**	**1.7521**	**0.0280**	**1.7801**	**0.4692**	**0.0264**	**0.4955**		**2,435.5856**	**2,435.5856**	**0.1000**		**2,438.0842**

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**		**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

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	0.0872	2.9688	0.7209	7.8400e-003	0.1984	6.0600e-003	0.2044	0.0571	5.8000e-003	0.0629		839.3056	839.3056	0.0519		840.6031
Worker	0.5817	0.3794	5.2190	0.0154	1.5537	0.0115	1.5652	0.4121	0.0106	0.4226		1,538.5886	1,538.5886	0.0415		1,539.6253
Total	**0.6690**	**3.3482**	**5.9399**	**0.0233**	**1.7521**	**0.0176**	**1.7696**	**0.4692**	**0.0164**	**0.4855**		**2,377.8942**	**2,377.8942**	**0.0934**		**2,380.2285**

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	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**	**0.0000**	**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

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	0.0872	2.9688	0.7209	7.8400e-003	0.1984	6.0600e-003	0.2044	0.0571	5.8000e-003	0.0629		839.3056	839.3056	0.0519		840.6031
Worker	0.5817	0.3794	5.2190	0.0154	1.5537	0.0115	1.5652	0.4121	0.0106	0.4226		1,538.5886	1,538.5886	0.0415		1,539.6253
Total	**0.6690**	**3.3482**	**5.9399**	**0.0233**	**1.7521**	**0.0176**	**1.7696**	**0.4692**	**0.0164**	**0.4855**		**2,377.8942**	**2,377.8942**	**0.0934**		**2,380.2285**

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

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	0.0818	2.8199	0.6825	7.7700e-003	0.1984	5.2700e-003	0.2036	0.0571	5.0400e-003	0.0622		831.9477	831.9477	0.0501		833.2007
Worker	0.5457	0.3428	4.8263	0.0149	1.5537	0.0112	1.5649	0.4121	0.0103	0.4223		1,483.4958	1,483.4958	0.0375		1,484.4330
Total	**0.6276**	**3.1627**	**5.5089**	**0.0227**	**1.7521**	**0.0164**	**1.7685**	**0.4692**	**0.0153**	**0.4845**		**2,315.4435**	**2,315.4435**	**0.0876**		**2,317.6336**

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	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

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	0.0818	2.8199	0.6825	7.7700e-003	0.1984	5.2700e-003	0.2036	0.0571	5.0400e-003	0.0622		831.9477	831.9477	0.0501		833.2007
Worker	0.5457	0.3428	4.8263	0.0149	1.5537	0.0112	1.5649	0.4121	0.0103	0.4223		1,483.4958	1,483.4958	0.0375		1,484.4330
Total	**0.6276**	**3.1627**	**5.5089**	**0.0227**	**1.7521**	**0.0164**	**1.7685**	**0.4692**	**0.0153**	**0.4845**		**2,315.4435**	**2,315.4435**	**0.0876**		**2,317.6336**

3.5 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9765	9.5221	12.1940	0.0189		0.4877	0.4877		0.4504	0.4504		1,805.1297	1,805.1297	0.5672		1,819.3091
Paving	0.3348					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3113**	**9.5221**	**12.1940**	**0.0189**		**0.4877**	**0.4877**		**0.4504**	**0.4504**		**1,805.1297**	**1,805.1297**	**0.5672**		**1,819.3091**

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	0.0785	0.0493	0.6944	2.1400e-003	0.2236	1.6100e-003	0.2252	0.0593	1.4800e-003	0.0608		213.4526	213.4526	5.3900e-003		213.5875
Total	**0.0785**	**0.0493**	**0.6944**	**2.1400e-003**	**0.2236**	**1.6100e-003**	**0.2252**	**0.0593**	**1.4800e-003**	**0.0608**		**213.4526**	**213.4526**	**5.3900e-003**		**213.5875**

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	0.9765	9.5221	12.1940	0.0189		0.4877	0.4877		0.4504	0.4504	0.0000	1,805.1297	1,805.1297	0.5672		1,819.3091
Paving	0.3348					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3113**	**9.5221**	**12.1940**	**0.0189**		**0.4877**	**0.4877**		**0.4504**	**0.4504**	**0.0000**	**1,805.1297**	**1,805.1297**	**0.5672**		**1,819.3091**

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	0.0785	0.0493	0.6944	2.1400e-003	0.2236	1.6100e-003	0.2252	0.0593	1.4800e-003	0.0608		213.4526	213.4526	5.3900e-003		213.5875
Total	**0.0785**	**0.0493**	**0.6944**	**2.1400e-003**	**0.2236**	**1.6100e-003**	**0.2252**	**0.0593**	**1.4800e-003**	**0.0608**		**213.4526**	**213.4526**	**5.3900e-003**		**213.5875**

