# Appendix A

## Air Quality and Greenhouse Gas Technical Report

# Draft
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**7940 Lankershim Boulevard Mixed-Use Project**

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# Acronyms and Abbreviations

| | |
|---|---|
| AB | Assembly Bill |
| ACC | Advanced Clean Cars |
| AQMP | air quality management plan |
| AR4 | Fourth Assessment Report |
| AV | Antelope Valley |
| BACT | best available control technology |
| BARCT | best available retrofit control technology |
| Basin | South Coast Air Basin |
| C | Celsius |
| CAAQS | California Ambient Air Quality Standards |
| CalEEMod | California Emissions Estimator Model |
| CALGreen | California Green Building Standards |
| CalRecycle | California Department of Resources Recycling and Recovery |
| CAPP | Community Air Protection Program |
| CARB | California Air Resources Board |
| CCAA | California Clean Air Act |
| CCR | California Code of Regulations |
| CCTV | closed-circuit television |
| CEC | California Energy Commission |
| CEQA | California Environmental Quality Act |
| $CH_4$ | methane |
| City | City of Los Angeles |
| CO | carbon monoxide |
| $CO_2$ | carbon dioxide |
| $CO_2e$ | carbon dioxide equivalent |
| COHb | carboxyhemoglobin |
| CTF | Cleaner Technology and Fuels |
| DPM | diesel exhaust particulate matter |
| DR | demand response |
| EIR | environmental impact report |
| EO | executive order |
| EV | electric vehicle |
| F | Fahrenheit |
| FAR | floor area ratio |
| FCAA | Federal Clean Air Act |
| Friant Ranch Decision | *Sierra Club v. County of Fresno* |

| | |
|---|---|
| Friant Ranch Project | Community Plan Update and Friant Ranch Specific Plan |
| g/L | grams per liter |
| GHG | greenhouse gas |
| GWP | global warming potential |
| HC | hydrocarbon |
| HFC | hydrofluorocarbon |
| HOV | high-occupancy vehicle |
| hp | horsepower |
| HQTA | high-quality transit area |
| HRA | health risk assessment |
| HVAC | heating, ventilation, and air-conditioning |
| IPCC | Intergovernmental Panel on Climate Change |
| LADWP | Los Angeles Department of Water and Power |
| LAMC | Los Angeles Municipal Code |
| LCFS | low-carbon fuel standard |
| LOS | level of service |
| LST | localized significance threshold |
| MATES | Multiple Air Toxics Exposure Study |
| $mg/m^3$ | milligrams per cubic meter |
| $MMTCO_2e$ | million metric tons of carbon dioxide equivalent |
| MPO | Metropolitan Planning Organization |
| $MTCO_2e$ | metric tons of carbon dioxide equivalent |
| MW | megawatt |
| $N_2O$ | nitrous oxide |
| NAAQS | National Ambient Air Quality Standards |
| NGO | nongovernmental organization |
| NMA | neighborhood mobility area |
| NO | nitric oxide |
| $NO_2$ | nitrogen dioxide |
| $NO_X$ | nitrogen oxide |
| $O_3$ | ozone |
| OPR | Office of Planning and Research |
| Pb | lead |
| PDF | project design feature |
| PFC | perfluorocarbon |
| pLAn | Sustainable City pLAn |
| PM | particulate matter |
| PM10 | particulate matter less than or equal to 10 microns in diameter |
| PM2.5 | particulate matter less than or equal to 2.5 microns in diameter |

| | |
|---|---|
| ppm | parts per million |
| PRC | Public Resources Code |
| Project | 7940 Lankershim Boulevard Mixed-Use Project |
| Project Site | 7918–7946 North Lankershim Boulevard and 11650–11664 Strathern Street |
| ROG | reactive organic gasses |
| RPS | Renewables Portfolio Standard |
| RTP/SCS | Regional Transportation Plan/Sustainable Communities Strategy |
| SB | Senate Bill |
| SCAG | Southern California Association of Governments |
| SCAQMD | South Coast Air Quality Management District |
| Scoping Plan | 2017 Climate Change Scoping Plan Update |
| SCS | sustainable communities strategies |
| sf | square feet |
| $SF_6$ | sulfur hexafluoride |
| SIP | State Implementation Plan |
| SJVAPCD | San Joaquin Valley Air Pollution Control District |
| SLCP | short-lived climate pollutant |
| $SO_2$ | sulfur dioxide |
| SRA | source receptor area |
| TAC | toxic air contaminant |
| TDM | Transportation Demand Management |
| TIS | Transportation Impact Analysis |
| TPA | Transit Priority Area |
| TSM | Transportation System Management |
| U.S. EPA | U.S. Environmental Protection Agency |
| V/C | volume to capacity |
| VMT | vehicle miles traveled |
| VOC | volatile organic compound |
| WRCC | Western Regional Climate Center |
| $\mu g/m^3$ | micrograms per cubic meter |

# Chapter 1
# Introduction

This Air Quality and Greenhouse Gas Technical Report is provided to support the City of Los Angeles (City) environmental review process and provide information regarding potential effects of air quality and greenhouse gas (GHG) emissions associated with the proposed 7940 Lankershim Boulevard Mixed-Use Project (Project) located in the Sun Valley-La Tuna Canyon Community Plan area within the City. The analysis provided in this report evaluates the potential for short- and long-term air quality and GHG impacts associated with construction and operation of the Project. The analysis includes a description of the environmental setting for the Project, including existing air quality and GHG conditions, as well as applicable laws and regulations, and documents the assumptions, methodologies, and findings used to evaluate the Project's air quality and GHG impacts.

## 1.1 Project Description Summary

The properties at 7918–7946 North Lankershim Boulevard and 11650–11664 Strathern Street (Project Site) form an irregularly shaped, approximately 4.69-acre parcel, bordered by North Lankershim Boulevard to the west and West Strathern Street to the north. Two commercial properties are currently located on the Project Site which includes a one-story commercial building, a one-story office building, and associated surface parking and storage areas. The Project would demolish the existing on-site structures to construct the Project.

The Project proposes the development of a seven-story mixed-use development consisting of 432 multi-family residential units and approximately 22,000 square feet of commercial uses. The Project would be approximately 87 feet in height and would include a total square footage of approximately 678,328 square feet (sf) and a floor area ratio (FAR) of 3.32:1. The residential component would include 72 one-bedroom units, 180 two-bedroom units, and 180 three-bedroom units. A total of 11 percent of the proposed residential units (48 units) would be designated as restricted affordable housing for either Extremely Low Income Households or Very Low Income Households. Five percent of the proposed residential units (22 units) would be designated as restricted affordable housing for Extremely Low Income Households, and six percent of the proposed residential units (26 units) would be designated as restricted affordable housing for Very Low Income Households.

Up to 541 parking spaces (432 residential and 109 commercial parking spaces) would be provided in structured parking located within one subterranean level and one at-grade level. All parking would be fully enclosed and screened from public view. The Project would provide 224 bicycle spaces in the structured parking (30 short term bicycle spaces and 194 long term bicycle spaces).

Open space areas and amenities for residents would be include a central courtyard that would be landscaped and open to the sky. Other amenities would include a community room, recreational room, swimming pool and spa area, multi-use sport court, pet park, and private balconies.

The Project would be designed to meet the California Green Building Standards (CALGreen Code) and Title 24 Building Standards Code. The Project would emphasize energy and water conservation, which would be achieved through the use of energy efficient heating, ventilation, and air-conditioning (HVAC) and lighting systems, and Energy Star appliances, and low flow plumbing fixtures. The Project proposes to be prewired for electric vehicle (EV) charging at 20 percent of its parking capacity for future use, of which five percent will be installed with chargers for immediate use by EVs, and rooftop solar uses in accordance with the CALGreen Code. The Project would also include solar panels on the 15 percent of the rooftop space.

## 1.2 Nearby Land Uses and Sensitive Receptors

Sensitive receptors are defined as locations where pollutant-sensitive members of the population may reside or where the presence of air pollutant emissions could adversely affect use of the land. Sensitive members of the population include those who may be more negatively affected by poor air quality than other members of the population, such as children, the elderly, or the infirm. In general, residential areas, hospitals, daycare facilities, elder-care facilities, elementary schools, and parks typically contain a high concentration of these sensitive population groups (CARB 2005).

The Project Site is located in an urbanized area surrounded by a mix of land uses, with the nearest existing sensitive receptors being residential uses and institutional/educational uses. The nearest residential uses to the Project Site include the single-family homes located to the north, across West Strathern Street, and immediately adjacent to the east and south of the Project Site boundary along Blythe Street and West Arminta Street, respectively. Aside from these nearest receptors, single-family residential uses are also located further to the south, across West Arminta Street, and to the west, across North Lankershim Boulevard and behind the existing automotive and commercial uses that front that roadway. The Arminta Street Elementary School and Arminta Street Early Education Center are located approximately 715 feet east of the Project Site, along Beck Avenue between West Strathern Street and West Arminta Street.

Chapter 2
# Air Quality

## 2.1 Existing Setting

### Regional Climate and Meteorology

The Project Site is located within the South Coast Air Basin (Basin), an area covering approximately 6,745 square miles and bounded by the Pacific Ocean to the west and south and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Basin includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, in addition to the San Gorgonio Pass area in Riverside County. The terrain and geographical location determine the distinctive climate of the Basin, which is a coastal plain with connecting broad valleys and low hills.

The Southern California region, which includes the Basin, lies in the semi-permanent high-pressure zone of the eastern Pacific. As a result, the climate is mild and tempered by cool sea breezes. The usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds. The extent and severity of the air pollution problem in the Basin is a function of the area's natural physical characteristics (weather and topography) as well as human-made influences (development patterns and lifestyle). Factors such as wind, sunlight, temperature, humidity, rainfall, and topography all affect the accumulation and dispersion of pollutants throughout the Basin, making it an area of high pollution potential.

The greatest air pollution impacts in the Basin occur from June through September. These are generally attributed to the large amount of pollutant emissions, light winds, and shallow vertical atmospheric mixing. This condition frequently reduces pollutant dispersion, thereby causing elevated air pollution levels. Pollutant concentrations in the Basin vary with location, season, and time of day. Ozone concentrations, for example, tend to be lower along the coast, higher in the near inland valleys, and lower in the far inland areas of the Basin and adjacent desert.

The active weather station closest to the Project Site is a Western Regional Climate Center (WRCC) monitoring station at the Burbank/Glendale/Pasadena Airport (Burbank Valley Pump Monitoring Station [COOP ID 041194]), which is approximately two miles to the southeast of the Project Site. Given the station's proximity to the Project Site, historic climatic conditions at the Burbank Valley Pump Monitoring Station are assumed to be representative of prevailing climatic conditions. According to climate data recorded from 1966 to 2016 at this station, the average annual maximum temperature in the area is approximately 77 degrees Fahrenheit (°F), and the average annual minimum temperature is approximately 51°F. The average precipitation in the area is approximately 16 inches annually, occurring primarily from December through March (WRCC 2019).

# Criteria Air Pollutants

For the protection of public health and welfare, the Federal Clean Air Act (FCAA) requires that the U.S. Environmental Protection Agency (U.S. EPA) establish National Ambient Air Quality Standards (NAAQS) for various pollutants. These pollutants are referred to as "criteria" pollutants. Similarly, the California Clean Air Act (CCAA) requires the California Air Resources Board (CARB) to set standards and designate areas as either attainment or nonattainment based on whether the California Ambient Air Quality Standards (CAAQS) have been achieved. As all criteria pollutants can have human health effects at certain concentrations, the NAAQS and CAAQS define the maximum amount of an air pollutant that can be present in ambient air without harming public health. An ambient air quality standard is generally specified as a concentration averaged over a specific time period, such as one hour, eight hours, 24 hours, or one year. The different averaging times and concentrations are meant to protect against different exposure effects. Standards established for the protection of human health are referred to as primary standards; whereas, standards established for the prevention of environmental and property damage are called secondary standards. The FCAA allows states to adopt additional or more health-protective standards. The air quality regulatory framework and ambient air quality standards are discussed in greater detail later in this report.

Air quality standards have been established for the following six criteria pollutants: ozone ($O_3$), lead, carbon monoxide (CO), nitrogen dioxide ($NO_2$), sulfur dioxide ($SO_2$), and particulate matter (PM), which consists of PM less than or equal to 10 microns in diameter ($PM_{10}$) and PM less than or equal to 2.5 microns in diameter ($PM_{2.5}$) (U.S. EPA 2019a). Criteria air pollutants are also categorized as primary and secondary pollutants. In general, primary pollutants are directly emitted into the atmosphere, and secondary pollutants are formed by chemical reactions in the atmosphere. Of the six criteria pollutants, CO, $SO_2$, $PM_{10}$, and $PM_{2.5}$ are primary pollutants, while $O_3$ and $NO_2$ are secondary pollutants. The following provides a summary discussion of the primary and secondary criteria air pollutants of primary concern.

## Ozone ($O_3$)

$O_3$, which is the main ingredient in urban smog, is not emitted directly into the air, but is created by chemical reactions between hydrocarbons (HC) and nitrogen oxides ($NO_X$) (both by-products of the internal combustion engine) in the presence of sunlight. Reactive organic gasses (ROG) are defined by CARB and include all HC except those exempted by CARB that contribute to smog formation, while volatile organic compounds (VOCs) are defined by the U.S. EPA and include all hydrocarbons except those exempted by the U.S. EPA. Generally speaking, ROGs and VOCs are similar but not identical, and their terms are used interchangeably. For purposes of this analysis, the term ROG is used. There are no separate ambient air quality standards for ROGs. Carcinogenic forms of ROG are toxic air contaminants (TACs), which are described below. An example is benzene.

ROG are compounds made up primarily of hydrogen and carbon atoms. Internal combustion associated with motor vehicle usage is the major source of hydrocarbons. Other sources of ROG are emissions associated with the use of paints and solvents, the application of asphalt paving, and the use of household consumer products such as aerosols.

The two major forms of $NO_X$ are nitric oxide (NO) and $NO_2$. NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure. $NO_2$ is a reddish-brown irritating gas formed by the combination of NO and oxygen. In addition to serving as an integral participant in $O_3$ formation, $NO_X$ also directly acts as an acute respiratory irritant and increases susceptibility to respiratory pathogens.

$O_3$ poses a higher risk to those who already suffer from respiratory diseases (e.g., asthma), children, older adults, and people who are active outdoor. Exposure to $O_3$ at certain concentrations can make breathing more difficult, cause shortness of breath and coughing, inflame and damage the airways, aggregate lung diseases, increase the frequency of asthma attacks, and cause chronic obstructive pulmonary disease. Studies show associations between short-term $O_3$ exposure and non-accidental mortality, including deaths from respiratory issues. Studies also suggest long-term exposure to $O_3$ may increase the risk of respiratory-related deaths (U.S. EPA 2019b). The concentration of $O_3$at which health effects are observed depends on an individual's sensitivity, level of exertion (i.e., breathing rate), and duration of exposure. Studies show large individual differences in the intensity of symptomatic responses, with one study finding no symptoms to the least responsive individual after a 2-hour exposure to 400 parts per billion of ozone and a 50 percent decrement in forced airway volume in the most responsive individual. Although the results vary, evidence suggest that sensitive populations (e.g., asthmatics) may be affected on days when the 8-hour maximum $O_3$ concentration reaches 80 parts per billion (U.S. EPA 2019c).

In addition to human health effect, ozone has been tied to crop damage, typically in the form of stunted growth, leaf discoloration, cell damage, and premature death. Ozone can also act as a corrosive and oxidant, resulting in property damage such as the degradation of rubber products and other materials.

## Nitrogen Dioxide ($NO_2$)

$NO_2$ is a reddish-brown gas with a bleach-like odor. As discussed previously, both NO and $NO_2$ are the two major forms of NOx. $NO_2$ is formed when NO reacts rapidly with the oxygen in air. $NO_2$ is responsible for the brownish tinge of polluted air. In the presence of sunlight, atmospheric $NO_2$ reacts and splits to form an NO molecule and an oxygen atom. The oxygen atom can react further to form $O_3$, via a complex series of chemical reactions involving hydrocarbons.

Population-based studies suggest that an increase in acute respiratory illness—including infections and respiratory symptoms in children (not infants)—is associated with long-term exposures to $NO_2$ at levels found in homes with gas stoves, which are higher than ambient $NO_2$ levels found in Southern California homes that generally have fewer or no stoves. In healthy people, increase in resistance to air flow and airway contraction is observed after short-term exposure to $NO_2$ (SCAQMD 2017a). Larger decreases in lung functions are observed in individuals with asthma and/or chronic obstructive pulmonary disease (e.g., chronic bronchitis, emphysema) than in healthy individuals, indicating a greater susceptibility of these sub-groups. More recent studies have found associations between $NO_2$ exposures and cardiopulmonary mortality, decreased lung function, respiratory symptoms and emergency room asthma visits.

## Carbon Monoxide (CO)

CO is a colorless, odorless, relatively inert gas. It is a trace constituent in the unpolluted troposphere, and is produced by both natural processes and human activities. In remote areas far from human habitation, CO occurs in the atmosphere at an average background concentration of 0.04 parts per million (ppm), primarily as a result of natural processes such as forest fires and the oxidation of methane. Global atmospheric mixing of CO from urban and industrial sources creates higher background concentrations (up to 0.20 ppm) near urban areas. The major source of CO in urban areas is incomplete combustion of carbon-containing fuels, mainly gasoline.

Individuals with a deficient blood supply to the heart are the most susceptible to the adverse effects of CO exposure. The effects observed include earlier onset of chest pain with exercise, and electrocardiograph changes indicative of worsening oxygen supply to the heart. Inhaled CO has no direct toxic effect on the lungs, but exerts its effect on tissues by interfering with oxygen transport by competing with oxygen to combine with hemoglobin present in the blood to form carboxyhemoglobin (COHb). Hence, conditions with an increased demand for oxygen supply can be adversely affected by exposure to CO. Individuals most at risk include those with diseases involving heart and blood vessels, fetuses (unborn babies), and people with chronic hypoxemia (oxygen deficiency) as seen in high altitudes. Exposure to CO at high concentrations can also cause fatigue, headaches, confusion, dizziness, and chest pain (CARB 2019a).

## Particulate Matter (PM)

PM consists of finely divided solids or liquids such as soot, dust, aerosols, fumes, and mists. Two forms of fine particulates are now recognized—respirable course particles with an aerodynamic diameter of 10 micrometers or less, or $PM_{10}$, and respirable fine particles with an aerodynamic diameter of 2.5 micrometers or less, or $PM_{2.5}$. Particulate discharge into the atmosphere results primarily from industrial, agricultural, construction, and transportation activities. However, wind on arid landscapes also contributes substantially to local particulate loading. PM is considered both a local and a regional pollutant.

Particulate pollution can be transported over long distances and may adversely affect the human, especially for people who are naturally sensitive or susceptible to breathing problems. Numerous studies have linked PM exposure to premature death in people with preexisting heart or lung disease. Other symptoms of exposure may include nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms. Depending on its composition, both $PM_{10}$ and $PM_{2.5}$ can also affect water quality and acidity, deplete soil nutrients, damage sensitive forests and crops, affect ecosystem diversity, and contribute to acid rain (U.S. EPA 2019d).

## Sulfur Dioxide ($SO_2$)

$SO_2$ is a colorless, irritating gas with a “rotten egg” smell primarily formed from the combustion of fossil fuels containing sulfur. $SO_2$ is considered a local pollutant because it tends to accumulate in the air locally. High concentrations of $SO_2$ can result in temporary breathing impairment for asthmatic children and adults who are active outdoors. Short-term exposures of asthmatic

individuals to elevated $SO_2$ levels during moderate activity may result in breathing difficulties that can be accompanied by symptoms such as wheezing, chest tightness, or shortness of breath. Other effects that have been associated with longer-term exposures to high concentrations of $SO_2$, in conjunction with high levels of PM, include aggravation of existing cardiovascular disease, respiratory illness, and alterations in the lungs' defenses. $SO_2$ also is a major precursor to $PM_{2.5}$, which is a significant health concern and a main contributor to poor visibility (see also the discussion of health effects of particulate matter).

### Lead (Pb)

Pb in the atmosphere is present as a mixture of a number of lead compounds. Leaded gasoline and lead smelters have been the main sources of lead emitted into the air. Due to the phasing out of leaded gasoline, there was a dramatic reduction in atmospheric Pb over the past three decades. Exposure to low levels of Pb can adversely affect the development and function of the central nervous system, leading to learning disorders, distractibility, inability to follow simple commands, and lower intelligence quotient. Fetuses, infants, and children are more sensitive than others to the adverse effects of Pb exposure. In adults, increased Pb levels are associated with increased blood pressure. Pb poisoning can cause anemia, lethargy, seizures, and death. There is no evidence to suggest that there are direct effects of Pb on the respiratory system.

## Toxic Air Contaminants (TAC)

TACs are generally defined as those contaminants that are known or suspected to cause serious health problems, but do not have a corresponding ambient air quality standard. Air toxics are also defined as an air pollutant that may increase a person's risk of developing cancer and/or other serious health effects; however, the emission of a toxic chemical does not automatically create a health hazard. Air toxics are emitted by a variety of industrial processes that include petroleum refining, electric utility and chrome plating operations, commercial operations, such as gasoline stations and dry cleaners, and motor vehicle exhaust and may exist as $PM_{10}$ and $PM_{2.5}$ or as vapors (gases). To date, CARB has identified 21 TACs and adopted EPA's list of hazardous air pollutants as TACs. In August 1998, CARB identified diesel particulate matter (DPM) emissions as a TAC (CARB 1998). In September 2000, CARB approved a comprehensive diesel risk reduction plan to reduce emissions from both new and existing diesel-fueled engines and vehicles. The goal of the plan was to reduce DPM emissions and the associated health risk by 75 percent by 2010 and by 85 percent by 2020 (CARB 2000).

TACs include metals, other particles, gases absorbed by particles, and certain vapors from fuels and other sources. Based on SCAQMD's Multiple Air Toxics Exposure Study (MATES) program that evaluates health risks from regional air toxics in the Basin, the majority of the estimated health risks from air toxics can be attributed to relatively few compounds, with the key driver being DPM. In the MATES IV Study that was conducted in 2012-2013, it was found that DPM accounted for 68 percent of the total estimated air toxics risk in the Basin (SCAQMD 2017b). DPM differs from other air toxics in that it is a complex mixture of hundreds of substances rather than a single substance (CARB 2009). DPM is composed of two phases, gas and particle, and both phases contribute to the health risk. The gas phase is composed of many of the urban hazardous air pollutants, such as acetaldehyde, acrolein, benzene, 1,3-butadiene, formaldehyde and

polycyclic aromatic hydrocarbons. The particle phase is also composed of many different types of particles by size or composition. Fine and ultra-fine PM is of the greatest health concern and may be composed of elemental carbon with adsorbed compounds such as organic compounds, $SO_X$, nitrates, metals and other trace elements. DPM is emitted from a broad range of diesel engines; the on-road diesel engines of trucks, buses and cars and the off-road diesel engines that include locomotives, marine vessels and heavy-duty equipment. Although DPM is emitted by diesel-fueled internal combustion engines, the composition of the emissions varies depending on engine type, operating conditions, fuel composition, lubricating oil, and whether an emission control system is present.

Acute exposure to diesel exhaust may cause irritation to the eyes, nose, throat and lungs, and some neurological effects, such as lightheadedness. Acute exposure may also elicit a cough or nausea, as well as exacerbate asthma. Chronic exposure to DPM in experimental animal inhalation studies has shown a range of dose-dependent lung inflammation and cellular changes in the lung and immunological effects. Based upon human and laboratory studies, there is considerable evidence that DPM is a likely carcinogen. Human epidemiological studies have demonstrated an association between DPM exposure and increased lung cancer rates in occupational settings.

# Ambient Air Quality

CARB collects ambient air quality data from a network of air monitoring stations throughout the state. The purpose of the monitoring stations is to measure ambient concentrations of pollutants and determine whether the ambient air quality meets the NAAQS and CAAQS. The closest monitoring station is the Reseda – Gault Street station (ARB 70074), which is approximately nine miles west of the Project Site. This station currently monitors only ambient concentrations of ozone, $NO_2$, CO, and $PM_{2.5,}$ but does not monitor $PM_{10}$. The next closest monitoring station that monitors $PM_{10}$ is the Los Angles – North Main Street monitoring station (ARB 70087), which is approximately 14 miles southeast of the Project Site. As such, the aforementioned air pollutant data from these two monitor stations are used to summarize the ambient air quality conditions near the Project Site.

Table 2.1-1 summarizes the concentrations of these pollutants, applicable regulatory standards, and the number of days per year applicable standards were exceeded for the last 3 years from which complete data are available (2015–2017). As discussed above, the CAAQS and NAAQS define clean air and represent the maximum amount of pollution that can be present in outdoor air without any harmful effects on people and the environment. The nearby stations have experienced frequent violations of the 8-hour ozone and 24-hour PM10 CAAQS over the period of record. Existing violations of the ozone and PM10 ambient air quality standards indicate that certain individuals exposed to this pollutant may experience certain health effects, including increased incidence of cardiovascular and respiratory ailments.

**Table 2.1-1: Summary of Ambient Air Quality Monitoring Data[a]**

| Pollutant Standards | 2015 | 2016 | 2017 |
|---|---|---|---|
| **1-hour Ozone ($O_3$)** | | | |
| Maximum Concentration (ppm) | 0.119 | 0.122 | 0.140 |
| *Number of Days Standard Exceeded* | | | |
| CAAQS 1-hour standard (0.09 ppm) | 0 | 0 | 4 |
| **8-Hour Ozone ($O_3$)** | | | |
| State Maximum Concentration (ppm) | 0.095 | 0.099 | 0.115 |
| National Maximum Concentration (ppm) | 0.094 | 0.098 | 0.114 |
| National Fourth-highest Concentration (ppm) | 0.087 | 0.086 | 0.095 |
| *Number of Days Standard Exceeded* | | | |
| CAAQS 8-hour standard (0.070 ppm) | 34 | 23 | 67 |
| NAAQS 8-hour standard (0.070 ppm) | 32 | 23 | 64 |
| **Carbon Monoxide (CO)** | | | |
| Maximum Concentration 1-hour Period (ppm) | 3 | 2.4 | 3 |
| Maximum Concentration 8-hour Period (ppm) | 2.5 | 1.9 | 2.5 |
| *Number of Days Standard Exceeded* | | | |
| NAAQS 8-hour standard (9 ppm) | 0 | 0 | 0 |
| CAAQS 8-hour standard (9.0 ppm) | 0 | 0 | 0 |
| NAAQS 1-hour standard (35 ppm) | 0 | 0 | 0 |
| CAAQS 1-hour standard (20 ppm) | 0 | 0 | 0 |
| **Nitrogen Dioxide ($NO_2$)** | | | |
| Maximum 1-hour Concentration (ppm) | 0.0725 | 0.0555 | 0.0625 |
| Annual Average Concentration (ppm) | 0.013 | 0.012 | 0.012 |
| *Number of Days Standard Exceeded* | | | |
| CAAQS 1-hour standard (0.18 ppm) | 0 | 0 | 0 |
| NAAQS 1-hour standard (0.100 ppm) | 0 | 0 | 0 |
| **Suspended Particulates ($PM_{10}$)** | | | |
| State Maximum 24-hour Concentration (μg/m$^3$) | 88.5 | 74.6 | 96.2 |
| National Maximum 24-hour Concentration (μg/m$^3$) | 73.0 | 64.0 | 64.6 |
| State Annual Average Concentration (CAAQS = 20 μg/m$^3$) | 27.0 | * | * |
| *Number of Days Standard Exceeded* | | | |
| CAAQS 24-hour standard (50 μg/m$^3$) | 30 | 21 | 40 |
| NAAQS 24-hour standard (150 μg/m$^3$) | 0 | 0 | 0 |
| **Suspended Particulates ($PM_{2.5}$)** | | | |
| National Maximum 24-hour Concentration (μg/m$^3$) | 36.8 | 30.0 | 35.2 |
| 24-hour Standard 98$^{th}$ Percentile (μg/m$^3$) | 28.4 | 24.5 | 20.7 |
| National Annual Average Concentration (μg/m$^3$) | 8.8 | 9.1 | 9.7 |
| State Annual Average Concentration (μg/m$^3$) | * | 16.9 | 16.8 |
| *Number of Days Standard Exceeded* | | | |
| NAAQS 24-hour standard (35 μg/m$^3$) | 1 | 0 | 0 |

Sources: CARB 2019b; U.S. EPA 2018. Data compiled by ICF.

ppm = parts per million; μg/m$^3$ = micrograms per cubic meter; mg/m$^3$ = milligrams per cubic meter; CAAQS = California Ambient Air Quality Standards; NAAQS = National Ambient Air Quality Standards

* = insufficient data available to determine value

[a] Data available at: https://www.arb.ca.gov/adam/topfour/topfour1.php.

The FCAA requires the U.S. EPA to designate areas within the country as either attainment or nonattainment for each criteria pollutant based on whether the NAAQS have been achieved. Similarly, the CCAA requires CARB to designate areas within California as either attainment or nonattainment for each criteria pollutant based on whether the CAAQS have been achieved. If a pollutant concentration is lower than the state or federal standard, the area is classified as being in attainment for that pollutant. If a pollutant violates the standard, the area is considered a nonattainment area. If data are insufficient to determine whether a pollutant is violating the standard, the area is designated unclassified. Additionally, where monitored pollutant concentrations exceeded the standard in question in the past but are no longer in violation of that standard that area is designated a maintenance area. Under the CCAA, areas are designated as nonattainment for a pollutant if air quality data show that a state standard for the pollutant was violated at least once during the previous three calendar years. Exceedances that are affected by highly irregular or infrequent events are not considered violations of a state standard and are not used as a basis for designating areas as nonattainment.

Table 2.1-2 summarizes the attainment status for the Los Angeles County portion of the Basin with respect to the NAAQS and CAAQS. The CAAQS and NAAQS represent concentration limits of criteria air pollutants needed to adequately protect human health and the environment. Existing violations of the $O_3$ and $PM_{10}$ ambient air quality standards indicate that certain individuals exposed to this pollutant may experience certain health effects, including increased incidence of acute and chronic cardiovascular and respiratory ailments.

**Table 2.1-2: Federal and State Attainment Status for the Los Angeles County Portion of the South Coast Air Basin**

| Criteria Pollutant | Federal Designation | State Designation |
|---|---|---|
| Ozone ($O_3$) (1-hour standard) | — | Nonattainment |
| Ozone ($O_3$) (8-hour standard) | Nonattainment – Extreme (P) | Nonattainment |
| Carbon Monoxide (CO) | Maintenance – Serious (P) | Attainment |
| Particulate Matter ($PM_{10}$) | Maintenance – Serious (P) | Nonattainment |
| Fine Particulate Matter ($PM_{2.5}$) | Nonattainment – Serious (P) | Nonattainment |
| Nitrogen Dioxide ($NO_2$) | Maintenance (P) | Attainment |
| Sulfur Dioxide ($SO_2$) | Attainment | Attainment |
| Lead (Pb) | Nonattainment (P) | Attainment |

Sources: U.S. EPA 2019e; CARB 2018a; CARB 2019e.
(P) = designation applies to a portion of the county

# 2.2 Regulatory Framework

## Federal

### Federal Clean Air Act

The FCAA was first enacted in 1963 and has been amended numerous times in subsequent years (1967, 1970, 1977, and 1990). The FCAA establishes the NAAQS and specifies future dates for achieving compliance. The FCAA also mandates that each state submit and implement a State Implementation Plan (SIP) for local areas not meeting those standards. The plans must include pollution control measures that demonstrate how the standards will be met. Because the Project Site is within the Los Angeles County portion of the Basin, it is in an area designated as nonattainment for certain pollutants that are regulated under the FCAA.

The 1990 amendments to the FCAA identify specific emission-reduction goals for areas not meeting the NAAQS. These amendments require both a demonstration of reasonable progress toward attainment and incorporation of additional sanctions for failure to attain or meet interim milestones. The sections of the FCAA that would most substantially affect the development of the Project include Title I (Nonattainment Provisions) and Title II (Mobile-Source Provisions).

Title I provisions were established with the goal of attaining the NAAQS for criteria pollutants. Table 2.2-1 shows the NAAQS currently in effect for each criteria pollutant. The NAAQS were amended in July 1997 to include an 8-hour standard for $O_3$ and adopt a standard for $PM_{2.5}$. The $PM_{2.5}$ NAAQS was most recently amended in 2012 and the 8-hour $O_3$ NAAQS was further amended in October 2015.

**Table 2.2-1: Federal and State Ambient Air Quality Standards**

| Pollutant | Averaging Time | CAAQS | NAAQS[1] |
|---|---|---|---|
| Ozone ($O_3$) | 1-hour | 0.09 ppm | - |
| | 8-hour | 0.070 ppm | 0.070 ppm |
| Respirable Particulate Matter ($PM_{10}$) | Annual mean | 20 µg/m³ | - |
| | 24- hour | 50 µg/m³ | 150 µg/m³ |
| Fine Particulate Matter ($PM_{2.5}$) | Annual mean | 12 µg/m³ | 12 µg/m³ |
| | 24- hour | No Standard | 35 µg/m³ |
| Carbon Monoxide (CO) | 1- hour | 20 ppm | 35 ppm |
| | 8- hour | 9.0 ppm | 9 ppm |
| Nitrogen Dioxide ($NO_2$) | Annual mean | 0.030 ppm | 0.053 ppm |
| | 1- hour | 0.18 ppm | 100 ppb |
| Sulfur Dioxide ($SO_2$) | Annual mean | - | 0.03 ppm |
| | 24- hour | 0.04 ppm | 0.14 ppm |
| | 3- hour | - | - |
| | 1- hour | 0.25 ppm | 75 ppb |
| Lead (Pb) | 30-day Average | 1.5 µg/m³ | - |
| | Calendar Quarter | - | 1.5 µg/m³ |
| | Rolling 3-Month Average | - | 0.15 µg/m³ |
| Sulfates | 24- hour | 25 µg/m³ | No Federal Standard |
| Hydrogen Sulfide | 1- hour | 0.03 ppm (42 µg/m³) | No Federal Standard |
| Vinyl Chloride | 24- hour | 0.01 ppm (26 µg/m³) | No Federal Standard |
| Visibility-Reducing Particle Matter | 8- hour | - | No Federal Standard |

Source: CARB 2016a.

ppb= parts per billion; ppm= parts per million; µg/m³ = micrograms per cubic meter.

[a] National standards are divided into primary and secondary standards. Primary standards are intended to protect public health, whereas secondary standards are intended to protect public welfare and the environment. Only Primary standards are shown here.

## Emission Standards for Non-Road Diesel Engines

To reduce emissions from non-road diesel equipment, the U.S. EPA established a series of increasingly strict emission standards for new non-road diesel engines. Tier 1 standards were phased in on newly manufactured equipment from 1996 through 2000 (year of manufacture), depending on the engine horsepower (hp) category. Tier 2 standards were phased in on newly manufactured equipment from 2001 through 2006. Tier 3 standards were phased in on newly manufactured equipment from 2006 through 2008. Tier 4 standards, which require advanced emission control technology, were phased in from 2008 through 2015.

### On-Road Diesel Fuel Rule

In December 2000, the U.S. EPA signed the Heavy-Duty Highway Rule, which reduces emissions from on-road, heavy-duty diesel trucks by establishing a series of increasingly strict emission standards for new engines. Manufacturers were required to produce new diesel vehicles that meet PM and $NO_X$ emission standards beginning with model year 2007 with the phase-in period being between 2007 and 2010. The phase-in was based on a percent-of-sales basis: 50 percent from 2007 to 2009 and 100 percent in 2010 (U.S. EPA 2001).

### Emission Standards for Heavy-Duty Vehicles

U.S. EPA has established a series of increasingly strict emission standards for new heavy-duty bus and truck engines. Emissions from heavy-duty trucks are managed by regulations and emission limits implemented at the federal, state, and local levels. In December 2000, EPA signed the Heavy-Duty Highway Rule, which reduces emissions from on-road, heavy-duty diesel trucks by establishing a series of increasingly strict emission standards for new engines. Manufacturers were required to produce new diesel vehicles that meet particulate matter and NOx emission standards beginning with model year 2007, with the phase-in period being between 2007 and 2010. The phase-in was based on a percentage-of-sales basis: 50 percent from 2007 to 2009 and 100 percent in 2010. Requirements apply to engines installed in all vehicles with Gross Vehicle Weight Rating above 14,000 pounds, and to some engines installed in vehicles with Gross Vehicle Weight Rating between 8,500 and 14,000 pounds (U.S. EPA 2019f).

## State

### California Clean Air Act

The CCAA, signed into law in 1988, requires all areas of the state to achieve and maintain the CAAQS by the earliest practical date. The CAAQS incorporate additional standards for most of the criteria pollutants and set standards for other pollutants recognized by the state. In general, the California standards are more health protective than the corresponding NAAQS. California has also set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. The Basin is in compliance with these standards. Table 2.2-1 shows the CAAQS currently in effect for each criteria pollutant.

The CARB and local air districts bear responsibility for achieving California's air quality standards, which are to be achieved through district-level air quality management plans that would be incorporated into the SIP. In California, EPA has delegated authority to prepare SIPs to CARB, which, in turn, has delegated that authority to individual air districts. CARB traditionally has established state air quality standards, maintaining oversight authority in air quality planning, developing programs for reducing emissions from motor vehicles, developing air emission inventories, collecting air quality and meteorological data, and approving SIPs.

The CCAA substantially adds to the authority and responsibilities of air districts. The CCAA designates air districts as lead air quality planning agencies, requires air districts to prepare air quality plans, and grants air districts authority to implement transportation control measures.

The CCAA also emphasizes the control of "indirect and area-wide sources" of air pollutant emissions. The CCAA gives local air pollution control districts explicit authority to regulate indirect sources of air pollution and to establish traffic control measures.

### Toxic Air Contaminants Regulations

California regulates TACs primarily through the Tanner Air Toxics Act (Assembly Bill [AB] 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588). The Toxic Air Contaminant Identification and Control Act (AB 1807) created California's program to reduce exposure to air toxics. The Air Toxics "Hot Spots" Information and Assessment Act (AB 2588) supplements the AB 1807 program by requiring a statewide air toxics inventory, notification of people exposed to a significant health risk, and facility plans to reduce these risks. In August 1998, CARB identified particulate emissions from diesel-fueled engines as TACs. In September 2000, CARB approved a comprehensive diesel risk reduction plan to reduce emissions from both new and existing diesel-fueled engines and vehicles. As an ongoing process, CARB reviews air contaminants and identifies those that are classified as TACs. CARB also continues to establish new programs and regulations for the control of TACs, including DPM, as appropriate.

In 2017, Governor Jerry Brown signed AB 617 into law to develop a new community focused program to more effectively reduce exposure to air pollution and preserve public health. CARB and local air quality districts are directed to take measures to protect communities disproportionally impacted by air pollution through local, community-specific strategies that are focused on the individual needs and issues particular to each community. Tasked to prepare a statewide strategy to reduce emissions in communities affected by high exposure to air pollution, CARB has established the Community Air Protection Program (CAPP) to identify and prioritize communities on an annual basis where reduction from pollution exposure is needed based on environmental, health, and socioeconomic information. This statewide effort to reduce exposure in communities most impacted by air pollution will require community air monitoring, community emission reduction plans, and incentive funding to deploy the cleanest technologies in the most impacted areas. While CARB ultimately selects the communities to be included in the CAPP and establishes the program requirements, AB 617 places the responsibility for the development and implementation of community emissions reduction programs primarily on the local air quality districts. Specifically, once communities are selected for action by CARB, the local air quality districts are tasked to: (1) form a community steering committee and begin development of community emission reduction programs; 2) develop expedited schedules for implementing best available retrofit control technology (BARCT) requirements; (3) deploy monitoring in communities selected for community air monitoring systems; and (4) adopt programs to reduce emissions in the selected communities (CARB 2019c).

## Regional

### South Coast Air Quality Management District

The Project Site lies within the Los Angeles County portion of the Basin, which is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). SCAQMD has jurisdiction over an area of approximately 10,743 square miles, including all of Orange County;

Los Angeles County, except for the Antelope Valley; the non-desert portion of western San Bernardino County; and the western and Coachella Valley portions of Riverside County. The Basin is a sub-region of SCAQMD's jurisdiction. Although air quality in this area has improved, the Basin requires continued diligence to meet air quality standards.

SCAQMD has adopted a series of air quality management plans (AQMPs) to meet the CAAQS and NAAQS. These plans require, among other emissions-reducing activities, control technology for existing sources, control programs for area sources and indirect sources, an SCAQMD permitting system that allows no net increase in emissions from any new or modified (i.e., previously permitted) emissions sources, and transportation control measures. The most recent publication is the 2016 AQMP, which is intended to serve as a regional blueprint for achieving the federal air quality standards and healthful air.

The 2016 AQMP represents a thorough analysis of existing and potential regulatory control options, and includes available, proven, and cost-effective strategies to pursue multiple goals in promoting reductions in GHG emissions and toxic risk, as well as efficiencies in energy use, transportation, and goods movement. The 2016 AQMP focuses on demonstrating NAAQS attainment dates for the 2008 8-hour $O_3$ standard, the 2012 annual $PM_{2.5}$ standard, and the 2006 24-hour $PM_{2.5}$ standard. The 2016 AQMP includes both stationary and mobile source strategies to ensure that rapidly approach attainment deadlines are met, that public health is protected to the maximum extent feasible, and that the region is not faced with burdensome sanctions if the NAAQS are not met by the established date.

SCAQMD published the *CEQA Air Quality Handbook* in November 1993[1] to help local governments analyze and mitigate project-specific air quality impacts. This handbook provides standards, methodologies, and procedures for conducting air quality analyses as part of California Environmental Quality Act (CEQA) documents prepared within SCAQMD's jurisdiction. In addition, SCAQMD has published two guidance documents: *Localized Significance Threshold Methodology for CEQA Evaluations* (2003, revised 2008) and *Particulate Matter (PM) 2.5 Significance Thresholds and Calculation Methodology* (2006). These publications provide guidance for evaluating localized effects from mass emissions during construction. Both were used in the preparation of this analysis.

The Project is also required to comply with all applicable SCAQMD Rules and Regulations pertaining to construction activities, including, but not limited to:

*Rule 401– Visible Emissions.* This rule prohibits the discharge into the atmosphere from any single source of emission whatsoever any air contaminant for a period or periods aggregating more than three minutes in any 1 hour that is as dark or darker in shade as that designated No. 1 on the Ringelmann Chart, as published by the U.S. Bureau of Mines.

[1] Section updates provided on the SCAQMD website: http://www.aqmd.gov/ceqa/hdbk.html

*Rule 402– Nuisance.* This rule prohibits the discharge of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public; endanger the comfort, repose, health, or safety of any such persons or the public; or cause, or have a natural tendency to cause, injury or damage to business or property. Odors are regulated under this rule.

*Rule 403 – Fugitive Dust.* This rule prohibits emissions of fugitive dust from any active operation, open storage pile, or disturbed surface area that remains visible beyond the property line of the emission's source. During construction, best available control measures identified in the rule would be required to minimize fugitive dust emissions from proposed earthmoving and grading activities. These measures would include site pre-watering and re-watering as necessary to maintain sufficient soil moisture content. Additional requirements apply to construction projects on properties with 50 or more acres of disturbed surface area or any earthmoving operation with a daily earthmoving or throughput volume of 5,000 cubic yards or more three times during the most recent 365-day period. These requirements include submittal of a dust control plan, maintenance of dust control records, and designation of an SCAQMD-certified dust control supervisor.

*Rule 1108 – Cutback Asphalt.* This rule specifies VOC content limits for cutback asphalt.

*Rule 1470 – Requirements for Stationary Diesel-Fueled Internal Combustion and Other Compression Ignition Engines.* This rule specifies requirements for stationary diesel engines, including emergency standby generators. It requires owners or operators of emergency standby generators to keep monthly logs of usage, limits maintenance and testing to 20 hours per year, and requires emission rates to not exceed 0.40 gram per brake-horsepower hour.

*Rule 1113 – Architectural Coatings.* This rule limits the VOC content in architectural coatings used in the SCAQMD jurisdiction. These limits are application-specific and are updated as availability of low-VOC products expands.

## Southern California Association of Governments

The Southern California Association of Governments (SCAG) is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial counties. SCAG addresses regional issues related to transportation, the economy, community development, and the environment, and is the federally designated metropolitan planning organization for a majority of the region and the largest metropolitan planning organization in the nation. As required by federal and state law, SCAG develops plans pertaining to transportation, growth management, hazardous waste management, housing, and air quality. SCAG data are used in the preparation of air quality forecasts and the conformity analysis included in the AQMP.