3.6 Architectural Coating - 2022

Unmitigated Construction On-Site

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

Category	lb/day										lb/day					
Archit. Coating	12.8361					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**13.0407**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

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	0.1099	0.0691	0.9722	3.0000e-003	0.3130	2.2500e-003	0.3152	0.0830	2.0700e-003	0.0851		298.8337	298.8337	7.5500e-003		299.0225
Total	**0.1099**	**0.0691**	**0.9722**	**3.0000e-003**	**0.3130**	**2.2500e-003**	**0.3152**	**0.0830**	**2.0700e-003**	**0.0851**		**298.8337**	**298.8337**	**7.5500e-003**		**299.0225**

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	12.8361					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**13.0407**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

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	0.1099	0.0691	0.9722	3.0000e-003	0.3130	2.2500e-003	0.3152	0.0830	2.0700e-003	0.0851		298.8337	298.8337	7.5500e-003		299.0225
Total	**0.1099**	**0.0691**	**0.9722**	**3.0000e-003**	**0.3130**	**2.2500e-003**	**0.3152**	**0.0830**	**2.0700e-003**	**0.0851**		**298.8337**	**298.8337**	**7.5500e-003**		**299.0225**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.8949	1.7841	23.2814	0.0639	7.1931	0.0523	7.2454	1.9076	0.0483	1.9559		6,365.1526	6,365.1526	0.2555		6,371.5388
Unmitigated	1.8949	1.7841	23.2814	0.0639	7.1931	0.0523	7.2454	1.9076	0.0483	1.9559		6,365.1526	6,365.1526	0.2555		6,371.5388

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	958.92	958.92	958.92	3,266,119	3,266,119
General Office Building	19.75	3.00	1.28	47,420	47,420
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Strip Mall	60.02	60.02	60.02	114,199	114,199
Total	1,038.69	1,021.94	1,020.22	3,427,738	3,427,738

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.00	20.00	40.00	86	11	3
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Strip Mall	16.60	8.40	6.90	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
Apartments Low Rise	0.804000	0.100500	0.080400	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.010100	0.000000	0.005000
General Office Building	0.843200	0.078400	0.019600	0.019600	0.019600	0.000000	0.000000	0.000000	0.000000	0.000000	0.019600	0.000000	0.000000
Other Non-Asphalt Surfaces	0.552111	0.043066	0.201891	0.118512	0.015605	0.005863	0.021387	0.031253	0.002087	0.001818	0.004803	0.000708	0.000896
Parking Lot	0.552111	0.043066	0.201891	0.118512	0.015605	0.005863	0.021387	0.031253	0.002087	0.001818	0.004803	0.000708	0.000896
Strip Mall	0.808100	0.101000	0.020200	0.020200	0.020200	0.000000	0.000000	0.020200	0.000000	0.000000	0.010100	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0303	0.2586	0.1105	1.6500e-003		0.0209	0.0209		0.0209	0.0209		330.0628	330.0628	6.3300e-003	6.0500e-003	332.0241
NaturalGas Unmitigated	0.0303	0.2586	0.1105	1.6500e-003		0.0209	0.0209		0.0209	0.0209		330.0628	330.0628	6.3300e-003	6.0500e-003	332.0241

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					
Apartments Low Rise	2794.88	0.0301	0.2576	0.1096	1.6400e-003		0.0208	0.0208		0.0208	0.0208		328.8089	328.8089	6.3000e-003	6.0300e-003	330.7629
General Office Building	5.81589	6.0000e-005	5.7000e-004	4.8000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.6842	0.6842	1.0000e-005	1.0000e-005	0.6883
Other Non-Asphalt Surfaces	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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	4.84142	5.0000e-005	4.7000e-004	4.0000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.5696	0.5696	1.0000e-005	1.0000e-005	0.5730
Total		**0.0303**	**0.2586**	**0.1105**	**1.6400e-003**		**0.0209**	**0.0209**		**0.0209**	**0.0209**		**330.0627**	**330.0627**	**6.3200e-003**	**6.0500e-003**	**332.0241**

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					

Apartments Low Rise	2.79488	0.0301	0.2576	0.1096	1.6400e-003		0.0208	0.0208		0.0208	0.0208		328.8089	328.8089	6.3000e-003	6.0300e-003	330.7629
General Office Building	0.00581589	6.0000e-005	5.7000e-004	4.8000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.6842	0.6842	1.0000e-005	1.0000e-005	0.6883
Other Non-Asphalt Surfaces	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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.00484142	5.0000e-005	4.7000e-004	4.0000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.5696	0.5696	1.0000e-005	1.0000e-005	0.5730
Total		**0.0303**	**0.2586**	**0.1105**	**1.6400e-003**		**0.0209**	**0.0209**		**0.0209**	**0.0209**		**330.0627**	**330.0627**	**6.3200e-003**	**6.0500e-003**	**332.0241**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.5005	2.2979	11.7545	0.0144		0.2355	0.2355		0.2355	0.2355	0.0000	2,793.6005	2,793.6005	0.0720	0.0509	2,810.5566
Unmitigated	3.5005	2.2979	11.7545	0.0144		0.2355	0.2355		0.2355	0.2355	0.0000	2,793.6005	2,793.6005	0.0720	0.0509	2,810.5566

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	0.2321					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.6863					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.2543	2.1731	0.9247	0.0139		0.1757	0.1757		0.1757	0.1757	0.0000	2,774.1177	2,774.1177	0.0532	0.0509	2,790.6028
Landscaping	0.3278	0.1249	10.8298	5.7000e-004		0.0598	0.0598		0.0598	0.0598		19.4829	19.4829	0.0188		19.9537
Total	**3.5005**	**2.2979**	**11.7545**	**0.0144**		**0.2355**	**0.2355**		**0.2355**	**0.2355**	**0.0000**	**2,793.6005**	**2,793.6005**	**0.0720**	**0.0509**	**2,810.5566**

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	0.2321					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.6863					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.2543	2.1731	0.9247	0.0139		0.1757	0.1757		0.1757	0.1757	0.0000	2,774.1177	2,774.1177	0.0532	0.0509	2,790.6028
Landscaping	0.3278	0.1249	10.8298	5.7000e-004		0.0598	0.0598		0.0598	0.0598		19.4829	19.4829	0.0188		19.9537
Total	**3.5005**	**2.2979**	**11.7545**	**0.0144**		**0.2355**	**0.2355**		**0.2355**	**0.2355**	**0.0000**	**2,793.6005**	**2,793.6005**	**0.0720**	**0.0509**	**2,810.5566**

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

Westbury Residential Development Project

South Coast Air Basin, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	1.22	1000sqft	0.03	1,220.00	0
Other Non-Asphalt Surfaces	0.09	Acre	0.09	3,920.40	0
Parking Lot	100.00	1000sqft	2.30	100,000.00	0
Apartments Low Rise	131.00	Dwelling Unit	1.30	131,000.00	375
Strip Mall	1.59	1000sqft	0.04	1,592.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Based on 131 residential units, four commercial ready units (represented by 1,220 sf of general office), and a 1,592 sf commercial space.

Construction Phase - Based on construction starting in Sept. 2020 and finishing in June 2022.

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Grading -

Architectural Coating - Assume architechtual coatings comply with SCAQMD Rule 1113.

Vehicle Trips - Based on the traffic study.

Woodstoves - Assume no woodstoves or wood-burning fireplaces and all residences have gas fireplaces.

Area Coating - Assume architechtual coatings comply with SCAQMD Rule 1113.

Energy Use - Assume all residences comply with 2019 CBC and Green Building codes. All energy use reduced by 50%.

Water And Wastewater - Assume all residences comply with 2019 CBC and Green Building codes. All water use reduced by 50%.

Land Use Change -

Sequestration - Estimated number of trees based on site plan.

Construction Off-road Equipment Mitigation - Dust control measures as required by SCAQMD Rule 403.

Mobile Land Use Mitigation -

Energy Mitigation -

Operational Off-Road Equipment -

Fleet Mix - Adjusted fleet mix to be appropriate for each land use.

Solid Waste -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	8.00	15.00
tblConstructionPhase	NumDays	230.00	360.00
tblConstructionPhase	NumDays	18.00	66.00
tblConstructionPhase	PhaseEndDate	9/17/2020	9/28/2020
tblConstructionPhase	PhaseEndDate	8/5/2021	2/14/2022
tblConstructionPhase	PhaseEndDate	8/31/2021	3/10/2022
tblConstructionPhase	PhaseEndDate	9/24/2021	6/10/2022
tblConstructionPhase	PhaseStartDate	9/18/2020	9/29/2020

tblConstructionPhase	PhaseStartDate	8/6/2021	2/15/2022
tblConstructionPhase	PhaseStartDate	9/1/2021	3/11/2022
tblEnergyUse	LightingElect	810.36	405.18
tblEnergyUse	LightingElect	3.66	1.83
tblEnergyUse	LightingElect	5.61	2.81
tblEnergyUse	NT24E	3,172.76	1,586.38
tblEnergyUse	NT24E	2.79	1.40
tblEnergyUse	NT24E	2.44	1.22
tblEnergyUse	NT24NG	6,030.00	3,015.00
tblEnergyUse	NT24NG	0.30	0.15
tblEnergyUse	T24E	877.14	438.57
tblEnergyUse	T24E	3.07	1.54
tblEnergyUse	T24E	4.58	2.29
tblEnergyUse	T24NG	9,544.50	4,772.25
tblEnergyUse	T24NG	3.47	1.74
tblEnergyUse	T24NG	1.92	0.96
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	111.35	131.00
tblFireplaces	NumberNoFireplace	13.10	0.00
tblFireplaces	NumberWood	6.55	0.00
tblFleetMix	HHD	0.03	0.00
tblFleetMix	HHD	0.03	0.00
tblFleetMix	HHD	0.03	0.02
tblFleetMix	LDA	0.55	0.80
tblFleetMix	LDA	0.55	0.84
tblFleetMix	LDA	0.55	0.81
tblFleetMix	LDT1	0.04	0.10
tblFleetMix	LDT1	0.04	0.08
tblFleetMix	LDT1	0.04	0.10
tblFleetMix	LDT2	0.20	0.08
tblFleetMix	LDT2	0.20	0.02