SCAG's 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (2016 RTP/SCS) aims to reduce air pollution by adding density in proximity to transit stations, and encouraging mixed-use development and active transportation. SCAG's RTP/SCS establishes general goals for land use planning and seeks improved access and mobility by placing

"destinations closer together, thereby decreasing the time and cost of traveling between them."[2] The 2016 RTP/SCS seeks to implement "strategies focused on compact infill development, superior placemaking (the process of creating public spaces that are appealing), and expanded housing and transportation choices."[3]

## City of Los Angeles General Plan Air Quality Element

The City's general plan Air Quality Element (1992) addresses citywide goals, objectives, and policies designed to promote cleaner air and improved public health. The principal objective of the Air Quality Element of the general plan is to aid the region in attaining the state and federal ambient air quality standards while continuing economic growth and improvement in the quality of life afforded to City residents. The Air Quality Element also documents how the City will implement local programs contained in the general plan through recognition of the interrelationships between transportation and land use planning. The Air Quality Element establishes six City-wide criteria for meeting its mobility and air quality goals:

- Good air quality in an environment of continued population growth and healthy economic structure;
- Less reliance on single-occupant vehicles with fewer commute and non-work trips;
- Efficient management of transportation facilities and system infrastructure using cost-effective system management and innovative demand-management techniques;
- Minimal impacts of existing land use patterns and future land use development on air quality by addressing the relationship between land use, transportation, and air quality;
- Energy efficiency through land use and transportation planning, the use of renewable resources and less-polluting fuels and the implementation of conservation measures such as site orientation and tree planting; and
- Citizen awareness of the linkages between personal behavior and air pollution and participation in efforts to reduce air pollution.

In accordance with CEQA requirements, the City assesses the air quality impacts of new development projects, requires mitigation of potentially significant air quality impacts by conditioning discretionary permits, and monitors and enforces implementation of such mitigation. The City uses the SCAQMD's *CEQA Air Quality Handbook* and SCAQMD's supplemental online guidance/information for the environmental review of plans and development proposals within its jurisdiction.

[2] Southern California Association of Governments, 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy, (2016), page 16. Available at: http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS.pdf.
[3] Southern California Association of Governments, 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy, (2016), page 14.

# 2.3 Air Quality Impacts and Mitigation Measures

## Methodology

Air pollutant emissions would occur from both construction and operation of the new mixed-use development at the Project Site. The Project's construction activities would generate temporary air pollutant emissions from the use of off-road mobile equipment and combustion-powered tools at the Project Site as well as construction-related worker, vendor truck, and haul truck trips traveling to and from the Project Site. Once constructed, air pollutant emissions would result from operations of the new mixed-use development, which includes mobile- and area-source emissions. The change in air pollutant emissions generated by the Project relative to baseline conditions has been estimated and compared with the applicable air quality thresholds of significance recommended by SCAQMD.

### Short-term Construction-Generated Emissions

Construction of the Project would generate emissions of ROG, $NO_X$, CO, $SO_X$, $PM_{10}$, and $PM_{2.5}$ that could result in short-term air quality effects during the construction period. Emissions would originate from off-road equipment exhaust, employee and haul truck vehicle exhaust (on-road vehicles), and fugitive dust from site grading and earth movement.

The Project's short-term construction emissions were estimated using the California Emissions Estimator Model (CalEEMod), version 2016.3.2, developed by the California Air Pollution Control Officers Association and recommended by SCAQMD. The modeling was conducted based on Project-specific construction data (e.g., schedule, equipment, truck volumes) provided by the Project applicant, where available. Where Project-specific information was not available, reasonable assumptions based on similar projects and default model settings were used to estimate criteria air pollutant and ozone precursor emissions. Because it is mandatory for all construction projects in the Basin to comply with SCAQMD Rule 403 for fugitive dust control, the reduction of fugitive $PM_{10}$ and $PM_{2.5}$ emissions from implementation of Rule 403 was accounted for in the modeling. Specific Rule 403 control requirements include, but are not limited to, applying water to exposed soils, particularly during grading and site preparation activities; washing equipment and vehicles or using another other method for removing material (e.g., washed gravel pad, wheel shaker, wheel spreading device) prior to leaving the work site; covering haul loads prior to haul vehicles leaving the work site; and removing any accumulated dirt/mud from roadways adjacent to the work site.[4] The resulting pollutant emissions estimated from CalEEMod were then assessed against SCAQMD's regional significance thresholds, which are shown in Table 2.3-1, to determine the Project's impacts on regional air quality. The modeling output files are provided in Appendix A of this report.

In conducting the localized air quality analysis for the Project, which focuses only on on-site emissions, the Project's peak on-site construction emissions generated from combustion sources (e.g., off-road construction equipment) and fugitive sources (e.g., grading and demolition dust)

[4] See https://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-403.pdf?sfvrsn=4, last accessed August 2019.

were extracted from the CalEEMod model run outputs. Additionally, to account for combustion emissions associated with vehicles traveling within the Project Site during construction, it was conservatively assumed that 5 percent of the total daily off-site mobile emissions from worker vehicle and vendor and haul truck trips would occur within the Project Site. Overall, the daily total on-site combustion, mobile, and fugitive dust emissions associated with the Project's construction activities were evaluated against SCAQMD's localized significance thresholds (LSTs) for a 4.6-acre site, which are shown in Table 2.3-2.

## Long-term Operational Emissions

Operation of the Project would generate emissions of ROG, NOx, CO, SOx, $PM_{10}$, and $PM_{2.5}$ that could result in long-term impacts on ambient air quality. The Project's emissions of these air pollutants and precursors, including mobile-, energy-, and area-source emissions, during operations were quantified using CalEEMod. Area-source emissions, which are widely distributed and composed of many small emissions sources (e.g., fireplaces, landscaping equipment, consumer products, painting operations, etc.), and energy-source emissions, which are generated from activities in buildings where natural gas is used (e.g., heating or cooking), were modeled according to the size and type of land use proposed at the Project Site. Modeling of mass mobile-source emissions was based on the number of daily vehicle trips that would result from the Project's new multi-family residential, restaurant, and commercial uses. Project trip generation rates for these proposed land uses were obtained from the Transportation Impact Study (TIS) prepared for the Project by Gibson Transportation Consulting.[5] The vehicle trips modeled in CalEEMod take into account trip reductions from internal capture from co-locating different land uses on the Project Site and from nearby access to public transportation. The resulting long-term operational emissions that would be generated by the Project were then assessed against the applicable SCAQMD thresholds (refer to Table 2.3-1) to determine the Project's impacts on regional air quality.

Aside from regional air quality impacts, the Project's localized air quality impacts during operations were analyzed by extracting the Project's on-site operational emissions from the CalEEMod model run. To account for mobile-source emissions associated with vehicles traveling within the two-level parking structure at the Project Site by Project residents and patrons of the new restaurant and commercial uses, it was conservatively assumed that 5 percent of the total daily off-site mobile emissions generated during Project operations would occur within the Project Site. The Project's total on-site operational emissions were then evaluated against SCAQMD's applicable operational LSTs (refer to Table 2.3-1).

It should be noted that, currently, the Project Site is used as a construction yard and is occupied by a single-story office and a single-story commercial building along with associated uses. According to the TIA for the Project, the existing uses at the Project Site generate approximately 40 daily vehicle trips.[6] With development of the Project, the operational emissions generated by the existing uses would cease and be replaced by those for the Project. However, for the purpose

[5] Gibson Transportation Consulting, Inc. September 2019. Draft Transportation Impact Study for the 7940 Lankershim Boulevard Mixed-Use Project, Los Angeles, California.
[6] Ibid.

of conducting a conservative analysis, the Project's operational emissions were assessed in this analysis without taking any emissions credit from the existing uses that currently occupy the Project Site. Thus, the actual operational emissions that would result from Project implementation would be lower than the emissions reported in this analysis.

### Operational Carbon Monoxide Hot Spots

A CO hot spot is a localized concentration of CO that is above the state or national 1-hour or 8-hour ambient air standards for the pollutant. The potential for the Project to result in localized CO impacts occurring from the addition of Project-associated traffic volumes at intersections is assessed based on SCAQMD's suggested criteria, which recommends performing a localized CO impact analysis for intersections that change from level of service (LOS) C to D as a result of a project and for all intersections rated D or worse where the project increases the volume-to-capacity (V/C) ratio by 2 percent or more. Additionally, as part of SCAQMD's 2003 AQMP, which is the most recent AQMP that addresses CO concentrations, a detailed CO hot spots analysis was conducted at four heavily congested intersections in the Basin that were likely to experience the highest CO concentrations. The results of the CO hot spots analysis did not predict a violation of CO standards at any of these four intersections. As such, the highest daily traffic volumes that would occur among the study intersections analyzed in the Project's TIS are also compared against the highest traffic volumes at the busiest intersection evaluated in the 2003 AQMP in this analysis to evaluate the potential for the Project to result in any localized CO impacts.

## Thresholds of Significance

Appendix G of the CEQA Guidelines provides a set of topics that addresses impacts with regard to air quality. The questions are as follows:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Result in a cumulatively considerable net increase in any criteria pollutant for which the project region is a nonattainment area with respect to the applicable federal or state ambient air quality standard;
- Expose sensitive receptors to substantial pollutant concentrations; and
- Result in other emissions (such as those leading to odors adversely affecting a substantial number of people).

### Supplemental Thresholds

#### Regional Thresholds

The City has not developed specific air quality thresholds for air quality impacts. Instead, it relies on the SCAQMD's *CEQA Air Quality Handbook* when acting as lead agency for CEQA purposes. Appendix G, Section III, of the CEQA Guidelines states that, where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make determinations regarding air quality impacts. Given SCAQMD's regulatory

role in the Basin, the significance thresholds and analysis methodologies established by SCAQMD are relied upon by the City in the context of the questions from Appendix G of the CEQA Guidelines to make determinations regarding air quality impacts. The SCAQMD significance thresholds and analysis methodologies are relied on here with respect to this analysis of the Project's potential air quality impacts.

The SCAQMD has established air quality significance thresholds that are applicable to both construction and operational emissions generated by CEQA projects within its jurisdiction. These significance thresholds were derived using regional emissions modeling to determine maximum allowable mass quantities of pollutant emissions that could be generated by individual projects without adversely affecting air quality and creating public health concerns based on existing pollution levels. These regional pollutant emission thresholds are shown in Table 2.3-1.

**Table 2.3-1: SCAQMD Regional Air Quality Significance Thresholds**

| | Mass Daily Thresholds (lbs./day) | |
|---|---|---|
| **Pollutant** | **Construction** | **Operation** |
| Nitrogen Oxides ($NO_X$) | 100 | 55 |
| Volatile Organic Compounds (VOC)[a] | 75 | 55 |
| Suspended Particulate Matter ($PM_{10}$) | 150 | 150 |
| Fine Particulate Matter ($PM_{2.5}$) | 55 | 55 |
| Sulfur Oxides ($SO_X$) | 150 | 150 |
| Carbon Monoxide (CO | 550 | 550 |
| Lead (Pb)[b] | 3 | 3 |

Source: SCAQMD 2019.

[a] The terms VOC and ROG are used interchangeably. SCAQMD uses VOC, and CalEEMod uses ROG.

[b] The Project would result in no lead emissions sources during the construction period or operations. As such, lead emissions are not evaluated herein.

## Localized Thresholds

Aside from regional air quality impacts, projects in the Basin are also required to analyze local air quality impacts. The SCAQMD has developed LSTs that represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standards, and thus would not cause or contribute to localized air quality impacts. LSTs are developed based on the ambient concentrations of that pollutant for each of the 38 source receptor areas (SRAs) in the Basin. The localized thresholds, which are found in the mass rate look-up tables in SCAQMD's *Final Localized Significance Threshold Methodology* document, were developed for the analysis of projects that are less than or equal to five acres in size and applicable only to the following criteria pollutants: NOx, CO, $PM_{10}$, and $PM_{2.5}$. The analysis of localized air quality impacts focuses only on the on-site activities of a project and does not include emissions that are generated off-site, such as on-road haul or delivery truck trips (SCAQMD 2003).

The mass rate look-up tables developed by SCAQMD present LST values in the form of allowable emissions (in pounds per day) as a function of receptor distance from a project's site boundary.

These LST values were developed by SCAQMD for 1-acre, 2-acre, and 5-acre sites. The LSTs established for each of the aforementioned site acreages represent the level of pollutant emissions that would not exceed the most stringent applicable federal or state ambient air quality standards. For project acreages that fall between the acreages presented in the mass rate look-up tables, SCAQMD recommends using either the LSTs for acreage that is smaller than that of the project or developing LSTs from a ratio of the known LSTs for smaller and larger acreages using a linear regression calculation. Because the Project Site is approximately 4.6 acres, the LST values for a 4.6-acre site were approximated through linear regression from the 2- and 5-acre LST values in the mass rate look-up tables. The construction and operational LSTs for a 4.6-acre site in SRA 7 (East San Fernando Valley), which is where the Project Site is located, are shown in Table 2.3-2.

**Table 2.3-2: SCAQMD LSTs**

| Pollutant Monitored within SRA 7 East San Fernando Valley | 4.6-Acre Site[a] Allowable Emissions (pounds/day) as a Function of Receptor Distance (feet) from Site Boundary 82 feet (25 meters)[b] |
|---|---|
| **Construction Screening Thresholds** | |
| Nitrogen Oxides ($NO_x$)[c] | 164.3 |
| Carbon Monoxide (CO) | 1,347.6 |
| Respirable Particulate Matter ($PM_{10}$) | 13.1 |
| Fine Particulate Matter ($PM_{2.5}$) | 7.4 |
| **Operational Screening Thresholds** | |
| Nitrogen Oxides ($NO_x$)[b] | 164.3 |
| Carbon Monoxide (CO) | 1,347.6 |
| Respirable Particulate Matter ($PM_{10}$) | 3.7 |
| Fine Particulate Matter ($PM_{2.5}$) | 1.8 |

Source: SCAQMD 2003 (revised 2008).

[a] The LSTs for a 4.6 acre site in SRA 7 were estimated from the corresponding LSTs for a 1-, 2-, and 5-acre site in SRA 1 (obtained from Appendix C [Localized Significance Threshold Screening Tables] of SCAQMD's *Final Localized Significance Threshold Methodology* document), using the linear regression calculation recommended by SCAQMD.

[b] While SCAQMD's mass rate look-up tables present LST values for receptor distances of 82, 164, 328, 656, and 1,640 feet from a project's site boundary, for the purpose of this analysis only the LST values at a receptor distance of 82 feet is provided since LSTs at this distance are the most conservative and best meet the distances at which the nearest off-site sensitive receptors are from the Project Site among the distances in SCAQMD's LST lookup tables. According to SCAQMD's LST methodology, it is recommended that projects with boundaries closer than 82 feet (25 meters) from the nearest receptor use the LSTs for receptors located at 82 feet.

[c] The localized thresholds listed for $NO_X$ in this table take into consideration the gradual conversion of NO to $NO_2$.The analysis of localized air quality impacts associated with $NO_X$ emissions focuses on $NO_2$ levels because of their association with adverse health effects.

## Health-Based Thresholds for Project-Generated Pollutants of Human Health Concern

The California Supreme Court's decision in *Sierra Club v. County of Fresno*, 6 Cal. 5th 502 (2018) (hereafter referred to as the Friant Ranch Decision), reviewed the long-term, regional air quality analysis contained in the environmental impact report (EIR) for the proposed *Community Plan Update* and *Friant Ranch Specific Plan* (Friant Ranch Project). The Friant Ranch Project is a 942-

acre master-plan development in unincorporated Fresno County within the San Joaquin Valley Air Basin, an air basin currently in nonattainment under the NAAQS and CAAQS for ozone and $PM_{2.5}$. The Friant Ranch Project was determined to result in significant and unavoidable air quality impacts with respect to PM10, ROG, and NOx. Despite the disclosure of these impacts, the court found that the EIR was flawed insofar as it did not attempt to draw any connection between the significant and unavoidable exceedances of criteria pollutant thresholds and any particular human health impacts. On this basis, the court found that the EIR's air quality analysis was inadequate because it failed to provide enough detail "for the public to translate the bare [criteria pollutant emissions] numbers provided into adverse health impacts or to understand why such a translation is not possible at this time." The court's decision clarifies that when significant and unavoidable exceedances of criteria pollutant thresholds occur, environmental documents must attempt to connect a project's air quality impacts to specific health effects or explain why it is not technically feasible to perform such an analysis.

As indicated herein, the Project does not require an EIR because the Project would not have significant and unavoidable air quality impacts and would not result in exceedances of the established SCAQMD-derived criteria pollutant thresholds used here. Accordingly, the Project's air quality impacts would be less than significant, and no analysis of human health impacts is required, per the Friant Ranch Decision. Nevertheless, because the Project would result in increased emissions of criteria pollutants compared with the baseline condition, the following discussion is presented for informational purposes.

As discussed in Section 2.1, *Existing Setting*, all criteria pollutants that would be generated by the Project are associated with some form of health risk (e.g., asthma, lower respiratory problems). Criteria pollutants can be classified as either regional or localized pollutants. Regional pollutants can be transported over long distances and affect ambient air quality far from the emissions source. Localized pollutants affect ambient air quality near the emissions source. Ozone is considered a regional criteria pollutant, whereas CO, $NO_2$, and $SO_2$ are localized pollutants. PM can be both a local and a regional pollutant, depending on its composition. As discussed above, the primary criteria pollutants of concern generated by the Project are ozone precursors (ROG and $NO_X$), CO, SOx, and PM because SCAQMD has developed numerical thresholds for these pollutants.

### Regional Project-Generated Criteria Pollutants (Ozone Precursors and Regional PM)

Adverse health effects induced by regional criteria pollutant emissions generated by the Project (ozone precursors and PM) are highly dependent on a multitude of interconnected variables (e.g., cumulative concentrations, local meteorology and atmospheric conditions, the number and character of exposed individuals [e.g., age, gender]). For these reasons, ozone precursors (ROG and $NO_X$) contribute to the formation of ground-borne ozone on a regional scale. Emissions of ROG and NOx generated in one area may not equate to a specific ozone concentration in that same area. Similarly, some types of particulate pollutant may be transported over long-distances or formed through atmospheric reactions. As such, the magnitude and locations of specific health effects from exposure to increased ozone or regional PM concentrations are the product of emissions generated by numerous sources throughout a region, as opposed to a single individual project.

Models and tools have been developed to correlate regional criteria pollutant emissions to potential community health impacts. While there are models capable of quantifying ozone and secondary PM formation and associated health effects, these tools were developed to support regional planning and policy analysis and have limited sensitivity to small changes in criteria pollutant concentrations induced by individual projects. Therefore, translating project-generated criteria pollutant emissions to the locations where specific health effects could occur or determining the resultant number of additional days of nonattainment cannot be estimated with any degree of accuracy with currently available tools.

Technical limitations of existing models to correlate project-level regional emissions to specific health consequences are recognized by air quality management districts throughout the state, including the San Joaquin Valley Air Pollution Control District (SJVAPCD) and SCAQMD, both of which provided amici curiae briefs for the Friant Ranch legal proceedings that the court lent significant credence to in its ruling but could not consider in the context of its review of the Friant Ranch Project EIR.[7] In its brief, SJVAPCD (2015) acknowledges that while health risk assessments for localized air toxics, such as DPM, are commonly prepared, "it is not feasible to conduct a similar analysis for criteria air pollutants because currently available computer modeling tools are not equipped for this task." SJVAPCD further notes that emissions solely from the Friant Ranch Project (which equate to less than one-tenth of one percent of the total NOx and VOC in the Valley) is not likely to yield valid information," and that any such information should not be "accurate when applied at the local level." SCAQMD (2015) presents similar information in their brief, stating that "it takes a large amount of additional precursor emissions to cause a modeled increase in ambient ozone levels".[8]

As discussed above, air districts develop region-specific CEQA thresholds of significance in consideration of existing air quality concentrations and attainment designations under the NAAQS and CAAQS. The NAAQS and CAAQS are informed by a wide range of scientific evidence that demonstrates there are known safe concentrations of criteria pollutants. While recognizing that air quality is generally a cumulative problem, air districts typically consider projects that generate criteria pollutant and ozone precursor emissions below these thresholds to be minor in nature and would not adversely affect air quality such that the NAAQS or CAAQS would be exceeded. The Project's incremental contribution to cumulative photochemical reactions that lead to the formation of tropospheric ozone and secondary PM cannot be traced to specific health outcomes on a regional scale, and therefore, a quantitative correlation of Project-generated regional criteria pollutant emissions to specific human health impacts is not included in this analysis.

### Localized Project-Generated Criteria Pollutants ($NO_2$, CO, and PM)

Localized pollutants generated by a project are deposited and potentially affect population near the emissions source. Because these pollutants dissipate with distance, emissions from individual

[7] The amici curiae briefs for Friant Ranch are available at: https://www.courts.ca.gov/41312.htm

[8] For example, SCAQMD's analysis of their 2012 Air Quality Attainment Plan showed that modeled NOx and ROG reductions of 432 and 187 tons per day, respectively, only reduced ozone levels by 9 parts per billion. Analysis of SCAQMD's Rule 1315 showed that emissions of NOx and ROG of 6,620 and 89,180 pounds per day, respectively, contributed to 20 premature deaths per year and 89,947 school absence (SCAQMD 2015).

projects can result in direct and material health impacts to adjacent sensitive receptors. Models and thresholds are readily available to quantify these potential health effects and evaluate their significance. As discussed above, the SCAQMD has developed LSTs for NOx, CO, $PM_{10}$, and $PM_{2.5}$ that represent the maximum emissions from a project's on-site activities that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standards, and thus would not cause or contribute to localized air quality impacts related to public health.[9] The applicable LSTs for assessing the potential local air quality impacts that could be generated by the Project's on-site emissions during construction and operations are presented in Table 2.3-2.

#### Carbon Monoxide Hot-Spots

Heavy traffic congestion can contribute to high levels of CO. Individuals exposed to these CO "hot-spots" may have a greater likelihood of developing adverse health effects (as described in Section 2.1., *Existing Setting*). The potential for the Project to result in localized CO impacts at intersections resulting from addition of its traffic volumes is assessed against the health-based CAAQS and NAAQS for CO. SCAQMD states that a project impact is significant if it causes or contributes to an exceedance of the following attainment standards:

- 1-hour standards of 20 ppm (state) and 35 ppm (federal), and
- 8-hour standards of 9.0 ppm (state) and 9 ppm (federal).

### Cumulative Impacts

Potential cumulative air quality impacts would result when other projects' pollutant emissions combine to degrade air quality conditions below acceptable levels. This could occur on a local level (e.g., increased vehicle emissions at congested intersections or concurrent construction activities at sensitive receptor locations) or a regional level (e.g., potential $O_3$ impacts from multiple past, present, and reasonably foreseeable projects within the Basin). Given that both localized and regional pollution is regulated at the air basin level, the Basin is the resource study area for the purposes of air quality.

The Basin experiences chronic exceedances of the NAAQS and CAAQS, and is currently in nonattainment status for $O_3$ (federal and state standards), $PM_{10}$ (state standards only), and $PM_{2.5}$ (federal and state standards). Consequently, cumulative development in the Basin as a whole could violate an air quality standard or contribute to an existing or projected air quality violation. Based on SCAQMD's cumulative air quality impact methodology, SCAQMD recommends that if an individual project results in air emissions of criteria pollutants that exceed the SCAQMD's recommended daily thresholds for project-specific impacts, then it would also result in a cumulatively considerable net increase of these criteria pollutants for which the project region is in non-attainment under an applicable federal or state ambient air quality standard. Conversely, if a project's emissions do not exceed the recommended daily thresholds for project-specific

[9] As noted previously, the SCAQMD's LSTs apply only to the on-site activities associated with a project and does not include emissions that are generated off-site, such as on-road haul or delivery truck trips.

impacts, its impacts would not be cumulatively considerable and would not contribute to nonattainment of applicable air quality standards in the Basin.

## Project Design Features

The following project design feature (PDF) would be implemented as part of the Project:

**PDF-AQ-1**: The following measures will be employed by the Project to minimize construction-related emissions:

- All off-road diesel-powered equipment shall be required to meet Tier 4 final off-road emissions standards during all phases of Project construction. Such equipment shall be outfitted with Best Available Control Technology (BACT) devices including a CARB certified Level 3 Diesel Particulate Filter or equivalent.
- Construction-related equipment, including heavy-duty equipment, motor vehicles, and portable equipment, shall be turned off when not in use for more than 5 minutes. Exceptions to these requirements are identified in 13 California Code of Regulations (CCR) Section 2485(d).
- Provide notification to trucks and vehicles in loading or unloading queues that their engines shall be turned off when not in use for more than 5 minutes.
- Electric equipment shall be used to the extent feasible in lieu of diesel or gasoline-powered equipment.
- All construction vehicles shall be equipped with proper emissions control equipment and kept in good and proper running order to substantially reduce NOx emissions.
- On-site construction activities shall utilize existing electric power sources to the extent feasible to minimize the use of higher polluting gas or diesel generators.
- Construction activities shall limit the hours of operation of heavy-duty equipment and/or the quantity of equipment in use to the extent feasible.
- During the application of architectural coatings for the new residential, restaurant, and commercial spaces, the Project shall use paints with a VOC content of 10 grams per liter (g/L) or less, which exceeds the regulatory VOC limits put forth by SCAQMD's Rule 1113.
- Sufficient dampening of the construction area shall be conducted as necessary to control dust caused by grading, hauling, and wind.
- Construction personnel shall secure loads by trimming and watering or covering to prevent the spilling or blowing of the earth material.
- Construction personnel shall clean all trucks and loads at the export site to prevent the blowing of dirt and spilling of loose earth.

- A sign shall be posted at the Project Site at a readily visible location that identifies the construction manager and a telephone number for any inquiries or complaints from residents regarding construction activities.

# Project Impacts

## Impact AQ-1: Would the Project conflict with or obstruct implementation of the applicable air quality plan?

### 2016 AQMP

The 2016 AQMP was adopted by the SCAQMD as a program to lead the Basin into compliance with criteria pollutant standards and other federal requirements for which the Basin is not in compliance. The AQMP relies on emissions forecasts based on the demographic and economic growth projections provided by the SCAG 2016 RTP/SCS (SCAQMD 2017c). SCAG is charged by California law to prepare and approve "the portions of each AQMP relating to demographic projections and integrated regional land use, housing, employment, and transportation programs, measures and strategies" (SCAQMD 2017c). Projects whose growth is included in the projections used in the formulation of the AQMP are considered to be consistent with the plan and to not obstruct its implementation. The SCAQMD recommends that, when determining whether a project is consistent with the current AQMP, a lead agency must assess: (1) whether the project would directly obstruct implementation of the plan through an increase in the frequency or severity of existing air quality violations, or cause or contribute to, new violations, or delay timely attainment of air quality standards, and (2) whether it is consistent with the demographic and economic assumptions (typically land use related, such as resultant employment or residential units) upon which the plan is based (SCAQMD 1993).

#### Criterion No. 1

As discussed below under Impact AQ-2, the Project would not obstruct implementation of the AQMP because emissions resulting from its construction (with implementation of PDF AQ-1) and operation would not exceed SCAQMD's regional mass emissions thresholds and LSTs (refer to Tables 2.3-5, 2.3-6, 2.3-8, and 2.3-9). The Project's emissions would therefore not increase concentrations of criteria pollutants or their precursors in a manner that could obstruct SCAQMD's efforts to achieve attainment of ambient air quality standards for any criteria pollutant for which it is currently not in attainment, or jeopardize the current attainment status of the Basin for other criteria pollutants.

#### Criterion No. 2

The Project is also consistent with the AQMP in that the Project has incorporated control strategies set forth in the AQMP for achieving Basin-wide emission reduction goals and the Project is consistent with the demographic and economic assumptions upon which the plan is based. The following sections provide a discussion of the Project's incorporation of emission control measures and the Project's consistency with demographic and economic assumptions used in development of the AQMP.

**Emission Control Measures**

During the construction period, the Project would require contractors to adhere to CARB's on-road vehicle and off-road equipment requirements, which would limit the level of construction emissions caused by the Project. Project design features that limit the level of construction emissions are identified above in PDF-AQ-1. In addition, the Project would be required pursuant to state law to use contractors that are in compliance with the CARB Air Toxic Control Measure that limits heavy duty diesel motor vehicle idling to no more than 5 minutes at any given location.[10] The Project contractor(s) would also be required by state regulations to comply with the fleet on-road heavy duty vehicle emissions standards consistent with Measure MOB-08 from the 2016 AQMP (SCAQMD 2017c:4-25). These control strategies are intended to reduce emissions from on-road and off-road heavy-duty vehicles and equipment, and are implemented by accelerating the replacement of older engines that produce higher pollutant emissions with newer engines that produce lower pollutant. The Project would comply with regulatory requirements to minimize short-term emissions from on-road and off-road diesel vehicles and equipment and SCAQMD's rules for controlling fugitive dust and other construction emissions, as identified in PDF-AQ-1. Compliance with these measures and requirements is consistent with the AQMP requirements for control strategies intended to reduce emissions from construction equipment and activities.

The AQMP includes transportation control measures that are intended to reduce regional mobile source emissions. Although much of the planned improvements in air quality identified in the AQMP are implemented at scales greater than at the project level (i.e., vehicle emissions standards), the Project's location, design, and land use would support a reduction in vehicle trips by increasing residential density on a major thoroughfare in an urbanized area near public transit.

The Project would require a zone change on a portion of the site, from the current C2-EZ1VL-CUGU (commercial) to RAS4-EZ1-CUGU (residential/accessory). The zone change is necessary to ensure that zoning for the Project Site is consistent with state law. Portions of the Project Site's current zoning are inconsistent with its Neighborhood Commercial General Plan designation. Therefore, the Project's zone change achieves the state law requirement to ensure that zoning is always consistent with the general plan. Moreover, the new zoning designations permit uniform development of multi-family residential uses; both the C2 and RAS4 zoning designation allow for R4 [multi-dwelling] uses under the City's zoning regulations. The new zoning designation would also permit the development of limited ground floor commercial uses, which allows for mixed-uses at the Project Site. Because the introduction of mixed-uses is a key principle in efforts to promote smart growth, the Project is consistent with the AQMP's mobile-source emission reduction strategies. The Project proposes increased density on an urban infill site by locating residential, and commercial uses in an identified Transit Priority Area (TPA) that is in close proximity to multiple bus stops with high frequency transit service, including Metro Bus lines 224 and 353/152 that run along Lankershim Boulevard. Other transit bus service located within

[10] The Air Toxic Control Measure (13 CCR Section 2485) specifies measures to reduce public exposure to diesel particulate matter and other air contaminants by establishing idling restrictions, emission standards, and other requirements for heavy-duty diesel engines and alternative idle-reduction technologies to limit the idling of diesel-fueled commercial motor vehicles. The Air Toxic Control Measure is incorporated as PDF-AQ-1.

one mile of the Project Site is provided along Laurel Canyon Boulevard, Roscoe Boulevard/Tuxford Street, Saticoy Street, and Vineland Avenue/Sunland Boulevard. The Project is also 0.90 miles southwest of the Metrolink Sun Valley Station, which serves the Metrolink Antelope Valley (AV) Line that travels to and from downtown Los Angeles, with a final destination in the City of Lancaster. By providing prewiring for EV charging spaces at the Project Site, the Project would also support the AQMP's emission reduction strategy of accelerating the deployment of zero and near-zero-emissions technologies.

The Project would also provide 30 short-term and 194 long-term bicycle parking consistent with Los Angeles Municipal Code (LAMC) Section 12.21.A.16(a)(1), which would encourage non-motorized transportation trips. Furthermore, as a mixed-use development that is located within walking distance of a variety of land uses in the area (including residential, office, commercial, industrial, school, and service uses), and multiple transit options, the Project would also encourage pedestrian travel and reduce vehicle trips and corresponding vehicle emissions. Thus, because Project's location, design, and land use would reduce vehicle trips, VMT, and associated emissions, the Project would be consistent with the mobile emission reduction goals of the AQMP.

Furthermore, the AQMP also promotes and encourages the use of solar energy systems to reduce criteria pollutant emissions over time. Control measure ECC-02 seeks criteria pollutant co-benefits from the implementation of required energy efficiency mandates such as California's Title 24 program. The Project would be prewired for rooftop solar use in accordance with the CALGreen Code, and would include solar panels on 15 percent of the rooftop space of the mixed-use building. Thus, the Project would be consistent with the energy emission reduction goals of the AQMP.

**Demographic and Economic Projections**

The Project would generate short-term construction jobs, but these workers are expected to be drawn from a regional pool of construction workers who travel among construction sites as individual projects are completed. Moreover, these jobs would be relatively small in number and temporary in nature. Therefore, the Project's construction jobs would not conflict with the long-term employment projections upon which the AQMP is based because such jobs would be relatively small in number and primarily drawn from the existing regional employment pool. Long-term operation of the Project would involve the employment of approximately 60 workers for the new commercial uses at the Project Site; these workers are expected to be drawn from the regional labor pool and result in, at most, only minimal population growth with respect to SCAG employment projections.[11] Thus, employment associated with Project operation would not conflict with the long-term employment projections used in the preparation of the AQMP due to the small number of employees that would be required for Project operation.

[11] SCAG projects employment in Los Angeles County alone would rise from 4.2 million in 2012 to 5.2 million in 2040 (SCAG 2016).

The Project is anticipated to be operational in 2023. The Project-related resident population growth is estimated to be approximately 1,050.[12] According to SCAG, the total population for the City of Los Angeles in 2018 is 4,059,665 persons (SCAG 2019). In 2023, the projected occupancy year of the Project, the City of Los Angeles is anticipated to have a population of approximately 4,184,605 persons,[13] a growth of 124,940 persons. The Project's estimated 1,050 residents would represent approximately 0.8 percent of the population growth forecasted by SCAG in the City of Los Angeles between 2018 and 2023. The Project's growth is consistent with the 2016 RTP/SCS goals and objectives under Senate Bill (SB) 375 to implement "smart growth" and state efforts to meet goals in the reduction of GHG. The 2016 RTP/SCS seeks improved "mobility and accessibility… to reach desired destinations with relative ease and within a reasonable time, using reasonably available transportation choices" (SCAG 2016). The 2016 RTP/SCS seeks to implement "strategies focused on compact infill development, superior placemaking (the process of creating public spaces that are appealing), and expanded housing and transportation choices" (SCAG 2016). The Project's proximity to public transit allows the Project's projected growth to be accommodated by existing and future transit options. Additionally, the Project is located in an urban infill location that is within walking distance to a variety of land uses that include office, commercial, school, and business service uses. As such, the Project's location and land use would reduce reliance on automobiles.

The population and employment growth resulting from the Project would be consistent with SCAG's regional forecast projections and, in turn, consistent with the growth projections accounted for in SCAQMD's AQMP. Therefore, the Project would not conflict with, or obstruct implementation of, the AQMP. This impact would be less than significant.

## City's General Plan Air Quality Element

In addition to the Project's consistency with the 2016 AQMP, the Project's consistency with the applicable goals, objectives, and policies of the City's General Plan Air Quality Element is also evaluated and shown in Table 2.3-3 below.

[12] The Project population assumes an average household size of 2.43 based on the Citywide Person per Household factor for multifamily units provided by the Department of City Planning Demographics Unit and as published in the 2016 American Community Survey.

[13] Based on a linear interpolation of SCAG data prepared for the 2016 RTP/SCS.

**Table 2.3-3: Consistency of Project with Applicable Goals, Policies, and Objectives of the City's General Plan Air Quality Element**

| Goal/Objective/Policy | Project Consistency Assessment |
|---|---|
| **Goal 1:** Good air quality and mobility in an environment of continued population growth and healthy economic structure. | **Consistent.** The Project would be consistent with SCAG RTP/SCS goals and objectives under SB 375 to implement "smart growth." The Project would provide residential uses and employment opportunities in proximity to job centers in Los Angeles where people can live and work and have access to convenient modes of transportation that provides options for reducing reliance on automobiles and minimizing associated air pollutant emissions. The Project would meet the applicable requirements of the California Green Building Standards Code and the City of Los Angeles Green Building Code. The Project would also reduce VMT as a result of its urban infill location in a TPA that is in proximity of public transportation, including multiple bus stops with high frequency transit service such as the Metro Bus lines 224 and 353/152 that run along Lankershim Boulevard. Other transit bus service located within one mile of the Project Site is provided along Laurel Canyon Boulevard, Roscoe Boulevard/Tuxford Street, Saticoy Street, and Vineland Avenue/Sunland Boulevard. The Project is also 0.90 miles southwest of the Metrolink Sun Valley Station, which serves the Metrolink Antelope Valley (AV) Line that travels to and from downtown Los Angeles, with a final destination in the City of Lancaster. The Project would add new infill residential units, with convenient access to public transit, which would allow people to live near work and recreational amenities. As a result, the Project would provide people with convenient mobility options and a wide range of economic/employment opportunities. |
| **Objective 1.1:** It is the objective of the City of Los Angeles to reduce air pollutants consistent with the Regional Air Quality Management Plan, increase traffic mobility, and sustain economic growth citywide. | **Consistent.** As reflected above, the Project would be consistent with the SCAG growth projections that are used in preparing the AQMP. The Project would occupy a location that is highly accessible by regional and local bus lines and the Metrolink rail system. As such, the Project would be supportive of the Transportation Control Measures in the AQMP related to reducing vehicle trips for employees, visitors and residents. The Project would provide infill residential and commercial uses, which would allow people to live near work and recreational amenities. |
| **Objective 1.3:** It is the objective of the City of Los Angeles to reduce particulate air pollutants emanating from unpaved areas, parking lots, and construction sites. | **Consistent.** The Project would eliminate a large surface parking lot, two older buildings, and unpaved areas on the Project Site and replace them with a modern, energy-efficient building. The Project would also incorporate measures that would reduce particulate air pollutants from unpaved areas, parking lots, and construction sites. The Project would implement required control measures for construction-related fugitive dust pursuant to SCAQMD Rule 403. The Project would also comply with |

| Goal/Objective/Policy | Project Consistency Assessment |
|---|---|
| | the applicable provisions of the CARB Air Toxics Control Measure regarding idling limitations for diesel trucks reducing exhaust DPM emissions. The Project contractor(s) would also be required by state regulations to comply with the fleet on-road heavy duty vehicle emissions standards consistent with Measure MOB-08 from the AQMP. These control strategies are intended to reduce emissions from on-road and off-road heavy-duty vehicles and equipment, and are implemented by accelerating the replacement of older engines that produce higher pollutant emissions with newer engines that produce lower pollutant. |
| **Policy 1.3.1:** Minimize particulate emissions from construction sites. | **Consistent.** The Project would incorporate measures that would reduce particulate air pollutants from construction activity as described above under Objective 1.3. |
| **Policy 1.3.2:** Minimize particulate emissions from unpaved roads and parking lots associated with vehicular traffic. | **Consistent.** The Project would implement required control measures for construction-related fugitive dust pursuant to SCAQMD Rule 403, which would minimize particulate emissions from unpaved roads and parking lots associated with construction-related vehicular traffic. The Project would also reduce unpaved, unlandscaped areas on the Project Site. |
| **Goal 2:** Less reliance on single-occupant vehicles with fewer commute and non-work trips. | **Consistent.** The Project's land use characteristics would reduce trips and VMT due to its urban infill location in a TPA that includes nearby housing, employment, office, commercial, and service uses with nearby access to multiple nearby public transportation routes. |
| **Objective 2.1:** It is the objective of the City of Los Angeles to reduce work trips as a step towards attaining trip reduction objectives necessary to achieve regional air quality goals. | **Consistent.** The Project is near existing public transportation, including existing regional and local Metro bus lines and a Metrolink station. The Project would locate infill residential and commercial land uses in an area with access to multiple other destinations, including job centers and other commercial uses. These features would reduce trips and encourage residents to utilize alternative modes of transportation. In addition, the Project would implement a Transportation Demand Management (TDM) program to promote non-auto travel and reduce single-occupant vehicle trips, as identified in the TIS prepared for the proposed Project. Strategies that would be implemented as part of the TDM program include educational programs, a transportation information center/kiosk, bicycle amenities, a contribution to the City Bicycle Plan Trust Fund for implementation of bicycle improvements, promotion and support of carpools and rideshare, incentives for using alternative travel modes, and parking incentives and administrative support for formation of carpools/vanpools, and mobility hub support. |
| **Policy 2.1.1:** Utilize compressed work weeks and flextime, telecommuting, carpooling, vanpooling, public transit, and improve | **Consistent.** The Project would be near multiple transportation routes, place housing near jobs and transit, and provide ample bicycle parking and |

| Goal/Objective/Policy | Project Consistency Assessment |
|---|---|
| walking/bicycling related facilities in order to reduce vehicle trips and/or VMT as an employer and encourage the private sector to do the same to reduce work trips and traffic congestion. | pedestrian infrastructure to incentivize increased biking and walking. The Project includes 224 bicycle parking spaces for the residential and commercial uses of the Project in accordance with LAMC requirements. The Project would encourage pedestrian travel by incorporating new residential and commercial uses in its mixed-use development and locating this development on a site located within walking distance of businesses in the area, as well as within close proximity to multiple transit options. Furthermore, the Project would include pedestrian-friendly landscaping and design, new perimeter landscaping and street trees, streetscape improvements, and street level commercial uses that would enliven the pedestrian experience. These features would reduce work trips and encourage employees to utilize alternative modes of transportation including public transportation, walking, and bicycling. In addition, Transportation System Management (TSM) improvements, including signal controllers and closed-circuit television (CCTV), would be installed at key intersections in the Project vicinity, which would reduce traffic congestion. The Project would also implement a TDM program to promote non-auto travel and reduce single-occupant vehicle trips, as identified in the TIS prepared for the proposed Project. Specific strategies that would be implemented as part of the TDM program are discussed above. |
| **Objective 2.2:** It is the objective of the City of Los Angeles to increase vehicle occupancy for non-work trips by creating disincentives for single passenger vehicles, and incentives for high occupancy vehicles. | **Consistent.** The Project would install pre-wiring for EV charging spaces for 20 percent of the parking capacity at the Project Site. In addition, of the 20 percent of parking spaces prewired for electric charging, 5 percent would include installed chargers for immediate use by EVs. Furthermore, the Project's location would encourage non-automotive transportation to and from the Project Site. The Project would be located within proximity of existing public transportation and would provide on-site bicycle parking for building residents, employees, and visitors. The Project would also implement a TDM program to promote non-auto travel and reduce single-occupant vehicle trips, as identified in the TIS prepared for the proposed Project. Specific strategies that would be implemented as part of the TDM program are discussed above. |
| **Policy 2.2.1:** Discourage single-occupant vehicle use through a variety of measures such as market incentive strategies, mode-shift incentives, trip reduction plans and ridesharing subsidies. | **Consistent.** The Project is near public transportation, including existing regional and local Metro bus lines and Metrolink rail, and would provide 224 bicycle parking spaces for residents, employees, and visitors. These features would encourage non-automotive transportation to and from the Project Site. The Project would also implement a TDM program to promote non-auto travel and reduce single-occupant vehicle trips, as identified in the TIS prepared for the proposed Project. Specific strategies that would be implemented as part of |

| Goal/Objective/Policy | Project Consistency Assessment |
|---|---|
| | the TDM program are discussed above. |
| **Policy 2.2.2:** Encourage multi-occupant vehicle travel and discourage single-occupant vehicle travel by instituting parking management practices. | **Consistent.** The Project would include 224 bicycle parking spaces in accordance with LAMC requirements, which would encourage non-automotive travel. The Project would also implement a TDM program to promote non-auto travel and reduce single-occupant vehicle trips, as identified in the TIS prepared for the proposed Project. Specific strategies that would be implemented as part of the TDM program are discussed above. |
| **Goal 4:** Minimal impact of existing land use patterns and future land use development on air quality by addressing the relationship between land use, transportation, and air quality. | **Consistent.** The Project would locate a mixed-use development in a TPA within walking distance of existing bus lines and a Metrolink station. The Project would also provide long-term and short-term bicycle parking which would help people have more opportunities to bicycle, walk and pursue other active alternatives to driving. The Project's location in an urban infill area would provide residents and visitors with shopping and dining options that are easily accessible on foot or by bicycle. The Project's design and location would help to improve air quality and the well-being of people as they would have greater opportunities for pedestrian and bicycling activity and to reduce their reliance on automobiles. |
| **Policy 4.2.2:** Improve accessibility for the City's residents to places of employment, shopping centers and other establishments. | **Consistent.** The Project would provide a new mixed-use development that would include residential and commercial (including restaurant) land uses in an infill location within proximity to public transportation. The Project is located an urban area surrounded by commercial, residential, restaurant, office, and service uses. |
| **Policy 4.2.3:** Ensure that new development is compatible with pedestrians, bicycles, transit, and alternative fuel vehicles. | **Consistent.** The Project would be located within proximity of multiple transportation routes, place housing near jobs and transit, and provide ample bicycle parking and pedestrian infrastructure to incentivize increased biking and walking. The Project includes 224 bicycle parking spaces for the residential and commercial uses of the Project in accordance with LAMC requirements. The Project would encourage pedestrian travel by incorporating new residential and commercial uses in its mixed-use development and locating this development on a site located within walking distance of businesses in the area, as well as within close proximity to multiple transit options. Furthermore, the Project would include pedestrian-friendly landscaping and design, new perimeter landscaping and street trees, streetscape improvements, and street level commercial uses that would enliven the pedestrian experience. These features would reduce work trips and encourage employees to utilize alternative modes of transportation including public transportation, walking, and bicycling. Additionally, the Project would install pre-wiring for EV charging spaces for 20 percent of the parking capacity at |

| Goal/Objective/Policy | Project Consistency Assessment |
|---|---|
| | the Project Site. In addition, of the 20 percent of parking spaces prewired for electric charging, 5 percent would include installed chargers for immediate use by EVs. |
| **Policy 4.2.5:** Emphasize trip reduction, alternative transit and congestion management measures for discretionary projects. | **Consistent.** The Project's mixed-use nature and its location near multiple transportation routes along with the provision of 224 bicycle parking spaces would help reduce vehicular trips and encourage use of alternative transit. In addition, TSM improvements, including signal controllers and CCTV, would be installed at key intersections in the Project vicinity, which would reduce traffic congestion. The Project would also implement a TDM program to promote non-auto travel and reduce single-occupant vehicle trips, as identified in the TIS prepared for the proposed Project. Specific strategies that would be implemented as part of the TDM program are discussed above. |
| **Goal 5:** Energy efficiency through land use and transportation planning, the use of renewable resources and less polluting fuels, and the implementation of conservation measures, including passive methods such as site orientation and tree planting. | **Consistent.** The Project would be required to comply with California Title 24 Building Standards Code and CALGreen Code. Energy saving and sustainable design would be incorporated throughout the Project. The Project would emphasize energy conservation, which would be achieved through the use of energy efficient Heating Ventilation and Air Conditioning (HVAC) and lighting systems. In addition, of the 20 percent of the parking spaces that would be prewired for charging, 5 percent would have chargers installed for immediate use by EVs. The Project would include also include solar panels on 15 percent of the mixed-used building's rooftop. As part of the Project, the existing 35 non-native and non-protected trees at the Project Site would be removed and replaced with a total 117 trees, resulting in a net increase of 89 trees. Of the 115 trees that would be planted, 15 would be street trees. |
| **Objective 5.1:** It is the objective of the City of Los Angeles to increase energy efficiency of City facilities and private developments. | **Consistent.** The Project would be required to comply with California Title 24 Building Standards Code and CALGreen Code. Energy saving and sustainable design would be incorporated throughout the Project. The Project would emphasize energy conservation, which would be achieved through the use of energy efficient HVAC and lighting systems. The Project would be prewired for EV charging and rooftop solar uses in accordance with the CALGreen Code. The Project would include also include solar panels on 15 percent of the mixed-used building's rooftop. |

| Goal/Objective/Policy | Project Consistency Assessment |
|---|---|
| **Policy 5.1.2:** Effect a reduction in energy consumption and shift to non-polluting sources of energy in its buildings and operations. | **Consistent.** As noted previously, the Project would incorporate energy saving and sustainable design throughout the Project in accordance with the Title 24 Building Standards Code and CALGreen Code. The Project would install pre-wiring for EV charging spaces for 20 percent of the parking capacity at the Project Site. In addition, of the 20 percent of parking spaces prewired for electric charging, 5 percent would include installed chargers for immediate use by EVs. Additionally, solar panels would be installed on 15 percent of the mixed-used building's rooftop. |
| **Policy 5.1.4:** Reduce energy consumption and associated air emissions by encouraging waste reduction and recycling. | **Consistent.** The Project would implement a construction waste management plan to divert all mixed construction and demolition debris to City certified construction and demolition waste processors, consistent with the Los Angeles City Council approved Council File 09-3029. During operations, the Project would be served by a solid waste collection and recycling service under the City's "recycLA" program, which offers recycling and organic waste recycling to businesses and large multi-family customers. |
| **Policy 5.3.1:** Support the development and use of equipment powered by electric or low-emitting fuels. | **Consistent.** As noted previously, the Project would incorporate energy saving and sustainable design throughout the Project in accordance with the Title 24 Building Standards Code and CALGreen Code. The Project would install pre-wiring for EV charging spaces for 20 percent of the parking capacity at the Project Site. In addition, of the 20 percent of parking spaces prewired for electric charging, 5 percent would include installed chargers for immediate use by EVs. Additionally, solar panels would be installed on 15 percent of the mixed-used building's rooftop. |

Source: ICF, 2019.

As discussed in Table 2.3-3, the construction and operation of the Project would not conflict with or be inconsistent with applicable air quality policies of the General Plan. Thus, implementation of the Project would result in a less-than-significant impact.

## Impact AQ-2: Would the Project result in a cumulatively considerable net increase in any criteria pollutant for which the Project region is a nonattainment area with respect to the applicable federal or state ambient air quality standard?

### Short-term Construction Emissions

Construction associated with the Project would generate criteria pollutant emissions from the following activities: (1) demolition; (2) site preparation; (3) grading and excavation; (4) construction workers traveling to and from Project Site; (5) delivering construction supplies to, and hauling debris from, the Project Site; (6) fuel combustion by on-site construction equipment;

and (7) building construction, the application of architectural coatings, and paving activities. These construction activities have the potential to temporarily create emissions of dust, fumes, equipment exhaust, and other air contaminants. The amount of emissions generated on a daily basis would vary, depending on the intensity and types of construction activities occurring simultaneously. To provide the most conservative analysis, maximum daily emissions estimates, which are used to assess Project impacts, are based on the day with the greatest intensity of construction activities.

For purposes of this air quality analysis, construction of Project is anticipated to commence in October 2019 and continue over an approximately 39-month period before ending in August 2023. Construction activities are expected to occur six days per week, from Monday through Saturday, and last eight hours per day. Table 2.3-4 presents the construction phases and estimated durations assumed for purposes of this analysis. Actual construction timing may vary depending on market conditions at the time of construction.

**Table 2.3-4: Anticipated Project Construction Schedule**

| Phases | Start (month/date/year) | Finish (month/date/year) | Duration (work days) |
|---|---|---|---|
| Demolition | 10/1/2019 | 11/15/2019 | 40 |
| Site Preparation | 5/1/2020 | 6/2/2020 | 28 |
| Grading/Excavation | 6/3/2020 | 7/18/2020 | 40 |
| Building Construction | 7/19/2020 | 5/18/2023 | 886 |
| Asphalt Paving | 5/19/2023 | 6/1/2023 | 12 |
| Architectural Coatings | 5/19/2023 | 6/8/2023 | 18 |

Construction would require demolition of the existing one-story office and commercial structures at the Project Site followed by removal of the demolition debris. The removal of this debris is estimated to require approximately seven haul truck trips per day during the demolition phase. Additionally, during the site preparation phase it is estimated that up to 33 haul truck trips per day would occur to remove materials from the Project Site. During the grading phase, an estimated 89,000 cubic yards of material would require export from the Project Site, requiring approximately 139 haul truck round trips per day. Aside from haul truck trips, daily vendor/delivery truck trips would also occur during each of the construction phases for the Project. All of the aforementioned truck trips for Project construction activities would be round trips.

As discussed previously, the Project would implement PDF-AQ-1 during construction to minimize construction-related emissions. Measures under PDF-AQ-1 that would reduce pollutant emissions include the use of off-road diesel-powered equipment that meets Tier 4 final off-road emissions standards during all phases of Project construction, limiting the time equipment engines are running when not in use, limiting idling times by trucks and vehicles in loading and unloading queues, use of existing electric power sources to the extent feasible to minimize use of higher polluting gas or diesel generators, and using low-VOC paint that exceeds the regulatory VOC limits put forth by SCAQMD's Rule 1113 during the application of architectural coatings. The modeled peak daily emissions of criteria air pollutants and ozone precursors associated with

construction of the Project without and with PDF-AQ-1 are presented in Tables 2.3-5 and 2.3-6, respectively.[14]

**Table 2.3-5: Regional Criteria Pollutant Construction Emissions Without PDF-AQ-1[a]**

| | Total Regional Pollutant Emissions (pounds per day) | | | | | |
|---|---|---|---|---|---|---|
| **Construction Phase** | **ROG[b]** | **$NO_X$** | **CO** | **$SO_X$** | **$PM_{10}$** | **$PM_{2.5}$** |
| **2019** | | | | | | |
| **Demolition** | | | | | | |
| On-Site Emissions | 3.3 | 34 | 18.9 | < 0.1 | 2.4 | 1.7 |
| Off-Site Emissions | 0.2 | 2.6 | 1.1 | < 0.1 | 0.3 | < 0.1 |
| **Total Phase Emissions** | **3.5** | **36.6** | **20.0** | **< 0.1** | **2.7** | **1.8** |
| **2020** | | | | | | |
| **Site Preparation** | | | | | | |
| On-Site Emissions | 2.1 | 23.1 | 11.8 | < 0.1 | 2.6 | 1.6 |
| Off-Site Emissions | 0.4 | 11.5 | 3.2 | < 0.1 | 0.8 | 0.3 |
| **Total Phase Emissions** | **2.5** | **34.6** | **15.0** | **0.1** | **3.4** | **1.8** |
| **Grading** | | | | | | |
| On-Site Emissions | 2.8 | 30.0 | 16.5 | < 0.1 | 4.1 | 2.5 |
| Off-Site Emissions | 2.8 | 86.9 | 21.1 | 0.2 | 5.7 | 1.8 |
| **Total Phase Emissions** | **5.6** | **116.9** | **37.6** | **0.3** | **9.7** | **4.3** |
| **Building Construction** | | | | | | |
| On-Site Emissions | 1.3 | 12.3 | 9.4 | < 0.1 | 0.6 | 0.6 |
| Off-Site Emissions | 0.6 | 4.1 | 4.6 | < 0.1 | 2.0 | 0.5 |
| **Total Phase Emissions** | **1.9** | **16.4** | **14.0** | **< 0.1** | **2.7** | **1.1** |
| **2021** | | | | | | |
| **Building Construction** | | | | | | |
| On-Site Emissions | 1.2 | 11.1 | 9.2 | < 0.1 | 0.6 | 0.5 |
| Off-Site Emissions | 0.5 | 3.8 | 4.3 | < 0.1 | 1.5 | 0.4 |
| **Total Phase Emissions** | **1.7** | **15.0** | **13.4** | **< 0.1** | **2.0** | **0.9** |

[14] The modeled construction emissions for the Project without PDF-AQ-1 are presented for information purposes only.

| Construction Phase | Total Regional Pollutant Emissions (pounds per day) | | | | | |
|---|---|---|---|---|---|---|
| | ROG[b] | $NO_X$ | CO | $SO_X$ | $PM_{10}$ | $PM_{2.5}$ |
| **2022** | | | | | | |
| **Building Construction** | | | | | | |
| On-Site Emissions | 1.1 | 9.9 | 9.0 | < 0.1 | 0.5 | 0.5 |
| Off-Site Emissions | 0.5 | 3.6 | 4.0 | < 0.1 | 1.5 | 0.4 |
| **Total Phase Emissions** | **1.6** | **13.5** | **13.0** | **< 0.1** | **2.0** | **0.9** |
| **2023** | | | | | | |
| **Building Construction** | | | | | | |
| On-Site Emissions | 1.0 | 9.2 | 8.9 | < 0.1 | 0.4 | 0.4 |
| Off-Site Emissions | 0.4 | 2.4 | 3.7 | < 0.1 | 2.2 | 0.6 |
| **Total Phase Emissions** | **1.4** | **11.6** | **12.6** | **< 0.1** | **2.6** | **1.0** |
| **Paving and Architectural Coatings** | | | | | | |
| On-Site Emissions - Paving | 0.6 | 6.1 | 8.6 | < 0.1 | 0.3 | 0.3 |
| Off-Site Emissions - Paving | 0.1 | 0.4 | 0.5 | 0.0 | 0.2 | < 0.1 |
| On-Site Emissions – Architectural Coatings | 159.4 | 1.7 | 2.4 | 0.0 | 0.1 | 0.1 |
| Off-Site Emissions – Architectural Coatings | < 0.1 | 0.3 | 0.3 | 0.0 | 0.1 | < 0.1 |
| **Total Phase Emissions[c]** | **160.2** | **8.5** | **11.7** | **< 0.1** | **0.6** | **0.4** |
| **Maximum Daily Regional Emissions During Project Construction** | **160.2** | **116.9** | **37.6** | **0.3** | **9.7** | **4.3** |

Source: CalEEMod modeling output provided in Appendix A.

Note: Totals may not add exactly due to rounding.

[a] The Project's regional construction emissions without PDF-AQ-1 are presented for information purposes only and thus are not compared to SCAQMD's regional pollutant thresholds.

[b] VOC and ROG are used interchangeably. SCAQMD uses VOC, and CalEEMod uses ROG.

[c] As the paving and architectural coatings phases would overlap during Project construction, the daily emissions from both of these phases are combined and presented.

ROG = reactive organic gases
$NO_X$ = nitrogen oxides
CO = carbon monoxide
$SO_X$ = sulfur oxides
$PM_{10}$ = particulate matter less than 10 microns in diameter
$PM_{2.5}$ = particulate matter less than 2.5 microns in diameter

**Table 2.3-6: Regional Criteria Pollutant Construction Emissions With PDF-AQ-1**

| | Total Regional Pollutant Emissions (pounds per day) | | | | | |
|---|---|---|---|---|---|---|
| **Construction Phase** | **ROG [a]** | **$NO_X$** | **CO** | **$SO_X$** | **$PM_{10}$** | **$PM_{2.5}$** |
| **2019** | | | | | | |
| **Demolition** | | | | | | |
| On-Site Emissions | 0.4 | 1.8 | 19.9 | < 0.1 | 0.8 | 0.2 |
| Off-Site Emissions | 0.2 | 2.6 | 1.1 | < 0.1 | 0.3 | 0.1 |
| **Total Phase Emissions** | **0.6** | **4.4** | **21.0** | **< 0.1** | **1.1** | **0.3** |
| **2020** | | | | | | |
| **Site Preparation** | | | | | | |
| On-Site Emissions | 0.4 | 1.5 | 13.6 | < 0.1 | 1.6 | 0.7 |
| Off-Site Emissions | 0.4 | 11.5 | 3.2 | < 0.1 | 0.8 | 0.3 |
| **Total Phase Emissions** | **0.8** | **13.0** | **16.8** | **0.1** | **2.5** | **1.0** |
| **Grading** | | | | | | |
| On-Site Emissions | 0.5 | 2.0 | 19.0 | < 0.1 | 2.8 | 1.4 |
| Off-Site Emissions | 2.8 | 86.9 | 21.1 | 0.2 | 5.7 | 1.8 |
| **Total Phase Emissions** | **3.2** | **88.9** | **40.1** | **0.3** | **8.5** | **3.2** |
| **Building Construction** | | | | | | |
| On-Site Emissions | 0.2 | 1.5 | 10.0 | < 0.1 | < 0.1 | < 0.1 |
| Off-Site Emissions | 0.6 | 4.1 | 4.6 | < 0.1 | 2.0 | 0.5 |
| **Total Phase Emissions** | **0.8** | **5.6** | **14.6** | **< 0.1** | **2.1** | **0.6** |
| **2021** | | | | | | |
| **Building Construction** | | | | | | |
| On-Site Emissions | 0.2 | 1.5 | 10.0 | < 0.1 | < 0.1 | < 0.1 |
| Off-Site Emissions | 0.5 | 3.8 | 4.3 | < 0.1 | 1.5 | 0.4 |
| **Total Phase Emissions** | **0.7** | **5.3** | **14.2** | **< 0.1** | **1.5** | **0.4** |
| **2022** | | | | | | |
| **Building Construction** | | | | | | |
| On-Site Emissions | 0.2 | 1.5 | 10.0 | < 0.1 | < 0.1 | < 0.1 |
| Off-Site Emissions | 0.5 | 3.6 | 4.0 | < 0.1 | 1.5 | 0.4 |
| **Total Phase Emissions** | **0.7** | **5.1** | **14.0** | **< 0.1** | **1.5** | **0.4** |
| **2023** | | | | | | |
| **Building Construction** | | | | | | |
| On-Site Emissions | 0.2 | 1.5 | 10.0 | < 0.1 | < 0.1 | < 0.1 |
| Off-Site Emissions | 0.4 | 2.4 | 3.7 | < 0.1 | 2.2 | 0.6 |
| **Total Phase Emissions** | **0.6** | **3.9** | **13.6** | **< 0.1** | **2.3** | **0.6** |
| **Paving and Architectural Coatings** | | | | | | |
| On-Site Emissions - Paving | 0.2 | 1.0 | 9.9 | < 0.1 | < 0.1 | < 0.1 |
| Off-Site Emissions - Paving | 0.1 | 0.4 | 0.5 | 0.0 | 0.2 | < 0.1 |
| On-Site Emissions – Architectural Coatings | 34.6 | 0.2 | 2.4 | 0.0 | < 0.1 | < 0.1 |
| Off-Site Emissions – Architectural Coatings | < 0.1 | 0.3 | 0.3 | 0.0 | 0.1 | < 0.1 |
| **Total Phase Emissions[b]** | **34.8** | **1.8** | **13.0** | **< 0.1** | **0.3** | **0.1** |

| Construction Phase | Total Regional Pollutant Emissions (pounds per day) | | | | | |
|---|---|---|---|---|---|---|
| | ROG [a] | $NO_X$ | CO | $SO_X$ | $PM_{10}$ | $PM_{2.5}$ |
| **Maximum Daily Regional Emissions During Project Construction** | **34.8** | **88.9** | **40.1** | **0.3** | **8.5** | **3.2** |
| *Regional Significance Threshold* | *75* | *100* | *550* | *150* | *150* | *55* |
| Exceed Threshold? | No | No | No | No | No | No |

Source: CalEEMod modeling output provided in Appendix A.
Note: Totals may not add exactly due to rounding.
[a] VOC and ROG are used interchangeably. SCAQMD uses VOC, and CalEEMod uses ROG.
[b] As the paving and architectural coatings phases would overlap during Project construction, the daily emissions from both of these phases are combined and presented.

As shown in Table 2.3-6, the maximum level of daily construction emissions generated by the Project with implementation of PDF-AQ-1 would not exceed SCAQMD's daily significance thresholds for any criteria pollutants during any of the construction phases.

## Long-term Operational Emissions

Implementation of the Project would result in long-term regional emissions of criteria air pollutants and ozone precursors associated with energy sources (natural gas consumption,) area sources (landscaping activities, re-applications of architectural coatings, and use of consumer products), and mobile sources. According to the TIS prepared for the Project, development of the Project would result in a total net increase of 3,473 daily vehicle trips over existing baseline conditions (Gibson 2019). This vehicle trip estimate takes into account trip reductions from Project land use characteristics, including internal capture from co-locating residential and commercial land uses on the Project Site, and location of the Project Site in an urbanized area that is also in proximity of transit options.

Table 2.3-7 presents the daily operational emissions generated by the Project. As noted previously, for the purpose of conducting a conservative analysis the operational emissions presented for the Project does not take any credit for the operational emissions generated by the existing uses at the Project Site that would be displaced by the Project. Thus, the actual operational emissions that would result from Project implementation would be lower than the estimated emissions presented in Table 2.3-7. As shown, the Project would result in long-term regional emissions of criteria air pollutants and ozone precursors that would be below SCAQMD's applicable thresholds.

**Table 2.3-7: Proposed Project Criteria Pollutant Operational Emissions**

| | Pollutant Emissions (pounds per day) | | | | | |
|---|---|---|---|---|---|---|
| **Source** | **ROG [a]** | **$NO_X$** | **CO** | **$SO_X$** | **$PM_{10}$** | **$PM_{2.5}$** |
| **Project** | | | | | | |
| Area Sources | 10.9 | 0.5 | 35.7 | < 0.1 | 0.2 | 0.2 |
| Energy Sources | 0.2 | 1.7 | 0.9 | < 0.1 | 0.1 | 0.1 |
| Mobile Sources | 5.2 | 21.3 | 63.4 | 0.2 | 19.5 | 5.3 |
| **Total Operational Emissions** | **16.3** | **23.5** | **100.1** | **0.2** | **19.9** | **5.7** |
| *Regional Significance Thresholds* | *55* | *55* | *550* | *150* | *150* | *55* |
| Threshold Exceeded? | No | No | No | No | No | No |

Source: CalEEMod modeling output provided in Appendix A.
Note: Totals may not add exactly due to rounding.
[a] VOC and ROG are used interchangeably. SCAQMD uses VOC, and CalEEMod uses ROG.

As discussed previously, SCAQMD's cumulative air quality impact methodology indicates that if an individual project results in air emissions of criteria pollutants that exceed the SCAQMD's recommended daily thresholds for project-specific impacts, then it would also result in a cumulatively considerable net increase of these criteria pollutants for which the project region is in nonattainment under an applicable federal or state ambient air quality standard. Because the Project's construction and operational pollutant emissions (refer to Tables 2.3-6 and 2.3-7) would not exceed the applicable SCAQMD's regional significance thresholds, the Project's emissions would not be cumulatively considerable.

Additionally, recognizing that SCAQMD's regional significance thresholds were established to achieve attainment of the NAAQS and CAAQS, which in turn define the maximum amount of an air pollutant that can be present in ambient air without harming public health, the Project's contribution of pollutant emissions is not expected to result in measurable human health impacts on a regional scale.

## Impact AQ-3: Would the Project expose sensitive receptors to substantial pollutant concentrations?

The term *sensitive receptors* refers to uses associated with people who are considered to be more sensitive than others to air pollutants. The reasons for greater than average sensitivity include pre-existing health problems, proximity to emissions sources, or duration of exposure to air pollutants. Schools, hospitals, and convalescent homes are considered to be relatively sensitive to poor air quality because children, elderly people, and the infirmed are more susceptible to respiratory distress and other air quality-related health problems on average than the general public. Residential areas are considered sensitive to poor air quality because people usually stay home for extended periods of time, with associated greater exposure to ambient air quality. Recreational uses are also considered sensitive due to the greater exposure to ambient air quality conditions because vigorous exercise associated with recreation places a high demand on the human respiratory system.

## Localized Pollutant Emissions

### Construction

To assess the potential localized air quality impacts resulting from the Project on nearby sensitive receptors during construction, the daily on-site construction emissions generated at the Project Site were evaluated against SCAQMD's applicable construction LSTs for a 4.6-acre site. The nearest sensitive receptors to the Project Site include:

- The single-family residences located approximately 85 feet to the north, across West Strathern Street;
- The single-family residences located directly adjacent to the east of the Project Site boundary, to the north and south of Blythe Street; and
- The single-family residences located directly adjacent to the south of the Project Site boundary.

Because the mass rate look-up tables provided by SCAQMD provide only LSTs at receptor distances of 82, 164, 328, 656, and 1,640 feet, the LSTs for a receptor distance of 82 feet were used to evaluate the potential localized air quality impacts associated with the Project's peak-day construction emissions.[15] This distance most closely corresponds to the distance from the Project Site to nearby sensitive receptors in the SCAQMD LST lookup tables.

As discussed previously, the Project would implement PDF-AQ-1 during construction to minimize construction-related emissions. The localized on-site emissions that are estimated to occur during peak construction days for each year of the Project's construction schedule without and with PDF-AQ-1 are presented in Tables 2.3-8 and 2.3-9, respectively.[16]

**Table 2.3-8: Localized Criteria Pollutant Construction Emissions Without PDF-AQ-1[a]**

| | Estimated Maximum Daily On-site Emissions (pounds per day)[b] | | | |
|---|---|---|---|---|
| **Construction Year** | **$NO_X$** | **CO** | **$PM_{10}$** | **$PM_{2.5}$** |
| 2019 | 34.1 | 18.9 | 2.4 | 1.7 |
| 2020 | 34.4 | 17.5 | 4.3 | 2.6 |
| 2021 | 11.3 | 9.4 | 0.6 | 0.5 |
| 2022 | 10.1 | 11.0 | 0.5 | 0.5 |
| 2023 | 9.3 | 10.9 | 0.5 | 0.4 |

Source: CalEEMod modeling output provided in Appendix A.

[a] The Project's localized construction emissions without PDF-AQ-1 are presented for information purposes only and thus are not compared against SCAQMD's LSTs.

[b] To account for combustion emissions associated with vehicles traveling within the Project Site during construction, it was conservatively assumed that 5 percent of the total daily off-site mobile emissions from worker vehicle and vendor and haul truck trips would occur within the Project Site.

[15] According to SCAQMD's LST methodology, it is recommended that projects with boundaries closer than 82 feet (25 meters) from the nearest receptor use the LSTs for receptors located at 82 feet.

[16] The modeled localized construction emissions for the Project without PDF-AQ-1 are presented for information purposes only.

**Table 2.3-9: Localized Criteria Pollutant Construction Emissions With PDF-AQ-1**

| | Estimated Maximum Daily On-site Emissions (pounds per day)[a] | | | |
|---|---|---|---|---|
| **Construction Year** | **$NO_X$** | **CO** | **$PM_{10}$** | **$PM_{2.5}$** |
| 2019 | 2.0 | 19.9 | 0.8 | 0.2 |
| 2020 | 6.4 | 20.0 | 3.1 | 1.5 |
| 2021 | 1.7 | 10.2 | 0.1 | 0.1 |
| 2022 | 1.7 | 10.2 | 0.1 | 0.1 |
| 2023 | 1.6 | 12.3 | 0.1 | 0.1 |
| *Applicable LSTs[b]* | *164.3* | *1,347.6* | *13.1* | *7.4* |
| Threshold Exceeded? | No | No | No | No |

Source: CalEEMod modeling output provided in Appendix A.

[a] To account for combustion emissions associated with vehicles traveling within the Project Site during construction, it was conservatively assumed that 5 percent of the total daily off-site mobile emissions from worker vehicle and vendor and haul truck trips would occur within the Project Site.

[b] Construction LSTs for a 4.6-acre site in SRA 7 (East San Fernando Valley) at a 82-feet (25-meter) distance for sensitive receptors.

As shown in Table 2.3-9, with incorporation of PDF-AQ-1 the daily emissions generated on-site by construction of the Project would not exceed any of the applicable SCAQMD LSTs for a 4.6-acre site in SRA 7 over the course of the entire construction schedule.

### Operations

Similar to the analysis of construction emissions, the daily amount of localized pollutant emissions generated on-site by the Project during operations was also assessed for its potential localized air quality impacts on nearby sensitive receptors. The operational emissions that would result from the Project were assessed against SCAQMD's applicable operational LSTs for a 4.6-acre site, as explained above. Table 2.3-10 presents the on-site operational emissions that would result from the Project. As shown, the Project's operations-related emissions generated on-site would not exceed SCAQMD's applicable operational LSTs.

For the purpose of conducting a conservative analysis, the on-site operational emissions presented for the Project does not take any credit for the on-site operational emissions generated by the existing uses at the Project Site that would be displaced by the Project. Thus, the actual operational emissions that would result from Project implementation would be lower than the estimated emissions presented in Table 2.3-10.

**Table 2.3-10: Localized Criteria Pollutant Operational Emissions**

| | Estimated Maximum Daily On-site Emissions (pounds per day)[a] | | | |
|---|---|---|---|---|
| **Emissions Source** | **$NO_X$** | **CO** | **$PM_{10}$** | **$PM_{2.5}$** |
| Area | 0.5 | 35.7 | 0.2 | 0.2 |
| Energy | 1.7 | 0.9 | 0.1 | 0.1 |
| Mobile | 1.1 | 3.2 | 1.0 | 0.3 |
| **Total Emissions** | **3.3** | **39.8** | **1.3** | **0.6** |
| Applicable LSTs[b] | 164.3 | 1,347.6 | 3.7 | 1.8 |
| Threshold Exceeded? | No | No | No | No |

Source: CalEEMod modeling output provided in Appendix A.

Note: Totals may not add exactly due to rounding.

[a] Localized operational emissions estimates assume all of the Area Sources and Energy Sources of emissions occur on-site and 5 percent of emissions from Mobile Sources occur on-site.

[b] Operational LSTs for a 4.6-acre site in SRA 7 (East San Fernando Valley) at a 82-feet (25-meter) distance for sensitive receptors.

In summary, the estimated localized construction and operational emissions associated with the Project would not exceed any of SCAQMD's applicable LSTs for criteria pollutants. The LSTs represent the maximum emissions from a project that would not be expected to cause or contribute to a violation of any short-term NAAQS or CAAQS, and have been developed by the SCAQMD for each of the SRAs in the Basin. As noted previously, the NAAQS and CAAQS are health-protective standards that define the maximum amount of ambient pollution that can be present without harming public health. Consequently, projects with emissions below the applicable LSTs would not be in violation of the NAAQS or CAAQS and, thus, EPA and CARB health protective standards. Because the Project's localized construction and operational emissions would not exceed the LSTs, the Project would not cause or contribute to a violation of any health-protective CAAQS and NAAQS.

## Toxic Air Contaminants

### Construction

Construction of the Project would result in sensitive receptor exposure to temporary TAC emissions associated with DPM emissions from heavy construction equipment. As discussed above, the nearest sensitive receptors are the single-family residences located to the north, across Strathern Street, directly adjacent to the east, and directly adjacent to the south of the Project Site.

The use of diesel trucks and construction equipment during the Project construction period would result in emissions of TACs, particularly DPM. However, while construction activities are expected to occur over 39-month period, the activities generating the most DPM emissions, which would be during the site preparation and grading phases that require the use of heavy-duty diesel equipment for earthmoving, would only occur over an 11-week period. The majority of the Project's construction period would consist of the building phase, which would use smaller-scale equipment with lower horsepower that generates lower levels of DPM emissions. As shown in Table 2.3-6 above, the highest daily $PM_{10}$ emissions generated during the Project's building phase would be

nearly four times lower than those generated during the Project's grading phase. Overall, the exposure of receptors to the Project's DPM emissions would be short-term in nature and much shorter than the assumed 70-year exposure period used to estimate lifetime cancer risks. Once construction activities have ceased, so too will the source emissions. Given the limited duration by which receptors would be exposed to DPM emissions, the risk of adverse health effects during the Project's construction period would be minor. Additionally, as discussed above under Impact AQ-1, the Project would not conflict with applicable AQMP requirements for control strategies intended to reduce emissions from construction equipment and activities. The Project would be required pursuant to state law to use contractors that are in compliance with the CARB Air Toxics Control Measure that limits diesel powered equipment and vehicle idling to no more than 5 minutes at a location, and Measure MOB-08 from the 2016 AQMP that requires the accelerated replacement of older on-road heavy-duty vehicles that produce higher pollutant emissions with newer engines that produce lower pollutant emissions. Compliance with these measures would minimize emissions of TACs during construction. Overall, emissions from construction equipment associated with the Project are expected to result in less than significant health risk impacts. SCAQMD's air quality handbook and website resources do not currently require the preparation of a quantitative health risk assessment (HRA) for construction-period TACs. Because of the limited exposure time for receptors during construction and the Project's incorporation of emissions controls through implementation of PDF-AQ-1, and because SCAQMD does not require construction HRAs to be prepared, no quantitative HRA is included in this analysis.

#### Operations

Typical sources of acutely and chronically hazardous TACs include industrial manufacturing processes, automotive repair facilities, and dry cleaning facilities. As the Project consists of residential, retail, and restaurant uses, the Project would not include sources of substantive TAC emissions identified by the SCAQMD or CARB. Project operation would generate minimal amounts of TACs from the use of consumer products, periodic use of fuel-powered landscaping equipment, and from other activities associated with residential and commercial uses such as cleaning and reapplication of architectural coatings. However, these emissions are expected to be occasional and result in minimal exposure to off-site sensitive receptors. The Project's restaurant operations would be subject to SCAQMD Rule 1138-Control of Emissions from Restaurant Operations. The Project would comply with this rule by installing a control device, such as a catalytic oxidizer, on all char broilers in order to reduce PM and VOC emissions. Thus, operation of the Project would result in less than significant health risk impacts.

### Carbon Monoxide Hot Spots

A CO hot spot is a localized concentration of CO that is above the state or national 1-hour or 8-hour ambient air standards for the pollutant. CO hot spots at roadway intersections are typically found in areas with significant traffic congestion. CO is a public health concern because at high enough concentrations, it can cause health problems such as fatigue, headache, confusion, dizziness, and even death. However, it should be noted that ambient concentrations of CO have declined dramatically in California because of existing controls and programs.

Most areas of the state, including the region in which the Project is located in, meet the state and federal CO standards (CARB 2004). As part of SCAQMD's 2003 AQMP, which is the most recent AQMP that addresses CO concentrations, a revision to the Federal Attainment Plan for Carbon Monoxide (CO Plan) that was originally approved in 1992 was provided that included a CO hot spots analysis at four specified heavily traveled intersections in Los Angeles at the peak morning and afternoon time periods. These four intersection locations selected for CO modeling are considered to be worst-case intersections that would likely experience the highest CO concentrations. The CO hot spots analysis in the 2003 AQMP did not predict a violation of CO standards at the four intersections. Of these four intersections, the busiest intersection evaluated was that at Wilshire Boulevard and Veteran Avenue, which was described as the most heavily congested intersection in Los Angeles County with an average daily traffic volume of approximately 100,000 vehicles per day. Based on the CO modeling, the 2003 AQMP estimated that the 1-hour and 8-hour concentrations at this intersection was 4.6 ppm and 3.5 ppm, respectively, which would not exceed the most stringent 1-hour CO standard of 20.0 ppm and 8-hour CO standards of 9 ppm. In reviewing the Project's TIS, it was determined that at buildout (2023) the highest daily traffic volumes generated at an intersection within the vicinity of the Project would be a cumulative total of 91,460 vehicles per day at the intersection of Lankershim Boulevard and Roscoe Boulevard/Tuxford Street. Because the daily amount of vehicles at this study intersection would not exceed 100,000 vehicles per day, it can be concluded that the Project would not exceed the most stringent 1-hour and 8-hour CO standards and no detailed CO hot spots analysis for the Project would be required. Therefore, the Project would not result in impacts related to CO hot spots, and would not contribute a significant level of CO such that localized air quality and human health would be substantially degraded.

## Impact AQ-4: Would the Project result in other emissions (such as those leading to odors adversely affecting a substantial number of people)?

According to the SCAQMD *CEQA Air Quality Handbook*, land uses associated with odor complaints typically include agricultural uses, wastewater treatment facilities, food processing plants, chemical plants, composting areas, refineries, landfills, dairies, and fiberglass molding facilities. The Project, which is a mixed-use development that consist of multi-family residential and commercial uses, includes none of these land uses. Thus, operation of the Project is not expected to result in objectionable odors for the neighboring uses and would not adversely affect a substantial number of people.

During construction of the Project, exhaust from equipment, activities associated with the application of architectural coatings and other interior and exterior finishes, and paving activities may produce discernible odors typical of most construction sites. Such odors would be, at worst, a temporary source of nuisance to adjacent uses, if at all, and would not affect a substantial number of people. As part of PDF-AQ-1, the Project would use low-VOC architectural coatings that exceed the requirements of SCAQMD Rule 1113, which would limit the odors associated with offgassing from those coatings. Odors associated with asphalt paving would only occur for a limited time period for the Project (12 work days), and the locations of paving activities would be distributed at the Project Site. Additionally, material deliveries and heavy-duty haul truck trips could create an occasional "whiff" of diesel exhaust for nearby receptors. These odors would not affect a substantial number of people because construction would be temporary, and

construction-generated emissions dissipate rapidly with increasing distance from the source. Overall, odors associated with Project construction would be temporary and intermittent in nature, and would not create a significant level of objectionable odors affecting a substantial number of people.

Chapter 3
# Greenhouse Gases and Climate Change

## 3.1 Existing Setting

### Global Climate Change

The phenomenon known as the greenhouse effect keeps the atmosphere near Earth's surface warm enough for the successful habitation of humans and other life forms. The greenhouse effect is created by sunlight that passes through the atmosphere. Some of the sunlight striking Earth is absorbed and converted to heat, which warms the surface. The surface emits a portion of this heat as infrared radiation, some of which is re-emitted toward the surface by GHGs. Human activities that generate GHGs increase the amount of infrared radiation absorbed by the atmosphere, thus enhancing the greenhouse effect and amplifying the warming of Earth.

Increases in fossil fuel combustion and deforestation have exponentially increased concentrations of GHGs in the atmosphere since the Industrial Revolution (IPCC 2007). Rising atmospheric concentrations of GHGs in excess of natural levels result in increasing global surface temperatures—a phenomenon commonly referred to as global warming. Higher global surface temperatures, in turn, result in changes to Earth's climate system, including increased ocean temperature and acidity, reduced sea ice, variable precipitation, and increased frequency and intensity of extreme weather events (IPCC 2018). Large-scale changes to Earth's system are collectively referred to as climate change.

The Intergovernmental Panel on Climate Change (IPCC) was established by the World Meteorological Organization and United Nations Environment Programme to assess scientific, technical, and socioeconomic information relevant to the understanding of climate change, its potential impacts, and options for adaptation and mitigation. The IPCC estimates that human-induced warming reached approximately 1 degree Celsius (°C) above pre-industrial levels in 2017, increasing at 0.2°C per decade. Under the current nationally determined contributions of mitigation from each country until 2030, global warming is expected to rise to 3°C by 2100, with warming to continue afterwards (IPCC 2018). Large increases in global temperatures could have substantial adverse effects on the natural and human environments worldwide and in California.

### Principal Greenhouse Gases

The principle anthropogenic (human-made) GHGs listed by the IPCC that contribute to global warming are carbon dioxide ($CO_2$), methane ($CH_4$), nitrous oxide ($N_2O$), and fluorinated compounds, including sulfur hexafluoride ($SF_6$), hydrofluorocarbons (HFCs), and perfluorocarbons (PFCs). Water vapor, the most abundant GHG, is not included in this list because its natural concentrations and fluctuations far outweigh its anthropogenic sources. California law and the CEQA Guidelines contain a similar definition of GHGs (Health and Safety Code Section 38505(g); 14 CCR Section 15364.5).

The primary GHGs of concern associated with the Project are $CO_2$, $CH_4$, and $N_2O$. Principal characteristics of these pollutants are discussed below.

- **Carbon dioxide** enters the atmosphere through fossil fuels (oil, natural gas, and coal) combustion, solid waste decomposition, plant and animal respiration, and chemical reactions (e.g., manufacture of cement). $CO_2$ is also removed from the atmosphere (or *sequestered*) when it is absorbed by plants as part of the biological carbon cycle.
- **Methane** is emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from livestock and other agricultural practices and from the decay of organic waste in municipal solid waste landfills.
- **Nitrous oxide** is emitted during agricultural and industrial activities, as well as during combustion of fossil fuels and solid waste.

Methods have been set forth to describe emissions of GHGs in terms of a single gas to simplify reporting and analysis. The most commonly accepted method to compare GHG emissions is the global warming potential (GWP) methodology defined in IPCC reference documents. IPCC defines the GWP of various GHG emissions on a normalized scale that recasts all GHG emissions in terms of carbon dioxide equivalent ($CO_2e$), which compares the gas in question to that of the same mass of $CO_2$ ($CO_2$ has a global warming potential of 1 by definition). The GWP values used in this report are based on the IPCC Fourth Assessment Report (AR4) and United Nations Framework Convention on Climate Change reporting guidelines (IPCC 2007). The AR4 GWP values are consistent with those used in CARB's most recent GHG inventory and the 2017 Scoping Plan Update.

Table 3.1-1 lists the global warming potential of $CO_2$, $CH_4$, and $N_2O$ and their lifetimes in the atmosphere.

**Table 3.1-1: Lifetimes and Global Warming Potentials of Key Greenhouse Gases**

| Greenhouse Gas | Global Warming Potential (100 years) | Lifetime(years)[a] |
|---|---|---|
| $CO_2$ | 1 | 50–200 |
| $CH_4$ | 25 | 9–15 |
| $N_2O$ | 298 | 121 |

Source: CARB 2018b.
[a] Defined as the half-life of the gas.
$CH_4$ = methane
$CO_2$ = carbon dioxide
$N_2O$ = nitrous oxide

GHGs are global pollutants, unlike criteria air pollutants and TACs. Criteria air pollutants and TACs occur locally or regionally, and local concentrations respond to locally implemented control measures. However, the long atmospheric lifetimes of GHGs allow them to be transported great distances from sources and become well mixed, unlike criteria air pollutants, which typically exhibit strong concentration gradients away from point sources. GHGs and global climate change represent cumulative impacts; that is, GHG emissions contribute, on a cumulative basis, to the significant adverse environmental impacts of global climate change.

# Statewide Greenhouse Gas Emissions Trends

A GHG inventory is a quantification of all GHG emissions and sinks[17] within a selected physical and/or economic boundary. GHG inventories can be performed on a large scale (e.g., for global and national entities) or on a small scale (e.g., for a building or person). Although many processes are difficult to evaluate, several agencies have developed tools to quantify emissions from certain sources.

CARB has prepared a statewide emissions inventory covering 2000 to 2016, which demonstrates that GHG emissions have decreased by approximately 11 percent over that period (CARB 2018c). The largest reductions in GHG emissions have come from the electricity sector, which continues to decrease as a result of the state's climate policies that has led to a growth in wind generation and solar power. Emissions in 2016 from the transportation sector, which represents California's largest source of GHG emissions and contributed 39 percent of total annual emissions, increased by two percent from 2015. The main driver of this increase in GHG emissions is from the use of on-road gasoline vehicles, and is likely due to a combination of factors such as population growth, lower fuel prices, improved economic conditions, and higher overall employment (CARB 2018c). Table 3.1-2 shows statewide GHG emission estimates from 2006 to 2016 in California. Note that the 2020 target (1990 levels) is 426.6 million metric tons of $CO_2e$ ($MMTCO_2e$) while the 2030 target (40 percent below 1990 levels) is currently set at 260 $MMTCO_2e$.

**Table 3.1-2: California Greenhouse Gas Emissions Inventory 2006–2016**

| | Annual $CO_2e$ Emissions (million metric tons) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sector** | **2006** | **2007** | **2008** | **2009** | **2010** | **2011** | **2012** | **2013** | **2014** | **2015** | **2016** |
| Transportation | 189 | 189 | 178 | 170 | 165 | 162 | 161 | 161 | 162 | 166 | 169 |
| Industrial | 93 | 90 | 91 | 88 | 92 | 91 | 91 | 94 | 94 | 92 | 90 |
| Electric Power | 105 | 114 | 120 | 101 | 90 | 88 | 95 | 90 | 88 | 84 | 69 |
| Commercial/Residential | 43 | 43 | 44 | 44 | 45 | 46 | 43 | 44 | 37 | 38 | 39 |
| Agriculture | 35 | 36 | 36 | 34 | 34 | 35 | 36 | 35 | 36 | 34 | 34 |
| High Global Warming Potential | 10 | 11 | 12 | 12 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| Recycling and Waste | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | 9 | 9 | 9 |
| **Emissions Total** | **483** | **490** | **487** | **457** | **448** | **444** | **450** | **448** | **444** | **441** | **429** |

Source: CARB 2018c.
Totals may not add exactly due to rounding.

[17] A GHG sink is a process, activity, or mechanism that removes a GHG from the atmosphere.

# 3.2 Regulatory Framework

## Federal

There is currently no federal overarching law specifically related to the reduction of GHG emissions. Under the Obama Administration, the U.S. EPA had been developing regulations under the FCAA pursuant to EPA's authority under the act. There have also been settlement agreements between EPA, several states, and nongovernmental organizations to address GHG emissions from electric generating units and refineries, as well as the EPA's issuance of an "Endangerment Finding" and a "Cause or Contribute Finding." The EPA has also adopted a Mandatory Reporting Rule and Clean Power Plan. Under the Clean Power Plan, EPA issued regulations to control $CO_2$ emissions from new and existing coal-fired power plants. However, on February 9, 2016 the Supreme Court issued a stay of these regulations pending litigation. Former EPA Administrator Scott Pruitt signed a measure to repeal the Clean Power Plan in October 2017. The fate of the proposed regulations is uncertain given the change in federal administrations and the pending deliberations in federal courts. Therefore, no federal regulations specifically related to GHG emissions have been factored into the Project's impact analysis.

## State

California has adopted statewide legislation addressing various aspects of climate change, GHG mitigation, and energy efficiency. Much of this establishes a broad framework for the state's long-term GHG and energy reduction goals and climate change adaptation program. The former and current governor(s) of California have also issued several EOs related to the state's evolving climate change policy. Summaries of key policies, executive orders (EOs), regulations, and legislation at the state level that are relevant to the Project are provided below in chronological order.