tblFleetMix	LDT2	0.20	0.02
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD2	5.8630e-003	0.00
tblFleetMix	LHD2	5.8630e-003	0.00
tblFleetMix	LHD2	5.8630e-003	0.00
tblFleetMix	MCY	4.8030e-003	0.01
tblFleetMix	MCY	4.8030e-003	0.02
tblFleetMix	MCY	4.8030e-003	0.01
tblFleetMix	MDV	0.12	0.00
tblFleetMix	MDV	0.12	0.02
tblFleetMix	MDV	0.12	0.02
tblFleetMix	MH	8.9600e-004	5.0000e-003
tblFleetMix	MH	8.9600e-004	0.00
tblFleetMix	MH	8.9600e-004	0.00
tblFleetMix	MHD	0.02	0.00
tblFleetMix	MHD	0.02	0.00
tblFleetMix	MHD	0.02	0.00
tblFleetMix	OBUS	2.0870e-003	0.00
tblFleetMix	OBUS	2.0870e-003	0.00
tblFleetMix	OBUS	2.0870e-003	0.00
tblFleetMix	SBUS	7.0800e-004	0.00
tblFleetMix	SBUS	7.0800e-004	0.00
tblFleetMix	SBUS	7.0800e-004	0.00
tblFleetMix	UBUS	1.8180e-003	0.00
tblFleetMix	UBUS	1.8180e-003	0.00
tblFleetMix	UBUS	1.8180e-003	0.00
tblLandUse	LandUseSquareFeet	1,590.00	1,592.00
tblLandUse	LotAcreage	8.19	1.30
tblSequestration	NumberOfNewTrees	0.00	10.00

tblVehicleTrips	HO_TTP	40.60	40.00
tblVehicleTrips	HS_TTP	19.20	20.00
tblVehicleTrips	HW_TTP	40.20	40.00
tblVehicleTrips	ST_TR	7.16	7.32
tblVehicleTrips	ST_TR	42.04	37.75
tblVehicleTrips	SU_TR	6.07	7.32
tblVehicleTrips	SU_TR	20.43	37.75
tblVehicleTrips	WD_TR	6.59	7.32
tblVehicleTrips	WD_TR	11.03	16.19
tblVehicleTrips	WD_TR	44.32	37.75
tblWater	IndoorWaterUseRate	8,535,177.36	4,267,588.68
tblWater	IndoorWaterUseRate	216,835.17	108,417.59
tblWater	IndoorWaterUseRate	117,775.31	55,554.39
tblWater	OutdoorWaterUseRate	5,380,872.68	2,690,436.34
tblWater	OutdoorWaterUseRate	132,898.98	66,449.49
tblWater	OutdoorWaterUseRate	72,184.87	34,049.47
tblWoodstoves	NumberCatalytic	6.55	0.00
tblWoodstoves	NumberNoncatalytic	6.55	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

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					
2020	4.1653	42.4773	22.8657	0.0496	18.2675	2.1990	20.4664	9.9840	2.0230	12.0071	0.0000	4,866.9963	4,866.9963	1.1974	0.0000	4,885.0870
2021	2.6336	20.8106	22.1007	0.0490	1.7521	0.9764	2.7284	0.4692	0.9179	1.3870	0.0000	4,812.8527	4,812.8527	0.7103	0.0000	4,830.6100

2022	13.1621	18.8032	21.4833	0.0485	1.7521	0.8256	2.5777	0.4692	0.7767	1.2458	0.0000	4,754.8627	4,754.8627	0.7005	0.0000	4,772.3757
Maximum	**13.1621**	**42.4773**	**22.8657**	**0.0496**	**18.2675**	**2.1990**	**20.4664**	**9.9840**	**2.0230**	**12.0071**	**0.0000**	**4,866.9963**	**4,866.9963**	**1.1974**	**0.0000**	**4,885.0870**