### Assembly Bill 1493—Pavley Rules (2002, amendments 2009)/Advanced Clean Cars (2011)

Known as Pavley I, Assembly Bill (AB) 1493 provided the nation's first GHG standards for automobiles. AB 1493 required CARB to adopt vehicle standards that will lower GHG emissions from new light-duty autos to the maximum extent feasible beginning in 2009. Additional strengthening of the Pavley standards (referred to previously as *Pavley II* and now referred to as the *Advanced Clean Cars* [ACC] measure) was adopted for vehicle model years 2017–2025 in 2012. Together, the two standards are expected to increase average fuel economy to roughly 54.5 mpg in 2025.

### Senate Bills 1078/107/X 1-2—Renewables Portfolio Standard and Renewable Energy Resources Act (2002, 2006, 2011)

SBs 1078 and 107, California's Renewables Portfolio Standard (RPS), obligated investor-owned utilities, energy service providers, and Community Choice Aggregations to procure an additional 1percent of retail sales per year from eligible renewable sources until 20 percent is reached by

2010. The California Public Utilities Commission and California Energy Commission (CEC) are jointly responsible for implementing the program. SB X 1-2, called the California Renewable Energy Resources Act, obligates all California electricity providers to obtain at least 33 percent of their energy from renewable resources by 2020. As noted below, SB 350 increased the RPS to 50 percent for 2030, and SB100 increased the RPS to 100 percent by 2045.

## Executive Order S-03-05 (2005)

EO S-03-05 is designed to reduce California's GHG emissions to (1) 2000 levels by 2010, (2) 1990 levels by 2020, and (3) 80 percent below 1990 levels by 2050. EO S-3-05 also calls for the California Environmental Protection Agency to prepare biennial science reports on the potential impact of continued global warming on certain sectors of the California economy. As a result of the scientific analysis presented in these biennial reports, a comprehensive Climate Adaptation Strategy was released in December 2009 following extensive interagency coordination and stakeholder input. The latest of these reports, Climate Action Team Biennial Report, was published in December 2010.

## Assembly Bill 32—California Global Warming Solutions Act (2006)

AB 32 codified the state's GHG emissions target by requiring California's global warming emissions to be reduced to 1990 levels by 2020. Since being adopted, CARB, CEC, the California Public Utilities Commission, and the California Building Standards Commission have been developing regulations that will help the state meet the goals of AB 32 and EO S-03-05. The scoping plan for AB 32 identifies specific measures to reduce GHG emissions to 1990 levels by 2020 and requires CARB and other state agencies to develop and enforce regulations and other initiatives to reduce GHG emissions. The AB 32 Scoping Plan, first adopted in 2008, comprises the state's roadmap for meeting AB 32's reduction target. Specifically, the scoping plan articulates a key role for local governments by recommending that they establish GHG emissions-reduction goals for both their municipal operations and the community that are consistent with those of the state (i.e., approximately 15 percent below current levels) (CARB 2008).

CARB re-evaluated its emissions forecast in light of the economic downturn and updated the projected 2020 emissions to 545 $MMTCO_2e$. Two reduction measures (Pavley I and RPS [12–20 percent]) that were not previously included in the 2008 scoping plan baseline were incorporated into the updated baseline, further reducing the 2020 statewide emissions projection to 507 $MMTCO_2e$. The updated forecast of 507 $MMTCO_2e$ is referred to as the AB 32 2020 baseline. An estimated reduction of 80 $MMTCO_2e$ is necessary to lower statewide emissions to the AB 32 target of 427 million $MTCO_2e$ by 2020 (CARB 2014).

CARB approved the *First Update to the Scoping Plan* on May 22, 2014 (CARB 2014). The first update includes both a 2020 element and a post-2020 element. The 2020 element focuses on the state, regional, and local initiatives that are being implemented now to help the state meet the 2020 goal.

On December 14, 2017, CARB approved the *2017 Climate Change Scoping Plan Update* (referred to as 2017 Scoping Plan herein), which is the proposed strategy for achieving California's 2030

GHG emissions target. In addition to building on established programs, such as cap-and-trade regulation, and the low-carbon fuel standard (LCFS), the update addresses, for the first time, GHG emissions related to agriculture and forestry in California (CARB 2017).

## Executive Order S-01-07—Low Carbon Fuel Standard (2007)

EO S-01-07, the Low-Carbon Fuel Standard (LCFS), mandates (1) that a statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020, with a reduction in the carbon content of fuel by a quarter of a percent starting in 2011, and (2) that a low carbon fuel standard for transportation fuels be established in California. The EO initiates a research and regulatory process at CARB. In September 2018, the LCFS regulation was amended to increase the statewide goal to a 20-percent reduction in carbon intensity of California's transportation fuels by at least by 2030. Note that the majority of the emissions benefits due to the LCFS come from the production cycle (upstream emissions) of the fuel rather than the combustion cycle (tailpipe). As a result, LCFS-related reductions are not included in this analysis of combustion-related emissions of $CO_2$.

## Senate Bill 375 (2008)

SB 375, signed into law by Governor Schwarzenegger on September 30, 2008, became effective January 1, 2009. This law requires the state's 18 Metropolitan Planning Organizations to develop the sustainable communities strategies (SCS) as part of their RTPs through integrated land use and transportation planning, and to demonstrate an ability to attain the GHG emissions reduction targets that the CARB established for the region by 2020 and 2035. This would be accomplished through either the financially constrained SCS as part of the RTP or an unconstrained alternative planning strategy. If regions develop integrated land use, housing, and transportation plans that meet the SB 375 targets, new projects in these regions can be relieved of certain CEQA review requirements.

## Assembly Bill 341 (2011)

In 2011, AB 341 modified the California Integrated Waste Management Act and directed CalRecycle to develop and adopt regulations for mandatory commercial recycling. The resulting Mandatory Commercial Recycling Regulation (2012) requires that on and after July 1, 2012, certain businesses that generate 4 cubic yards or more of commercial solid waste per week or is a multifamily residential dwelling of 5 units or more must arrange recycling services. To comply with this requirement, businesses may either separate recyclables and self-haul them or subscribe to a recycling service that includes mixed waste processing. AB 341 also established a statewide recycling goal of 75 percent by 2020.

## Cap-and-Trade (2011, 2017)

CARB adopted the cap-and-trade program in October 2011. The California Cap-and-Trade program is a market-based system with an overall emissions limit for affected emission sources. Affected sources include in-state electricity generators, hydrogen production, petroleum refining, and other large-scale manufacturers and fuel suppliers and distributors. The original Cap-and-Trade program set a compliance schedule through 2020. AB 398 extends the program

through 2030 and requires CARB to make refinements, including establishing a price ceiling. Revenue generated from the Cap-and-Trade program is used to fund various programs. AB 398 established post-2020 funding priorities, to include (1) Air Toxics and Criteria Pollutants, (2) Low and Zero Carbon Transportation, (3) Sustainable Agricultural Practices, (4) Healthy Forests and Urban Greening, (5) Short-lived Climate Pollutants, (6) Climate Adaptation and Resiliency, and (7) Climate and Clean Energy Research.

## Senate Bill 1383 (2013)

SB 1383, adopted in 2013, requires CARB to develop and implement a Short-Lived Climate Pollutant (SLCP) Strategy with the following 2030 goals: 40 percent reduction in methane; 40 percent reduction in hydrofluorocarbon (HFC) gases; and 50 percent reduction in anthropogenic black carbon. Per its directive, CARB adopted the SLCP Strategy, establishing a path to decrease SLCPs from various sectors of the economy. Strategies span from wastewater and landfill practices and methane recovery to reducing natural gas leaks and consumption. The SLCP strategy also identifies measures that can reduce HFC emissions through incentive programs and limitations on the use of high-GWP refrigerants in new refrigeration and air-conditioning equipment.

## Executive Order B-30-15 (2015)

Governor Jerry Brown signed EO B-30-15 on April 29, 2015. EO B-30-15 established a medium-term goal for 2030 of reducing GHG emissions by 40 percent below 1990 levels and requires the CARB to update its current AB 32 Scoping Plan to identify measures to meet the 2030 target. The EO B-30-15 supports EO S-3-05 but is only binding on state agencies.

## Senate Bill 350 (2015)

SB 350 (De León, also known as the "Clean Energy and Pollution Reduction Act of 2015") was approved by the California legislature in September 2015 and signed by Governor Brown in October 2015. Its key provisions are to require the following by 2030: (1) an RPS of 50 percent and (2) a doubling of efficiency for existing buildings.

## Senate Bill 32, California Global Warming Solutions Act of 2006: Emissions Limit, and Assembly Bill 197, State Air Resources Board, Greenhouse Gases, Regulations (2016)

SB 32 (Pavley) bill requires CARB to ensure that statewide GHG emissions are reduced to at least 40 percent below the 1990 level by 2030, consistent with the target set forth in EO B-30-15. The bill specifies that SB 32 shall become operative only if AB 197 (Garcia) is enacted and becomes effective on or before January 1, 2017. AB 197 creates requirements to form the Joint Legislative Committee on Climate Change Policies; requires CARB to prioritize direct emission reductions from stationary sources, mobile sources, and other sources and consider social costs when adopting regulations to reduce GHG emissions beyond the 2020 statewide limit; requires CARB to prepare reports on sources of GHGs, criteria air pollutants, and toxic air contaminants;

establishes 6-year terms for voting members of CARB; and adds two legislators as non-voting members of CARB. Both bills were signed by Governor Brown in September 2016.

CARB approved the 2017 Scoping Plan Update in December 2017, which builds on the programs set in place as part of the previous Scoping Plan that was drafted to meet the 2020 reduction targets per AB 32. The 2017 Scoping Plan Update proposes meeting the 2030 goal by accelerating the focus on zero and near-zero technologies for moving freight, continued investment in renewables, greater use of low-carbon fuels including electricity and hydrogen, stronger efforts to reduce emissions of short-lived climate pollutants ($CH_4$, black carbon, and fluorinated gases), further efforts to create walkable communities with expanded mass transit and other alternatives to traveling by car, continuing the cap-and-trade program, and ensuring that natural lands become carbon sinks to provide additional emissions reductions and flexibility in meeting the target. The Scoping Plan Update also recommends that local governments aim to achieve community-wide efficiency of 6 $MTCO_2e$ per capita by 2030 and 2 $MTCO_2e$ per capita by 2050 to be used in local climate action planning. These efficiency targets would replace the "15 percent from 2008 levels by 2020" approach recommended in the initial Scoping Plan, which would allow for local governments to grow in a sustainable manner (CARB 2016b).

## Senate Bill 100 (2018)

SB 100 (De León, also known as the "California Renewables Portfolio Standard Program: emissions of greenhouse gases") was approved by the California legislature and signed by Governor Brown in September 2018. The bill increases RPS in 2030 from 50 percent to 60 percent and establishes a goal of 100 percent RPS by 2045. SB 100 is a legislative action that was signed into law after the 2017 Scoping Plan was adopted. The Scoping Plan modeling is based on the SB 350 target of 50 percent renewables by 2030. However, the new SB 100 target of 60 percent renewables by 2030 and 100 percent renewables by 2045 supersede the goals of SB 350 and will be included in future Scoping Plan updates.

## Executive Order B-55-18 (2018)

EO B-55-18 was approved by the California legislature and signed by Governor Brown in September 2018. EO B-55-18 acknowledges the environmental, community, and public health risks posed by future climate change. It further recognizes the climate stabilization goal adopted by 194 states and the European Union under the Paris Agreement. While the United States was not party to the agreement, California is committed to meeting the Paris Agreement goals and going beyond them wherever possible. Based on the worldwide scientific agreement that carbon neutrality must be achieved by midcentury, EO B-55-18 establishes a new state goal to achieve carbon neutrality as soon as possible, and no later than 2045, and to achieve and maintain net negative emissions thereafter. The EO charges the CARB with developing a framework for implementing and tracking progress towards these goals. This EO extends EO S-3-05, but is only binding on state agencies. However, given this directive, it is likely that the carbon neutral goal by 2045 will make its way into future updates to the Scoping Plan, which must be updated every five years.

### Green Building Code and Title 24 Updates

The California Green Building Standards (CALGreen) Code (proposed Part 11, Title 24) was adopted as part of the California Building Standards Code (24 CCR). Part 11 established voluntary standards that became mandatory under the 2010 edition of the code. These involved sustainable site development, energy efficiency (in excess of CEC requirements), water conservation, material conservation, and internal air contaminants. The current energy efficiency standards were adopted in 2016 and took effect on January 1, 2017. The standards are to be updated periodically, with the next update planned for 2019.

## Regional

### South Coast Air Quality Management District

As discussed previously in Chapter 2.2 of this report, the SCAQMD has primary responsibility for development and implementation of rules and regulations to attain the NAAQS and CAAQS as well as permitting new or modified sources, developing air quality management plans, and adopting and enforcing air pollution regulations within the Basin. CARB's Scoping Plans do not provide an explicit role for local air districts with respect to implementing the reduction goals of SB 32 and AB 32, but CARB does state that they will work actively with air districts in coordinating emissions reporting, encouraging and coordinating GHG reductions, and providing technical assistance in quantifying reductions. The ability of air districts to control emissions (both criteria pollutants and GHGs) is provided primarily through permitting but also through their role as a CEQA lead or commenting agency, the establishment of CEQA thresholds, and the development of analytical requirements for CEQA documents.

On December 5, 2008, SCAQMD Governing Board considered draft GHG guidance, and adopted a staff proposal for an interim GHG significance threshold of 10,000 $MTCO_2e$ per year for industrial permitting projects where SCAQMD is the lead agency. The board letter, resolution, interim GHG significance threshold, draft guidance document, and attachments can be found under Board Agenda Item 31 of the December 5, 2008, Governing Board Meeting Agenda[18]. In its draft guidance document, SCAQMD included evidence and rationale for developing thresholds, specifically citing CEQA Guidelines Section 15064.7(a) *("each public agency is encouraged to develop and publish thresholds of significance that the agency uses in the determination of the significance of environmental effects"*) and Subsection (b) (*"Thresholds of significance to be adopted for general use as part of the lead agency's environmental review process must be adopted by ordinance, resolution, rule or regulation, and developed through a public review process and be supported by substantial evidence"*). SCAQMD developed thresholds for both stationary sources as well as for land use development projects. SCAQMD's recommended GHG significance threshold underwent a public review process as part of stakeholder working group meetings that were open to the public. The draft guidance document provides the supporting analysis and methodology for developing the GHG significance thresholds for both stationary sources as well as for land use development projects. After completion of the public process, the proposed interim thresholds for land use

[18] Board Agenda Item 31 data available at: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/ghg-significance-thresholds

development projects were brought to the SCAQMD's Governing Board but were not formally adopted, while the threshold involving industrial permitting projects where SCAQMD is lead agency was adopted.

For industrial process, the SCAQMD has formally adopted a 10,000 $MTCO_2e$ threshold for industrial (permitted) facilities where SCAQMD is the lead agency. This industrial source threshold is not appropriate for use on residential, commercial, or mixed-use projects such as the Project, since it is not associated with industrial processes.

SCAQMD noted that the proposed interim GHG significance thresholds for evaluation of land use development projects was only a recommendation for lead agencies and not a mandatory requirement. The GHG significance threshold may be used at the discretion of the local lead agency. The draft GHG guidance identified a tiered approach for determining the significance of GHG emissions, one of which included the use of numerical screening thresholds. With respect to numerical GHG significance thresholds, the SCAQMD proposed two different approaches to be taken by lead agencies when analyzing GHG emissions:

- Option #1 includes using separate numerical thresholds for residential projects (3,500 $MTCO_2e$/year), commercial projects (1,400 MTCO2e/year), and mixed-use projects (3,000 MTCO2e/year).
- Option #2 is use of a single numerical threshold for all non-industrial projects of 3,000 $MTCO_2e$/year. SCAQMD's most recent recommendation per its September 2010 meeting minutes is to use option #2.

However, these numerical thresholds have not been adopted by SCAQMD.

## Southern California Association of Governments (SCAG) 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (2016 RTP/SCS)

SCAG is the Metropolitan Planning Organization (MPO) for the six-county region that includes Los Angeles, Orange, Riverside, Ventura, San Bernardino and Imperial counties. The 2016 RTP/SCS includes commitments to reduce emissions from transportation sources to comply with SB 375. Goals and policies included in the 2016 RTP/SCS to reduce GHG emissions consist of adding density in proximity to transit stations, mixed-use development and encouraging active transportation (i.e., non-motorized transportation such as bicycling). SCAG promotes the following policies and actions related to active transportation to help the region confront congestion and mobility issues and consequently reduce emissions:

- Implement Transportation Demand Management (TDM) strategies including integrating bicycling through folding bikes on buses programs, triple racks on buses, and dedicated racks on light and heavy rail vehicles;
- Encourage and support local jurisdictions to develop "Active Transportation Plans" for their jurisdiction if they do not already have one;
- Expand Compass Blueprint program to support member cities in the development of bicycle plans;

- Expand the Toolbox Tuesday's program to encourage local jurisdictions to direct enforcement agencies to focus on bicycling and walking safety to reduce multimodal conflicts;
- Support local advocacy groups and bicycle-related businesses to provide bicycle-safety curricula to the general public;
- Encourage children, including those with disabilities, to walk and bicycle to school;
- Encourage local jurisdictions to adopt and implement the proposed SCAG Regional Bikeway Network; and
- Support local jurisdictions to connect all of the cities within the SCAG region via bicycle facilities.

SB 375 requires CARB to develop regional $CO_2$ emission reduction targets, compared to 2005 emissions, for cars and light trucks only for 2020 and 2035 for each MPO. SB 375 also requires that each MPO prepare an SCS as part of the RTP to reduce $CO_2$ by better aligning transportation, land use, and housing. For SCAG, the SCS targets through September 30, 2018 require SCAG to reduce per capita emissions eight percent below 2005 levels by 2020 and 13 percent below 2005 levels by 2035 (SCAG 2016). The 2016 RTP/SCS states that the region will meet or exceed the SB 375 per capita targets, lowering regional per capita GHG emissions (below 2005 levels) by eight percent by 2020 and 18 percent by 2035. The 2016 RTP/SCS also states that regional 2040 per capita emissions would be reduced by 22 percent, although CARB has not established a 2040 per capita emissions target. After September 30, 2018, SCAG's SCS targets increased and required SCAG to reduce per capita GHG emissions from passenger vehicles by approximately eight percent by 2020 and 19 percent by 2035 over base year 2005 (CARB 2019d).

# Local

## Sustainable City pLAn

Under Mayor Eric Garcetti the City of Los Angeles released its first-ever Sustainable City pLAn (pLAn) on April 8, 2015 (City of Los Angeles 2015). Recognizing the risks posed by climate change, the pLAn set time-bound outcomes on climate action, most notably to reduce GHG emissions by 45 percent by 2025, 60 percent by 2035, and 80 percent by 2050, all against a 1990 baseline. Through the completion and verification of the GHG inventory update, the City concluded that:

- The City accounted for approximately 36.2 $MMTCO_2e$ in 1990;
- The City's most recent inventory shows that emissions fell to 29 $MMTCO_2e$ in 2013; and
- Los Angeles' emissions are 20 percent below the 1990 baseline as of 2013, putting Los Angeles nearly halfway to the 2025 pLAn reduction target of 45 percent.

In addition, the 20 percent reduction exceeds the 15 percent statewide goal listed in the First Update to the AB 32 Scoping Plan.

On April 29, 2019, Mayor Garcetti released the Los Angeles' Green New Deal, which is the first four-year update to the 2015 pLAn (the Sustainable City pLAn, as updated by Los Angeles' Green New Deal, is referred to herein as the 2019 updates to the pLAn). This updated plan augments, expands, and elaborates in even more detail the City's vision for a sustainable future and assigns accelerated GHG emission reduction targets and new aggressive goals to place the City on the path to a zero carbon future by 2050. The 2019 updates to the pLAn accelerate the following targets (City of Los Angeles 2019):

- LADWP will supply 55 percent renewable energy by 2025; 80 percent by 2036; and 100 percent by 2045
- Sourcing 70 percent of the City's water locally by 2035, and capture 150,000 acre feet/year (AFY) of stormwater by 2035
- Reduce building energy use per square feet for all types of buildings 22 percent by 2025; 34 percent by 2035; and 44 percent by 2050
- Reduce vehicle miles traveled (VMT) per capita by at least 13 percent by 2025, 39 percent by 2035, and 45 percent by 2050
- Ensure 57 percent of new housing units are built within 1,500 feet of transit by 2025; and 75 percent by 2035
- Increase the percentage of zero emission vehicles in the City to 25 percent by 2025; 80 percent by 2035; and 100 percent by 2050
- Create 300,000 green jobs by 2035; and 400,000 by 2050
- Convert all City fleet vehicles to zero emission where technically feasible by 2028
- Reduce municipal GHG emissions 55 percent by 2025 and 65 percent by 2035 from 2008 baseline levels, reaching carbon neutral by 2045

Overall, the updated plan calls for reducing GHGs to 50 percent below 1990 levels by 2025; 73 percent below 1990 levels by 2035; and becoming carbon neutral by 2050. By following the 2019 updates to the Sustainable City pLAn, the City is expected to reduce an additional 30 percent in GHG emissions above and beyond the 2015 pLAn.

## City of Los Angeles Green Building Code

In April 2008, the City of Los Angeles adopted the Green Building Program Ordinance to address the impact on climate change from new development. In 2011, 2014, and 2016, Chapter IX, Article 9, of the Los Angeles Municipal Code (LAMC), referred to as the Los Angeles Green Building Code, was amended to incorporate various provisions of the CALGreen Code. The Los Angeles Green Building Code includes mandatory requirements and elective measures for three categories of buildings: (1) low-rise residential buildings; (2) non-residential and high-rise residential buildings; and (3) additions and alternations to residential and non-residential buildings.

# 3.3 Greenhouse Gases and Climate Change Impacts and Mitigation Measures

## Methodology

Project related activities would result in short-term and long-term generation of GHG emissions during construction and operation. The GHG emissions from the Project were quantified using the same methods described above for estimating criteria pollutants.

### Short-term Construction-Generated Emissions

During Project construction, GHG emissions would be generated by off-road, heavy-duty construction equipment at the Project Site and worker, vendor, and haul truck vehicle trips traveling to and from the Project Site. As was conducted for the criteria pollutant analysis, the Project's construction-related GHG emissions have been modeled using the most recent version of CalEEMod (Version 2016.3.2) and based on Project-specific construction data (e.g., schedule, equipment, truck volumes) provided by the Project applicant, where available. Where Project-specific information was not available, reasonable assumptions based on other similar projects and default model settings were used to estimate GHG emissions. The modeling output files are provided in Appendix A of this report.

Based on SCAQMD's 2008 *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold* document, SCAQMD recommends that for construction GHG emissions the total emissions for a project be amortized over a 30-year period and added to its operational emission estimates (SCAQMD 2008). Thus, in accordance with SCAQMD's recommendation, the Project's construction GHG emissions have been amortized over a 30-year lifetime of the Project (i.e., total construction GHG emissions were divided by 30) and the resulting annual emissions were added to the Project's estimated annual operational GHG emissions.

### Long-term Operational Emissions

The Project's operational GHG emissions, including GHGs generated by direct and indirect sources, are estimated according to the recommended methodologies from SCAQMD. Direct sources include emissions such as vehicle trips, natural gas consumption, and landscape maintenance. Indirect sources include off-site emissions occurring as a result of the Project's operations such as electricity and water consumption and solid waste disposal. As was conducted for the criteria pollutant analysis, the direct and indirect GHG emissions generated during the Project's operations have been estimated using CalEEMod. Modeling is based on Project-specific data (e.g., size and type of proposed uses), design features, and vehicle trip information provided by the TIS prepared for the Project.[19] While the proposed residential dwelling units do not include fireplaces, the Project's outdoor courtyard includes two fireplaces

[19] Gibson Transportation Consulting, Inc. September 2019. Draft Transportation Impact Study for the 7940 Lankershim Boulevard Mixed-Use Project, Los Angeles, California.

and two fire pits. As such, fireplace emissions from these outdoor amenities have been modeled in CalEEMod by assuming four residential units would be supplied with fireplaces.

The vehicle trips modeled in CalEEMod take into account trip reductions from internal capture from co-locating different land uses on the Project Site and from nearby access to public transportation. Additionally, as discussed above, because the Project qualifies as a transit priority project under SB 375 and thereby meets the eligibility criteria for CEQA streamlining under PRC 21159.28, the mobile GHG emissions generated by cars and light-duty truck trips associated with the Project would not need to be included in the environmental analysis. As such, the mobile GHG emissions estimated for the Project in this analysis excludes those emissions from passenger cars and light-duty trucks. The GHG emission calculations for the Project also include credits or reductions for GHG-reducing measures that are required by regulation, such as reductions in energy and water demand from the City's Green Building Code, which incorporates by reference the CALGreen Code. Additionally, because the proposed residential uses would be supplied with Energy Star appliances, the reduction in energy usage have also been accounted in CalEEMod based on the most recent data from the Energy Star program regarding energy efficiencies for clothes washers, dishwashers, refrigerators, and ceiling fans. The solid waste GHG emissions associated with the Project also accounts for the most recent solid waste diversion rate achieved by the City that has been reported, which was approximately 76 percent in 2012 (City of Los Angeles 2013).

Similar to the criteria air pollutant analysis, the GHG emissions that are generated by the existing construction yard currently operating at the Project Site have not been accounted for in this analysis. For the purpose of conducting a conservative analysis, the Project's operational GHG emissions were assessed in this analysis without taking any emissions credit from the existing uses that currently occupy the Project Site. Thus, the actual operational GHG emissions that would result from Project implementation would be lower than the emissions reported in this analysis.

## Consistency with Greenhouse Gas Reduction Plan, Policies, and Actions

The Project's GHG emissions are also evaluated by assessing the Project's consistency with applicable GHG reduction strategies and local actions adopted by the City. As discussed further below, the City has established goals and actions to reduce the generation and emission of GHGs from both public and private activities in the Sustainable City pLAn.

In the 2010 CEQA Guidelines amendments, lead agencies were encouraged to tier from programmatic mitigation plans and programs when they perform individual project analyses. As indicated above, the City does not have a programmatic mitigation plan to tier from, such as a GHG reduction plan, as recommended in the relevant amendments to the CEQA Guidelines. However, the Mayor's office has released the Sustainable City pLAn, and the City has adopted the Los Angeles Green Building Code, which encourage and require applicable projects to implement energy efficiency measures. In addition, Project consistency with state and regional regulatory plans and policies to reduce GHG emissions are analyzed herein, including CARB's 2017 Scoping Plan and SCAG's 2016 RTP/SCS.

# Thresholds of Significance

## CEQA Guidelines

Appendix G of the CEQA Guidelines provides screening questions that are intended to assist lead agencies when assessing a project's potential impacts regarding GHG emissions, as follows::

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment;
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

With respect to GHG emissions, CEQA Guidelines Section 15064.4 provides guidance to lead agencies for determining the significance of impacts from GHG emissions. Section 15064.4(a) provides that a lead agency shall make a good-faith effort based, to the extent possible, on scientific and factual data to describe, calculate, or estimate the amount of GHG emissions resulting from a project. Section 15064.4(a) further provides that a lead agency shall have the discretion to determine, in the context of a particular project, whether to: (1) quantify GHG emissions resulting from a project and/or (2) to rely on qualitative analysis or performance-based standards.

Pursuant to CEQA Guidelines Section 15064.4(a), the analysis presented herein quantifies GHG emissions resulting from the Project and provides a good-faith effort to describe, calculate, and estimate GHG emissions resulting from the Project and compares those emissions with the chosen threshold level.

CEQA Guidelines Section 15064.4(b) also provides that, when assessing the significance of impacts from GHG emissions, a lead agency should focus the analysis on the reasonably foreseeable incremental contribution of the project's emissions to the effects of climate change and consider a timeframe that is appropriate for the project. The lead agency's analysis should reasonably reflect evolving scientific knowledge and state regulatory schemes, and consider (1) the extent to which the project may increase or reduce GHG emissions compared with existing conditions, (2) whether the project's GHG 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 a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. The analysis of the potential impacts from the Project's GHG emissions follows this approach.

## Available Thresholds

The CEQA Guidelines do not provide numeric or qualitative thresholds of significance for evaluating GHG emissions. Instead, they leave the determination of the significance of GHG emissions up to the lead agency and authorize the lead agency to consider thresholds of significance previously adopted or recommended by other public agencies or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence (CEQA Guidelines Sections 15064.7[b] and 15064.7[c]). Additionally, any

public agency may also use an environmental standard as a threshold of significance, as it would promote consistency in significance determination and integrates environmental review with other environmental program planning and regulations (CEQA Guidelines Section 15064.7[d]).

As discussed under Section 3.2, Regulatory Framework, AB 32 establishes the requirement for reducing statewide GHGs to 1990 emissions levels by 2020. A number of air quality management agencies throughout the state have drafted or adopted various threshold approaches and guidelines for analyzing 2020 operational GHG emissions in CEQA documents. The different thresholds include (1) compliance with a qualified GHG reduction strategy, (2) performance-based reductions, (3) numeric "bright-line" thresholds, (4) efficiency-based thresholds, and (5) compliance with regulatory programs. The California Supreme Court's *Newhall Ranch* decision confirmed that, when an agency chooses to rely completely on a single quantitative method to justify a no-significance finding, "CEQA demands the agency research and document the quantitative parameters essential to that method" (*Center for Biological Diversity v. Department of Fish and Wildlife* [2015] Cal.App.4th). The *Golden Door* case reinforced the message from the Newhall Ranch decision that analyses need to provide substantial evidence to support significance thresholds selected for use in the CEQA analysis (*Golden Door Properties v. County of San Diego* [2018] Cal.App.4th.). Further, the appellate court ruling in City of *Long Beach v. City of Los Angeles* held that a qualitative analysis of consistency with state GHG reductions plans is adequate and projects that generate a significant amount of GHG emissions may still be consistent with state and local GHG reduction plans (*City of Long Beach v. City of Los Angeles* [2018] 19 Cal.App.5th 465). A qualitative analysis is also supported by the CEQA Guidelines and the SB 97 Final Statement of Reasons.[20]

The City has not adopted a threshold with supporting analysis setting forth approaches and guidelines for analyzing GHG emissions and climate change in CEQA documents. Additionally, although the City prepared the Sustainable City pLAn in 2015, followed by the update in 2019, these plans do not adopt thresholds of significance and otherwise do not meet the criteria established under CEQA Guidelines Section 15183.5(b) to be considered as qualified GHG reduction plans.

The SCAQMD has yet to adopt a GHG significance threshold for land use development projects (e.g., residential/commercial projects) but did form a GHG significance threshold working group to further evaluate potential GHG significance thresholds.[21] In October 2008, SCAQMD released a draft guidance document regarding interim CEQA GHG significance thresholds.[22] Within its October 2008 document, the SCAQMD proposed interim CEQA GHG indicators of

[20] See CEQA Guidelines Sections 15064.4; 15064.7; California Natural Resources Agency, Final Statement of Reasons for Regulatory Action, Amendments to the State CEQA Guidelines Addressing Analysis and Mitigation of Greenhouse Case Emissions Pursuant to SB 97, December 2009. Available: <http://resources.ca.gov/ceqa/docs/Final_Statement_of_Reasons.pdf>. Accessed: September 4, 2019.

[21] South Coast Air Quality Management District. 2008. Greenhouse Gases CEQA Significance Thresholds. Available: http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/ghg-significance-thresholds. Accessed: September 4, 2019.

[22] South Coast Air Quality Management District. 2008. Draft Guidance Document – Interim CEQA Greenhouse Gas Significance Threshold. October. Available: http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-6/ghg-meeting-6-guidance-document-discussion.pdf?sfvrsn=2. Accessed: September 4, 2019.

significance using a tiered approach. Under Tier 1, projects that are exempt from CEQA would be less than significant. Under Tier 2, projects that are consistent with an adopted GHG reduction plan would be less than significant. Under Tier 3, all non-industrial land use projects, including mixed-use projects that emit 3,000 $MTCO_2e$ per year or less would be less than significant.[23] Tier 4 uses performance standards that require projects to demonstrate that they meet a percent emission reduction target below business as usual to determine significance for commercial/residential projects that emit more than 3,000 $MTCO_2e$ per year.[24]

In November 2009, the working group proposed an additional Tier 4 standard that uses performance standards, including a requirement for projects to demonstrate that they meet a service population metric to determine significance for commercial/residential projects that emit more than 3,000 $MTCO_2e$ per year.[25,26] The working group proposed a project-level target of 4.6 $MTCO_2e$ per service population, based on calculations performed by the Bay Area Air Quality Management District.[27] On December 5, 2008, the SCAQMD Governing Board adopted a staff proposal for an interim GHG significance threshold of 10,000 $MTCO_2e$ for stationary source/industrial projects when the SCAQMD is lead agency.[28] In the September 2010 presentation by the working group, the Tier 4 performance standard of a percent emission reduction target below business as usual referred to an approach used by the San Joaquin Valley Air Pollution Control District that uses a comparison of a development's GHG emissions to a business-as-usual scenario.[29,30]

The working group did not recommend a specific numeric reduction target in the September 2010 presentation.[31] In addition, in September 2010, the working group recalculated the target as 4.8 $MTCO_2e$ per service population by dividing the 2020 statewide GHG reduction target for the land use sector by the sum of total statewide population and land use sector employment, as explained in the September 28, 2010, minutes to Stakeholder Working Group #15 (the prior 4.6

[23] Ibid.

[24] Ibid.

[25] South Coast Air Quality Management District. 2009. Greenhouse Gas CEQA Significance Threshold Stakeholder Working Group #14. November 19. Available: http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-14/ghg-meeting-14-main-presentation.pdf?sfvrsn=2. Accessed: September 4, 2019.

[26] The SCAQMD defines service population as including population and employment.

[27] Bay Area Air Quality Management District. 2009. Revised Draft Options and Justification Report, California Environmental Quality Act Thresholds of Significance. Available: http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/revised-draft-ceqa-thresholds-justification-report-oct-2009.pdf?la=en. Accessed: September 4, 2019.

[28] South Coast Air Quality Management District. 2008. Greenhouse Gases CEQA Significance Thresholds.

[29] South Coast Air Quality Management District. 2010. Greenhouse Gas CEQA Significance Threshold Stakeholder Working Group Meeting #15. September 28. Available: http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15/ghg-meeting-15-main-presentation.pdf?sfvrsn=2. Accessed: September 4, 2019.

[30] San Joaquin Valley Air Pollution Control District. 2009. Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA. December 17. Available: http://www.valleyair.org/Programs/CCAP/12-17-09/3%20CCAP%20-%20FINAL%20LU%20Guidance%20-%20Dec%2017%202009.pdf. Accessed: September 4, 2019.

[31] South Coast Air Quality Management District. n.d. Greenhouse Gas CEQA Significance Threshold Stakeholder Working Group Meeting #15.

$MTCO_2e$ per service population target was calculated by the Bay Area Air Quality Management District by dividing the 2020 statewide GHG reduction target for the land use sector by the sum of the total statewide population and total statewide employment).[32] The aforementioned working group has been inactive since 2011, and the SCAQMD has not formally adopted any GHG significance threshold for land use development projects. It should be noted that the SCAQMD interim thresholds were developed in conjunction with AB 32 and do not address post-2020 GHG reduction goals.

## Threshold Approach

In the absence of quantitative GHG thresholds and/or a qualified GHG reduction plan for use by a project to tier or streamline its environmental analysis, CEQA provides that a lead agency could rely on regulatory compliance to show a less-than-significant GHG impact if the project complies with or exceeds those programs adopted by CARB or other state agencies. As discussed previously, the Project is expected to be in operation by 2023. Beyond 2020, the state has established a GHG emissions reduction target for 2030 that has been codified in law through SB 32 and the 2017 Scoping Plan was adopted to meet this goal. Therefore, 2030 marks the next statutory statewide milestone target applicable to the Project. The plan to achieve these statewide emission reduction goals is provided by the 2017 Scoping Plan (and future updates), and demonstrating consistency with the 2017 Scoping Plan will demonstrate that the Project is doing its fair share towards achieving statewide reduction targets.

Overall, of the threshold options discussed above, the approach used in this analysis is compliance with regulatory programs, which is appropriate in addressing the Project's post-2020 completion and operation. Under this threshold approach, the Project's GHG emissions are evaluated for each major emission sector (e.g., energy, water, waste, mobile, and stationary) addressed in the 2017 Scoping Plan to determine whether the Project's emissions would conflict with applicable sector-specific reduction targets and strategies identified in the 2017 Scoping Plan to meet the state's 2030 target under SB 32.

In the absence of any adopted quantitative threshold, and in accordance with case law and the CEQA Guidelines, the lead agency has determined that the Project would not have a significant effect on the environment if the Project is found to be consistent with applicable regulatory plans and policies to reduce GHG emissions, including the emissions reduction measures discussed within CARB's 2017 Scoping Plan, SCAG's 2016 RTP/SCS, and the City's Sustainable City pLAn and Green Building Code.

Note that GHGs and climate change are exclusively cumulative impacts; there are no non-cumulative GHG emissions impacts from a climate change perspective (California Air Pollution Control Officers Association 2008). Therefore, in accordance with the scientific consensus regarding the cumulative nature of GHGs, the analysis herein analyzes the cumulative contribution of Project-related GHG emissions.

[32] South Coast Air Quality Management District. n.d. Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group #15.

# SB 375 CEQA Streamlining

Section 21159.28 of the Public Resources Code (PRC), which was added under SB 375 that was enacted in 2008, provides that residential and mixed-use projects that meet certain criteria are eligible for CEQA streamlining, provided that CARB has accepted the Metropolitan Planning Organization's determination that the project area's SCS achieves the GHG emission reduction targets established by CARB for the region. In cases where a project meets the criteria under Section 21159.28, the project would qualify for SB 375 CEQA Streamlining whereby no environmental analysis is required of: (1) project-specific or cumulative impacts from cars and light-duty truck trips generated by the project on global warming or the regional transportation network or (2) growth-inducing impacts.

As the Project has been determined to meet the criteria of Section 21159.28 for CEQA streamlining benefits, no analysis of GHG emission impacts resulting from passenger cars and light-duty trucks is required.

# Project Design Features

The following GHG-reducing PDF measure, which lists specific baseline development features that would be implemented by the Project Applicant and agreed to by the City, would be incorporated into the Project:

**PDF-GHG-1**:

- The Project shall install energy efficient appliances.
- The Project shall install low-flow plumbing fixtures.
- The Project shall provide 19 short-term and 183 long-term bicycle parking spaces at the Project Site.
- The Project shall plant a total of 117 trees, 15 of which would be street trees, along with native and drought-tolerant vegetation such as shrubs and ground cover.
- The Project shall install solar panels on 15 percent of the rooftop space of the proposed mixed-use building.
- The Project shall install prewiring for electrical vehicle (EV) charging for 20 percent of the total parking spaces provided at the Project Site.
- The Project shall provide EV parking spaces that are installed with chargers and ready for immediate EV use for 5 percent of the total parking spaces provided at the Project Site.
- The Project shall not provide any indoor fireplaces for residential units.
- The Project shall install outdoor power outlets to facilitate the use of electric landscaping equipment for maintaining common areas.

- The Project shall enroll in the organic waste recycling services provided by the solid waste collection service provider and ensure that compostable receptacles will be provided for the multi-family uses to reduce landfilled waste.

# Project Impacts

## Impact GHG-1: Would the proposed Project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?

### Short-term Construction

Construction of the Project would result in temporary generation of GHG emissions related to off-road equipment use and on-road vehicle operations. As mentioned previously, GHG emissions are measured exclusively as cumulative impacts; therefore, the Project's construction emissions are considered part of total GHG emissions for the Project lifecycle, which also include GHG emissions during operations. In accordance with SCAQMD guidance, the Project's construction emissions are amortized over a 30-year period and the resulting annual emissions are combined with the Project's annual operational GHG emissions.

Table 3.3-1 below shows GHG emissions related to construction of the Project. As shown, construction of the Project is estimated to generate a total of 2,142 $MTCO_2e$ over the construction period. When amortized over a 30-year period, the Project's construction GHG emissions would be approximately 71 $MTCO_2e$ per year. Because construction emission sources would cease once construction is complete, construction emissions are considered short term.

**Table 3.3-1: Estimated Short-term Construction Related GHG Emissions**

| Construction Years | Estimated GHG Emissions ($MTCO_2e$)[a] |
|---|---|
| 2019 | 79 |
| 2020 | 842 |
| 2021 | 514 |
| 2022 | 508 |
| 2023 | 200 |
| **Total Construction Emissions** | **2,142** |
| *Annual Construction Emissions (Amortized over 30 years)* | *71* |

Source: Emissions modeling by ICF using CalEEMod version 2016.3.2 (Appendix A).
[a] Totals may not add up due to rounding.

### Long-term Operation

Area and indirect sources of GHG emissions associated with the Project would primarily result from electricity and natural gas consumption, water transport (the energy used to deliver water to and from the Project Site), and solid waste generation. GHG emissions from electricity consumed on the Project Site would be generated off-site by fuel combustion at the electricity

provider. GHG emissions from water transport are also indirect emissions resulting from the energy required to transport water from its source. In addition, the new residential and retail uses at the Project Site would also generate mobile source emissions from motor vehicle trips generated by residents and patrons.

The estimated operational GHG emissions resulting from the Project are shown in Table 3.3-2. Additionally, in accordance with SCAQMD's recommendation, the Project's amortized construction-related GHG emissions from Table 3.3-1 are added to the operational emissions estimate in order to determine the Project's total annual GHG emissions.

**Table 3.3-2: Estimated Annual Greenhouse Gas Emissions from Project Operation in 2021 (metric tons per year)**

| Emission Source | Estimated Annual GHG Emissions ($MTCO_2e$ per year) |
|---|---|
| Area | 12 |
| Energy | 1,430 |
| Mobile[b] | 777 |
| Waste | 41 |
| Water/Wastewater | 197 |
| **Total Annual Operational Emissions** [a] | **2,457** |
| Amortized Construction | 71 |
| **Total Annual Project Emissions** [a] | **2,527** |

Source: ICF Emissions Modeling (Appendix A).

[a] Totals may not add up due to rounding.

[b] As the Project is a transit priority project that qualifies for SB 375 CEQA streamlining, the mobile-related GHG emissions presented in this table exclude those generated from passenger cars and light-duty trucks pursuant.

As shown in Table 3.3-2, the Project's total annual GHG emissions would be approximately 2,527 $MTCO_2e$ per year.

As discussed in the Methodology section, above, the Project's compliance with regulatory programs is used to analyze the significance of its potential impacts with respect to GHG emissions dating from its post-2020 completion and operation. Under this threshold approach, the Project's GHG emissions are evaluated for consistency with each major emission sector (e.g., energy, water, waste, mobile, and stationary) addressed in the 2017 Scoping Plan to determine whether the Project's emissions would conflict with applicable sector-specific reduction targets and strategies identified in the 2017 Scoping Plan to meet the state's 2030 target under SB 32. The following sections present the sector-by-sector analysis of the Project's potential GHG impacts.

### Area Emissions

As shown in Table 3.3-2, emissions associated with area sources would be approximately 12 $MTCO_2e$ per year. The Project's area sources include gasoline-powered landscaping equipment (e.g., trimmers, mowers) and the outdoor courtyard fireplaces. Area source emissions associated with landscaping equipment are based on CalEEMod's default assumptions, which estimates

equipment usage based on square footage of new building space. The landscaping at the Project Site would include trees, shrubs, and ground cover vegetation as opposed to grassed lawn areas, thereby minimizing the routine use of mowers and other landscaping equipment. Additionally, the Project's landscaped areas would be comprised of native and drought tolerant vegetation. This type of landscaping typically requires minimal pruning and maintenance, which also serves to minimize the use of fuel-powered landscaping equipment. The Scoping Plan does not include specific measures or 2030 emissions reduction requirements for landscaping equipment. While the inevitable transition away from fossil fuel equipment would be needed to achieve carbon neutrality by 2045, the Scoping Plan did not assume all electric landscaping equipment in their 2030 reduction analysis. Thus, because the use of trees and shrubs instead of grass lawn areas by the Project would reduce landscaping emissions relative to buildings that largely incorporate grass, the Project would be consistent with the Scoping Plan's overall goal of reducing emissions from fossil-fueled landscaping equipment.

Area source emissions associated with the Project's four outdoor courtyard fireplaces (i.e., two fireplaces and two fire pits), which would be natural gas fired, were accounted for in CalEEMod by selecting the use of natural gas fireplaces at four of the 432 total residential units proposed at the Project Site. For the purpose of conducting a conservative analysis, it was assumed that these outdoor fireplaces would be used 30 percent of the year. However, none of the 432 residential dwelling units would be equipped with indoor fireplaces under the Project. Because the Project would not supply the residential units with indoor fireplaces and would be limited to only four outdoor fireplaces, the fireplace emissions from the Project would be reduced relative to a residential building that supplies indoor fireplaces to its dwelling units. Thus, by not supplying indoor fireplaces for the residential units, the Project would be consistent with the Scoping Plan's goal of reducing GHG emissions associated with natural gas usage.

**Energy Emissions**

GHGs are emitted directly from buildings through the combustion of any type of fuel (e.g., natural gas for cooking). GHGs can also be emitted indirectly from the generation of electricity. The Scoping Plan outlines strategies to reduce energy demand and fossil fuel use, while increasing energy efficiency and renewable energy generation. These strategies include transitioning to cleaner fuels, greater efficiency in existing buildings, and electrification of end uses in commercial sectors. As shown in Table 3.3-2, the Project's building energy emissions would be approximately 1,430 $MTCO_2e$ per year.

OPR's 2018 *CEQA and Climate Change Advisory* recommends that a land use development project that "achieves applicable building energy efficiency standards, uses no natural gas or other fossil fuels, and includes Energy Star appliances where available, may be able to demonstrate a less-than-significant greenhouse gas impact associated with project operation." While OPR recommends new building do not consume fossil fuels, the 2017 Scoping Plan does not assume all electric buildings in their 2030 reduction analysis. Rather, the 2017 Scoping Plan assumes new gas appliances will be high efficiency.

The Project would install energy-efficient HVAC and lighting systems, Energy Star appliances, and meet Cal Green and Title 24 Building Standards Code requirements. The Project would also

include solar panels on 15 percent of the proposed mixed-use building's rooftop space. Though the Project would allow for natural gas appliances and heating, all units would meet high efficiency standards, consistent with the assumptions and emissions reduction requirements of the 2017 Scoping Plan for 2030. Thus, the Project would be consistent with the 2017 Scoping Plan's overall goal of reducing building energy emissions to meet the state's 2030 GHG reduction target.

**Mobile Source Emissions**

GHG emissions associated with on-road mobile sources are generated from residents, workers, and visitors, and delivery vehicles traveling to and from the Project Site. As noted previously, because the Project is a transit priority project that qualifies for CEQA streamlining under SB 375, no environmental analysis is required for the Project's GHG emissions from passenger cars and light-duty trucks. As shown in Table 3.3-2, emissions from mobile sources (excluding passenger cars and light-duty trucks) would be approximately 777 $MTCO_2e$ per year. It should be noted that these emissions are for the opening year (2023) of the Project, and that future annual emissions from mobile sources associated with the Project would continue to decline as the state's transportation sector transitions to zero-emission and lower-emission vehicles.

As discussed above, CARB acknowledges that reductions in VMT are required to meet the state's long-term climate change goals. The Project's urban infill location, with nearby access to public transportation in proximity to the Project Site, is consistent with state and local VMT reduction policies. The Project Site is in close proximity to multiple bus stops with high frequency transit service, including Metro Bus lines 224 and 353/152 that run along Lankershim Boulevard. Other transit bus service located within one mile of the Project Site is provided along Laurel Canyon Boulevard, Roscoe Boulevard/Tuxford Street, Saticoy Street, and Vineland Avenue/Sunland Boulevard. The Project is also 0.90 miles southwest of the Metrolink Sun Valley Station, which serves the Metrolink Antelope Valley (AV) Line that travels to and from downtown Los Angeles, with a final destination in the City of Lancaster. Additionally, designated "Tier 2" bike lanes under the City's Mobility Plan 2035, which are bicycle lanes with striped separation on arterial roadways, are provided near the Project Site along Lankershim Boulevard north of Burbank Boulevard, along Laurel Canyon south of Strathern Street, and along Strathern Street west of Laurel Canyon, which would serve to reduce VMT. As a mixed-use development that is located within walking distance of businesses in the area and multiple transit options, the Project would also encourage pedestrian travel.

The Project would provide a total of 224 bicycle parking spaces at the Project Site, satisfying LAMC requirements to support bicycling by its residents and visitors. Thus, the Project's location, which is an urban infill site in a high-quality transit area (HQTA), as defined by SCAG, and a TPA, and mix of land uses would encourage the use of transit, walking and bicycling. As such the Project would reduce VMT from automobiles and minimize GHG emissions associated with mobile emissions. Furthermore, in accordance with the CALGreen code the Project would install pre-wiring for EV charging spaces for 20 percent of its total parking capacity for future use, with 5 percent of the parking spaces having chargers installed for immediate use by EVs. The provision of EV spaces at the Project Site would further reduce mobile GHG emissions. Overall, the Project would be consistent with the state's goal of reducing VMT.

### Land Use Emissions

The existing landscaping on the Project Site is limited and consists of 35 non-native and non-protected trees. As part of the Project, these existing trees would be removed and replaced with 117 trees, including 15 street trees, for a net increase of 89 trees. Additionally, the Project Site would also plant other native and drought-tolerant vegetation such as shrubs and ground cover. The increase in trees and vegetation at the Project Site would increase carbon sequestration over existing conditions. While there are no relevant measures in the Scoping Plan or explicit regulatory requirements related to tree or vegetation planting, the Scoping Plan does discuss the importance of maintaining natural and working lands, which also encompasses green spaces in urban and built environments, to serve as a carbon sink. Additionally, the Scoping Plan notes that the creation and management of parks and other green space in urban areas, including expansion of the existing urban tree canopy, would help to reduce GHG emissions. Thus, the additional trees and native and drought-tolerant vegetation by the Project would be consistent with the Scoping Plan's overall goal of avoiding losses in carbon sequestration.

### Waste Emissions

Solid waste may be disposed in landfills or diverted for recycling, composting, or reuse. GHG emissions from landfills are generated through anaerobic breakdown of material. The Scoping Plan aims to reduce waste emissions by diverting waste away from landfills through waste reduction, re-use, composting, and material recovery. In addition, AB 341 requires mandatory recycling for certain commercial businesses, including a multi-family residential dwelling of five units or more.

As shown in Table 3.3-2, emissions associated with waste would be approximately 41 $MTCO_2e$ per year. As of February 1, 2018, a new waste and recycling system for all businesses and large apartment complexes in the City referred to as "recycLA" was implemented by the LA Sanitation, which is responsible in overseeing the collection and recycling of waste generated by residential, commercial and industrial uses in the City and surrounding communities. Under the recycLA program, the City is divided into 11 different service zones and waste collection contracts are awarded to seven different companies to collect trash at businesses, apartment buildings, and condos in those areas. Part of the services that recycLA will offer to businesses and large multi-family customers include blue bins for recycling and organics recycling. The implementation of this program aims to reduce landfill disposal by one million tons per year by 2025 and reduce waste by 65 percent in all 11 of the City's service zones, with the goal of achieving zero waste by 2050. Thus, upon its completion and operation in 2023, the Project would be served by this solid waste collection and recycling service, which is consistent with the Scoping Plan's overall goal of reducing waste emissions and its specific strategy to avoid landfill methane emissions by reducing the disposal of landfilled waste and organics through programs such as edible food recovery programs. In addition, these features would support and comply with AB 341's mandatory recycling requirement and support the state's recycling goal.

### Water and Wastewater Emissions

Indirect GHG emissions result from the production of electricity used to convey, treat, and distribute water and wastewater. The amount of electricity required to convey, treat, and distribute

water depends on the volume of water as well as the sources of water. The Scoping Plan outlines objectives and goals to reduce GHGs in the water sector, including using and reusing water more efficiently through greater water conservation, drought tolerant landscaping, stormwater capture, and water recycling. Regulations have further targeted water supply and water conservation (e.g., SB X7-7) through building and landscaping efficiency (e.g., Title 24).

As shown in Table 3.3-2, the annual emissions associated with water use would be approximately 197 $MTCO_2e$ during the Project's opening year. The Project would incorporate water efficiency measures in compliance with the applicable requirements of the California Green Building Standards Code and the City of Los Angeles Green Building Code, which incorporates by reference the CALGreen Code. The Project's design would utilize low-flow plumbing fixtures that as a minimum comply with the flush volumes and gallons per minute water rates in the CALGreen Code and City requirements that decreases indoor water use. Outdoor water conservation measures include the installation of water-efficient irrigation systems and the planting of water-efficient landscaping consisting of native and drought-tolerant vegetation to minimize irrigation requirements. Thus, the indoor and outdoor water conservation measures of the Project serve to support ongoing regulatory programs (e.g., SB X7-7, Title 24) that aim to reduce GHG emissions associated with conveying water and distributing water to ultimately achieve climate neutrality.

### Conclusion

As discussed above, the Project's sustainability measures are consistent with applicable polices from the 2017 Scoping Plan and regulatory programs for the area, energy, water, waste, and land use sectors. The Project's consistency with other statutes and policies related to GHG reduction efforts identified in the 2017 Scoping Plan are identified in AB 32, SB 32, and the 2017 Scoping Plan section under Impact GHG-2. The Project would also result in a net increase in trees at the Project Site along with other native and drought-tolerant vegetation over existing conditions, and therefore would be consistent with Scoping Plan's overall goal of avoiding losses in carbon sequestration. The location of the Project in an urban infill site in proximity to multiple transit options along with its mixed-use development of residential and commercial uses would also result in a reduction in VMT that is consistent with the Scoping Plan's long-term climate change goals. Overall, GHG emissions from construction and operation of the Project would have a less than significant impact on the environment.

## Impact GHG-2: Would the proposed Project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs?

### SCAG 2016 RTP/SCS

The 2016 RTP/SCS is a long-range planning document that balances future mobility and housing needs with economic, environmental, and public health goals in the SCAG region. One of the key strategies of the plan is to integrate land use, housing, and transportation planning to ensure sustainable regional growth. Goals and policies included in the 2016 RTP/SCS to reduce GHG emissions consist of adding density in proximity to transit stations, mixed-use development and encouraging active transportation (i.e., non-motorized transportation such as bicycling). SCAG's 2016 RTP/SCS complies with SB 375, which requires an SCS to be prepared as part of the RTP by

each MPO that outlines policies to reduce per capita GHG emissions from automobiles and light trucks. The SCS policies include a mix of strategies that encourage compact growth patterns, mixed-use design, alternative transportation, transit, mobility and access, network expansion, and transportation investment. Table 3.3-3 shows the Project's consistency with the 2016–2040 RTP/SCS goals and guiding policies.

**Table 3.3-3: Consistency of Project with SCAG 2016–2040 RTP/SCS**

| Applicable Targets | Project Consistency Assessment |
|---|---|
| **2016 RTP/SCS Goals** | |
| 1. Align the plan investments and policies with improving regional economic development and competitiveness. | **Not applicable.** SCAG and its member agencies are responsible for aligning RTP/SCS investments and polices with improving regional economic development and competitiveness. The Project would not conflict with this goal. |
| 2. Maximize mobility and accessibility for all people and goods in the region. | **Consistent.** The Project would be near multiple transportation routes, place housing near jobs and transit, and provide ample bicycle parking and pedestrian infrastructure to incentivize increased biking and walking. The Project would include 224 bicycle parking spaces for the residential and commercial uses of the Project, in accordance with LAMC requirements. The Project would encourage pedestrian travel by incorporating new residential and commercial uses in its mixed-use development and locating them on a site that would be within walking distance to businesses in the area and near multiple transit options. |
| 3. Ensure travel safety and reliability for all people and goods in the region. | **Not applicable.** The Project would involve the construction and operation of a mixed-use development. Although people and goods would travel to and from the Project Site by personal vehicle, transit modes, biking, or walking, the Project would have negligible bearing on regional travel safety and reliability. The Project would not conflict with this goal, and would support its implementation by providing off-site street and right of way improvements as part of the development of the Project. |
| 4. Preserve and ensure a sustainable regional transportation system. | **Consistent.** The Project is a mixed-use development that would be located near multiple transportation routes, place housing near jobs and transit, and provide ample bicycle parking and pedestrian infrastructure to incentivize increased biking and walking. The Project would include 224 bicycle parking spaces for the residential and commercial uses of the Project, in accordance with LAMC requirements. The Project would encourage pedestrian travel by incorporating new residential and commercial uses in its mixed-use development and locating them on a site that would be within walking distance to businesses in the area and near |

| Applicable Targets | Project Consistency Assessment |
|---|---|
| | multiple transit options. The Project would also implement a TDM program to promote non-auto travel and reduce single-occupant vehicle trips, as identified in the TIS prepared for the proposed Project. Strategies that would be implemented as part of the TDM program include educational programs, a transportation information center/kiosk, bicycle amenities, a contribution to the City Bicycle Plan Trust Fund for implementation of bicycle improvements, promotion and support of carpools and rideshare, incentives for using alternative travel modes, and parking incentives and administrative support for formation of carpools/vanpools, and mobility hub support. |
| 5. Maximize the productivity of our transportation system. | **Consistent.** The Project is a mixed-use development that would be located near multiple transportation routes, place housing near jobs and transit, and provide ample bicycle parking and pedestrian infrastructure to incentivize increased biking and walking. By placing housing near jobs and transit, the Project would be consistent with the tenets of smart growth that maximize the productivity of the transportation system. |
| 6. Protect the environment and health of our residents by improving air quality and encouraging active transportation (e.g., bicycling and walking). | **Consistent.** The Project would locate a mixed-use development in a TPA that would be within walking distance to existing bus lines and a Metrolink station. The Project would also provide long-term and short-term bicycle parking, which would give people have more opportunities to bicycle, walk, and pursue other active alternatives to driving. The Project's location in an urban infill area would provide residents and visitors with shopping and dining options that would be easily accessible on foot or by bicycle. The Project's design and location would help to improve air quality and the well-being of people because they would have greater opportunities for pedestrian and bicycling activity and reduce their reliance on automobiles. |
| 7. Actively encourage and create incentives for energy efficiency, where possible. | **Consistent.** The Project would comply with the California Title 24 Building Standards Code and CALGreen Code. Energy savings and a sustainable design would be incorporated throughout the Project. The Project would emphasize energy conservation, which would be achieved through the use of energy-efficient HVAC and lighting systems. In addition, of the 20% of parking spaces that would be prewired for charging, 5% would have chargers installed for immediate use by EVs. The Project would include solar panels on 15% of the mixed-used building's rooftop. |

| Applicable Targets | Project Consistency Assessment |
|---|---|
| 8. Encourage land use and growth patterns that facilitate transit and active transportation. | **Consistent.** The Project would involve construction and operation of a high-density, mixed-use development near bus and rail transit options; it would incentivize bicycle and pedestrian trips through the provision of supporting infrastructure. |
| 9. Maximize the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies. | **Consistent.** TSM improvements, including signal controllers and CCTV, would be installed at key intersections in the Project vicinity, which would contribute to improved monitoring of the transportation system. |
| **2016 RTP/SCS Guiding Policies** | |
| 1. Transportation investments shall be based on SCAG's adopted regional Performance Indicators. | **Not applicable.** SCAG and its member agencies are responsible for transportation investments and the use of performance indicators. The Project would not conflict with this policy. |
| 2. Ensuring safety, adequate maintenance and efficiency of operations on the existing multimodal transportation system should be the highest RTP/ SCS priorities for any incremental funding in the region. | **Not applicable.** SCAG and its member agencies are responsible for the safety, maintenance, and operational efficiency of the transportation system. The Project would not conflict with this policy, and would support its implementation by providing off-site street and right of way improvements as part of the development of the Project. |
| 3. RTP/SCS land use and growth strategies in the RTP/SCS will respect local input and advance smart growth initiatives. | **Consistent.** The Project would locate a mixed-use development in a TPA within walking distance of existing bus lines and a Metrolink station. The Project would also provide long-term and short-term bicycle parking which would help people have more opportunities to bicycle, walk and pursue other active alternatives to driving. The Project's location in an urban infill area would provide residents and visitors with shopping and dining options that are easily accessible on foot or by bicycle. The Project's design and location would help to improve air quality and the well-being of people as they would have greater opportunities for pedestrian and bicycling activity and to reduce their reliance on automobiles. |
| 4. Transportation demand management (TDM) and active transportation will be focus areas, subject to Policy 1. | **Consistent.** The Project would involve the construction and operation of a high-density, mixed-use development near bus and rail transit options, and would also incentivize bicycle and pedestrian trips through the provision of supporting infrastructure. The Project would implement a TDM program to promote non-auto travel and reduce single-occupant vehicle trips, as identified in the TIS prepared for the proposed Project. Specific strategies that would be implemented as part of the TDM program are discussed above. |

| Applicable Targets | Project Consistency Assessment |
|---|---|
| 5. HOV gap closures that significantly increase transit and rideshare usage will be supported and encouraged, subject to Policy 1. | **Not applicable.** The Project is unrelated to HOV gap closures. The Project would not conflict with this policy. |
| 6. The RTP/SCS will support investments and strategies to reduce non-recurrent congestion and demand for single occupancy vehicle use, by leveraging advanced technologies. | **Not applicable.** SCAG and its member agencies are responsible for transportation investments and the use of advanced technologies to reduce congestion and demand for single occupancy vehicles. The Project would not conflict with this policy. |
| 7. The RTP/SCS will encourage transportation investments that result in cleaner air, a better environment, a more efficient transportation system and sustainable outcomes in the long run. | **Not applicable.** SCAG and its member agencies are responsible for transportation investments that improve air quality, the environment, transportation efficiency, and sustainability. The Project would not conflict with this policy. |
| 8. Monitoring progress on all aspects of the Plan, including the timely implementation of projects, programs, and strategies, will be an important and integral component of the Plan. | **Not applicable.** SCAG and its member agencies are responsible for monitor progress on all aspects of the RTP/SCS. The Project would not conflict with this policy. |
| Source: ICF, 2019. | |

Implementation of the SCS is intended to improve the efficiency of the transportation system and achieve a variety of land use types throughout the SCAG region that meet market demands in a balanced and sustainable manner. Some of the primary land use strategies discussed in the 2016 RTP/SCS include focusing new growth around transit (especially within the region's HQTAs), growth around "Livable Corridors," and providing more options for short trips,. The 2016 RTP/SCS identifies HQTAs as a cornerstone of land use planning best practice in the SCAG region, and assumes that 46 percent of new housing and 55 percent of new employment locations developed between 2012 and 2040 will be located within HQTAs. Focusing growth in HQTAs would provide households with expanded transportation choices other than vehicle driving, including walking, biking, use of public transit (e.g., buses, light rail, commuter rail, subway), and shared mobility options, as well as more direct and easier access to jobs, schools, shopping, healthcare, and entertainment. The Livable Corridor strategy discussed in the 2016 RTP/SCS refers to the use of integrated transportation and land use planning to revitalize commercial strips to increase economic activity and improve mobility options. This strategy includes promoting the development of mixed-use retail centers at key nodes along the corridors, increasing neighborhood-oriented retail at more intersections, and increasing zoning that allows for the replacement of under-performing auto-oriented strip retail between nodes with higher density residential and employment. Recognizing that 38 percent of all trips in the SCAG region are less than three miles, the 2016 RTP/SCS also includes land use strategies to encourage the use of alternative modes of transportation for short trips. One strategy to accomplish this is to shift retail growth from large centralized retail strip malls to smaller distributed centers throughout neighborhood mobility areas (NMAs), which are defined as neighborhood areas that have a high intersection density, low to moderate traffic speeds, and robust residential retail connections, to reduce distances residents would have to travel for retail goods. Another strategy involves the development of "Complete Communities," which are defined as mixed-use districts that have housing, employment, and a mix of retail and services located in close proximity to each other. These complete communities would allow for most daily needs of residents to be met

within a short distance, which in turn would encourage short trips made by walking and cycling as opposed to automobile travel. All of these land use strategies promoted in the 2016 RTP/SCS would reduce VMT and GHG emissions.

The Project would be consistent with the land use strategies of the 2016 RTP/SCS and the goals of SB 375, including the reduction of VMT and the corresponding mobile GHG emissions. As a transit priority project under SB 375 that is located in a HQTA, the Project locates a mixed-use development consisting of residential, retail, and restaurant uses near public transit, including frequent Metro bus lines and the Metrolink Sun Valley Station. The urban infill location of the Project Site is also surrounded by a diverse mixture of land uses including residential, office, commercial, industrial, school, and service uses. The diversity of land uses in proximity to the Project Site and the mix of uses associated with the Project would reduce vehicle trips and VMT by encouraging walking and non-automotive forms of transportation, which would result in corresponding reductions in mobile GHG emissions. Thus, implementation of the Project would help accommodate forecasted growth within the SCAG region while also supporting the reduction of per capital GHG emissions from passenger vehicles consistent with the 2016 RTP/SCS. The Project would also incorporate energy and water conservation features to meet the CALGreen Code. Overall, the Project would be consistent with the goals of SB 375 and 2016 RTP/SCS.

## AB 32, SB 32, and 2017 Scoping Plan

AB 32 and SB 32 outline the state's GHG emissions reduction targets for 2020 and 2030, respectively. In 2008 and 2014, CARB adopted the Scoping Plan and First Update, respectively, as a framework for achieving AB 32. The Scoping Plan and First Update outline a series of technologically feasible and cost-effective measures to reduce statewide GHG emissions. CARB adopted the 2017 Scoping Plan in November 2017 as a framework to achieve the 2030 GHG reduction goal described in SB 32. There is no state plan for addressing GHG reductions beyond 2030. As discussed previously, because the Project is expected to be in operation by 2023, the statewide GHG emissions reduction target for 2030 is the statutory statewide milestone target that is applicable to the Project.

Based on CARB's 2017 Scoping Plan, many of the reductions needed to meet the 2030 target will come from state regulations, including cap-and-trade, the requirement for increased renewable energy sources in California's energy supply, updates to Title 24, and increased emission reduction requirements for mobile sources. The 2017 Scoping Plan indicates that reductions would need to come in the form of changes pertaining to vehicle emissions and mileage standards, changes pertaining to sources of electricity and increased energy efficiency at existing facilities, and state and local plans, policies, or regulations that will lower GHG emissions relative to business-as-usual conditions. The 2017 Scoping Plan carries forward GHG reduction measures from the First Update, as well as new potential measures to help achieve the state's 2030 target across all sectors of the California economy, including transportation, energy, and industry.

As discussed above under Impact GHG-1, the Project would be consistent with the applicable polices from the 2017 Scoping Plan and regulatory programs for the area, energy, water, waste, and land use sectors. The Project would be designed to meet the CALGreen Code, and would emphasize energy and water conservation through the use of energy efficient HVAC and lighting

systems, energy star appliances, and low flow plumbing fixtures. Solar panels would be installed on 15 percent of the Project's rooftop space and 20 percent of the provided parking spaces would be prewired for EV charging, with 5 percent of the parking spaces having chargers installed for immediate use by EVs. The Project would be consistent with the Scoping Plan's overall goal of avoiding losses in carbon sequestration by planting a net increase of 89 trees at the Project Site over existing conditions along with other native and drought-tolerant vegetation. By locating its mixed-use residential, restaurant, and retail commercial development on a Project Site that is located within a HQTA and TPA near frequent bus lines, the Metrolink Sun Valley Station, bike lanes, and a pedestrian network, the Project would reduce VMT by encouraging the use of transit, walking, and bicycling as compared to similar stand-alone residential uses that are not located in close proximity to transit. Thus, the GHG emission reductions resulting from the Project's features, design, and location would be consistent with the goals of the 2017 Scoping Plan and would assist the state with meeting its GHG reduction goals. Table 3.3-4 shows the Project's consistency with statutes and programs identified in the state's 2017 Scoping Plan that aim to reduce GHG emissions.

**Table 3.3-4: Consistency of Project with 2017 Scoping Plan**

| Applicable Policies and Objectives | Project Consistency Assessment |
|---|---|
| SB 350: Reduce GHG emissions in the electricity sector through the implementation of the 50 percent RPS, doubling of energy savings, and other actions as appropriate to achieve GHG emissions reductions planning targets in the Integrated Resource Plan process. | **Consistent.** This policy is a state program that requires no action at the local or project level. Nonetheless, as part of the Project's sustainability goals identified in PDF-GHG-1, the Project would install energy-efficient appliances, low-flow plumbing fixtures, and solar panels on 15% of the rooftop space, all of which would reduce emissions in the energy sector. |
| Low-Carbon Fuel Standard: Transition to cleaner/less-polluting fuels that have a lower carbon footprint. | **Consistent.** This policy is a state program that requires no action at the local or project level. Nonetheless, the Project would reduce mobile-source GHG emissions by including short- and long-term bike parking, prewiring 20% of the total parking spaces for EV charging, and providing EV chargers at 5% of the total parking spaces. |
| Mobile Source Strategy (Cleaner Technology and Fuels [CTF] Scenario): Reduce GHGs and other pollutants from the transportation sector through transition to zero-emission and low-emission vehicles, cleaner transit systems and reduction of vehicle miles traveled. | **Consistent.** This policy is a state program that requires no action at the local or project level. Nonetheless, the Project would reduce mobile-source GHG emissions by including short- and long-term bike parking, prewiring 20% of the total parking spaces for EV charging, and providing EV chargers at 5% of the total parking spaces. |
| SB 1383: Approve and Implement Short-Lived Climate Pollutant strategy to reduce highly potent GHGs. | **Not applicable.** This policy is a state program that requires no action at the local or project level and is not applicable to the proposed Project. The Project would not conflict with this statute. |
| California Sustainable Freight Action Plan: Improve freight efficiency, transition to zero-emission technologies, and increase competitiveness of California's freight system. | **Not applicable.** This policy is a state program that requires no action at the local or project level and is not applicable to the proposed Project. The Project would not conflict with this plan. |

| Applicable Policies and Objectives | Project Consistency Assessment |
|---|---|
| Post-2020 Cap-and-Trade Program: Reduce GHGs across largest GHG emissions sources. | **Not applicable.** This policy is a state program that requires no action at the local or project level. The Project would not conflict with this program. |
| Source: ICF, 2019. | |

## City of Los Angeles – Sustainable City pLAn

The 2019 Los Angeles' Green New Deal is the first four-year update to the City's 2015 pLAn and expands in more detail the vision to achieve a sustainable future that entails a carbon-neutral economy by 2050. This updated plan accelerates targets from the 2015 pLAn for supplying renewable energy, increasing local water sourcing, reducing building energy, reducing VMT per capita, reducing municipal GHG emissions, increasing the percentage of zero emission passenger and City-fleet vehicles, building new housing near transit, and increasing the number of green jobs. Of the issue areas that are addressed in separate chapters in the 2019 updates to the pLAn, those that are relevant for the Project include: Renewable Energy, Local Water, Clean & Health Buildings, Housing & Development, Mobility & Public Transit, Zero Emission Vehicles, Water & Resource Recovery, and Urban Ecosystems & Resilience. The relevant targets established for each of these issue areas that are applicable to the Project are shown in Table 3.3-3. The Project-level analysis describes the consistency of the Project with these targets.

**Table 3.3-5: Consistency of Project with Sustainable City pLAn (2019 Update)**

| Applicable Targets | Project Consistency Assessment |
|---|---|
| **Renewable Energy** | |
| • LADWP will supply 55% renewable energy by 2025; 80% by 2036; and 100% by 2045<br>• Increase cumulative MW by 2025; 2035; and 2050 of:<br>o Local solar to 900-1,500 MW; 1,500-1,800 MW; and 1,950 MW<br>o Energy storage capacity to 1,654-1,750 MW; 3,000 MW; and 4,000 MW<br>o Demand response (DR) programs to 234 MW (2025) and 600 MW (2035) | **Consistent.** Although this reduction target is applicable to the City's renewable energy programs, the Project would support this target by including solar panels on 15% of the rooftop space of the mixed-use building. |
| **Local Water** | |
| • Reduce potable water use per capita by 22.5% by 2025; and 25% by 2035; and maintain or reduce 2035 per capita water use through 2050 | **Consistent.** The Project would comply with the applicable requirements of the California Green Building Standards Code and the City of Los Angeles Green Building Code and incorporate water efficiency measures. The Project's design would utilize low-flow plumbing fixtures that as a minimum comply with the flush volumes and gallons per minute water rates in the CALGreen Code and City requirements to reduce indoor water use. The Project also incorporates outdoor water conservation measures including the installation of water-efficient irrigation systems and the planting |

| Applicable Targets | Project Consistency Assessment |
|---|---|
| | of water-efficient landscaping consisting of native and drought-tolerant vegetation to minimize irrigation requirements. |
| **Clean & Healthy Buildings** | |
| • Reduce building energy use per sq. ft. for all building types 22% by 2025; 34% by 2035; and 44% by 2050 | **Consistent.** The Project would install energy efficient HVAC and lighting systems, Energy Star appliances, and meet Cal Green and Title 24 Building Standards Code requirements. The Project would also include solar panels on 15% of the proposed mixed-use building's rooftop space. Though the Project would allow for natural gas appliances and heating, all units would meet high efficiency standards. |

| Applicable Targets | Project Consistency Assessment |
|---|---|
| **Housing & Development** | |
| • Ensure 57% of new housing units are built within 1,500 ft. of transit by 2025; and 75% by 2035<br>• Create or preserve 50,000 income-restricted affordable housing units by 2035 and increase stability for renters | **Consistent.** The Project is located in an urban infill location that is in proximity of public transportation, including multiple bus stops with high frequency transit service such as the Metro Bus lines 224 and 353/152 that run along Lankershim Boulevard. Other transit bus service located within one mile of the Project Site is provided along Laurel Canyon Boulevard, Roscoe Boulevard/Tuxford Street, Saticoy Street, and Vineland Avenue/Sunland Boulevard. The Project is also 0.90 miles southwest of the Metrolink Sun Valley Station, which serves the Metrolink Antelope Valley (AV) Line that travels to and from downtown Los Angeles, with a final destination in the City of Lancaster. The Project also sets aside 11 percent of its total residential units (48 affordable units) for Extremely Low or Very Low Income Households. |
| **Mobility & Public Transit** | |
| • Increase the percentage of all trips made by walking, biking, micro-mobility / matched rides or transit to at least 35% by 2025; 50% by 2035; and maintain at least 50% by 2050<br>• Reduce VMT per capita by at least 13% by 2025; 39% by 2035; and 45% by 2050 | **Consistent.** By locating its mixed-use residential, restaurant, and retail commercial development on a Project Site that is located within a HQTA and TPA near frequent bus lines, the Metrolink Sun Valley Station, bike lanes, and a pedestrian network, the Project would reduce VMT by encouraging the use of transit, walking, and bicycling as compared to similar stand-alone residential uses that are not located in close proximity to transit. Additionally, the urban infill location of the Project Site is also surrounded by a diverse mixture of land uses including residential, office, commercial, industrial, school, and service uses. The diversity of land uses in proximity to the Project Site and the mix of uses associated with the Project would reduce vehicle trips and VMT by encouraging walking and non-automotive forms of transportation. |
| **Zero Emission Vehicles** | |
| • Increase the percentage of electric and zero emission vehicles in the city to 25% by 2025; 80% by 2035; and 100% by 2050 | **Consistent.** By providing prewiring for EV parking for 20 percent of its total parking spaces, with 5 percent of the parking spaces having chargers installed for immediate use by EVs, the Project supports this reduction target by the City. |

| Applicable Targets | Project Consistency Assessment |
|---|---|
| **Waste & Resource Recovery** | |
| • Increase landfill diversion rate to 90% by 2025; 95% by 2035; and 100% by 2050<br>• Eliminate organic waste going to landfill by 2028<br>• Increase proportion of waste products and recyclables productively reused and/or repurposed within L.A. County to at least 25% by 2025; and 50% by 2035 | **Consistent.** The Project would be served by a solid waste collection and recycling service under the recycLA program that was recently implemented on February 1, 2018. Part of the services that recycLA will offer to businesses and large multi-family customers include blue bins for recycling and organics recycling. The implementation of this program is aimed to achieve the City's zero waste goal by 2050. |
| **Urban Ecosystem & Resilience** | |
| • Increase tree canopy in areas of greatest need by at least 50% by 2028 | **Consistent.** The existing Project Site currently has 35 non-native and non-protected trees, with no street trees. As part of the Project, these existing 35 trees would be removed and replaced with a total 117 trees, resulting in a net increase of 89 trees. Of the 115 trees that would be planted, 15 would be street trees. As such, the Project would support the City's reduction target associated with increase the City's tree canopy. |
| Source: ICF, 2019. | |

As described in Table 3.3-3, the Project would be consistent with and support the applicable City targets of the 2019 updates to the pLAn for achieving a carbon neutral economy by 2050.

## City of Los Angeles Green Building Code

The Project would be consistent with the Los Angeles Green Building Code, which would reduce GHG emissions by complying with Title 24 Building Energy Efficiency Standards, as amended by the City, and installing Energy Star appliances. The Project would reduce indoor water use through the installation of low-flow plumbing fixtures that, at a minimum, comply with the flush volumes and gallons-per-minute water rates in the CALGreen Code and City requirements to decrease indoor water use. Outdoor water conservation measures include the installation of water-efficient irrigation systems and the planting of water-efficient landscaping, consisting of native and drought-tolerant vegetation, to minimize irrigation requirements. The HVAC system would also be designed in compliance with the CALGreen Code to maximize energy efficiency with respect to heat loss and heat gain. Each of these Project elements would help minimize GHG emissions, and the Project would be consistent with the Los Angeles Green Building Code.

## Conclusion

In summary, the GHG emission reductions resulting from the Project's features, design, and location would be consistent with the goals of the 2017 Scoping Plan, SB 375, the 2016 RTP/SCS, and Los Angeles' Sustainable City pLAn and Green Building Code. Accordingly, impacts related to conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs would be less than significant.

# Chapter 4
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# Appendix A: Compiled Emissons Summary and CalEEMod Outputs

**7940 Lankershim Boulevard**
Compiled Emissions

**CONSTRUCTION**

*Daily - Without PDFs*

| Phase | | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | Total PM10 | Fugitive PM2.5 | Exhaust PM2.5 | Total PM2.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| *Demolition (2019)* | On-Site | 3.31 | 34.00 | 18.87 | 0.04 | 0.76 | 1.67 | 2.43 | 0.11 | 1.55 | 1.67 |
| | Off-Site | 0.15 | 2.57 | 1.13 | 0.01 | 0.28 | 0.01 | 0.29 | 0.07 | 0.01 | 0.09 |
| | Total | 3.46 | 36.57 | 20.00 | 0.04 | 1.03 | 1.69 | 2.72 | 0.19 | 1.56 | 1.75 |
| *Site Preparation (2020)* | On-Site | 2.05 | 23.13 | 11.79 | 0.03 | 1.59 | 0.96 | 2.55 | 0.69 | 0.88 | 1.57 |
| | Off-Site | 0.41 | 11.46 | 3.16 | 0.03 | 0.80 | 0.04 | 0.84 | 0.22 | 0.04 | 0.26 |
| | Total | 2.46 | 34.59 | 14.95 | 0.06 | 2.39 | 1.00 | 3.38 | 0.91 | 0.92 | 1.83 |
| *Grading (2020)* | On-Site | 2.81 | 30.01 | 16.49 | 0.04 | 2.76 | 1.31 | 4.06 | 1.34 | 1.20 | 2.54 |
| | Off-Site | 2.76 | 86.91 | 21.09 | 0.24 | 5.37 | 0.29 | 5.66 | 1.48 | 0.28 | 1.75 |
| | Total | 5.57 | 116.91 | 37.58 | 0.27 | 8.13 | 1.60 | 9.72 | 2.82 | 1.48 | 4.29 |
| *Building Construction (2020)* | On-Site | 1.33 | 12.26 | 9.38 | 0.02 | 0.00 | 0.64 | 0.64 | 0.00 | 0.61 | 0.61 |
| | Off-Site | 0.55 | 4.12 | 4.57 | 0.02 | 2.01 | 0.02 | 2.03 | 0.52 | 0.02 | 0.54 |
| | Total | 1.88 | 16.38 | 13.95 | 0.04 | 2.01 | 0.66 | 2.67 | 0.52 | 0.63 | 1.14 |
| *Building Construction (2021)* | On-Site | 1.19 | 11.14 | 9.17 | 0.02 | 0.00 | 0.55 | 0.55 | 0.00 | 0.52 | 0.52 |
| | Off-Site | 0.52 | 3.83 | 4.25 | 0.02 | 1.47 | 0.02 | 1.49 | 0.39 | 0.02 | 0.40 |
| | Total | 1.71 | 14.96 | 13.43 | 0.04 | 1.47 | 0.57 | 2.04 | 0.39 | 0.54 | 0.93 |
| *Building Construction (2022)* | On-Site | 1.08 | 9.94 | 9.02 | 0.02 | 0.00 | 0.47 | 0.47 | 0.00 | 0.45 | 0.45 |
| | Off-Site | 0.49 | 3.55 | 3.98 | 0.02 | 1.47 | 0.02 | 1.49 | 0.39 | 0.02 | 0.40 |
| | Total | 1.57 | 13.50 | 13.00 | 0.04 | 1.47 | 0.49 | 1.96 | 0.39 | 0.46 | 0.85 |
| *Building Construction (2023)* | On-Site | 1.00 | 9.17 | 8.93 | 0.02 | 0.00 | 0.42 | 0.42 | 0.00 | 0.39 | 0.39 |
| | Off-Site | 0.43 | 2.42 | 3.66 | 0.02 | 2.21 | 0.01 | 2.22 | 0.57 | 0.01 | 0.58 |
| | Total | 1.43 | 11.60 | 12.59 | 0.04 | 2.21 | 0.43 | 2.64 | 0.57 | 0.41 | 0.97 |
| *Paving (2023)* | On-Site | 0.63 | 6.12 | 8.56 | 0.01 | 0.00 | 0.30 | 0.30 | 0.00 | 0.28 | 0.28 |
| | Off-Site | 0.06 | 0.43 | 0.48 | 0.00 | 0.15 | 0.00 | 0.15 | 0.04 | 0.00 | 0.04 |
| *Architectural Coatings (2023)* | On-Site | 159.44 | 1.74 | 2.41 | 0.00 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 0.09 |
| | Off-Site | 0.03 | 0.25 | 0.25 | 0.00 | 0.08 | 0.00 | 0.08 | 0.02 | 0.00 | 0.02 |
| | Total | 160.15 | 8.54 | 11.70 | 0.02 | 0.23 | 0.40 | 0.63 | 0.06 | 0.38 | 0.44 |
| Maximum Daily Regional Emissions | | **160.15** | **116.91** | **37.58** | **0.27** | **8.13** | **1.69** | **9.72** | **2.82** | **1.56** | **4.29** |
| Regional Significance Threshold | | 75 | 100 | 550 | 150 | | | 150 | | | 55 |
| Exceeds Regional Threshold? | | **Yes** | **Yes** | No | No | | | No | | | No |
| Maximum On-Site | | 160.07 | 34.35 | 18.93 | 0.05 | | | 4.35 | | | 2.63 |
| Localized Significance Threshold (SRA 7, 5-acre, 25-m receptor distance) | | N/A | 164.3 | 1347.6 | N/A | | | 13.1 | | | 7.4 |
| Exceeds LST? | | N/A | No | No | N/A | | | No | | | No |

*Daily - With PDFs*

| Phase | | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | Total PM10 | Fugitive PM2.5 | Exhaust PM2.5 | Total PM2.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| *Demolition (2019)* | On-Site | 0.42 | 1.84 | 19.88 | 0.04 | 0.76 | 0.06 | 0.81 | 0.11 | 0.06 | 0.17 |
| | Off-Site | 0.15 | 2.57 | 1.13 | 0.01 | 0.28 | 0.01 | 0.29 | 0.07 | 0.01 | 0.09 |
| | Total | 0.57 | 4.40 | 21.01 | 0.04 | 1.03 | 0.07 | 1.10 | 0.19 | 0.07 | 0.26 |
| *Site Preparation (2020)* | On-Site | 0.35 | 1.50 | 13.62 | 0.03 | 1.59 | 0.05 | 1.63 | 0.69 | 0.05 | 0.74 |
| | Off-Site | 0.41 | 11.46 | 3.16 | 0.03 | 0.80 | 0.04 | 0.84 | 0.22 | 0.04 | 0.26 |
| | Total | 0.76 | 12.95 | 16.77 | 0.06 | 2.39 | 0.09 | 2.47 | 0.91 | 0.08 | 0.99 |
| *Grading (2020)* | On-Site | 0.47 | 2.04 | 18.97 | 0.04 | 2.76 | 0.06 | 2.82 | 1.34 | 0.06 | 1.40 |
| | Off-Site | 2.76 | 86.91 | 21.09 | 0.24 | 5.37 | 0.29 | 5.66 | 1.48 | 0.28 | 1.75 |
| | Total | 3.23 | 88.94 | 40.05 | 0.27 | 8.13 | 0.35 | 8.48 | 2.82 | 0.34 | 3.15 |
| *Building Construction (2020)* | On-Site | 0.21 | 1.50 | 9.98 | 0.02 | 0.00 | 0.03 | 0.03 | 0.00 | 0.03 | 0.03 |
| | Off-Site | 0.55 | 4.12 | 4.57 | 0.02 | 2.01 | 0.02 | 2.03 | 0.52 | 0.02 | 0.54 |
| | Total | 0.76 | 5.62 | 14.55 | 0.04 | 2.01 | 0.05 | 2.06 | 0.52 | 0.04 | 0.56 |
| *Building Construction (2021)* | On-Site | 0.21 | 1.50 | 9.98 | 0.02 | 0.00 | 0.03 | 0.03 | 0.00 | 0.03 | 0.03 |
| | Off-Site | 0.52 | 3.83 | 4.25 | 0.02 | 1.47 | 0.02 | 1.49 | 0.39 | 0.02 | 0.40 |
| | Total | 0.72 | 5.33 | 14.23 | 0.04 | 1.47 | 0.04 | 1.51 | 0.39 | 0.04 | 0.43 |
| *Building Construction (2022)* | On-Site | 0.21 | 1.50 | 9.98 | 0.02 | 0.00 | 0.03 | 0.03 | 0.00 | 0.03 | 0.03 |
| | Off-Site | 0.49 | 3.55 | 3.98 | 0.02 | 1.47 | 0.02 | 1.49 | 0.39 | 0.02 | 0.40 |
| | Total | 0.69 | 5.05 | 13.96 | 0.04 | 1.47 | 0.04 | 1.51 | 0.39 | 0.04 | 0.43 |
| *Building Construction (2023)* | On-Site | 0.21 | 1.50 | 9.98 | 0.02 | 0.00 | 0.03 | 0.03 | 0.00 | 0.03 | 0.03 |
| | Off-Site | 0.43 | 2.42 | 3.66 | 0.02 | 2.21 | 0.01 | 2.22 | 0.57 | 0.01 | 0.58 |
| | Total | 0.63 | 3.92 | 13.63 | 0.04 | 2.21 | 0.04 | 2.25 | 0.57 | 0.04 | 0.60 |
| *Paving (2023)* | On-Site | 0.20 | 0.95 | 9.86 | 0.01 | 0.00 | 0.03 | 0.03 | 0.00 | 0.03 | 0.03 |
| | Off-Site | 0.06 | 0.43 | 0.48 | 0.00 | 0.15 | 0.00 | 0.15 | 0.04 | 0.00 | 0.04 |
| *Architectural Coatings (2023)* | On-Site | 34.55 | 0.17 | 2.44 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | 0.01 | 0.01 |
| | Off-Site | 0.03 | 0.25 | 0.25 | 0.00 | 0.08 | 0.00 | 0.08 | 0.02 | 0.00 | 0.02 |
| | Total | 34.83 | 1.80 | 13.03 | 0.02 | 0.23 | 0.04 | 0.27 | 0.06 | 0.04 | 0.10 |
| Maximum Daily Regional Emissions | | **34.83** | **88.94** | **40.05** | **0.27** | **8.13** | **0.35** | **8.48** | **2.82** | **0.34** | **3.15** |
| Regional Significance Threshold | | 75 | 100 | 550 | 150 | | | 150 | | | 55 |
| Exceeds Regional Threshold? | | No | No | No | No | | | No | | | No |
| Maximum On-Site | | 34.76 | 6.38 | 20.02 | 0.05 | | | 3.10 | | | 1.49 |
| Localized Significance Threshold (SRA 7, 5-acre, 25-m receptor distance) | | N/A | 164.3 | 1347.6 | N/A | | | 13.1 | | | 7.4 |
| Exceeds LST? | | N/A | No | No | N/A | | | No | | | No |

*Annual*

| Year | CO2e (MT/Yr) |
|---|---|
| 2019 | 78.63 |
| 2020 | 841.58 |
| 2021 | 514.16 |
| 2022 | 507.77 |
| 2023 | 200.19 |
| Total | 2142.33 |
| | **71.4** MT (amortized over 30 years) |

**OPERATION**

*Daily - without PDFs*

| | | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | Total PM10 | Fugitive PM2.5 | Exhaust PM2.5 | Total PM2.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Area | 10.9 | 0.5 | 35.7 | 0.00 | 0.0 | 0.2 | 0.2 | 0.0 | 0.2 | 0.2 |
| | Energy | 0.2 | 1.7 | 0.9 | 0.01 | 0.0 | 0.1 | 0.1 | 0.0 | 0.1 | 0.1 |
| | Mobile | 5.2 | 21.3 | 63.4 | 0.23 | 19.4 | 0.2 | 19.5 | 5.2 | 0.2 | 5.3 |
| Maximum Daily Regional Emissions | Total | 16.3 | 23.5 | 100.1 | 0.2 | 19.4 | 0.5 | 19.9 | 5.2 | 0.5 | 5.7 |
| Regional Significance Threshold | | 55 | 55 | 550 | 150 | | | 150 | | | 55 |
| Exceeds Regional Threshold? | | No | No | No | No | | | No | | | No |
| Maximum On-Site | | 11.4 | 3.2 | 39.8 | 0.0 | 1.0 | 0.3 | 1.3 | 0.3 | 0.3 | 0.6 |
| Localized Significance Threshold (SRA 7, 5-acre, 25-m receptor distance) | | N/A | 164.3 | 1347.6 | N/A | | | 3.7 | | | 1.8 |
| Exceeds LST? | | N/A | No | No | N/A | | | No | | | No |

*Daily - with PDFs*

| | | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | Total PM10 | Fugitive PM2.5 | Exhaust PM2.5 | Total PM2.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Area | 10.9 | 0.5 | 35.7 | 0.0 | 0.0 | 0.2 | 0.2 | 0.0 | 0.2 | 0.2 |
| | Energy | 0.2 | 1.7 | 0.9 | 0.0 | 0.0 | 0.1 | 0.1 | 0.0 | 0.1 | 0.1 |
| | Mobile | 5.2 | 21.3 | 63.4 | 0.2 | 19.4 | 0.2 | 19.5 | 5.2 | 0.2 | 5.3 |
| Maximum Daily Regional Emissions | Total | 16.3 | 23.5 | 100.1 | 0.2 | 19.4 | 0.5 | 19.9 | 5.2 | 0.5 | 5.7 |
| Regional Significance Threshold | | 55 | 55 | 550 | 150 | | | 150 | | | 55 |
| Exceeds Regional Threshold? | | No | No | No | No | | | No | | | No |
| Maximum On-Site | | 11.4 | 3.2 | 39.8 | 0.0 | 1.0 | 0.3 | 1.3 | 0.3 | 0.3 | 0.6 |
| Localized Significance Threshold (SRA 7, 5-acre, 25-m receptor distance) | | N/A | 164.3 | 1347.6 | N/A | | | 3.7 | | | 1.8 |
| Exceeds LST? | | N/A | No | No | N/A | | | No | | | No |

*Annual*

| | CO2e (MT/Yr) | |
|---|---|---|
| Area | 12 | |
| Energy | 1430 | |
| Mobile | 777 | (*Emissions from passenger cars and light-duty trucks excluded) |
| Waste | 41 | |
| Water | 197 | |
| Const. (amortized) | 71 | |
| Total | **2527** | Total (with amortized construction emissions) |

# 7940 Lankershim Boulevard - without PDFs

**Los Angeles-South Coast County, Summer**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Pharmacy/Drugstore with Drive Thru | 14.00 | 1000sqft | 0.00 | 14,000.00 | 0 |
| Enclosed Parking with Elevator | 541.00 | Space | 0.00 | 216,400.00 | 0 |
| High Turnover (Sit Down Restaurant) | 8.00 | 1000sqft | 0.00 | 8,000.00 | 0 |
| Apartments Mid Rise | 432.00 | Dwelling Unit | 4.69 | 432,000.00 | 1236 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.2 | **Precipitation Freq (Days)** | 33 |
| **Climate Zone** | 12 | | | **Operational Year** | 2023 |
| **Utility Company** | Los Angeles Department of Water & Power | | | | |
| **CO2 Intensity (lb/MWhr)** | 669 | **CH4 Intensity (lb/MWhr)** | 0.026 | **N2O Intensity (lb/MWhr)** | 0.003 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics - Accounts for RPS for LADWP

Land Use - 4.69-acre site; 541 parking spaces associated with proposed project parking structure

Construction Phase - Construction to occur 6 days/week

Off-road Equipment - Architectural coating equip

Off-road Equipment - Building equip

Off-road Equipment - Demolition equip

Off-road Equipment - Grading equip

Off-road Equipment - Paving equip

Off-road Equipment - Site prep equip

Trips and VMT - Anticipated construction vehicle trips

Demolition - Based on 7 daily haul truck trips over 40 days, and assuming building debris density is 1,620 lbs/cyd

Grading - 89,000 cy of soil export

Architectural Coating - construction coatings

Vehicle Trips - Accounts for less trips from walk-in/transit reduction, internal apture, and pass-by reductions

Woodstoves - Accounts for outdoor courtyard fireplaces (2) and firepits (2); Assumes these outdoor amenites would be used 30% of the year.