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					
2020	4.1653	42.4773	22.8657	0.0496	7.2470	2.1990	9.4460	3.9263	2.0230	5.9494	0.0000	4,866.9963	4,866.9963	1.1974	0.0000	4,885.0870
2021	2.6336	20.8106	22.1007	0.0490	1.7521	0.9764	2.7284	0.4692	0.9179	1.3870	0.0000	4,812.8527	4,812.8527	0.7103	0.0000	4,830.6100
2022	13.1621	18.8032	21.4833	0.0485	1.7521	0.8256	2.5777	0.4692	0.7767	1.2458	0.0000	4,754.8627	4,754.8627	0.7005	0.0000	4,772.3757
Maximum	**13.1621**	**42.4773**	**22.8657**	**0.0496**	**7.2470**	**2.1990**	**9.4460**	**3.9263**	**2.0230**	**5.9494**	**0.0000**	**4,866.9963**	**4,866.9963**	**1.1974**	**0.0000**	**4,885.0870**

	ROG	NOx	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**	**50.62**	**0.00**	**42.76**	**55.46**	**0.00**	**41.38**	**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	3.5005	2.2979	11.7545	0.0144		0.2355	0.2355		0.2355	0.2355	0.0000	2,793.6005	2,793.6005	0.0720	0.0509	2,810.5566
Energy	0.0303	0.2586	0.1105	1.6500e-003		0.0209	0.0209		0.0209	0.0209		330.0628	330.0628	6.3300e-003	6.0500e-003	332.0241
Mobile	1.8080	1.9352	21.8157	0.0600	7.1931	0.0523	7.2454	1.9076	0.0483	1.9559		5,977.5713	5,977.5713	0.2502		5,983.8253

Total	**5.3387**	**4.4917**	**33.6807**	**0.0761**	**7.1931**	**0.3087**	**7.5018**	**1.9076**	**0.3047**	**2.2123**	**0.0000**	**9,101.2346**	**9,101.2346**	**0.3285**	**0.0569**	**9,126.4060**

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	3.5005	2.2979	11.7545	0.0144		0.2355	0.2355		0.2355	0.2355	0.0000	2,793.6005	2,793.6005	0.0720	0.0509	2,810.5566
Energy	0.0303	0.2586	0.1105	1.6500e-003		0.0209	0.0209		0.0209	0.0209		330.0628	330.0628	6.3300e-003	6.0500e-003	332.0241
Mobile	1.8080	1.9352	21.8157	0.0600	7.1931	0.0523	7.2454	1.9076	0.0483	1.9559		5,977.5713	5,977.5713	0.2502		5,983.8253
Total	**5.3387**	**4.4917**	**33.6807**	**0.0761**	**7.1931**	**0.3087**	**7.5018**	**1.9076**	**0.3047**	**2.2123**	**0.0000**	**9,101.2346**	**9,101.2346**	**0.3285**	**0.0569**	**9,126.4060**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	9/1/2020	9/7/2020	5	5	
2	Grading	Grading	9/8/2020	9/28/2020	5	15	
3	Building Construction	Building Construction	9/29/2020	2/14/2022	5	360	
4	Paving	Paving	2/15/2022	3/10/2022	5	18	
5	Architectural Coating	Architectural Coating	3/11/2022	6/10/2022	5	66	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 7.5

Acres of Paving: 2.39

Residential Indoor: 265,275; Residential Outdoor: 88,425; Non-Residential Indoor: 4,218; Non-Residential Outdoor: 1,406; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	139.00	31.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	28.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216		3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**4.0765**	**42.4173**	**21.5136**	**0.0380**	**18.0663**	**2.1974**	**20.2637**	**9.9307**	**2.0216**	**11.9523**		**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

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	0.0888	0.0600	0.6653	1.9400e-003	0.2012	1.5300e-003	0.2027	0.0534	1.4100e-003	0.0548		193.1132	193.1132	5.5600e-003		193.2522
Total	**0.0888**	**0.0600**	**0.6653**	**1.9400e-003**	**0.2012**	**1.5300e-003**	**0.2027**	**0.0534**	**1.4100e-003**	**0.0548**		**193.1132**	**193.1132**	**5.5600e-003**		**193.2522**

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					7.0458	0.0000	7.0458	3.8730	0.0000	3.8730			0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216	0.0000	3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**4.0765**	**42.4173**	**21.5136**	**0.0380**	**7.0458**	**2.1974**	**9.2433**	**3.8730**	**2.0216**	**5.8946**	**0.0000**	**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

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	0.0888	0.0600	0.6653	1.9400e-003	0.2012	1.5300e-003	0.2027	0.0534	1.4100e-003	0.0548		193.1132	193.1132	5.5600e-003		193.2522
Total	**0.0888**	**0.0600**	**0.6653**	**1.9400e-003**	**0.2012**	**1.5300e-003**	**0.2027**	**0.0534**	**1.4100e-003**	**0.0548**		**193.1132**	**193.1132**	**5.5600e-003**		**193.2522**

3.3 Grading - 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					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000

Off-Road	2.4288	26.3859	16.0530	0.0297		1.2734	1.2734		1.1716	1.1716		2,872.4851	2,872.4851	0.9290		2,895.7106
Total	**2.4288**	**26.3859**	**16.0530**	**0.0297**	**6.5523**	**1.2734**	**7.8258**	**3.3675**	**1.1716**	**4.5390**		**2,872.4851**	**2,872.4851**	**0.9290**		**2,895.7106**

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	0.0740	0.0500	0.5544	1.6200e-003	0.1677	1.2800e-003	0.1689	0.0445	1.1800e-003	0.0456		160.9277	160.9277	4.6300e-003		161.0435
Total	**0.0740**	**0.0500**	**0.5544**	**1.6200e-003**	**0.1677**	**1.2800e-003**	**0.1689**	**0.0445**	**1.1800e-003**	**0.0456**		**160.9277**	**160.9277**	**4.6300e-003**		**161.0435**

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					2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000			0.0000
Off-Road	2.4288	26.3859	16.0530	0.0297		1.2734	1.2734		1.1716	1.1716	0.0000	2,872.4851	2,872.4851	0.9290		2,895.7106
Total	**2.4288**	**26.3859**	**16.0530**	**0.0297**	**2.5554**	**1.2734**	**3.8288**	**1.3133**	**1.1716**	**2.4849**	**0.0000**	**2,872.4851**	**2,872.4851**	**0.9290**		**2,895.7106**

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	0.0740	0.0500	0.5544	1.6200e-003	0.1677	1.2800e-003	0.1689	0.0445	1.1800e-003	0.0456		160.9277	160.9277	4.6300e-003		161.0435
Total	**0.0740**	**0.0500**	**0.5544**	**1.6200e-003**	**0.1677**	**1.2800e-003**	**0.1689**	**0.0445**	**1.1800e-003**	**0.0456**		**160.9277**	**160.9277**	**4.6300e-003**		**161.0435**

3.4 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	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**		**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

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	0.1076	3.2638	0.8800	7.7000e-003	0.1984	0.0164	0.2148	0.0571	0.0157	0.0728		822.6699	822.6699	0.0579		824.1161
Worker	0.6859	0.4630	5.1372	0.0150	1.5537	0.0119	1.5655	0.4121	0.0109	0.4230		1,491.2633	1,491.2633	0.0429		1,492.3364
Total	**0.7935**	**3.7267**	**6.0172**	**0.0227**	**1.7521**	**0.0283**	**1.7803**	**0.4692**	**0.0266**	**0.4958**		**2,313.9332**	**2,313.9332**	**0.1008**		**2,316.4525**

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	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**	**0.0000**	**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

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	0.1076	3.2638	0.8800	7.7000e-003	0.1984	0.0164	0.2148	0.0571	0.0157	0.0728		822.6699	822.6699	0.0579		824.1161
Worker	0.6859	0.4630	5.1372	0.0150	1.5537	0.0119	1.5655	0.4121	0.0109	0.4230		1,491.2633	1,491.2633	0.0429		1,492.3364
Total	**0.7935**	**3.7267**	**6.0172**	**0.0227**	**1.7521**	**0.0283**	**1.7803**	**0.4692**	**0.0266**	**0.4958**		**2,313.9332**	**2,313.9332**	**0.1008**		**2,316.4525**

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**		**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

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	0.0916	2.9618	0.8013	7.6300e-003	0.1984	6.2500e-003	0.2046	0.0571	5.9800e-003	0.0631		816.4587	816.4587	0.0555		817.8454
Worker	0.6410	0.4167	4.7242	0.0145	1.5537	0.0115	1.5652	0.4121	0.0106	0.4226		1,443.0301	1,443.0301	0.0388		1,444.0004
Total	**0.7327**	**3.3785**	**5.5255**	**0.0221**	**1.7521**	**0.0178**	**1.7698**	**0.4692**	**0.0166**	**0.4857**		**2,259.4888**	**2,259.4888**	**0.0943**		**2,261.8458**

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	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**	**0.0000**	**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

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	0.0916	2.9618	0.8013	7.6300e-003	0.1984	6.2500e-003	0.2046	0.0571	5.9800e-003	0.0631		816.4587	816.4587	0.0555		817.8454
Worker	0.6410	0.4167	4.7242	0.0145	1.5537	0.0115	1.5652	0.4121	0.0106	0.4226		1,443.0301	1,443.0301	0.0388		1,444.0004
Total	**0.7327**	**3.3785**	**5.5255**	**0.0221**	**1.7521**	**0.0178**	**1.7698**	**0.4692**	**0.0166**	**0.4857**		**2,259.4888**	**2,259.4888**	**0.0943**		**2,261.8458**