Area Coating - Coatings

Energy Use -

Construction Off-road Equipment Mitigation - SCAQMD Rule 403

Energy Mitigation - Use of Energy Star appliances

Water Mitigation - CALGreen

Waste Mitigation -

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblApplianceMitigation | PercentImprovement | 30.00 | 25.00 |
| tblApplianceMitigation | PercentImprovement | 15.00 | 12.00 |
| tblApplianceMitigation | PercentImprovement | 50.00 | 40.00 |
| tblApplianceMitigation | PercentImprovement | 15.00 | 9.00 |

| | | | |
|---|---|---|---|
| tblArchitecturalCoating | EF_Nonresidential_Exterior | 100.00 | 50.00 |
| tblArchitecturalCoating | EF_Nonresidential_Interior | 100.00 | 50.00 |
| tblAreaCoating | Area_EF_Nonresidential_Exterior | 100 | 50 |
| tblAreaCoating | Area_EF_Nonresidential_Interior | 100 | 50 |
| tblConstructionPhase | NumDays | 230.00 | 886.00 |
| tblConstructionPhase | NumDays | 20.00 | 40.00 |
| tblConstructionPhase | NumDays | 8.00 | 40.00 |
| tblConstructionPhase | NumDays | 18.00 | 12.00 |
| tblConstructionPhase | NumDays | 5.00 | 28.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblFireplaces | FireplaceDayYear | 25.00 | 110.00 |
| tblFireplaces | FireplaceWoodMass | 1,019.20 | 0.00 |
| tblFireplaces | NumberGas | 367.20 | 4.00 |
| tblFireplaces | NumberNoFireplace | 43.20 | 428.00 |
| tblFireplaces | NumberWood | 21.60 | 0.00 |
| tblGrading | MaterialExported | 0.00 | 89,000.00 |
| tblLandUse | LotAcreage | 0.32 | 0.00 |
| tblLandUse | LotAcreage | 4.87 | 0.00 |
| tblLandUse | LotAcreage | 0.18 | 0.00 |
| tblLandUse | LotAcreage | 11.37 | 4.69 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 2.00 |

| | | | |
|---|---|---|---|
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 4.00 | 1.00 |
| tblOffRoadEquipment | UsageHours | 6.00 | 8.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 6.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 8.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 4.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 6.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 6.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 4.00 |
| tblOffRoadEquipment | UsageHours | 6.00 | 8.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 4.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 8.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 6.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 6.00 |
| tblProjectCharacteristics | CH4IntensityFactor | 0.029 | 0.026 |
| tblProjectCharacteristics | CO2IntensityFactor | 1227.89 | 669 |
| tblProjectCharacteristics | N2OIntensityFactor | 0.006 | 0.003 |
| tblTripsAndVMT | HaulingTripNumber | 359.00 | 280.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 924.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 10,632.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 24.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 18.00 |

| | | | |
|---|---|---|---|
| tblTripsAndVMT | VendorTripNumber | 0.00 | 3.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 17.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 55.00 |
| tblTripsAndVMT | VendorTripNumber | 85.00 | 3.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 1.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 1.00 |
| tblTripsAndVMT | WorkerTripNumber | 15.00 | 12.00 |
| tblTripsAndVMT | WorkerTripNumber | 13.00 | 10.00 |
| tblTripsAndVMT | WorkerTripNumber | 18.00 | 14.00 |
| tblTripsAndVMT | WorkerTripNumber | 410.00 | 85.00 |
| tblTripsAndVMT | WorkerTripNumber | 13.00 | 10.00 |
| tblTripsAndVMT | WorkerTripNumber | 82.00 | 5.00 |
| tblVehicleTrips | ST_TR | 6.39 | 4.90 |
| tblVehicleTrips | ST_TR | 158.37 | 76.75 |
| tblVehicleTrips | ST_TR | 96.91 | 56.00 |
| tblVehicleTrips | SU_TR | 5.86 | 4.90 |
| tblVehicleTrips | SU_TR | 131.84 | 76.75 |
| tblVehicleTrips | SU_TR | 96.91 | 56.00 |
| tblVehicleTrips | WD_TR | 6.65 | 4.90 |
| tblVehicleTrips | WD_TR | 127.15 | 76.75 |
| tblVehicleTrips | WD_TR | 96.91 | 56.00 |
| tblWoodstoves | NumberCatalytic | 21.60 | 0.00 |
| tblWoodstoves | NumberNoncatalytic | 21.60 | 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 | | | | | |
| 2019 | 3.4528 | 36.5366 | 19.9983 | 0.0432 | 2.2177 | 1.6848 | 3.9025 | 0.3687 | 1.5642 | 1.9328 | 0.0000 | 4,318.8972 | 4,318.8972 | 1.0452 | 0.0000 | 4,345.0262 |
| 2020 | 5.4984 | 115.8738 | 36.3588 | 0.2739 | 12.4406 | 1.5913 | 14.0319 | 4.9101 | 1.4744 | 6.3844 | 0.0000 | 29,202.7731 | 29,202.7731 | 2.9188 | 0.0000 | 29,275.7423 |
| 2021 | 1.6658 | 14.8964 | 13.4261 | 0.0367 | 1.4696 | 0.5710 | 2.0406 | 0.3863 | 0.5402 | 0.9265 | 0.0000 | 3,659.7003 | 3,659.7003 | 0.4604 | 0.0000 | 3,671.2090 |
| 2022 | 1.5230 | 13.4379 | 13.0022 | 0.0363 | 1.4696 | 0.4909 | 1.9605 | 0.3863 | 0.4646 | 0.8509 | 0.0000 | 3,613.3498 | 3,613.3498 | 0.4533 | 0.0000 | 3,624.6812 |
| 2023 | 160.1456 | 11.5606 | 12.5906 | 0.0355 | 2.2118 | 0.4282 | 2.6400 | 0.5685 | 0.4051 | 0.9736 | 0.0000 | 3,535.0628 | 3,535.0628 | 0.4473 | 0.0000 | 3,546.1203 |
| **Maximum** | **160.1456** | **115.8738** | **36.3588** | **0.2739** | **12.4406** | **1.6848** | **14.0319** | **4.9101** | **1.5642** | **6.3844** | **0.0000** | **29,202.7731** | **29,202.7731** | **2.9188** | **0.0000** | **29,275.7423** |

## 2.1 Overall Construction (Maximum Daily Emission)

**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 | | | | | |
| 2019 | 3.4528 | 36.5366 | 19.9983 | 0.0432 | 1.0331 | 1.6848 | 2.7179 | 0.1893 | 1.5642 | 1.7535 | 0.0000 | 4,318.8972 | 4,318.8972 | 1.0452 | 0.0000 | 4,345.0262 |
| 2020 | 5.4984 | 115.8738 | 36.3588 | 0.2739 | 8.1284 | 1.5913 | 9.7197 | 2.8152 | 1.4744 | 4.2896 | 0.0000 | 29,202.7731 | 29,202.7731 | 2.9188 | 0.0000 | 29,275.7423 |
| 2021 | 1.6658 | 14.8964 | 13.4261 | 0.0367 | 1.4696 | 0.5710 | 2.0406 | 0.3863 | 0.5402 | 0.9265 | 0.0000 | 3,659.7003 | 3,659.7003 | 0.4604 | 0.0000 | 3,671.2090 |
| 2022 | 1.5230 | 13.4379 | 13.0022 | 0.0363 | 1.4696 | 0.4909 | 1.9605 | 0.3863 | 0.4646 | 0.8509 | 0.0000 | 3,613.3498 | 3,613.3498 | 0.4533 | 0.0000 | 3,624.6812 |
| 2023 | 160.1456 | 11.5606 | 12.5906 | 0.0355 | 2.2118 | 0.4282 | 2.6400 | 0.5685 | 0.4051 | 0.9736 | 0.0000 | 3,535.0628 | 3,535.0628 | 0.4473 | 0.0000 | 3,546.1203 |
| **Maximum** | **160.1456** | **115.8738** | **36.3588** | **0.2739** | **8.1284** | **1.6848** | **9.7197** | **2.8152** | **1.5642** | **4.2896** | **0.0000** | **29,202.7731** | **29,202.7731** | **2.9188** | **0.0000** | **29,275.7423** |

| | ROG | NOx | 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** | **27.75** | **0.00** | **22.37** | **34.35** | **0.00** | **20.55** | **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 | 10.9379 | 0.4778 | 35.7342 | 2.3100e-003 | | 0.2029 | 0.2029 | | 0.2029 | 0.2029 | 0.0000 | 149.0037 | 149.0037 | 0.0637 | 1.5500e-003 | 151.0579 |
| Energy | 0.1954 | 1.6995 | 0.9312 | 0.0107 | | 0.1350 | 0.1350 | | 0.1350 | 0.1350 | | 2,131.0600 | 2,131.0600 | 0.0409 | 0.0391 | 2,143.7239 |
| Mobile | 5.1657 | 20.8957 | 63.3973 | 0.2342 | 19.3757 | 0.1727 | 19.5484 | 5.1851 | 0.1606 | 5.3457 | | 23,859.4066 | 23,859.4066 | 1.1610 | | 23,888.4309 |
| **Total** | **16.2989** | **23.0729** | **100.0628** | **0.2471** | **19.3757** | **0.5106** | **19.8863** | **5.1851** | **0.4985** | **5.6835** | **0.0000** | **26,139.4703** | **26,139.4703** | **1.2655** | **0.0406** | **26,183.2127** |

### 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 | 10.9379 | 0.4778 | 35.7342 | 2.3100e-003 | | 0.2029 | 0.2029 | | 0.2029 | 0.2029 | 0.0000 | 149.0037 | 149.0037 | 0.0637 | 1.5500e-003 | 151.0579 |
| Energy | 0.1954 | 1.6995 | 0.9312 | 0.0107 | | 0.1350 | 0.1350 | | 0.1350 | 0.1350 | | 2,131.0600 | 2,131.0600 | 0.0409 | 0.0391 | 2,143.7239 |
| Mobile | 5.1657 | 20.8957 | 63.3973 | 0.2342 | 19.3757 | 0.1727 | 19.5484 | 5.1851 | 0.1606 | 5.3457 | | 23,859.4066 | 23,859.4066 | 1.1610 | | 23,888.4309 |
| **Total** | **16.2989** | **23.0729** | **100.0628** | **0.2471** | **19.3757** | **0.5106** | **19.8863** | **5.1851** | **0.4985** | **5.6835** | **0.0000** | **26,139.4703** | **26,139.4703** | **1.2655** | **0.0406** | **26,183.2127** |

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

## 3.0 Construction Detail

**Construction Phase**

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|---|---|---|---|---|---|---|---|
| 1 | Demolition | Demolition | 10/1/2019 | 11/15/2019 | 6 | 40 | |
| 2 | Site Preparation | Site Preparation | 5/1/2020 | 6/2/2020 | 6 | 28 | |
| 3 | Grading | Grading | 6/3/2020 | 7/18/2020 | 6 | 40 | |
| 4 | Building Construction | Building Construction | 7/19/2020 | 5/18/2023 | 6 | 886 | |
| 5 | Paving | Paving | 5/19/2023 | 6/1/2023 | 6 | 12 | |
| 6 | Architectural Coating | Architectural Coating | 5/19/2023 | 6/8/2023 | 6 | 18 | |

**Acres of Grading (Site Preparation Phase): 28**

**Acres of Grading (Grading Phase): 30**

**Acres of Paving: 0**

**Residential Indoor: 874,800; Residential Outdoor: 291,600; Non-Residential Indoor: 33,000; Non-Residential Outdoor: 11,000; Striped Parking Area: 12,984 (Architectural Coating – sqft)**

**OffRoad Equipment**

7940 Lankershim Boulevard - without PDFs - Los Angeles-South Coast County, Summer

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|---|---|---|---|---|---|
| Demolition | Concrete/Industrial Saws | 1 | 6.00 | 81 | 0.73 |
| Demolition | Excavators | 2 | 8.00 | 158 | 0.38 |
| Demolition | Off-Highway Trucks | 1 | 2.00 | 402 | 0.38 |
| Demolition | Rubber Tired Dozers | 2 | 8.00 | 247 | 0.40 |
| Site Preparation | Graders | 1 | 8.00 | 187 | 0.41 |
| Site Preparation | Off-Highway Trucks | 1 | 4.00 | 402 | 0.38 |
| Site Preparation | Rubber Tired Dozers | 1 | 4.00 | 247 | 0.40 |
| Site Preparation | Scrapers | 1 | 4.00 | 367 | 0.48 |
| Site Preparation | Tractors/Loaders/Backhoes | 1 | 8.00 | 97 | 0.37 |
| Grading | Excavators | 1 | 4.00 | 158 | 0.38 |
| Grading | Graders | 1 | 4.00 | 187 | 0.41 |
| Grading | Off-Highway Trucks | 2 | 4.00 | 402 | 0.38 |
| Grading | Rubber Tired Dozers | 1 | 8.00 | 247 | 0.40 |
| Grading | Scrapers | 1 | 4.00 | 367 | 0.48 |
| Grading | Tractors/Loaders/Backhoes | 1 | 8.00 | 97 | 0.37 |
| Building Construction | Cranes | 1 | 8.00 | 231 | 0.29 |
| Building Construction | Forklifts | 1 | 6.00 | 89 | 0.20 |
| Building Construction | Generator Sets | 1 | 6.00 | 84 | 0.74 |
| Building Construction | Tractors/Loaders/Backhoes | 1 | 8.00 | 97 | 0.37 |
| Building Construction | Welders | 1 | 6.00 | 46 | 0.45 |
| Paving | Cement and Mortar Mixers | 1 | 6.00 | 9 | 0.56 |
| Paving | Pavers | 1 | 8.00 | 130 | 0.42 |
| Paving | Paving Equipment | 1 | 6.00 | 132 | 0.36 |
| Paving | Rollers | 1 | 8.00 | 80 | 0.38 |
| Paving | Tractors/Loaders/Backhoes | 1 | 6.00 | 97 | 0.37 |
| Architectural Coating | Air Compressors | 1 | 8.00 | 78 | 0.48 |

**Trips and VMT**

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|
| Demolition | 6 | 12.00 | 3.00 | 280.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Site Preparation | 5 | 10.00 | 17.00 | 924.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Grading | 7 | 14.00 | 55.00 | 11,125.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Building Construction | 5 | 85.00 | 3.00 | 10,632.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Paving | 5 | 10.00 | 1.00 | 24.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Architectural Coating | 1 | 5.00 | 1.00 | 18.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |

## 3.1 Mitigation Measures Construction

Water Exposed Area

## 3.2 Demolition - 2019

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 1.9420 | 0.0000 | 1.9420 | 0.2940 | 0.0000 | 0.2940 | | | 0.0000 | | | 0.0000 |
| Off-Road | 3.3146 | 34.0014 | 18.8705 | 0.0354 | | 1.6736 | 1.6736 | | 1.5535 | 1.5535 | | 3,484.5403 | 3,484.5403 | 0.9931 | | 3,509.3683 |
| **Total** | **3.3146** | **34.0014** | **18.8705** | **0.0354** | **1.9420** | **1.6736** | **3.6155** | **0.2940** | **1.5535** | **1.8475** | | **3,484.5403** | **3,484.5403** | **0.9931** | | **3,509.3683** |

## 3.2 Demolition - 2019

### 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 | 0.0658 | 2.1440 | 0.4571 | 5.5900e-003 | 0.1224 | 7.8700e-003 | 0.1303 | 0.0336 | 7.5300e-003 | 0.0411 | | 605.1582 | 605.1582 | 0.0417 | | 606.2001 |
| Vendor | 0.0125 | 0.3472 | 0.0921 | 7.8000e-004 | 0.0192 | 2.2100e-003 | 0.0214 | 5.5300e-003 | 2.1200e-003 | 7.6500e-003 | | 83.6444 | 83.6444 | 5.3600e-003 | | 83.7784 |
| Worker | 0.0600 | 0.0441 | 0.5786 | 1.4600e-003 | 0.1341 | 1.1600e-003 | 0.1353 | 0.0356 | 1.0700e-003 | 0.0366 | | 145.5544 | 145.5544 | 5.0000e-003 | | 145.6793 |
| **Total** | **0.1382** | **2.5352** | **1.1278** | **7.8300e-003** | **0.2757** | **0.0112** | **0.2870** | **0.0747** | **0.0107** | **0.0854** | | **834.3570** | **834.3570** | **0.0520** | | **835.6579** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 0.7574 | 0.0000 | 0.7574 | 0.1147 | 0.0000 | 0.1147 | | | 0.0000 | | | 0.0000 |
| Off-Road | 3.3146 | 34.0014 | 18.8705 | 0.0354 | | 1.6736 | 1.6736 | | 1.5535 | 1.5535 | 0.0000 | 3,484.5403 | 3,484.5403 | 0.9931 | | 3,509.3683 |
| **Total** | **3.3146** | **34.0014** | **18.8705** | **0.0354** | **0.7574** | **1.6736** | **2.4309** | **0.1147** | **1.5535** | **1.6681** | **0.0000** | **3,484.5403** | **3,484.5403** | **0.9931** | | **3,509.3683** |

## 3.2 Demolition - 2019

**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 | 0.0658 | 2.1440 | 0.4571 | 5.5900e-003 | 0.1224 | 7.8700e-003 | 0.1303 | 0.0336 | 7.5300e-003 | 0.0411 | | 605.1582 | 605.1582 | 0.0417 | | 606.2001 |
| Vendor | 0.0125 | 0.3472 | 0.0921 | 7.8000e-004 | 0.0192 | 2.2100e-003 | 0.0214 | 5.5300e-003 | 2.1200e-003 | 7.6500e-003 | | 83.6444 | 83.6444 | 5.3600e-003 | | 83.7784 |
| Worker | 0.0600 | 0.0441 | 0.5786 | 1.4600e-003 | 0.1341 | 1.1600e-003 | 0.1353 | 0.0356 | 1.0700e-003 | 0.0366 | | 145.5544 | 145.5544 | 5.0000e-003 | | 145.6793 |
| **Total** | **0.1382** | **2.5352** | **1.1278** | **7.8300e-003** | **0.2757** | **0.0112** | **0.2870** | **0.0747** | **0.0107** | **0.0854** | | **834.3570** | **834.3570** | **0.0520** | | **835.6579** |

## 3.3 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 | | | | | 4.0715 | 0.0000 | 4.0715 | 1.7696 | 0.0000 | 1.7696 | | | 0.0000 | | | 0.0000 |
| Off-Road | 2.0531 | 23.1342 | 11.7943 | 0.0282 | | 0.9572 | 0.9572 | | 0.8806 | 0.8806 | | 2,729.9770 | 2,729.9770 | 0.8829 | | 2,752.0502 |
| **Total** | **2.0531** | **23.1342** | **11.7943** | **0.0282** | **4.0715** | **0.9572** | **5.0287** | **1.7696** | **0.8806** | **2.6502** | | **2,729.9770** | **2,729.9770** | **0.8829** | | **2,752.0502** |

## 3.3 Site Preparation - 2020

### 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 | 0.2883 | 9.4888 | 2.1026 | 0.0261 | 0.5770 | 0.0303 | 0.6073 | 0.1582 | 0.0290 | 0.1871 | | 2,824.2450 | 2,824.2450 | 0.1922 | | 2,829.0509 |
| Vendor | 0.0605 | 1.8083 | 0.4738 | 4.4100e-003 | 0.1088 | 8.5100e-003 | 0.1174 | 0.0313 | 8.1400e-003 | 0.0395 | | 470.9420 | 470.9420 | 0.0287 | | 471.6604 |
| Worker | 0.0460 | 0.0327 | 0.4378 | 1.1800e-003 | 0.1118 | 9.3000e-004 | 0.1127 | 0.0296 | 8.6000e-004 | 0.0305 | | 117.6113 | 117.6113 | 3.7100e-003 | | 117.7040 |
| **Total** | **0.3947** | **11.3299** | **3.0143** | **0.0317** | **0.7976** | **0.0397** | **0.8373** | **0.2191** | **0.0380** | **0.2571** | | **3,412.7983** | **3,412.7983** | **0.2247** | | **3,418.4153** |

### 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 | | | | | 1.5879 | 0.0000 | 1.5879 | 0.6902 | 0.0000 | 0.6902 | | | 0.0000 | | | 0.0000 |
| Off-Road | 2.0531 | 23.1342 | 11.7943 | 0.0282 | | 0.9572 | 0.9572 | | 0.8806 | 0.8806 | 0.0000 | 2,729.9770 | 2,729.9770 | 0.8829 | | 2,752.0502 |
| **Total** | **2.0531** | **23.1342** | **11.7943** | **0.0282** | **1.5879** | **0.9572** | **2.5451** | **0.6902** | **0.8806** | **1.5708** | **0.0000** | **2,729.9770** | **2,729.9770** | **0.8829** | | **2,752.0502** |

## 3.3 Site Preparation - 2020

**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 | 0.2883 | 9.4888 | 2.1026 | 0.0261 | 0.5770 | 0.0303 | 0.6073 | 0.1582 | 0.0290 | 0.1871 | | 2,824.2450 | 2,824.2450 | 0.1922 | | 2,829.0509 |
| Vendor | 0.0605 | 1.8083 | 0.4738 | 4.4100e-003 | 0.1088 | 8.5100e-003 | 0.1174 | 0.0313 | 8.1400e-003 | 0.0395 | | 470.9420 | 470.9420 | 0.0287 | | 471.6604 |
| Worker | 0.0460 | 0.0327 | 0.4378 | 1.1800e-003 | 0.1118 | 9.3000e-004 | 0.1127 | 0.0296 | 8.6000e-004 | 0.0305 | | 117.6113 | 117.6113 | 3.7100e-003 | | 117.7040 |
| **Total** | **0.3947** | **11.3299** | **3.0143** | **0.0317** | **0.7976** | **0.0397** | **0.8373** | **0.2191** | **0.0380** | **0.2571** | | **3,412.7983** | **3,412.7983** | **0.2247** | | **3,418.4153** |

## 3.4 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 | | | | | 7.0691 | 0.0000 | 7.0691 | 3.4342 | 0.0000 | 3.4342 | | | 0.0000 | | | 0.0000 |
| Off-Road | 2.8090 | 30.0053 | 16.4918 | 0.0383 | | 1.3072 | 1.3072 | | 1.2026 | 1.2026 | | 3,711.6591 | 3,711.6591 | 1.2004 | | 3,741.6698 |
| **Total** | **2.8090** | **30.0053** | **16.4918** | **0.0383** | **7.0691** | **1.3072** | **8.3763** | **3.4342** | **1.2026** | **4.6368** | | **3,711.6591** | **3,711.6591** | **1.2004** | | **3,741.6698** |

## 3.4 Grading - 2020

### 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 | 2.4294 | 79.9723 | 17.7211 | 0.2197 | 4.8629 | 0.2552 | 5.1181 | 1.3330 | 0.2442 | 1.5772 | | 23,802.8224 | 23,802.8224 | 1.6202 | | 23,843.3267 |
| Vendor | 0.1956 | 5.8505 | 1.5329 | 0.0143 | 0.3521 | 0.0275 | 0.3797 | 0.1014 | 0.0263 | 0.1277 | | 1,523.6358 | 1,523.6358 | 0.0930 | | 1,525.9603 |
| Worker | 0.0644 | 0.0458 | 0.6130 | 1.6500e-003 | 0.1565 | 1.3100e-003 | 0.1578 | 0.0415 | 1.2100e-003 | 0.0427 | | 164.6558 | 164.6558 | 5.1900e-003 | | 164.7856 |
| **Total** | **2.6895** | **85.8686** | **19.8670** | **0.2356** | **5.3715** | **0.2841** | **5.6556** | **1.4759** | **0.2717** | **1.7476** | | **25,491.1140** | **25,491.1140** | **1.7183** | | **25,534.0725** |

### 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 | | | | | 2.7569 | 0.0000 | 2.7569 | 1.3393 | 0.0000 | 1.3393 | | | 0.0000 | | | 0.0000 |
| Off-Road | 2.8090 | 30.0053 | 16.4918 | 0.0383 | | 1.3072 | 1.3072 | | 1.2026 | 1.2026 | 0.0000 | 3,711.6591 | 3,711.6591 | 1.2004 | | 3,741.6698 |
| **Total** | **2.8090** | **30.0053** | **16.4918** | **0.0383** | **2.7569** | **1.3072** | **4.0641** | **1.3393** | **1.2026** | **2.5420** | **0.0000** | **3,711.6591** | **3,711.6591** | **1.2004** | | **3,741.6698** |

## 3.4 Grading - 2020

**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 | 2.4294 | 79.9723 | 17.7211 | 0.2197 | 4.8629 | 0.2552 | 5.1181 | 1.3330 | 0.2442 | 1.5772 | | 23,802.8224 | 23,802.8224 | 1.6202 | | 23,843.3267 |
| Vendor | 0.1956 | 5.8505 | 1.5329 | 0.0143 | 0.3521 | 0.0275 | 0.3797 | 0.1014 | 0.0263 | 0.1277 | | 1,523.6358 | 1,523.6358 | 0.0930 | | 1,525.9603 |
| Worker | 0.0644 | 0.0458 | 0.6130 | 1.6500e-003 | 0.1565 | 1.3100e-003 | 0.1578 | 0.0415 | 1.2100e-003 | 0.0427 | | 164.6558 | 164.6558 | 5.1900e-003 | | 164.7856 |
| **Total** | **2.6895** | **85.8686** | **19.8670** | **0.2356** | **5.3715** | **0.2841** | **5.6556** | **1.4759** | **0.2717** | **1.7476** | | **25,491.1140** | **25,491.1140** | **1.7183** | | **25,534.0725** |

## 3.5 Building Construction - 2020

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.3268 | 12.2573 | 9.3847 | 0.0169 | | 0.6402 | 0.6402 | | 0.6060 | 0.6060 | | 1,593.4655 | 1,593.4655 | 0.3632 | | 1,602.5459 |
| **Total** | **1.3268** | **12.2573** | **9.3847** | **0.0169** | | **0.6402** | **0.6402** | | **0.6060** | **0.6060** | | **1,593.4655** | **1,593.4655** | **0.3632** | | **1,602.5459** |

## 3.5 Building Construction - 2020

### 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 | 0.1048 | 3.4505 | 0.7646 | 9.4800e-003 | 1.0411 | 0.0110 | 1.0521 | 0.2616 | 0.0105 | 0.2721 | | 1,026.9982 | 1,026.9982 | 0.0699 | | 1,028.7458 |
| Vendor | 0.0107 | 0.3191 | 0.0836 | 7.8000e-004 | 0.0192 | 1.5000e-003 | 0.0207 | 5.5300e-003 | 1.4400e-003 | 6.9700e-003 | | 83.1074 | 83.1074 | 5.0700e-003 | | 83.2342 |
| Worker | 0.3912 | 0.2783 | 3.7217 | 0.0100 | 0.9501 | 7.9400e-003 | 0.9580 | 0.2520 | 7.3200e-003 | 0.2593 | | 999.6959 | 999.6959 | 0.0315 | | 1,000.4839 |
| **Total** | **0.5067** | **4.0479** | **4.5699** | **0.0203** | **2.0104** | **0.0205** | **2.0308** | **0.5191** | **0.0193** | **0.5383** | | **2,109.8015** | **2,109.8015** | **0.1065** | | **2,112.4639** |

### 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 | 1.3268 | 12.2573 | 9.3847 | 0.0169 | | 0.6402 | 0.6402 | | 0.6060 | 0.6060 | 0.0000 | 1,593.4655 | 1,593.4655 | 0.3632 | | 1,602.5459 |
| **Total** | **1.3268** | **12.2573** | **9.3847** | **0.0169** | | **0.6402** | **0.6402** | | **0.6060** | **0.6060** | **0.0000** | **1,593.4655** | **1,593.4655** | **0.3632** | | **1,602.5459** |

## 3.5 Building Construction - 2020

**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 | 0.1048 | 3.4505 | 0.7646 | 9.4800e-003 | 1.0411 | 0.0110 | 1.0521 | 0.2616 | 0.0105 | 0.2721 | | 1,026.9982 | 1,026.9982 | 0.0699 | | 1,028.7458 |
| Vendor | 0.0107 | 0.3191 | 0.0836 | 7.8000e-004 | 0.0192 | 1.5000e-003 | 0.0207 | 5.5300e-003 | 1.4400e-003 | 6.9700e-003 | | 83.1074 | 83.1074 | 5.0700e-003 | | 83.2342 |
| Worker | 0.3912 | 0.2783 | 3.7217 | 0.0100 | 0.9501 | 7.9400e-003 | 0.9580 | 0.2520 | 7.3200e-003 | 0.2593 | | 999.6959 | 999.6959 | 0.0315 | | 1,000.4839 |
| **Total** | **0.5067** | **4.0479** | **4.5699** | **0.0203** | **2.0104** | **0.0205** | **2.0308** | **0.5191** | **0.0193** | **0.5383** | | **2,109.8015** | **2,109.8015** | **0.1065** | | **2,112.4639** |

## 3.5 Building Construction - 2021

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.1922 | 11.1358 | 9.1716 | 0.0169 | | 0.5528 | 0.5528 | | 0.5231 | 0.5231 | | 1,593.5462 | 1,593.5462 | 0.3580 | | 1,602.4972 |
| **Total** | **1.1922** | **11.1358** | **9.1716** | **0.0169** | | **0.5528** | **0.5528** | | **0.5231** | **0.5231** | | **1,593.5462** | **1,593.5462** | **0.3580** | | **1,602.4972** |

## 3.5 Building Construction - 2021

### 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 | 0.1001 | 3.2189 | 0.7548 | 9.3600e-003 | 0.5003 | 9.8800e-003 | 0.5102 | 0.1288 | 9.4500e-003 | 0.1383 | | 1,015.7355 | 1,015.7355 | 0.0689 | | 1,017.4588 |
| Vendor | 9.1200e-003 | 0.2913 | 0.0762 | 7.7000e-004 | 0.0192 | 6.0000e-004 | 0.0198 | 5.5300e-003 | 5.7000e-004 | 6.1000e-003 | | 82.4642 | 82.4642 | 4.8600e-003 | | 82.5856 |
| Worker | 0.3644 | 0.2504 | 3.4236 | 9.7200e-003 | 0.9501 | 7.6800e-003 | 0.9578 | 0.2520 | 7.0700e-003 | 0.2590 | | 967.9544 | 967.9544 | 0.0285 | | 968.6674 |
| **Total** | **0.4735** | **3.7606** | **4.2545** | **0.0199** | **1.4696** | **0.0182** | **1.4877** | **0.3863** | **0.0171** | **0.4034** | | **2,066.1541** | **2,066.1541** | **0.1023** | | **2,068.7118** |

### 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 | 1.1922 | 11.1358 | 9.1716 | 0.0169 | | 0.5528 | 0.5528 | | 0.5231 | 0.5231 | 0.0000 | 1,593.5462 | 1,593.5462 | 0.3580 | | 1,602.4972 |
| **Total** | **1.1922** | **11.1358** | **9.1716** | **0.0169** | | **0.5528** | **0.5528** | | **0.5231** | **0.5231** | **0.0000** | **1,593.5462** | **1,593.5462** | **0.3580** | | **1,602.4972** |

## 3.5 Building Construction - 2021

**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 | 0.1001 | 3.2189 | 0.7548 | 9.3600e-003 | 0.5003 | 9.8800e-003 | 0.5102 | 0.1288 | 9.4500e-003 | 0.1383 | | 1,015.7355 | 1,015.7355 | 0.0689 | | 1,017.4588 |
| Vendor | 9.1200e-003 | 0.2913 | 0.0762 | 7.7000e-004 | 0.0192 | 6.0000e-004 | 0.0198 | 5.5300e-003 | 5.7000e-004 | 6.1000e-003 | | 82.4642 | 82.4642 | 4.8600e-003 | | 82.5856 |
| Worker | 0.3644 | 0.2504 | 3.4236 | 9.7200e-003 | 0.9501 | 7.6800e-003 | 0.9578 | 0.2520 | 7.0700e-003 | 0.2590 | | 967.9544 | 967.9544 | 0.0285 | | 968.6674 |
| **Total** | **0.4735** | **3.7606** | **4.2545** | **0.0199** | **1.4696** | **0.0182** | **1.4877** | **0.3863** | **0.0171** | **0.4034** | | **2,066.1541** | **2,066.1541** | **0.1023** | | **2,068.7118** |

## 3.5 Building Construction - 2022

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.0779 | 9.9445 | 9.0244 | 0.0169 | | 0.4744 | 0.4744 | | 0.4491 | 0.4491 | | 1,593.9766 | 1,593.9766 | 0.3549 | | 1,602.8489 |
| **Total** | **1.0779** | **9.9445** | **9.0244** | **0.0169** | | **0.4744** | **0.4744** | | **0.4491** | **0.4491** | | **1,593.9766** | **1,593.9766** | **0.3549** | | **1,602.8489** |

## 3.5 Building Construction - 2022

### 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 | 0.0952 | 2.9902 | 0.7471 | 9.2400e-003 | 0.5003 | 8.5800e-003 | 0.5089 | 0.1288 | 8.2100e-003 | 0.1370 | | 1,003.7220 | 1,003.7220 | 0.0679 | | 1,005.4194 |
| Vendor | 8.5600e-003 | 0.2770 | 0.0720 | 7.6000e-004 | 0.0192 | 5.2000e-004 | 0.0197 | 5.5300e-003 | 5.0000e-004 | 6.0300e-003 | | 81.7458 | 81.7458 | 4.6900e-003 | | 81.8630 |
| Worker | 0.3413 | 0.2262 | 3.1586 | 9.3700e-003 | 0.9501 | 7.4400e-003 | 0.9575 | 0.2520 | 6.8500e-003 | 0.2588 | | 933.9055 | 933.9055 | 0.0258 | | 934.5499 |
| **Total** | **0.4451** | **3.4935** | **3.9777** | **0.0194** | **1.4696** | **0.0165** | **1.4861** | **0.3863** | **0.0156** | **0.4019** | | **2,019.3732** | **2,019.3732** | **0.0984** | | **2,021.8323** |

### 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 | 1.0779 | 9.9445 | 9.0244 | 0.0169 | | 0.4744 | 0.4744 | | 0.4491 | 0.4491 | 0.0000 | 1,593.9766 | 1,593.9766 | 0.3549 | | 1,602.8489 |
| **Total** | **1.0779** | **9.9445** | **9.0244** | **0.0169** | | **0.4744** | **0.4744** | | **0.4491** | **0.4491** | **0.0000** | **1,593.9766** | **1,593.9766** | **0.3549** | | **1,602.8489** |

## 3.5 Building Construction - 2022

**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 | 0.0952 | 2.9902 | 0.7471 | 9.2400e-003 | 0.5003 | 8.5800e-003 | 0.5089 | 0.1288 | 8.2100e-003 | 0.1370 | | 1,003.7220 | 1,003.7220 | 0.0679 | | 1,005.4194 |
| Vendor | 8.5600e-003 | 0.2770 | 0.0720 | 7.6000e-004 | 0.0192 | 5.2000e-004 | 0.0197 | 5.5300e-003 | 5.0000e-004 | 6.0300e-003 | | 81.7458 | 81.7458 | 4.6900e-003 | | 81.8630 |
| Worker | 0.3413 | 0.2262 | 3.1586 | 9.3700e-003 | 0.9501 | 7.4400e-003 | 0.9575 | 0.2520 | 6.8500e-003 | 0.2588 | | 933.9055 | 933.9055 | 0.0258 | | 934.5499 |
| **Total** | **0.4451** | **3.4935** | **3.9777** | **0.0194** | **1.4696** | **0.0165** | **1.4861** | **0.3863** | **0.0156** | **0.4019** | | **2,019.3732** | **2,019.3732** | **0.0984** | | **2,021.8323** |

## 3.5 Building Construction - 2023

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.9999 | 9.1731 | 8.9348 | 0.0169 | | 0.4172 | 0.4172 | | 0.3948 | 0.3948 | | 1,594.3031 | 1,594.3031 | 0.3517 | | 1,603.0958 |
| **Total** | **0.9999** | **9.1731** | **8.9348** | **0.0169** | | **0.4172** | **0.4172** | | **0.3948** | **0.3948** | | **1,594.3031** | **1,594.3031** | **0.3517** | | **1,603.0958** |

## 3.5 Building Construction - 2023

### 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 | 0.0625 | 1.9727 | 0.6820 | 8.8300e-003 | 1.2424 | 3.5700e-003 | 1.2460 | 0.3110 | 3.4200e-003 | 0.3144 | | 961.8778 | 961.8778 | 0.0632 | | 963.4576 |
| Vendor | 6.3500e-003 | 0.2102 | 0.0651 | 7.4000e-004 | 0.0192 | 2.4000e-004 | 0.0195 | 5.5300e-003 | 2.3000e-004 | 5.7600e-003 | | 79.1722 | 79.1722 | 4.1600e-003 | | 79.2762 |
| Worker | 0.3205 | 0.2047 | 2.9088 | 9.0300e-003 | 0.9501 | 7.2300e-003 | 0.9573 | 0.2520 | 6.6500e-003 | 0.2586 | | 899.7097 | 899.7097 | 0.0232 | | 900.2907 |
| **Total** | **0.3893** | **2.3875** | **3.6558** | **0.0186** | **2.2118** | **0.0110** | **2.2228** | **0.5685** | **0.0103** | **0.5788** | | **1,940.7597** | **1,940.7597** | **0.0906** | | **1,943.0245** |

### 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 | 0.9999 | 9.1731 | 8.9348 | 0.0169 | | 0.4172 | 0.4172 | | 0.3948 | 0.3948 | 0.0000 | 1,594.3031 | 1,594.3031 | 0.3517 | | 1,603.0958 |
| **Total** | **0.9999** | **9.1731** | **8.9348** | **0.0169** | | **0.4172** | **0.4172** | | **0.3948** | **0.3948** | **0.0000** | **1,594.3031** | **1,594.3031** | **0.3517** | | **1,603.0958** |

## 3.5 Building Construction - 2023

**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 | 0.0625 | 1.9727 | 0.6820 | 8.8300e-003 | 1.2424 | 3.5700e-003 | 1.2460 | 0.3110 | 3.4200e-003 | 0.3144 | | 961.8778 | 961.8778 | 0.0632 | | 963.4576 |
| Vendor | 6.3500e-003 | 0.2102 | 0.0651 | 7.4000e-004 | 0.0192 | 2.4000e-004 | 0.0195 | 5.5300e-003 | 2.3000e-004 | 5.7600e-003 | | 79.1722 | 79.1722 | 4.1600e-003 | | 79.2762 |
| Worker | 0.3205 | 0.2047 | 2.9088 | 9.0300e-003 | 0.9501 | 7.2300e-003 | 0.9573 | 0.2520 | 6.6500e-003 | 0.2586 | | 899.7097 | 899.7097 | 0.0232 | | 900.2907 |
| **Total** | **0.3893** | **2.3875** | **3.6558** | **0.0186** | **2.2118** | **0.0110** | **2.2228** | **0.5685** | **0.0103** | **0.5788** | | **1,940.7597** | **1,940.7597** | **0.0906** | | **1,943.0245** |

## 3.6 Paving - 2023

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.6313 | 6.1230 | 8.5577 | 0.0133 | | 0.3032 | 0.3032 | | 0.2798 | 0.2798 | | 1,269.2449 | 1,269.2449 | 0.4022 | | 1,279.2994 |
| Paving | 0.0000 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| **Total** | **0.6313** | **6.1230** | **8.5577** | **0.0133** | | **0.3032** | **0.3032** | | **0.2798** | **0.2798** | | **1,269.2449** | **1,269.2449** | **0.4022** | | **1,279.2994** |

## 3.6 Paving - 2023

### 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 | 0.0104 | 0.3288 | 0.1137 | 1.4700e-003 | 0.0350 | 6.0000e-004 | 0.0356 | 9.5900e-003 | 5.7000e-004 | 0.0102 | | 160.3130 | 160.3130 | 0.0105 | | 160.5763 |
| Vendor | 2.1200e-003 | 0.0701 | 0.0217 | 2.5000e-004 | 6.4000e-003 | 8.0000e-005 | 6.4800e-003 | 1.8400e-003 | 8.0000e-005 | 1.9200e-003 | | 26.3907 | 26.3907 | 1.3900e-003 | | 26.4254 |
| Worker | 0.0377 | 0.0241 | 0.3422 | 1.0600e-003 | 0.1118 | 8.5000e-004 | 0.1126 | 0.0296 | 7.8000e-004 | 0.0304 | | 105.8482 | 105.8482 | 2.7300e-003 | | 105.9166 |
| **Total** | **0.0502** | **0.4229** | **0.4776** | **2.7800e-003** | **0.1532** | **1.5300e-003** | **0.1547** | **0.0411** | **1.4300e-003** | **0.0425** | | **292.5519** | **292.5519** | **0.0147** | | **292.9182** |

### 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 | 0.6313 | 6.1230 | 8.5577 | 0.0133 | | 0.3032 | 0.3032 | | 0.2798 | 0.2798 | 0.0000 | 1,269.2449 | 1,269.2449 | 0.4022 | | 1,279.2994 |
| Paving | 0.0000 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| **Total** | **0.6313** | **6.1230** | **8.5577** | **0.0133** | | **0.3032** | **0.3032** | | **0.2798** | **0.2798** | **0.0000** | **1,269.2449** | **1,269.2449** | **0.4022** | | **1,279.2994** |

## 3.6 Paving - 2023

**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 | 0.0104 | 0.3288 | 0.1137 | 1.4700e-003 | 0.0350 | 6.0000e-004 | 0.0356 | 9.5900e-003 | 5.7000e-004 | 0.0102 | | 160.3130 | 160.3130 | 0.0105 | | 160.5763 |
| Vendor | 2.1200e-003 | 0.0701 | 0.0217 | 2.5000e-004 | 6.4000e-003 | 8.0000e-005 | 6.4800e-003 | 1.8400e-003 | 8.0000e-005 | 1.9200e-003 | | 26.3907 | 26.3907 | 1.3900e-003 | | 26.4254 |
| Worker | 0.0377 | 0.0241 | 0.3422 | 1.0600e-003 | 0.1118 | 8.5000e-004 | 0.1126 | 0.0296 | 7.8000e-004 | 0.0304 | | 105.8482 | 105.8482 | 2.7300e-003 | | 105.9166 |
| **Total** | **0.0502** | **0.4229** | **0.4776** | **2.7800e-003** | **0.1532** | **1.5300e-003** | **0.1547** | **0.0411** | **1.4300e-003** | **0.0425** | | **292.5519** | **292.5519** | **0.0147** | | **292.9182** |

## 3.7 Architectural Coating - 2023

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Archit. Coating | 159.1824 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.2556 | 1.7373 | 2.4148 | 3.9600e-003 | | 0.0944 | 0.0944 | | 0.0944 | 0.0944 | | 375.2641 | 375.2641 | 0.0225 | | 375.8253 |
| **Total** | **159.4379** | **1.7373** | **2.4148** | **3.9600e-003** | | **0.0944** | **0.0944** | | **0.0944** | **0.0944** | | **375.2641** | **375.2641** | **0.0225** | | **375.8253** |

## 3.7 Architectural Coating - 2023

### 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 | 5.2000e-003 | 0.1644 | 0.0568 | 7.4000e-004 | 0.0175 | 3.0000e-004 | 0.0178 | 4.7900e-003 | 2.8000e-004 | 5.0800e-003 | | 80.1565 | 80.1565 | 5.2700e-003 | | 80.2881 |
| Vendor | 2.1200e-003 | 0.0701 | 0.0217 | 2.5000e-004 | 6.4000e-003 | 8.0000e-005 | 6.4800e-003 | 1.8400e-003 | 8.0000e-005 | 1.9200e-003 | | 26.3907 | 26.3907 | 1.3900e-003 | | 26.4254 |
| Worker | 0.0189 | 0.0120 | 0.1711 | 5.3000e-004 | 0.0559 | 4.3000e-004 | 0.0563 | 0.0148 | 3.9000e-004 | 0.0152 | | 52.9241 | 52.9241 | 1.3700e-003 | | 52.9583 |
| **Total** | **0.0262** | **0.2465** | **0.2496** | **1.5200e-003** | **0.0798** | **8.1000e-004** | **0.0806** | **0.0215** | **7.5000e-004** | **0.0222** | | **159.4713** | **159.4713** | **8.0300e-003** | | **159.6718** |

### 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 | 159.1824 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.2556 | 1.7373 | 2.4148 | 3.9600e-003 | | 0.0944 | 0.0944 | | 0.0944 | 0.0944 | 0.0000 | 375.2641 | 375.2641 | 0.0225 | | 375.8253 |
| **Total** | **159.4379** | **1.7373** | **2.4148** | **3.9600e-003** | | **0.0944** | **0.0944** | | **0.0944** | **0.0944** | **0.0000** | **375.2641** | **375.2641** | **0.0225** | | **375.8253** |

## 3.7 Architectural Coating - 2023

**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 | 5.2000e-003 | 0.1644 | 0.0568 | 7.4000e-004 | 0.0175 | 3.0000e-004 | 0.0178 | 4.7900e-003 | 2.8000e-004 | 5.0800e-003 | | 80.1565 | 80.1565 | 5.2700e-003 | | 80.2881 |
| Vendor | 2.1200e-003 | 0.0701 | 0.0217 | 2.5000e-004 | 6.4000e-003 | 8.0000e-005 | 6.4800e-003 | 1.8400e-003 | 8.0000e-005 | 1.9200e-003 | | 26.3907 | 26.3907 | 1.3900e-003 | | 26.4254 |
| Worker | 0.0189 | 0.0120 | 0.1711 | 5.3000e-004 | 0.0559 | 4.3000e-004 | 0.0563 | 0.0148 | 3.9000e-004 | 0.0152 | | 52.9241 | 52.9241 | 1.3700e-003 | | 52.9583 |
| **Total** | **0.0262** | **0.2465** | **0.2496** | **1.5200e-003** | **0.0798** | **8.1000e-004** | **0.0806** | **0.0215** | **7.5000e-004** | **0.0222** | | **159.4713** | **159.4713** | **8.0300e-003** | | **159.6718** |

# 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 | 5.1657 | 20.8957 | 63.3973 | 0.2342 | 19.3757 | 0.1727 | 19.5484 | 5.1851 | 0.1606 | 5.3457 | | 23,859.4066 | 23,859.4066 | 1.1610 | | 23,888.4309 |
| Unmitigated | 5.1657 | 20.8957 | 63.3973 | 0.2342 | 19.3757 | 0.1727 | 19.5484 | 5.1851 | 0.1606 | 5.3457 | | 23,859.4066 | 23,859.4066 | 1.1610 | | 23,888.4309 |

## 4.2 Trip Summary Information

| | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|---|---|---|---|---|---|
| Land Use | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| Apartments Mid Rise | 2,116.80 | 2,116.80 | 2116.80 | 7,233,427 | 7,233,427 |
| Enclosed Parking with Elevator | 0.00 | 0.00 | 0.00 | | |
| High Turnover (Sit Down Restaurant) | 614.00 | 614.00 | 614.00 | 836,778 | 836,778 |
| Pharmacy/Drugstore with Drive Thru | 784.00 | 784.00 | 784.00 | 1,041,658 | 1,041,658 |
| Total | 3,514.80 | 3,514.80 | 3,514.80 | 9,111,863 | 9,111,863 |

## 4.3 Trip Type Information

| | Miles | | | Trip % | | | Trip Purpose % | | |
|---|---|---|---|---|---|---|---|---|---|
| Land Use | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary | Diverted | Pass-by |
| Apartments Mid Rise | 14.70 | 5.90 | 8.70 | 40.20 | 19.20 | 40.60 | 86 | 11 | 3 |
| Enclosed Parking with Elevator | 16.60 | 8.40 | 6.90 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 |
| High Turnover (Sit Down | 16.60 | 8.40 | 6.90 | 8.50 | 72.50 | 19.00 | 37 | 20 | 43 |
| Pharmacy/Drugstore with Drive | 16.60 | 8.40 | 6.90 | 7.50 | 73.50 | 19.00 | 38 | 13 | 49 |

## 4.4 Fleet Mix

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Apartments Mid Rise | 0.545842 | 0.044768 | 0.205288 | 0.119317 | 0.015350 | 0.006227 | 0.020460 | 0.031333 | 0.002546 | 0.002133 | 0.005184 | 0.000692 | 0.000862 |
| Enclosed Parking with Elevator | 0.545842 | 0.044768 | 0.205288 | 0.119317 | 0.015350 | 0.006227 | 0.020460 | 0.031333 | 0.002546 | 0.002133 | 0.005184 | 0.000692 | 0.000862 |
| High Turnover (Sit Down Restaurant) | 0.545842 | 0.044768 | 0.205288 | 0.119317 | 0.015350 | 0.006227 | 0.020460 | 0.031333 | 0.002546 | 0.002133 | 0.005184 | 0.000692 | 0.000862 |
| Pharmacy/Drugstore with Drive Thru | 0.545842 | 0.044768 | 0.205288 | 0.119317 | 0.015350 | 0.006227 | 0.020460 | 0.031333 | 0.002546 | 0.002133 | 0.005184 | 0.000692 | 0.000862 |

## 5.0 Energy Detail

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

Install Energy Efficient Appliances

| | ROG | NOx | CO | SO2 | Fugitive 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 | 0.1954 | 1.6995 | 0.9312 | 0.0107 | | 0.1350 | 0.1350 | | 0.1350 | 0.1350 | | 2,131.0600 | 2,131.0600 | 0.0409 | 0.0391 | 2,143.7239 |
| NaturalGas Unmitigated | 0.1954 | 1.6995 | 0.9312 | 0.0107 | | 0.1350 | 0.1350 | | 0.1350 | 0.1350 | | 2,131.0600 | 2,131.0600 | 0.0409 | 0.0391 | 2,143.7239 |

## 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 Mid Rise | 12993.4 | 0.1401 | 1.1974 | 0.5095 | 7.6400e-003 | | 0.0968 | 0.0968 | | 0.0968 | 0.0968 | | 1,528.6297 | 1,528.6297 | 0.0293 | 0.0280 | 1,537.7136 |
| Enclosed Parking with Elevator | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| High Turnover (Sit Down Restaurant) | 5057.75 | 0.0545 | 0.4959 | 0.4165 | 2.9800e-003 | | 0.0377 | 0.0377 | | 0.0377 | 0.0377 | | 595.0298 | 595.0298 | 0.0114 | 0.0109 | 598.5658 |
| Pharmacy/Drugstore with Drive Thru | 62.9041 | 6.8000e-004 | 6.1700e-003 | 5.1800e-003 | 4.0000e-005 | | 4.7000e-004 | 4.7000e-004 | | 4.7000e-004 | 4.7000e-004 | | 7.4005 | 7.4005 | 1.4000e-004 | 1.4000e-004 | 7.4445 |
| **Total** | | **0.1953** | **1.6995** | **0.9312** | **0.0107** | | **0.1350** | **0.1350** | | **0.1350** | **0.1350** | | **2,131.0600** | **2,131.0600** | **0.0408** | **0.0391** | **2,143.7239** |

## 5.2 Energy by Land Use - NaturalGas

**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 Mid Rise | 12.9934 | 0.1401 | 1.1974 | 0.5095 | 7.6400e-003 | | 0.0968 | 0.0968 | | 0.0968 | 0.0968 | | 1,528.6297 | 1,528.6297 | 0.0293 | 0.0280 | 1,537.7136 |
| Enclosed Parking with Elevator | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| High Turnover (Sit Down Restaurant) | 5.05775 | 0.0545 | 0.4959 | 0.4165 | 2.9800e-003 | | 0.0377 | 0.0377 | | 0.0377 | 0.0377 | | 595.0298 | 595.0298 | 0.0114 | 0.0109 | 598.5658 |
| Pharmacy/Drugstore with Drive Thru | 0.0629041 | 6.8000e-004 | 6.1700e-003 | 5.1800e-003 | 4.0000e-005 | | 4.7000e-004 | 4.7000e-004 | | 4.7000e-004 | 4.7000e-004 | | 7.4005 | 7.4005 | 1.4000e-004 | 1.4000e-004 | 7.4445 |
| **Total** | | **0.1953** | **1.6995** | **0.9312** | **0.0107** | | **0.1350** | **0.1350** | | **0.1350** | **0.1350** | | **2,131.0600** | **2,131.0600** | **0.0408** | **0.0391** | **2,143.7239** |

# 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 | 10.9379 | 0.4778 | 35.7342 | 2.3100e-003 | | 0.2029 | 0.2029 | | 0.2029 | 0.2029 | 0.0000 | 149.0037 | 149.0037 | 0.0637 | 1.5500e-003 | 151.0579 |
| Unmitigated | 10.9379 | 0.4778 | 35.7342 | 2.3100e-003 | | 0.2029 | 0.2029 | | 0.2029 | 0.2029 | 0.0000 | 149.0037 | 149.0037 | 0.0637 | 1.5500e-003 | 151.0579 |

## 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 | 0.7850 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 9.0659 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Hearth | 7.7600e-003 | 0.0664 | 0.0282 | 4.2000e-004 | | 5.3600e-003 | 5.3600e-003 | | 5.3600e-003 | 5.3600e-003 | 0.0000 | 84.7059 | 84.7059 | 1.6200e-003 | 1.5500e-003 | 85.2093 |
| Landscaping | 1.0793 | 0.4115 | 35.7060 | 1.8900e-003 | | 0.1975 | 0.1975 | | 0.1975 | 0.1975 | | 64.2978 | 64.2978 | 0.0620 | | 65.8487 |
| **Total** | **10.9379** | **0.4778** | **35.7342** | **2.3100e-003** | | **0.2029** | **0.2029** | | **0.2029** | **0.2029** | **0.0000** | **149.0037** | **149.0037** | **0.0637** | **1.5500e-003** | **151.0579** |

## 6.2 Area by SubCategory

**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 | 0.7850 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 9.0659 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Hearth | 7.7600e-003 | 0.0664 | 0.0282 | 4.2000e-004 | | 5.3600e-003 | 5.3600e-003 | | 5.3600e-003 | 5.3600e-003 | 0.0000 | 84.7059 | 84.7059 | 1.6200e-003 | 1.5500e-003 | 85.2093 |
| Landscaping | 1.0793 | 0.4115 | 35.7060 | 1.8900e-003 | | 0.1975 | 0.1975 | | 0.1975 | 0.1975 | | 64.2978 | 64.2978 | 0.0620 | | 65.8487 |
| **Total** | **10.9379** | **0.4778** | **35.7342** | **2.3100e-003** | | **0.2029** | **0.2029** | | **0.2029** | **0.2029** | **0.0000** | **149.0037** | **149.0037** | **0.0637** | **1.5500e-003** | **151.0579** |

# 7.0 Water Detail

## 7.1 Mitigation Measures Water

Apply Water Conservation Strategy

# 8.0 Waste Detail

## 8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

# 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

# 7940 Lankershim Boulevard - without PDFs

**Los Angeles-South Coast County, Winter**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Pharmacy/Drugstore with Drive Thru | 14.00 | 1000sqft | 0.00 | 14,000.00 | 0 |
| Enclosed Parking with Elevator | 541.00 | Space | 0.00 | 216,400.00 | 0 |
| High Turnover (Sit Down Restaurant) | 8.00 | 1000sqft | 0.00 | 8,000.00 | 0 |
| Apartments Mid Rise | 432.00 | Dwelling Unit | 4.69 | 432,000.00 | 1236 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.2 | **Precipitation Freq (Days)** | 33 |
| **Climate Zone** | 12 | | | **Operational Year** | 2023 |
| **Utility Company** | Los Angeles Department of Water & Power | | | | |
| **CO2 Intensity (lb/MWhr)** | 669 | **CH4 Intensity (lb/MWhr)** | 0.026 | **N2O Intensity (lb/MWhr)** | 0.003 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics - Accounts for RPS for LADWP

Land Use - 4.69-acre site; 541 parking spaces associated with proposed project parking structure

Construction Phase - Construction to occur 6 days/week

Off-road Equipment - Architectural coating equip

Off-road Equipment - Building equip

Off-road Equipment - Demolition equip

Off-road Equipment - Grading equip

Off-road Equipment - Paving equip

Off-road Equipment - Site prep equip

Trips and VMT - Anticipated construction vehicle trips

Demolition - Based on 7 daily haul truck trips over 40 days, and assuming building debris density is 1,620 lbs/cyd

Grading - 89,000 cy of soil export

Architectural Coating - construction coatings

Vehicle Trips - Accounts for less trips from walk-in/transit reduction, internal apture, and pass-by reductions

Woodstoves - Accounts for outdoor courtyard fireplaces (2) and firepits (2); Assumes these outdoor amenites would be used 30% of the year.

Area Coating - Coatings

Energy Use -

Construction Off-road Equipment Mitigation - SCAQMD Rule 403

Energy Mitigation - Use of Energy Star appliances

Water Mitigation - CALGreen

Waste Mitigation -

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblApplianceMitigation | PercentImprovement | 30.00 | 25.00 |
| tblApplianceMitigation | PercentImprovement | 15.00 | 12.00 |
| tblApplianceMitigation | PercentImprovement | 50.00 | 40.00 |
| tblApplianceMitigation | PercentImprovement | 15.00 | 9.00 |

| | | | |
|---|---|---|---|
| tblArchitecturalCoating | EF_Nonresidential_Exterior | 100.00 | 50.00 |
| tblArchitecturalCoating | EF_Nonresidential_Interior | 100.00 | 50.00 |
| tblAreaCoating | Area_EF_Nonresidential_Exterior | 100 | 50 |
| tblAreaCoating | Area_EF_Nonresidential_Interior | 100 | 50 |
| tblConstructionPhase | NumDays | 230.00 | 886.00 |
| tblConstructionPhase | NumDays | 20.00 | 40.00 |
| tblConstructionPhase | NumDays | 8.00 | 40.00 |
| tblConstructionPhase | NumDays | 18.00 | 12.00 |
| tblConstructionPhase | NumDays | 5.00 | 28.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblFireplaces | FireplaceDayYear | 25.00 | 110.00 |
| tblFireplaces | FireplaceWoodMass | 1,019.20 | 0.00 |
| tblFireplaces | NumberGas | 367.20 | 4.00 |
| tblFireplaces | NumberNoFireplace | 43.20 | 428.00 |
| tblFireplaces | NumberWood | 21.60 | 0.00 |
| tblGrading | MaterialExported | 0.00 | 89,000.00 |
| tblLandUse | LotAcreage | 0.32 | 0.00 |
| tblLandUse | LotAcreage | 4.87 | 0.00 |
| tblLandUse | LotAcreage | 0.18 | 0.00 |
| tblLandUse | LotAcreage | 11.37 | 4.69 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 2.00 |

| | | | |
|---|---|---|---|
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 4.00 | 1.00 |
| tblOffRoadEquipment | UsageHours | 6.00 | 8.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 6.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 8.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 4.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 6.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 6.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 4.00 |
| tblOffRoadEquipment | UsageHours | 6.00 | 8.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 4.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 8.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 6.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 6.00 |
| tblProjectCharacteristics | CH4IntensityFactor | 0.029 | 0.026 |
| tblProjectCharacteristics | CO2IntensityFactor | 1227.89 | 669 |
| tblProjectCharacteristics | N2OIntensityFactor | 0.006 | 0.003 |
| tblTripsAndVMT | HaulingTripNumber | 359.00 | 280.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 924.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 10,632.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 24.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 18.00 |

| | | | |
|---|---|---|---|
| tblTripsAndVMT | VendorTripNumber | 0.00 | 3.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 17.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 55.00 |
| tblTripsAndVMT | VendorTripNumber | 85.00 | 3.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 1.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 1.00 |
| tblTripsAndVMT | WorkerTripNumber | 15.00 | 12.00 |
| tblTripsAndVMT | WorkerTripNumber | 13.00 | 10.00 |
| tblTripsAndVMT | WorkerTripNumber | 18.00 | 14.00 |
| tblTripsAndVMT | WorkerTripNumber | 410.00 | 85.00 |
| tblTripsAndVMT | WorkerTripNumber | 13.00 | 10.00 |
| tblTripsAndVMT | WorkerTripNumber | 82.00 | 5.00 |
| tblVehicleTrips | ST_TR | 6.39 | 4.90 |
| tblVehicleTrips | ST_TR | 158.37 | 76.75 |
| tblVehicleTrips | ST_TR | 96.91 | 56.00 |
| tblVehicleTrips | SU_TR | 5.86 | 4.90 |
| tblVehicleTrips | SU_TR | 131.84 | 76.75 |
| tblVehicleTrips | SU_TR | 96.91 | 56.00 |
| tblVehicleTrips | WD_TR | 6.65 | 4.90 |
| tblVehicleTrips | WD_TR | 127.15 | 76.75 |
| tblVehicleTrips | WD_TR | 96.91 | 56.00 |
| tblWoodstoves | NumberCatalytic | 21.60 | 0.00 |
| tblWoodstoves | NumberNoncatalytic | 21.60 | 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 | | | | | |
| 2019 | 3.4615 | 36.5704 | 19.9910 | 0.0430 | 2.2177 | 1.6850 | 3.9027 | 0.3687 | 1.5643 | 1.9330 | 0.0000 | 4,297.8739 | 4,297.8739 | 1.0468 | 0.0000 | 4,324.0444 |
| 2020 | 5.5734 | 116.9127 | 37.5772 | 0.2697 | 12.4406 | 1.5956 | 14.0362 | 4.9101 | 1.4785 | 6.3886 | 0.0000 | 28,741.5966 | 28,741.5966 | 2.9835 | 0.0000 | 28,816.1838 |
| 2021 | 1.7096 | 14.9620 | 13.1863 | 0.0360 | 1.4696 | 0.5711 | 2.0407 | 0.3863 | 0.5404 | 0.9267 | 0.0000 | 3,583.3030 | 3,583.3030 | 0.4614 | 0.0000 | 3,594.8379 |
| 2022 | 1.5651 | 13.4954 | 12.7777 | 0.0355 | 1.4696 | 0.4911 | 1.9606 | 0.3863 | 0.4648 | 0.8511 | 0.0000 | 3,539.0318 | 3,539.0318 | 0.4543 | 0.0000 | 3,550.3897 |
| 2023 | 160.1530 | 11.5953 | 12.3668 | 0.0348 | 2.2118 | 0.4283 | 2.6401 | 0.5685 | 0.4052 | 0.9737 | 0.0000 | 3,463.7038 | 3,463.7038 | 0.4477 | 0.0000 | 3,474.7766 |
| **Maximum** | **160.1530** | **116.9127** | **37.5772** | **0.2697** | **12.4406** | **1.6850** | **14.0362** | **4.9101** | **1.5643** | **6.3886** | **0.0000** | **28,741.5966** | **28,741.5966** | **2.9835** | **0.0000** | **28,816.1838** |

## 2.1 Overall Construction (Maximum Daily Emission)

**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 | | | | | |
| 2019 | 3.4615 | 36.5704 | 19.9910 | 0.0430 | 1.0331 | 1.6850 | 2.7181 | 0.1893 | 1.5643 | 1.7537 | 0.0000 | 4,297.8739 | 4,297.8739 | 1.0468 | 0.0000 | 4,324.0444 |
| 2020 | 5.5734 | 116.9127 | 37.5772 | 0.2697 | 8.1284 | 1.5956 | 9.7240 | 2.8152 | 1.4785 | 4.2937 | 0.0000 | 28,741.5966 | 28,741.5966 | 2.9835 | 0.0000 | 28,816.1838 |
| 2021 | 1.7096 | 14.9620 | 13.1863 | 0.0360 | 1.4696 | 0.5711 | 2.0407 | 0.3863 | 0.5404 | 0.9267 | 0.0000 | 3,583.3030 | 3,583.3030 | 0.4614 | 0.0000 | 3,594.8379 |
| 2022 | 1.5651 | 13.4954 | 12.7777 | 0.0355 | 1.4696 | 0.4911 | 1.9606 | 0.3863 | 0.4648 | 0.8511 | 0.0000 | 3,539.0318 | 3,539.0318 | 0.4543 | 0.0000 | 3,550.3897 |
| 2023 | 160.1530 | 11.5953 | 12.3668 | 0.0348 | 2.2118 | 0.4283 | 2.6401 | 0.5685 | 0.4052 | 0.9737 | 0.0000 | 3,463.7038 | 3,463.7038 | 0.4477 | 0.0000 | 3,474.7766 |
| **Maximum** | **160.1530** | **116.9127** | **37.5772** | **0.2697** | **8.1284** | **1.6850** | **9.7240** | **2.8152** | **1.5643** | **4.2937** | **0.0000** | **28,741.5966** | **28,741.5966** | **2.9835** | **0.0000** | **28,816.1838** |

| | ROG | NOx | 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** | **27.75** | **0.00** | **22.36** | **34.35** | **0.00** | **20.54** | **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 | 10.9379 | 0.4778 | 35.7342 | 2.3100e-003 | | 0.2029 | 0.2029 | | 0.2029 | 0.2029 | 0.0000 | 149.0037 | 149.0037 | 0.0637 | 1.5500e-003 | 151.0579 |
| Energy | 0.1954 | 1.6995 | 0.9312 | 0.0107 | | 0.1350 | 0.1350 | | 0.1350 | 0.1350 | | 2,131.0600 | 2,131.0600 | 0.0409 | 0.0391 | 2,143.7239 |
| Mobile | 4.9992 | 21.3206 | 60.6045 | 0.2227 | 19.3757 | 0.1737 | 19.5494 | 5.1851 | 0.1615 | 5.3466 | | 22,699.3546 | 22,699.3546 | 1.1615 | | 22,728.3932 |
| **Total** | **16.1325** | **23.4978** | **97.2699** | **0.2356** | **19.3757** | **0.5115** | **19.8872** | **5.1851** | **0.4994** | **5.6844** | **0.0000** | **24,979.4183** | **24,979.4183** | **1.2661** | **0.0406** | **25,023.1749** |

### 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 | 10.9379 | 0.4778 | 35.7342 | 2.3100e-003 | | 0.2029 | 0.2029 | | 0.2029 | 0.2029 | 0.0000 | 149.0037 | 149.0037 | 0.0637 | 1.5500e-003 | 151.0579 |
| Energy | 0.1954 | 1.6995 | 0.9312 | 0.0107 | | 0.1350 | 0.1350 | | 0.1350 | 0.1350 | | 2,131.0600 | 2,131.0600 | 0.0409 | 0.0391 | 2,143.7239 |
| Mobile | 4.9992 | 21.3206 | 60.6045 | 0.2227 | 19.3757 | 0.1737 | 19.5494 | 5.1851 | 0.1615 | 5.3466 | | 22,699.3546 | 22,699.3546 | 1.1615 | | 22,728.3932 |
| **Total** | **16.1325** | **23.4978** | **97.2699** | **0.2356** | **19.3757** | **0.5115** | **19.8872** | **5.1851** | **0.4994** | **5.6844** | **0.0000** | **24,979.4183** | **24,979.4183** | **1.2661** | **0.0406** | **25,023.1749** |

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

## 3.0 Construction Detail

**Construction Phase**

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|---|---|---|---|---|---|---|---|
| 1 | Demolition | Demolition | 10/1/2019 | 11/15/2019 | 6 | 40 | |
| 2 | Site Preparation | Site Preparation | 5/1/2020 | 6/2/2020 | 6 | 28 | |
| 3 | Grading | Grading | 6/3/2020 | 7/18/2020 | 6 | 40 | |
| 4 | Building Construction | Building Construction | 7/19/2020 | 5/18/2023 | 6 | 886 | |
| 5 | Paving | Paving | 5/19/2023 | 6/1/2023 | 6 | 12 | |
| 6 | Architectural Coating | Architectural Coating | 5/19/2023 | 6/8/2023 | 6 | 18 | |

**Acres of Grading (Site Preparation Phase): 28**

**Acres of Grading (Grading Phase): 30**

**Acres of Paving: 0**

**Residential Indoor: 874,800; Residential Outdoor: 291,600; Non-Residential Indoor: 33,000; Non-Residential Outdoor: 11,000; Striped Parking Area: 12,984 (Architectural Coating – sqft)**

**OffRoad Equipment**

7940 Lankershim Boulevard - without PDFs - Los Angeles-South Coast County, Winter

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|---|---|---|---|---|---|
| Demolition | Concrete/Industrial Saws | 1 | 6.00 | 81 | 0.73 |
| Demolition | Excavators | 2 | 8.00 | 158 | 0.38 |
| Demolition | Off-Highway Trucks | 1 | 2.00 | 402 | 0.38 |
| Demolition | Rubber Tired Dozers | 2 | 8.00 | 247 | 0.40 |
| Site Preparation | Graders | 1 | 8.00 | 187 | 0.41 |
| Site Preparation | Off-Highway Trucks | 1 | 4.00 | 402 | 0.38 |
| Site Preparation | Rubber Tired Dozers | 1 | 4.00 | 247 | 0.40 |
| Site Preparation | Scrapers | 1 | 4.00 | 367 | 0.48 |
| Site Preparation | Tractors/Loaders/Backhoes | 1 | 8.00 | 97 | 0.37 |
| Grading | Excavators | 1 | 4.00 | 158 | 0.38 |
| Grading | Graders | 1 | 4.00 | 187 | 0.41 |
| Grading | Off-Highway Trucks | 2 | 4.00 | 402 | 0.38 |
| Grading | Rubber Tired Dozers | 1 | 8.00 | 247 | 0.40 |
| Grading | Scrapers | 1 | 4.00 | 367 | 0.48 |
| Grading | Tractors/Loaders/Backhoes | 1 | 8.00 | 97 | 0.37 |
| Building Construction | Cranes | 1 | 8.00 | 231 | 0.29 |
| Building Construction | Forklifts | 1 | 6.00 | 89 | 0.20 |
| Building Construction | Generator Sets | 1 | 6.00 | 84 | 0.74 |
| Building Construction | Tractors/Loaders/Backhoes | 1 | 8.00 | 97 | 0.37 |
| Building Construction | Welders | 1 | 6.00 | 46 | 0.45 |
| Paving | Cement and Mortar Mixers | 1 | 6.00 | 9 | 0.56 |
| Paving | Pavers | 1 | 8.00 | 130 | 0.42 |
| Paving | Paving Equipment | 1 | 6.00 | 132 | 0.36 |
| Paving | Rollers | 1 | 8.00 | 80 | 0.38 |
| Paving | Tractors/Loaders/Backhoes | 1 | 6.00 | 97 | 0.37 |
| Architectural Coating | Air Compressors | 1 | 8.00 | 78 | 0.48 |

**Trips and VMT**

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|
| Demolition | 6 | 12.00 | 3.00 | 280.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Site Preparation | 5 | 10.00 | 17.00 | 924.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Grading | 7 | 14.00 | 55.00 | 11,125.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Building Construction | 5 | 85.00 | 3.00 | 10,632.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Paving | 5 | 10.00 | 1.00 | 24.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Architectural Coating | 1 | 5.00 | 1.00 | 18.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |

## 3.1 Mitigation Measures Construction

Water Exposed Area

## 3.2 Demolition - 2019

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 1.9420 | 0.0000 | 1.9420 | 0.2940 | 0.0000 | 0.2940 | | | 0.0000 | | | 0.0000 |
| Off-Road | 3.3146 | 34.0014 | 18.8705 | 0.0354 | | 1.6736 | 1.6736 | | 1.5535 | 1.5535 | | 3,484.5403 | 3,484.5403 | 0.9931 | | 3,509.3683 |
| **Total** | **3.3146** | **34.0014** | **18.8705** | **0.0354** | **1.9420** | **1.6736** | **3.6155** | **0.2940** | **1.5535** | **1.8475** | | **3,484.5403** | **3,484.5403** | **0.9931** | | **3,509.3683** |

## 3.2 Demolition - 2019

### 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 | 0.0674 | 2.1726 | 0.4880 | 5.5000e-003 | 0.1224 | 8.0100e-003 | 0.1304 | 0.0336 | 7.6700e-003 | 0.0412 | | 594.8948 | 594.8948 | 0.0433 | | 595.9764 |
| Vendor | 0.0130 | 0.3477 | 0.1015 | 7.6000e-004 | 0.0192 | 2.2500e-003 | 0.0215 | 5.5300e-003 | 2.1500e-003 | 7.6800e-003 | | 81.3831 | 81.3831 | 5.7200e-003 | | 81.5261 |
| Worker | 0.0665 | 0.0488 | 0.5310 | 1.3800e-003 | 0.1341 | 1.1600e-003 | 0.1353 | 0.0356 | 1.0700e-003 | 0.0366 | | 137.0557 | 137.0557 | 4.7100e-003 | | 137.1736 |
| **Total** | **0.1469** | **2.5690** | **1.1205** | **7.6400e-003** | **0.2757** | **0.0114** | **0.2872** | **0.0747** | **0.0109** | **0.0855** | | **813.3336** | **813.3336** | **0.0537** | | **814.6760** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 0.7574 | 0.0000 | 0.7574 | 0.1147 | 0.0000 | 0.1147 | | | 0.0000 | | | 0.0000 |
| Off-Road | 3.3146 | 34.0014 | 18.8705 | 0.0354 | | 1.6736 | 1.6736 | | 1.5535 | 1.5535 | 0.0000 | 3,484.5403 | 3,484.5403 | 0.9931 | | 3,509.3683 |
| **Total** | **3.3146** | **34.0014** | **18.8705** | **0.0354** | **0.7574** | **1.6736** | **2.4309** | **0.1147** | **1.5535** | **1.6681** | **0.0000** | **3,484.5403** | **3,484.5403** | **0.9931** | | **3,509.3683** |

## 3.2 Demolition - 2019

**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 | 0.0674 | 2.1726 | 0.4880 | 5.5000e-003 | 0.1224 | 8.0100e-003 | 0.1304 | 0.0336 | 7.6700e-003 | 0.0412 | | 594.8948 | 594.8948 | 0.0433 | | 595.9764 |
| Vendor | 0.0130 | 0.3477 | 0.1015 | 7.6000e-004 | 0.0192 | 2.2500e-003 | 0.0215 | 5.5300e-003 | 2.1500e-003 | 7.6800e-003 | | 81.3831 | 81.3831 | 5.7200e-003 | | 81.5261 |
| Worker | 0.0665 | 0.0488 | 0.5310 | 1.3800e-003 | 0.1341 | 1.1600e-003 | 0.1353 | 0.0356 | 1.0700e-003 | 0.0366 | | 137.0557 | 137.0557 | 4.7100e-003 | | 137.1736 |
| **Total** | **0.1469** | **2.5690** | **1.1205** | **7.6400e-003** | **0.2757** | **0.0114** | **0.2872** | **0.0747** | **0.0109** | **0.0855** | | **813.3336** | **813.3336** | **0.0537** | | **814.6760** |

## 3.3 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 | | | | | 4.0715 | 0.0000 | 4.0715 | 1.7696 | 0.0000 | 1.7696 | | | 0.0000 | | | 0.0000 |
| Off-Road | 2.0531 | 23.1342 | 11.7943 | 0.0282 | | 0.9572 | 0.9572 | | 0.8806 | 0.8806 | | 2,729.9770 | 2,729.9770 | 0.8829 | | 2,752.0502 |
| **Total** | **2.0531** | **23.1342** | **11.7943** | **0.0282** | **4.0715** | **0.9572** | **5.0287** | **1.7696** | **0.8806** | **2.6502** | | **2,729.9770** | **2,729.9770** | **0.8829** | | **2,752.0502** |

## 3.3 Site Preparation - 2020

### 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 | 0.2953 | 9.6117 | 2.2346 | 0.0256 | 0.5770 | 0.0308 | 0.6077 | 0.1582 | 0.0294 | 0.1876 | | 2,775.6104 | 2,775.6104 | 0.1992 | | 2,780.5911 |
| Vendor | 0.0632 | 1.8080 | 0.5226 | 4.2900e-003 | 0.1088 | 8.6500e-003 | 0.1175 | 0.0313 | 8.2700e-003 | 0.0396 | | 458.0634 | 458.0634 | 0.0306 | | 458.8292 |
| Worker | 0.0511 | 0.0363 | 0.4010 | 1.1100e-003 | 0.1118 | 9.3000e-004 | 0.1127 | 0.0296 | 8.6000e-004 | 0.0305 | | 110.7420 | 110.7420 | 3.4900e-003 | | 110.8293 |
| **Total** | **0.4096** | **11.4559** | **3.1582** | **0.0310** | **0.7976** | **0.0403** | **0.8379** | **0.2191** | **0.0386** | **0.2577** | | **3,344.4159** | **3,344.4159** | **0.2334** | | **3,350.2495** |

### 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 | | | | | 1.5879 | 0.0000 | 1.5879 | 0.6902 | 0.0000 | 0.6902 | | | 0.0000 | | | 0.0000 |
| Off-Road | 2.0531 | 23.1342 | 11.7943 | 0.0282 | | 0.9572 | 0.9572 | | 0.8806 | 0.8806 | 0.0000 | 2,729.9770 | 2,729.9770 | 0.8829 | | 2,752.0502 |
| **Total** | **2.0531** | **23.1342** | **11.7943** | **0.0282** | **1.5879** | **0.9572** | **2.5451** | **0.6902** | **0.8806** | **1.5708** | **0.0000** | **2,729.9770** | **2,729.9770** | **0.8829** | | **2,752.0502** |

## 3.3 Site Preparation - 2020

**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 | 0.2953 | 9.6117 | 2.2346 | 0.0256 | 0.5770 | 0.0308 | 0.6077 | 0.1582 | 0.0294 | 0.1876 | | 2,775.6104 | 2,775.6104 | 0.1992 | | 2,780.5911 |
| Vendor | 0.0632 | 1.8080 | 0.5226 | 4.2900e-003 | 0.1088 | 8.6500e-003 | 0.1175 | 0.0313 | 8.2700e-003 | 0.0396 | | 458.0634 | 458.0634 | 0.0306 | | 458.8292 |
| Worker | 0.0511 | 0.0363 | 0.4010 | 1.1100e-003 | 0.1118 | 9.3000e-004 | 0.1127 | 0.0296 | 8.6000e-004 | 0.0305 | | 110.7420 | 110.7420 | 3.4900e-003 | | 110.8293 |
| **Total** | **0.4096** | **11.4559** | **3.1582** | **0.0310** | **0.7976** | **0.0403** | **0.8379** | **0.2191** | **0.0386** | **0.2577** | | **3,344.4159** | **3,344.4159** | **0.2334** | | **3,350.2495** |

## 3.4 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 | | | | | 7.0691 | 0.0000 | 7.0691 | 3.4342 | 0.0000 | 3.4342 | | | 0.0000 | | | 0.0000 |
| Off-Road | 2.8090 | 30.0053 | 16.4918 | 0.0383 | | 1.3072 | 1.3072 | | 1.2026 | 1.2026 | | 3,711.6591 | 3,711.6591 | 1.2004 | | 3,741.6698 |
| **Total** | **2.8090** | **30.0053** | **16.4918** | **0.0383** | **7.0691** | **1.3072** | **8.3763** | **3.4342** | **1.2026** | **4.6368** | | **3,711.6591** | **3,711.6591** | **1.2004** | | **3,741.6698** |

## 3.4 Grading - 2020

### 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 | 2.4884 | 81.0074 | 18.8333 | 0.2159 | 4.8629 | 0.2592 | 5.1220 | 1.3330 | 0.2479 | 1.5809 | | 23,392.9288 | 23,392.9288 | 1.6791 | | 23,434.9057 |
| Vendor | 0.2045 | 5.8493 | 1.6906 | 0.0139 | 0.3521 | 0.0280 | 0.3801 | 0.1014 | 0.0268 | 0.1281 | | 1,481.9699 | 1,481.9699 | 0.0991 | | 1,484.4473 |
| Worker | 0.0715 | 0.0508 | 0.5614 | 1.5600e-003 | 0.1565 | 1.3100e-003 | 0.1578 | 0.0415 | 1.2100e-003 | 0.0427 | | 155.0389 | 155.0389 | 4.8900e-003 | | 155.1610 |
| **Total** | **2.7645** | **86.9074** | **21.0854** | **0.2313** | **5.3715** | **0.2884** | **5.6599** | **1.4759** | **0.2759** | **1.7518** | | **25,029.9375** | **25,029.9375** | **1.7831** | | **25,074.5141** |

### 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 | | | | | 2.7569 | 0.0000 | 2.7569 | 1.3393 | 0.0000 | 1.3393 | | | 0.0000 | | | 0.0000 |
| Off-Road | 2.8090 | 30.0053 | 16.4918 | 0.0383 | | 1.3072 | 1.3072 | | 1.2026 | 1.2026 | 0.0000 | 3,711.6591 | 3,711.6591 | 1.2004 | | 3,741.6698 |
| **Total** | **2.8090** | **30.0053** | **16.4918** | **0.0383** | **2.7569** | **1.3072** | **4.0641** | **1.3393** | **1.2026** | **2.5420** | **0.0000** | **3,711.6591** | **3,711.6591** | **1.2004** | | **3,741.6698** |

## 3.4 Grading - 2020

**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 | 2.4884 | 81.0074 | 18.8333 | 0.2159 | 4.8629 | 0.2592 | 5.1220 | 1.3330 | 0.2479 | 1.5809 | | 23,392.9288 | 23,392.9288 | 1.6791 | | 23,434.9057 |
| Vendor | 0.2045 | 5.8493 | 1.6906 | 0.0139 | 0.3521 | 0.0280 | 0.3801 | 0.1014 | 0.0268 | 0.1281 | | 1,481.9699 | 1,481.9699 | 0.0991 | | 1,484.4473 |
| Worker | 0.0715 | 0.0508 | 0.5614 | 1.5600e-003 | 0.1565 | 1.3100e-003 | 0.1578 | 0.0415 | 1.2100e-003 | 0.0427 | | 155.0389 | 155.0389 | 4.8900e-003 | | 155.1610 |
| **Total** | **2.7645** | **86.9074** | **21.0854** | **0.2313** | **5.3715** | **0.2884** | **5.6599** | **1.4759** | **0.2759** | **1.7518** | | **25,029.9375** | **25,029.9375** | **1.7831** | | **25,074.5141** |

## 3.5 Building Construction - 2020

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.3268 | 12.2573 | 9.3847 | 0.0169 | | 0.6402 | 0.6402 | | 0.6060 | 0.6060 | | 1,593.4655 | 1,593.4655 | 0.3632 | | 1,602.5459 |
| **Total** | **1.3268** | **12.2573** | **9.3847** | **0.0169** | | **0.6402** | **0.6402** | | **0.6060** | **0.6060** | | **1,593.4655** | **1,593.4655** | **0.3632** | | **1,602.5459** |

## 3.5 Building Construction - 2020

### 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 | 0.1074 | 3.4952 | 0.8126 | 9.3100e-003 | 1.0411 | 0.0112 | 1.0523 | 0.2616 | 0.0107 | 0.2723 | | 1,009.3129 | 1,009.3129 | 0.0725 | | 1,011.1240 |
| Vendor | 0.0112 | 0.3191 | 0.0922 | 7.6000e-004 | 0.0192 | 1.5300e-003 | 0.0207 | 5.5300e-003 | 1.4600e-003 | 6.9900e-003 | | 80.8347 | 80.8347 | 5.4100e-003 | | 80.9699 |
| Worker | 0.4344 | 0.3081 | 3.4086 | 9.4500e-003 | 0.9501 | 7.9400e-003 | 0.9580 | 0.2520 | 7.3200e-003 | 0.2593 | | 941.3073 | 941.3073 | 0.0297 | | 942.0491 |
| **Total** | **0.5529** | **4.1223** | **4.3134** | **0.0195** | **2.0104** | **0.0207** | **2.0310** | **0.5191** | **0.0195** | **0.5385** | | **2,031.4549** | **2,031.4549** | **0.1075** | | **2,034.1429** |

### 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 | 1.3268 | 12.2573 | 9.3847 | 0.0169 | | 0.6402 | 0.6402 | | 0.6060 | 0.6060 | 0.0000 | 1,593.4655 | 1,593.4655 | 0.3632 | | 1,602.5459 |
| **Total** | **1.3268** | **12.2573** | **9.3847** | **0.0169** | | **0.6402** | **0.6402** | | **0.6060** | **0.6060** | **0.0000** | **1,593.4655** | **1,593.4655** | **0.3632** | | **1,602.5459** |

## 3.5 Building Construction - 2020

**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 | 0.1074 | 3.4952 | 0.8126 | 9.3100e-003 | 1.0411 | 0.0112 | 1.0523 | 0.2616 | 0.0107 | 0.2723 | | 1,009.3129 | 1,009.3129 | 0.0725 | | 1,011.1240 |
| Vendor | 0.0112 | 0.3191 | 0.0922 | 7.6000e-004 | 0.0192 | 1.5300e-003 | 0.0207 | 5.5300e-003 | 1.4600e-003 | 6.9900e-003 | | 80.8347 | 80.8347 | 5.4100e-003 | | 80.9699 |
| Worker | 0.4344 | 0.3081 | 3.4086 | 9.4500e-003 | 0.9501 | 7.9400e-003 | 0.9580 | 0.2520 | 7.3200e-003 | 0.2593 | | 941.3073 | 941.3073 | 0.0297 | | 942.0491 |
| **Total** | **0.5529** | **4.1223** | **4.3134** | **0.0195** | **2.0104** | **0.0207** | **2.0310** | **0.5191** | **0.0195** | **0.5385** | | **2,031.4549** | **2,031.4549** | **0.1075** | | **2,034.1429** |