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

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	0.0860	2.8112	0.7590	7.5600e-003	0.1984	5.4400e-003	0.2038	0.0571	5.2100e-003	0.0623		809.1685	809.1685	0.0535		810.5065
Worker	0.6029	0.3764	4.3610	0.0140	1.5537	0.0112	1.5649	0.4121	0.0103	0.4223		1,391.3606	1,391.3606	0.0351		1,392.2370
Total	**0.6889**	**3.1876**	**5.1199**	**0.0215**	**1.7521**	**0.0166**	**1.7687**	**0.4692**	**0.0155**	**0.4846**		**2,200.5291**	**2,200.5291**	**0.0886**		**2,202.7435**

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	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

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	0.0860	2.8112	0.7590	7.5600e-003	0.1984	5.4400e-003	0.2038	0.0571	5.2100e-003	0.0623		809.1685	809.1685	0.0535		810.5065
Worker	0.6029	0.3764	4.3610	0.0140	1.5537	0.0112	1.5649	0.4121	0.0103	0.4223		1,391.3606	1,391.3606	0.0351		1,392.2370
Total	**0.6889**	**3.1876**	**5.1199**	**0.0215**	**1.7521**	**0.0166**	**1.7687**	**0.4692**	**0.0155**	**0.4846**		**2,200.5291**	**2,200.5291**	**0.0886**		**2,202.7435**

3.5 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9765	9.5221	12.1940	0.0189		0.4877	0.4877		0.4504	0.4504		1,805.1297	1,805.1297	0.5672		1,819.3091
Paving	0.3348					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3113**	**9.5221**	**12.1940**	**0.0189**		**0.4877**	**0.4877**		**0.4504**	**0.4504**		**1,805.1297**	**1,805.1297**	**0.5672**		**1,819.3091**

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	0.0868	0.0542	0.6275	2.0100e-003	0.2236	1.6100e-003	0.2252	0.0593	1.4800e-003	0.0608		200.1958	200.1958	5.0400e-003		200.3219
Total	**0.0868**	**0.0542**	**0.6275**	**2.0100e-003**	**0.2236**	**1.6100e-003**	**0.2252**	**0.0593**	**1.4800e-003**	**0.0608**		**200.1958**	**200.1958**	**5.0400e-003**		**200.3219**

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	0.9765	9.5221	12.1940	0.0189		0.4877	0.4877		0.4504	0.4504	0.0000	1,805.1297	1,805.1297	0.5672		1,819.3091
Paving	0.3348					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3113**	**9.5221**	**12.1940**	**0.0189**		**0.4877**	**0.4877**		**0.4504**	**0.4504**	**0.0000**	**1,805.1297**	**1,805.1297**	**0.5672**		**1,819.3091**

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	0.0868	0.0542	0.6275	2.0100e-003	0.2236	1.6100e-003	0.2252	0.0593	1.4800e-003	0.0608		200.1958	200.1958	5.0400e-003		200.3219
Total	**0.0868**	**0.0542**	**0.6275**	**2.0100e-003**	**0.2236**	**1.6100e-003**	**0.2252**	**0.0593**	**1.4800e-003**	**0.0608**		**200.1958**	**200.1958**	**5.0400e-003**		**200.3219**

3.6 Architectural Coating - 2022

Unmitigated Construction On-Site

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

Category	lb/day										lb/day					
Archit. Coating	12.8361					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**13.0407**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

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	0.1215	0.0758	0.8785	2.8100e-003	0.3130	2.2500e-003	0.3152	0.0830	2.0700e-003	0.0851		280.2741	280.2741	7.0600e-003		280.4506
Total	**0.1215**	**0.0758**	**0.8785**	**2.8100e-003**	**0.3130**	**2.2500e-003**	**0.3152**	**0.0830**	**2.0700e-003**	**0.0851**		**280.2741**	**280.2741**	**7.0600e-003**		**280.4506**

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	12.8361					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**13.0407**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

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	0.1215	0.0758	0.8785	2.8100e-003	0.3130	2.2500e-003	0.3152	0.0830	2.0700e-003	0.0851		280.2741	280.2741	7.0600e-003		280.4506
Total	**0.1215**	**0.0758**	**0.8785**	**2.8100e-003**	**0.3130**	**2.2500e-003**	**0.3152**	**0.0830**	**2.0700e-003**	**0.0851**		**280.2741**	**280.2741**	**7.0600e-003**		**280.4506**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.8080	1.9352	21.8157	0.0600	7.1931	0.0523	7.2454	1.9076	0.0483	1.9559		5,977.5713	5,977.5713	0.2502		5,983.8253
Unmitigated	1.8080	1.9352	21.8157	0.0600	7.1931	0.0523	7.2454	1.9076	0.0483	1.9559		5,977.5713	5,977.5713	0.2502		5,983.8253

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	958.92	958.92	958.92	3,266,119	3,266,119
General Office Building	19.75	3.00	1.28	47,420	47,420
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Strip Mall	60.02	60.02	60.02	114,199	114,199
Total	1,038.69	1,021.94	1,020.22	3,427,738	3,427,738

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.00	20.00	40.00	86	11	3
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Strip Mall	16.60	8.40	6.90	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
Apartments Low Rise	0.804000	0.100500	0.080400	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.010100	0.000000	0.005000
General Office Building	0.843200	0.078400	0.019600	0.019600	0.019600	0.000000	0.000000	0.000000	0.000000	0.000000	0.019600	0.000000	0.000000
Other Non-Asphalt Surfaces	0.552111	0.043066	0.201891	0.118512	0.015605	0.005863	0.021387	0.031253	0.002087	0.001818	0.004803	0.000708	0.000896
Parking Lot	0.552111	0.043066	0.201891	0.118512	0.015605	0.005863	0.021387	0.031253	0.002087	0.001818	0.004803	0.000708	0.000896
Strip Mall	0.808100	0.101000	0.020200	0.020200	0.020200	0.000000	0.000000	0.020200	0.000000	0.000000	0.010100	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0303	0.2586	0.1105	1.6500e-003		0.0209	0.0209		0.0209	0.0209		330.0628	330.0628	6.3300e-003	6.0500e-003	332.0241
NaturalGas Unmitigated	0.0303	0.2586	0.1105	1.6500e-003		0.0209	0.0209		0.0209	0.0209		330.0628	330.0628	6.3300e-003	6.0500e-003	332.0241

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					
Apartments Low Rise	2794.88	0.0301	0.2576	0.1096	1.6400e-003		0.0208	0.0208		0.0208	0.0208		328.8089	328.8089	6.3000e-003	6.0300e-003	330.7629
General Office Building	5.81589	6.0000e-005	5.7000e-004	4.8000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.6842	0.6842	1.0000e-005	1.0000e-005	0.6883
Other Non-Asphalt Surfaces	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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	4.84142	5.0000e-005	4.7000e-004	4.0000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.5696	0.5696	1.0000e-005	1.0000e-005	0.5730
Total		**0.0303**	**0.2586**	**0.1105**	**1.6400e-003**		**0.0209**	**0.0209**		**0.0209**	**0.0209**		**330.0627**	**330.0627**	**6.3200e-003**	**6.0500e-003**	**332.0241**

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					

Apartments Low Rise	2.79488	0.0301	0.2576	0.1096	1.6400e-003		0.0208	0.0208		0.0208	0.0208		328.8089	328.8089	6.3000e-003	6.0300e-003	330.7629
General Office Building	0.00581589	6.0000e-005	5.7000e-004	4.8000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.6842	0.6842	1.0000e-005	1.0000e-005	0.6883
Other Non-Asphalt Surfaces	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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.00484142	5.0000e-005	4.7000e-004	4.0000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.5696	0.5696	1.0000e-005	1.0000e-005	0.5730
Total		**0.0303**	**0.2586**	**0.1105**	**1.6400e-003**		**0.0209**	**0.0209**		**0.0209**	**0.0209**		**330.0627**	**330.0627**	**6.3200e-003**	**6.0500e-003**	**332.0241**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.5005	2.2979	11.7545	0.0144		0.2355	0.2355		0.2355	0.2355	0.0000	2,793.6005	2,793.6005	0.0720	0.0509	2,810.5566
Unmitigated	3.5005	2.2979	11.7545	0.0144		0.2355	0.2355		0.2355	0.2355	0.0000	2,793.6005	2,793.6005	0.0720	0.0509	2,810.5566

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	0.2321					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.6863					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.2543	2.1731	0.9247	0.0139		0.1757	0.1757		0.1757	0.1757	0.0000	2,774.1177	2,774.1177	0.0532	0.0509	2,790.6028
Landscaping	0.3278	0.1249	10.8298	5.7000e-004		0.0598	0.0598		0.0598	0.0598		19.4829	19.4829	0.0188		19.9537
Total	**3.5005**	**2.2979**	**11.7545**	**0.0144**		**0.2355**	**0.2355**		**0.2355**	**0.2355**	**0.0000**	**2,793.6005**	**2,793.6005**	**0.0720**	**0.0509**	**2,810.5566**

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	0.2321					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.6863					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.2543	2.1731	0.9247	0.0139		0.1757	0.1757		0.1757	0.1757	0.0000	2,774.1177	2,774.1177	0.0532	0.0509	2,790.6028
Landscaping	0.3278	0.1249	10.8298	5.7000e-004		0.0598	0.0598		0.0598	0.0598		19.4829	19.4829	0.0188		19.9537
Total	**3.5005**	**2.2979**	**11.7545**	**0.0144**		**0.2355**	**0.2355**		**0.2355**	**0.2355**	**0.0000**	**2,793.6005**	**2,793.6005**	**0.0720**	**0.0509**	**2,810.5566**

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