## 3.5 Building Construction - 2021

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.1922 | 11.1358 | 9.1716 | 0.0169 | | 0.5528 | 0.5528 | | 0.5231 | 0.5231 | | 1,593.5462 | 1,593.5462 | 0.3580 | | 1,602.4972 |
| **Total** | **1.1922** | **11.1358** | **9.1716** | **0.0169** | | **0.5528** | **0.5528** | | **0.5231** | **0.5231** | | **1,593.5462** | **1,593.5462** | **0.3580** | | **1,602.4972** |

## 3.5 Building Construction - 2021

### 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 | 0.1025 | 3.2584 | 0.8003 | 9.2000e-003 | 0.5003 | 0.0100 | 0.5103 | 0.1288 | 9.6000e-003 | 0.1384 | | 998.1397 | 998.1397 | 0.0714 | | 999.9238 |
| Vendor | 9.5700e-003 | 0.2907 | 0.0842 | 7.5000e-004 | 0.0192 | 6.1000e-004 | 0.0198 | 5.5300e-003 | 5.9000e-004 | 6.1200e-003 | | 80.2037 | 80.2037 | 5.1800e-003 | | 80.3331 |
| Worker | 0.4053 | 0.2772 | 3.1302 | 9.1500e-003 | 0.9501 | 7.6800e-003 | 0.9578 | 0.2520 | 7.0700e-003 | 0.2590 | | 911.4134 | 911.4134 | 0.0268 | | 912.0839 |
| **Total** | **0.5173** | **3.8263** | **4.0147** | **0.0191** | **1.4696** | **0.0183** | **1.4879** | **0.3863** | **0.0173** | **0.4036** | | **1,989.7568** | **1,989.7568** | **0.1034** | | **1,992.3408** |

### 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 | 1.1922 | 11.1358 | 9.1716 | 0.0169 | | 0.5528 | 0.5528 | | 0.5231 | 0.5231 | 0.0000 | 1,593.5462 | 1,593.5462 | 0.3580 | | 1,602.4972 |
| **Total** | **1.1922** | **11.1358** | **9.1716** | **0.0169** | | **0.5528** | **0.5528** | | **0.5231** | **0.5231** | **0.0000** | **1,593.5462** | **1,593.5462** | **0.3580** | | **1,602.4972** |

## 3.5 Building Construction - 2021

**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 | 0.1025 | 3.2584 | 0.8003 | 9.2000e-003 | 0.5003 | 0.0100 | 0.5103 | 0.1288 | 9.6000e-003 | 0.1384 | | 998.1397 | 998.1397 | 0.0714 | | 999.9238 |
| Vendor | 9.5700e-003 | 0.2907 | 0.0842 | 7.5000e-004 | 0.0192 | 6.1000e-004 | 0.0198 | 5.5300e-003 | 5.9000e-004 | 6.1200e-003 | | 80.2037 | 80.2037 | 5.1800e-003 | | 80.3331 |
| Worker | 0.4053 | 0.2772 | 3.1302 | 9.1500e-003 | 0.9501 | 7.6800e-003 | 0.9578 | 0.2520 | 7.0700e-003 | 0.2590 | | 911.4134 | 911.4134 | 0.0268 | | 912.0839 |
| **Total** | **0.5173** | **3.8263** | **4.0147** | **0.0191** | **1.4696** | **0.0183** | **1.4879** | **0.3863** | **0.0173** | **0.4036** | | **1,989.7568** | **1,989.7568** | **0.1034** | | **1,992.3408** |

## 3.5 Building Construction - 2022

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.0779 | 9.9445 | 9.0244 | 0.0169 | | 0.4744 | 0.4744 | | 0.4491 | 0.4491 | | 1,593.9766 | 1,593.9766 | 0.3549 | | 1,602.8489 |
| **Total** | **1.0779** | **9.9445** | **9.0244** | **0.0169** | | **0.4744** | **0.4744** | | **0.4491** | **0.4491** | | **1,593.9766** | **1,593.9766** | **0.3549** | | **1,602.8489** |

## 3.5 Building Construction - 2022

### 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 | 0.0975 | 3.0244 | 0.7905 | 9.0800e-003 | 0.5003 | 8.7200e-003 | 0.5090 | 0.1288 | 8.3400e-003 | 0.1372 | | 986.1801 | 986.1801 | 0.0702 | | 987.9354 |
| Vendor | 8.9900e-003 | 0.2762 | 0.0797 | 7.4000e-004 | 0.0192 | 5.4000e-004 | 0.0197 | 5.5300e-003 | 5.1000e-004 | 6.0400e-003 | | 79.4911 | 79.4911 | 5.0000e-003 | | 79.6160 |
| Worker | 0.3807 | 0.2504 | 2.8830 | 8.8200e-003 | 0.9501 | 7.4400e-003 | 0.9575 | 0.2520 | 6.8500e-003 | 0.2588 | | 879.3840 | 879.3840 | 0.0242 | | 879.9894 |
| **Total** | **0.4872** | **3.5510** | **3.7533** | **0.0186** | **1.4696** | **0.0167** | **1.4863** | **0.3863** | **0.0157** | **0.4020** | | **1,945.0552** | **1,945.0552** | **0.0994** | | **1,947.5408** |

### 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 | 1.0779 | 9.9445 | 9.0244 | 0.0169 | | 0.4744 | 0.4744 | | 0.4491 | 0.4491 | 0.0000 | 1,593.9766 | 1,593.9766 | 0.3549 | | 1,602.8489 |
| **Total** | **1.0779** | **9.9445** | **9.0244** | **0.0169** | | **0.4744** | **0.4744** | | **0.4491** | **0.4491** | **0.0000** | **1,593.9766** | **1,593.9766** | **0.3549** | | **1,602.8489** |

## 3.5 Building Construction - 2022

**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 | 0.0975 | 3.0244 | 0.7905 | 9.0800e-003 | 0.5003 | 8.7200e-003 | 0.5090 | 0.1288 | 8.3400e-003 | 0.1372 | | 986.1801 | 986.1801 | 0.0702 | | 987.9354 |
| Vendor | 8.9900e-003 | 0.2762 | 0.0797 | 7.4000e-004 | 0.0192 | 5.4000e-004 | 0.0197 | 5.5300e-003 | 5.1000e-004 | 6.0400e-003 | | 79.4911 | 79.4911 | 5.0000e-003 | | 79.6160 |
| Worker | 0.3807 | 0.2504 | 2.8830 | 8.8200e-003 | 0.9501 | 7.4400e-003 | 0.9575 | 0.2520 | 6.8500e-003 | 0.2588 | | 879.3840 | 879.3840 | 0.0242 | | 879.9894 |
| **Total** | **0.4872** | **3.5510** | **3.7533** | **0.0186** | **1.4696** | **0.0167** | **1.4863** | **0.3863** | **0.0157** | **0.4020** | | **1,945.0552** | **1,945.0552** | **0.0994** | | **1,947.5408** |

## 3.5 Building Construction - 2023

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.9999 | 9.1731 | 8.9348 | 0.0169 | | 0.4172 | 0.4172 | | 0.3948 | 0.3948 | | 1,594.3031 | 1,594.3031 | 0.3517 | | 1,603.0958 |
| **Total** | **0.9999** | **9.1731** | **8.9348** | **0.0169** | | **0.4172** | **0.4172** | | **0.3948** | **0.3948** | | **1,594.3031** | **1,594.3031** | **0.3517** | | **1,603.0958** |

## 3.5 Building Construction - 2023

### 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 | 0.0640 | 1.9865 | 0.7111 | 8.6800e-003 | 1.2424 | 3.6700e-003 | 1.2461 | 0.3110 | 3.5100e-003 | 0.3145 | | 945.1659 | 945.1659 | 0.0650 | | 946.7909 |
| Vendor | 6.6800e-003 | 0.2092 | 0.0709 | 7.2000e-004 | 0.0192 | 2.6000e-004 | 0.0195 | 5.5300e-003 | 2.4000e-004 | 5.7700e-003 | | 77.0224 | 77.0224 | 4.4000e-003 | | 77.1323 |
| Worker | 0.3586 | 0.2264 | 2.6500 | 8.5000e-003 | 0.9501 | 7.2300e-003 | 0.9573 | 0.2520 | 6.6500e-003 | 0.2586 | | 847.2125 | 847.2125 | 0.0218 | | 847.7576 |
| **Total** | **0.4293** | **2.4222** | **3.4320** | **0.0179** | **2.2118** | **0.0112** | **2.2229** | **0.5685** | **0.0104** | **0.5789** | | **1,869.4007** | **1,869.4007** | **0.0912** | | **1,871.6808** |

### 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 | 0.9999 | 9.1731 | 8.9348 | 0.0169 | | 0.4172 | 0.4172 | | 0.3948 | 0.3948 | 0.0000 | 1,594.3031 | 1,594.3031 | 0.3517 | | 1,603.0958 |
| **Total** | **0.9999** | **9.1731** | **8.9348** | **0.0169** | | **0.4172** | **0.4172** | | **0.3948** | **0.3948** | **0.0000** | **1,594.3031** | **1,594.3031** | **0.3517** | | **1,603.0958** |

## 3.5 Building Construction - 2023

**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 | 0.0640 | 1.9865 | 0.7111 | 8.6800e-003 | 1.2424 | 3.6700e-003 | 1.2461 | 0.3110 | 3.5100e-003 | 0.3145 | | 945.1659 | 945.1659 | 0.0650 | | 946.7909 |
| Vendor | 6.6800e-003 | 0.2092 | 0.0709 | 7.2000e-004 | 0.0192 | 2.6000e-004 | 0.0195 | 5.5300e-003 | 2.4000e-004 | 5.7700e-003 | | 77.0224 | 77.0224 | 4.4000e-003 | | 77.1323 |
| Worker | 0.3586 | 0.2264 | 2.6500 | 8.5000e-003 | 0.9501 | 7.2300e-003 | 0.9573 | 0.2520 | 6.6500e-003 | 0.2586 | | 847.2125 | 847.2125 | 0.0218 | | 847.7576 |
| **Total** | **0.4293** | **2.4222** | **3.4320** | **0.0179** | **2.2118** | **0.0112** | **2.2229** | **0.5685** | **0.0104** | **0.5789** | | **1,869.4007** | **1,869.4007** | **0.0912** | | **1,871.6808** |

## 3.6 Paving - 2023

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.6313 | 6.1230 | 8.5577 | 0.0133 | | 0.3032 | 0.3032 | | 0.2798 | 0.2798 | | 1,269.2449 | 1,269.2449 | 0.4022 | | 1,279.2994 |
| Paving | 0.0000 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| **Total** | **0.6313** | **6.1230** | **8.5577** | **0.0133** | | **0.3032** | **0.3032** | | **0.2798** | **0.2798** | | **1,269.2449** | **1,269.2449** | **0.4022** | | **1,279.2994** |

## 3.6 Paving - 2023

### 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 | 0.0107 | 0.3311 | 0.1185 | 1.4500e-003 | 0.0350 | 6.1000e-004 | 0.0356 | 9.5900e-003 | 5.9000e-004 | 0.0102 | | 157.5276 | 157.5276 | 0.0108 | | 157.7985 |
| Vendor | 2.2300e-003 | 0.0697 | 0.0236 | 2.4000e-004 | 6.4000e-003 | 9.0000e-005 | 6.4900e-003 | 1.8400e-003 | 8.0000e-005 | 1.9200e-003 | | 25.6741 | 25.6741 | 1.4700e-003 | | 25.7108 |
| Worker | 0.0422 | 0.0266 | 0.3118 | 1.0000e-003 | 0.1118 | 8.5000e-004 | 0.1126 | 0.0296 | 7.8000e-004 | 0.0304 | | 99.6721 | 99.6721 | 2.5700e-003 | | 99.7362 |
| **Total** | **0.0551** | **0.4275** | **0.4539** | **2.6900e-003** | **0.1532** | **1.5500e-003** | **0.1547** | **0.0411** | **1.4500e-003** | **0.0425** | | **282.8738** | **282.8738** | **0.0149** | | **283.2455** |

### 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 | 0.6313 | 6.1230 | 8.5577 | 0.0133 | | 0.3032 | 0.3032 | | 0.2798 | 0.2798 | 0.0000 | 1,269.2449 | 1,269.2449 | 0.4022 | | 1,279.2994 |
| Paving | 0.0000 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| **Total** | **0.6313** | **6.1230** | **8.5577** | **0.0133** | | **0.3032** | **0.3032** | | **0.2798** | **0.2798** | **0.0000** | **1,269.2449** | **1,269.2449** | **0.4022** | | **1,279.2994** |

## 3.6 Paving - 2023

**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 | 0.0107 | 0.3311 | 0.1185 | 1.4500e-003 | 0.0350 | 6.1000e-004 | 0.0356 | 9.5900e-003 | 5.9000e-004 | 0.0102 | | 157.5276 | 157.5276 | 0.0108 | | 157.7985 |
| Vendor | 2.2300e-003 | 0.0697 | 0.0236 | 2.4000e-004 | 6.4000e-003 | 9.0000e-005 | 6.4900e-003 | 1.8400e-003 | 8.0000e-005 | 1.9200e-003 | | 25.6741 | 25.6741 | 1.4700e-003 | | 25.7108 |
| Worker | 0.0422 | 0.0266 | 0.3118 | 1.0000e-003 | 0.1118 | 8.5000e-004 | 0.1126 | 0.0296 | 7.8000e-004 | 0.0304 | | 99.6721 | 99.6721 | 2.5700e-003 | | 99.7362 |
| **Total** | **0.0551** | **0.4275** | **0.4539** | **2.6900e-003** | **0.1532** | **1.5500e-003** | **0.1547** | **0.0411** | **1.4500e-003** | **0.0425** | | **282.8738** | **282.8738** | **0.0149** | | **283.2455** |

## 3.7 Architectural Coating - 2023

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Archit. Coating | 159.1824 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.2556 | 1.7373 | 2.4148 | 3.9600e-003 | | 0.0944 | 0.0944 | | 0.0944 | 0.0944 | | 375.2641 | 375.2641 | 0.0225 | | 375.8253 |
| **Total** | **159.4379** | **1.7373** | **2.4148** | **3.9600e-003** | | **0.0944** | **0.0944** | | **0.0944** | **0.0944** | | **375.2641** | **375.2641** | **0.0225** | | **375.8253** |

## 3.7 Architectural Coating - 2023

### 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 | 5.3300e-003 | 0.1656 | 0.0593 | 7.2000e-004 | 0.0175 | 3.1000e-004 | 0.0178 | 4.7900e-003 | 2.9000e-004 | 5.0900e-003 | | 78.7638 | 78.7638 | 5.4200e-003 | | 78.8992 |
| Vendor | 2.2300e-003 | 0.0697 | 0.0236 | 2.4000e-004 | 6.4000e-003 | 9.0000e-005 | 6.4900e-003 | 1.8400e-003 | 8.0000e-005 | 1.9200e-003 | | 25.6741 | 25.6741 | 1.4700e-003 | | 25.7108 |
| Worker | 0.0211 | 0.0133 | 0.1559 | 5.0000e-004 | 0.0559 | 4.3000e-004 | 0.0563 | 0.0148 | 3.9000e-004 | 0.0152 | | 49.8360 | 49.8360 | 1.2800e-003 | | 49.8681 |
| **Total** | **0.0287** | **0.2486** | **0.2388** | **1.4600e-003** | **0.0798** | **8.3000e-004** | **0.0806** | **0.0215** | **7.6000e-004** | **0.0222** | | **154.2740** | **154.2740** | **8.1700e-003** | | **154.4781** |

### 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 | 159.1824 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.2556 | 1.7373 | 2.4148 | 3.9600e-003 | | 0.0944 | 0.0944 | | 0.0944 | 0.0944 | 0.0000 | 375.2641 | 375.2641 | 0.0225 | | 375.8253 |
| **Total** | **159.4379** | **1.7373** | **2.4148** | **3.9600e-003** | | **0.0944** | **0.0944** | | **0.0944** | **0.0944** | **0.0000** | **375.2641** | **375.2641** | **0.0225** | | **375.8253** |

## 3.7 Architectural Coating - 2023

**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 | 5.3300e-003 | 0.1656 | 0.0593 | 7.2000e-004 | 0.0175 | 3.1000e-004 | 0.0178 | 4.7900e-003 | 2.9000e-004 | 5.0900e-003 | | 78.7638 | 78.7638 | 5.4200e-003 | | 78.8992 |
| Vendor | 2.2300e-003 | 0.0697 | 0.0236 | 2.4000e-004 | 6.4000e-003 | 9.0000e-005 | 6.4900e-003 | 1.8400e-003 | 8.0000e-005 | 1.9200e-003 | | 25.6741 | 25.6741 | 1.4700e-003 | | 25.7108 |
| Worker | 0.0211 | 0.0133 | 0.1559 | 5.0000e-004 | 0.0559 | 4.3000e-004 | 0.0563 | 0.0148 | 3.9000e-004 | 0.0152 | | 49.8360 | 49.8360 | 1.2800e-003 | | 49.8681 |
| **Total** | **0.0287** | **0.2486** | **0.2388** | **1.4600e-003** | **0.0798** | **8.3000e-004** | **0.0806** | **0.0215** | **7.6000e-004** | **0.0222** | | **154.2740** | **154.2740** | **8.1700e-003** | | **154.4781** |

# 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 | 4.9992 | 21.3206 | 60.6045 | 0.2227 | 19.3757 | 0.1737 | 19.5494 | 5.1851 | 0.1615 | 5.3466 | | 22,699.3546 | 22,699.3546 | 1.1615 | | 22,728.3932 |
| Unmitigated | 4.9992 | 21.3206 | 60.6045 | 0.2227 | 19.3757 | 0.1737 | 19.5494 | 5.1851 | 0.1615 | 5.3466 | | 22,699.3546 | 22,699.3546 | 1.1615 | | 22,728.3932 |

## 4.2 Trip Summary Information

| | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|---|---|---|---|---|---|
| Land Use | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| Apartments Mid Rise | 2,116.80 | 2,116.80 | 2116.80 | 7,233,427 | 7,233,427 |
| Enclosed Parking with Elevator | 0.00 | 0.00 | 0.00 | | |
| High Turnover (Sit Down Restaurant) | 614.00 | 614.00 | 614.00 | 836,778 | 836,778 |
| Pharmacy/Drugstore with Drive Thru | 784.00 | 784.00 | 784.00 | 1,041,658 | 1,041,658 |
| Total | 3,514.80 | 3,514.80 | 3,514.80 | 9,111,863 | 9,111,863 |

## 4.3 Trip Type Information

| | Miles | | | Trip % | | | Trip Purpose % | | |
|---|---|---|---|---|---|---|---|---|---|
| Land Use | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary | Diverted | Pass-by |
| Apartments Mid Rise | 14.70 | 5.90 | 8.70 | 40.20 | 19.20 | 40.60 | 86 | 11 | 3 |
| Enclosed Parking with Elevator | 16.60 | 8.40 | 6.90 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 |
| High Turnover (Sit Down | 16.60 | 8.40 | 6.90 | 8.50 | 72.50 | 19.00 | 37 | 20 | 43 |
| Pharmacy/Drugstore with Drive | 16.60 | 8.40 | 6.90 | 7.50 | 73.50 | 19.00 | 38 | 13 | 49 |

## 4.4 Fleet Mix

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Apartments Mid Rise | 0.545842 | 0.044768 | 0.205288 | 0.119317 | 0.015350 | 0.006227 | 0.020460 | 0.031333 | 0.002546 | 0.002133 | 0.005184 | 0.000692 | 0.000862 |
| Enclosed Parking with Elevator | 0.545842 | 0.044768 | 0.205288 | 0.119317 | 0.015350 | 0.006227 | 0.020460 | 0.031333 | 0.002546 | 0.002133 | 0.005184 | 0.000692 | 0.000862 |
| High Turnover (Sit Down Restaurant) | 0.545842 | 0.044768 | 0.205288 | 0.119317 | 0.015350 | 0.006227 | 0.020460 | 0.031333 | 0.002546 | 0.002133 | 0.005184 | 0.000692 | 0.000862 |
| Pharmacy/Drugstore with Drive Thru | 0.545842 | 0.044768 | 0.205288 | 0.119317 | 0.015350 | 0.006227 | 0.020460 | 0.031333 | 0.002546 | 0.002133 | 0.005184 | 0.000692 | 0.000862 |

## 5.0 Energy Detail

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

Install Energy Efficient Appliances

| | ROG | NOx | CO | SO2 | Fugitive 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 | 0.1954 | 1.6995 | 0.9312 | 0.0107 | | 0.1350 | 0.1350 | | 0.1350 | 0.1350 | | 2,131.0600 | 2,131.0600 | 0.0409 | 0.0391 | 2,143.7239 |
| NaturalGas Unmitigated | 0.1954 | 1.6995 | 0.9312 | 0.0107 | | 0.1350 | 0.1350 | | 0.1350 | 0.1350 | | 2,131.0600 | 2,131.0600 | 0.0409 | 0.0391 | 2,143.7239 |

## 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 Mid Rise | 12993.4 | 0.1401 | 1.1974 | 0.5095 | 7.6400e-003 | | 0.0968 | 0.0968 | | 0.0968 | 0.0968 | | 1,528.6297 | 1,528.6297 | 0.0293 | 0.0280 | 1,537.7136 |
| Enclosed Parking with Elevator | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| High Turnover (Sit Down Restaurant) | 5057.75 | 0.0545 | 0.4959 | 0.4165 | 2.9800e-003 | | 0.0377 | 0.0377 | | 0.0377 | 0.0377 | | 595.0298 | 595.0298 | 0.0114 | 0.0109 | 598.5658 |
| Pharmacy/Drugstore with Drive Thru | 62.9041 | 6.8000e-004 | 6.1700e-003 | 5.1800e-003 | 4.0000e-005 | | 4.7000e-004 | 4.7000e-004 | | 4.7000e-004 | 4.7000e-004 | | 7.4005 | 7.4005 | 1.4000e-004 | 1.4000e-004 | 7.4445 |
| **Total** | | **0.1953** | **1.6995** | **0.9312** | **0.0107** | | **0.1350** | **0.1350** | | **0.1350** | **0.1350** | | **2,131.0600** | **2,131.0600** | **0.0408** | **0.0391** | **2,143.7239** |

## 5.2 Energy by Land Use - NaturalGas

**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 Mid Rise | 12.9934 | 0.1401 | 1.1974 | 0.5095 | 7.6400e-003 | | 0.0968 | 0.0968 | | 0.0968 | 0.0968 | | 1,528.6297 | 1,528.6297 | 0.0293 | 0.0280 | 1,537.7136 |
| Enclosed Parking with Elevator | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| High Turnover (Sit Down Restaurant) | 5.05775 | 0.0545 | 0.4959 | 0.4165 | 2.9800e-003 | | 0.0377 | 0.0377 | | 0.0377 | 0.0377 | | 595.0298 | 595.0298 | 0.0114 | 0.0109 | 598.5658 |
| Pharmacy/Drugstore with Drive Thru | 0.0629041 | 6.8000e-004 | 6.1700e-003 | 5.1800e-003 | 4.0000e-005 | | 4.7000e-004 | 4.7000e-004 | | 4.7000e-004 | 4.7000e-004 | | 7.4005 | 7.4005 | 1.4000e-004 | 1.4000e-004 | 7.4445 |
| **Total** | | **0.1953** | **1.6995** | **0.9312** | **0.0107** | | **0.1350** | **0.1350** | | **0.1350** | **0.1350** | | **2,131.0600** | **2,131.0600** | **0.0408** | **0.0391** | **2,143.7239** |

# 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 | 10.9379 | 0.4778 | 35.7342 | 2.3100e-003 | | 0.2029 | 0.2029 | | 0.2029 | 0.2029 | 0.0000 | 149.0037 | 149.0037 | 0.0637 | 1.5500e-003 | 151.0579 |
| Unmitigated | 10.9379 | 0.4778 | 35.7342 | 2.3100e-003 | | 0.2029 | 0.2029 | | 0.2029 | 0.2029 | 0.0000 | 149.0037 | 149.0037 | 0.0637 | 1.5500e-003 | 151.0579 |

## 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 | 0.7850 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 9.0659 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Hearth | 7.7600e-003 | 0.0664 | 0.0282 | 4.2000e-004 | | 5.3600e-003 | 5.3600e-003 | | 5.3600e-003 | 5.3600e-003 | 0.0000 | 84.7059 | 84.7059 | 1.6200e-003 | 1.5500e-003 | 85.2093 |
| Landscaping | 1.0793 | 0.4115 | 35.7060 | 1.8900e-003 | | 0.1975 | 0.1975 | | 0.1975 | 0.1975 | | 64.2978 | 64.2978 | 0.0620 | | 65.8487 |
| **Total** | **10.9379** | **0.4778** | **35.7342** | **2.3100e-003** | | **0.2029** | **0.2029** | | **0.2029** | **0.2029** | **0.0000** | **149.0037** | **149.0037** | **0.0637** | **1.5500e-003** | **151.0579** |

## 6.2 Area by SubCategory

**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 | 0.7850 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 9.0659 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Hearth | 7.7600e-003 | 0.0664 | 0.0282 | 4.2000e-004 | | 5.3600e-003 | 5.3600e-003 | | 5.3600e-003 | 5.3600e-003 | 0.0000 | 84.7059 | 84.7059 | 1.6200e-003 | 1.5500e-003 | 85.2093 |
| Landscaping | 1.0793 | 0.4115 | 35.7060 | 1.8900e-003 | | 0.1975 | 0.1975 | | 0.1975 | 0.1975 | | 64.2978 | 64.2978 | 0.0620 | | 65.8487 |
| **Total** | **10.9379** | **0.4778** | **35.7342** | **2.3100e-003** | | **0.2029** | **0.2029** | | **0.2029** | **0.2029** | **0.0000** | **149.0037** | **149.0037** | **0.0637** | **1.5500e-003** | **151.0579** |

# 7.0 Water Detail

## 7.1 Mitigation Measures Water

Apply Water Conservation Strategy

# 8.0 Waste Detail

## 8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

# 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

# 7940 Lankershim Boulevard - without PDFs

**Los Angeles-South Coast County, Annual**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Pharmacy/Drugstore with Drive Thru | 14.00 | 1000sqft | 0.00 | 14,000.00 | 0 |
| Enclosed Parking with Elevator | 541.00 | Space | 0.00 | 216,400.00 | 0 |
| High Turnover (Sit Down Restaurant) | 8.00 | 1000sqft | 0.00 | 8,000.00 | 0 |
| Apartments Mid Rise | 432.00 | Dwelling Unit | 4.69 | 432,000.00 | 1236 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.2 | **Precipitation Freq (Days)** | 33 |
| **Climate Zone** | 12 | | | **Operational Year** | 2023 |
| **Utility Company** | Los Angeles Department of Water & Power | | | | |
| **CO2 Intensity (lb/MWhr)** | 669 | **CH4 Intensity (lb/MWhr)** | 0.026 | **N2O Intensity (lb/MWhr)** | 0.003 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics - Accounts for RPS for LADWP

Land Use - 4.69-acre site; 541 parking spaces associated with proposed project parking structure

Construction Phase - Construction to occur 6 days/week

Off-road Equipment - Architectural coating equip

Off-road Equipment - Building equip

Off-road Equipment - Demolition equip

Off-road Equipment - Grading equip

Off-road Equipment - Paving equip

Off-road Equipment - Site prep equip

Trips and VMT - Anticipated construction vehicle trips

Demolition - Based on 7 daily haul truck trips over 40 days, and assuming building debris density is 1,620 lbs/cyd

Grading - 89,000 cy of soil export

Architectural Coating - construction coatings

Vehicle Trips - Accounts for less trips from walk-in/transit reduction, internal apture, and pass-by reductions

Woodstoves - Accounts for outdoor courtyard fireplaces (2) and firepits (2); Assumes these outdoor amenites would be used 30% of the year.

Area Coating - Coatings

Energy Use -

Construction Off-road Equipment Mitigation - SCAQMD Rule 403

Energy Mitigation - Use of Energy Star appliances

Water Mitigation - CALGreen

Waste Mitigation -

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblApplianceMitigation | PercentImprovement | 30.00 | 25.00 |
| tblApplianceMitigation | PercentImprovement | 15.00 | 12.00 |
| tblApplianceMitigation | PercentImprovement | 50.00 | 40.00 |
| tblApplianceMitigation | PercentImprovement | 15.00 | 9.00 |

| | | | |
|---|---|---|---|
| tblArchitecturalCoating | EF_Nonresidential_Exterior | 100.00 | 50.00 |
| tblArchitecturalCoating | EF_Nonresidential_Interior | 100.00 | 50.00 |
| tblAreaCoating | Area_EF_Nonresidential_Exterior | 100 | 50 |
| tblAreaCoating | Area_EF_Nonresidential_Interior | 100 | 50 |
| tblConstructionPhase | NumDays | 230.00 | 886.00 |
| tblConstructionPhase | NumDays | 20.00 | 40.00 |
| tblConstructionPhase | NumDays | 8.00 | 40.00 |
| tblConstructionPhase | NumDays | 18.00 | 12.00 |
| tblConstructionPhase | NumDays | 5.00 | 28.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblFireplaces | FireplaceDayYear | 25.00 | 110.00 |
| tblFireplaces | FireplaceWoodMass | 1,019.20 | 0.00 |
| tblFireplaces | NumberGas | 367.20 | 4.00 |
| tblFireplaces | NumberNoFireplace | 43.20 | 428.00 |
| tblFireplaces | NumberWood | 21.60 | 0.00 |
| tblGrading | MaterialExported | 0.00 | 89,000.00 |
| tblLandUse | LotAcreage | 0.32 | 0.00 |
| tblLandUse | LotAcreage | 4.87 | 0.00 |
| tblLandUse | LotAcreage | 0.18 | 0.00 |
| tblLandUse | LotAcreage | 11.37 | 4.69 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 2.00 |

| | | | |
|---|---|---|---|
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 4.00 | 1.00 |
| tblOffRoadEquipment | UsageHours | 6.00 | 8.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 6.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 8.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 4.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 6.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 6.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 4.00 |
| tblOffRoadEquipment | UsageHours | 6.00 | 8.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 4.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 8.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 6.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 6.00 |
| tblProjectCharacteristics | CH4IntensityFactor | 0.029 | 0.026 |
| tblProjectCharacteristics | CO2IntensityFactor | 1227.89 | 669 |
| tblProjectCharacteristics | N2OIntensityFactor | 0.006 | 0.003 |
| tblTripsAndVMT | HaulingTripNumber | 359.00 | 280.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 924.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 10,632.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 24.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 18.00 |

| | | | |
|---|---|---|---|
| tblTripsAndVMT | VendorTripNumber | 0.00 | 3.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 17.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 55.00 |
| tblTripsAndVMT | VendorTripNumber | 85.00 | 3.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 1.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 1.00 |
| tblTripsAndVMT | WorkerTripNumber | 15.00 | 12.00 |
| tblTripsAndVMT | WorkerTripNumber | 13.00 | 10.00 |
| tblTripsAndVMT | WorkerTripNumber | 18.00 | 14.00 |
| tblTripsAndVMT | WorkerTripNumber | 410.00 | 85.00 |
| tblTripsAndVMT | WorkerTripNumber | 13.00 | 10.00 |
| tblTripsAndVMT | WorkerTripNumber | 82.00 | 5.00 |
| tblVehicleTrips | ST_TR | 6.39 | 4.90 |
| tblVehicleTrips | ST_TR | 158.37 | 76.75 |
| tblVehicleTrips | ST_TR | 96.91 | 56.00 |
| tblVehicleTrips | SU_TR | 5.86 | 4.90 |
| tblVehicleTrips | SU_TR | 131.84 | 76.75 |
| tblVehicleTrips | SU_TR | 96.91 | 56.00 |
| tblVehicleTrips | WD_TR | 6.65 | 4.90 |
| tblVehicleTrips | WD_TR | 127.15 | 76.75 |
| tblVehicleTrips | WD_TR | 96.91 | 56.00 |
| tblWoodstoves | NumberCatalytic | 21.60 | 0.00 |
| tblWoodstoves | NumberNoncatalytic | 21.60 | 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 | | | | | |
| 2019 | 0.0691 | 0.7324 | 0.3997 | 8.6000e-004 | 0.0443 | 0.0337 | 0.0780 | 7.3500e-003 | 0.0313 | 0.0386 | 0.0000 | 78.1525 | 78.1525 | 0.0190 | 0.0000 | 78.6268 |
| 2020 | 0.2752 | 4.0285 | 1.9226 | 8.8800e-003 | 0.4548 | 0.0927 | 0.5475 | 0.1617 | 0.0868 | 0.2485 | 0.0000 | 839.1383 | 839.1383 | 0.0978 | 0.0000 | 841.5841 |
| 2021 | 0.2611 | 2.3535 | 2.0722 | 5.6700e-003 | 0.2254 | 0.0894 | 0.3148 | 0.0593 | 0.0846 | 0.1439 | 0.0000 | 512.5257 | 512.5257 | 0.0654 | 0.0000 | 514.1595 |
| 2022 | 0.2388 | 2.1231 | 2.0076 | 5.6000e-003 | 0.2254 | 0.0768 | 0.3023 | 0.0593 | 0.0727 | 0.1321 | 0.0000 | 506.1585 | 506.1585 | 0.0644 | 0.0000 | 507.7672 |
| 2023 | 1.5214 | 0.7441 | 0.8109 | 2.2100e-003 | 0.1294 | 0.0280 | 0.1573 | 0.0333 | 0.0265 | 0.0598 | 0.0000 | 199.5389 | 199.5389 | 0.0262 | 0.0000 | 200.1935 |
| **Maximum** | **1.5214** | **4.0285** | **2.0722** | **8.8800e-003** | **0.4548** | **0.0927** | **0.5475** | **0.1617** | **0.0868** | **0.2485** | **0.0000** | **839.1383** | **839.1383** | **0.0978** | **0.0000** | **841.5841** |

## 2.1 Overall Construction

**Mitigated Construction**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | tons/yr | | | | | | | | | | MT/yr | | | | | |
| 2019 | 0.0691 | 0.7324 | 0.3997 | 8.6000e-004 | 0.0206 | 0.0337 | 0.0543 | 3.7600e-003 | 0.0313 | 0.0351 | 0.0000 | 78.1524 | 78.1524 | 0.0190 | 0.0000 | 78.6268 |
| 2020 | 0.2752 | 4.0285 | 1.9226 | 8.8800e-003 | 0.3337 | 0.0927 | 0.4265 | 0.1047 | 0.0868 | 0.1915 | 0.0000 | 839.1381 | 839.1381 | 0.0978 | 0.0000 | 841.5838 |
| 2021 | 0.2611 | 2.3535 | 2.0722 | 5.6700e-003 | 0.2254 | 0.0894 | 0.3148 | 0.0593 | 0.0846 | 0.1439 | 0.0000 | 512.5255 | 512.5255 | 0.0654 | 0.0000 | 514.1592 |
| 2022 | 0.2388 | 2.1231 | 2.0076 | 5.6000e-003 | 0.2254 | 0.0768 | 0.3023 | 0.0593 | 0.0727 | 0.1321 | 0.0000 | 506.1583 | 506.1583 | 0.0644 | 0.0000 | 507.7670 |
| 2023 | 1.5214 | 0.7441 | 0.8109 | 2.2100e-003 | 0.1294 | 0.0280 | 0.1573 | 0.0333 | 0.0265 | 0.0598 | 0.0000 | 199.5388 | 199.5388 | 0.0262 | 0.0000 | 200.1934 |
| **Maximum** | **1.5214** | **4.0285** | **2.0722** | **8.8800e-003** | **0.3337** | **0.0927** | **0.4265** | **0.1047** | **0.0868** | **0.1915** | **0.0000** | **839.1381** | **839.1381** | **0.0978** | **0.0000** | **841.5838** |

| | ROG | NOx | 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** | **13.41** | **0.00** | **10.34** | **18.88** | **0.00** | **9.73** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** |

| Quarter | Start Date | End Date | Maximum Unmitigated ROG + NOX (tons/quarter) | Maximum Mitigated ROG + NOX (tons/quarter) |
|---|---|---|---|---|
| **1** | **10-1-2019** | **12-31-2019** | 0.7892 | 0.7892 |
| **3** | **4-1-2020** | **6-30-2020** | 1.9785 | 1.9785 |
| **4** | **7-1-2020** | **9-30-2020** | 1.5116 | 1.5116 |
| **5** | **10-1-2020** | **12-31-2020** | 0.7199 | 0.7199 |
| **6** | **1-1-2021** | **3-31-2021** | 0.6430 | 0.6430 |
| **7** | **4-1-2021** | **6-30-2021** | 0.6459 | 0.6459 |

| | | | | |
|---|---|---|---|---|
| **8** | **7-1-2021** | **9-30-2021** | 0.6530 | 0.6530 |
| **9** | **10-1-2021** | **12-31-2021** | 0.6573 | 0.6573 |
| **10** | **1-1-2022** | **3-31-2022** | 0.5809 | 0.5809 |
| **11** | **4-1-2022** | **6-30-2022** | 0.5835 | 0.5835 |
| **12** | **7-1-2022** | **9-30-2022** | 0.5899 | 0.5899 |
| **13** | **10-1-2022** | **12-31-2022** | 0.5938 | 0.5938 |
| **14** | **1-1-2023** | **3-31-2023** | 0.5024 | 0.5024 |
| **15** | **4-1-2023** | **6-30-2023** | 1.7628 | 1.7628 |
| | | **Highest** | 1.9785 | 1.9785 |

## 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 | 1.9331 | 0.0551 | 4.4648 | 2.6000e-004 | | 0.0250 | 0.0250 | | 0.0250 | 0.0250 | 0.0000 | 11.5177 | 11.5177 | 7.1200e-003 | 8.0000e-005 | 11.7186 |
| Energy | 0.0357 | 0.3102 | 0.1700 | 1.9400e-003 | | 0.0246 | 0.0246 | | 0.0246 | 0.0246 | 0.0000 | 1,433.5371 | 1,433.5371 | 0.0488 | 0.0113 | 1,438.1279 |
| Mobile | 0.8860 | 3.9453 | 11.1710 | 0.0411 | 3.4583 | 0.0315 | 3.4898 | 0.9270 | 0.0293 | 0.9562 | 0.0000 | 3,802.7650 | 3,802.7650 | 0.1908 | 0.0000 | 3,807.5345 |
| Waste | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 68.2090 | 0.0000 | 68.2090 | 4.0310 | 0.0000 | 168.9850 |
| Water | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 10.0129 | 187.0901 | 197.1029 | 1.0357 | 0.0251 | 230.4816 |
| **Total** | **2.8547** | **4.3106** | **15.8057** | **0.0433** | **3.4583** | **0.0811** | **3.5394** | **0.9270** | **0.0789** | **1.0059** | **78.2219** | **5,434.9098** | **5,513.1317** | **5.3134** | **0.0365** | **5,656.8476** |

## 2.2 Overall Operational

**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 | 1.9331 | 0.0551 | 4.4648 | 2.6000e-004 | | 0.0250 | 0.0250 | | 0.0250 | 0.0250 | 0.0000 | 11.5177 | 11.5177 | 7.1200e-003 | 8.0000e-005 | 11.7186 |
| Energy | 0.0357 | 0.3102 | 0.1700 | 1.9400e-003 | | 0.0246 | 0.0246 | | 0.0246 | 0.0246 | 0.0000 | 1,424.9873 | 1,424.9873 | 0.0484 | 0.0113 | 1,429.5584 |
| Mobile | 0.8860 | 3.9453 | 11.1710 | 0.0411 | 3.4583 | 0.0315 | 3.4898 | 0.9270 | 0.0293 | 0.9562 | 0.0000 | 3,802.7650 | 3,802.7650 | 0.1908 | 0.0000 | 3,807.5345 |
| Waste | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 16.3702 | 0.0000 | 16.3702 | 0.9675 | 0.0000 | 40.5564 |
| Water | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 8.0103 | 162.1488 | 170.1591 | 0.8290 | 0.0202 | 196.8908 |
| **Total** | **2.8547** | **4.3106** | **15.8057** | **0.0433** | **3.4583** | **0.0811** | **3.5394** | **0.9270** | **0.0789** | **1.0059** | **24.3805** | **5,401.4188** | **5,425.7993** | **2.0428** | **0.0315** | **5,486.2588** |

| | ROG | NOx | 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** | **68.83** | **0.62** | **1.58** | **61.55** | **13.69** | **3.02** |

## 3.0 Construction Detail

**Construction Phase**

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|---|---|---|---|---|---|---|---|
| 1 | Demolition | Demolition | 10/1/2019 | 11/15/2019 | 6 | 40 | |
| 2 | Site Preparation | Site Preparation | 5/1/2020 | 6/2/2020 | 6 | 28 | |
| 3 | Grading | Grading | 6/3/2020 | 7/18/2020 | 6 | 40 | |
| 4 | Building Construction | Building Construction | 7/19/2020 | 5/18/2023 | 6 | 886 | |
| 5 | Paving | Paving | 5/19/2023 | 6/1/2023 | 6 | 12 | |
| 6 | Architectural Coating | Architectural Coating | 5/19/2023 | 6/8/2023 | 6 | 18 | |

**Acres of Grading (Site Preparation Phase): 28**

**Acres of Grading (Grading Phase): 30**

**Acres of Paving: 0**

**Residential Indoor: 874,800; Residential Outdoor: 291,600; Non-Residential Indoor: 33,000; Non-Residential Outdoor: 11,000; Striped Parking Area: 12,984 (Architectural Coating – sqft)**

**<u>OffRoad Equipment</u>**

7940 Lankershim Boulevard - without PDFs - Los Angeles-South Coast County, Annual

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|---|---|---|---|---|---|
| Demolition | Concrete/Industrial Saws | 1 | 6.00 | 81 | 0.73 |
| Demolition | Excavators | 2 | 8.00 | 158 | 0.38 |
| Demolition | Off-Highway Trucks | 1 | 2.00 | 402 | 0.38 |
| Demolition | Rubber Tired Dozers | 2 | 8.00 | 247 | 0.40 |
| Site Preparation | Graders | 1 | 8.00 | 187 | 0.41 |
| Site Preparation | Off-Highway Trucks | 1 | 4.00 | 402 | 0.38 |
| Site Preparation | Rubber Tired Dozers | 1 | 4.00 | 247 | 0.40 |
| Site Preparation | Scrapers | 1 | 4.00 | 367 | 0.48 |
| Site Preparation | Tractors/Loaders/Backhoes | 1 | 8.00 | 97 | 0.37 |
| Grading | Excavators | 1 | 4.00 | 158 | 0.38 |
| Grading | Graders | 1 | 4.00 | 187 | 0.41 |
| Grading | Off-Highway Trucks | 2 | 4.00 | 402 | 0.38 |
| Grading | Rubber Tired Dozers | 1 | 8.00 | 247 | 0.40 |
| Grading | Scrapers | 1 | 4.00 | 367 | 0.48 |
| Grading | Tractors/Loaders/Backhoes | 1 | 8.00 | 97 | 0.37 |
| Building Construction | Cranes | 1 | 8.00 | 231 | 0.29 |
| Building Construction | Forklifts | 1 | 6.00 | 89 | 0.20 |
| Building Construction | Generator Sets | 1 | 6.00 | 84 | 0.74 |
| Building Construction | Tractors/Loaders/Backhoes | 1 | 8.00 | 97 | 0.37 |
| Building Construction | Welders | 1 | 6.00 | 46 | 0.45 |
| Paving | Cement and Mortar Mixers | 1 | 6.00 | 9 | 0.56 |
| Paving | Pavers | 1 | 8.00 | 130 | 0.42 |
| Paving | Paving Equipment | 1 | 6.00 | 132 | 0.36 |
| Paving | Rollers | 1 | 8.00 | 80 | 0.38 |
| Paving | Tractors/Loaders/Backhoes | 1 | 6.00 | 97 | 0.37 |
| Architectural Coating | Air Compressors | 1 | 8.00 | 78 | 0.48 |

**Trips and VMT**

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|
| Demolition | 6 | 12.00 | 3.00 | 280.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Site Preparation | 5 | 10.00 | 17.00 | 924.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Grading | 7 | 14.00 | 55.00 | 11,125.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Building Construction | 5 | 85.00 | 3.00 | 10,632.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Paving | 5 | 10.00 | 1.00 | 24.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Architectural Coating | 1 | 5.00 | 1.00 | 18.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |

## 3.1 Mitigation Measures Construction

Water Exposed Area

## 3.2 Demolition - 2019

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 0.0388 | 0.0000 | 0.0388 | 5.8800e-003 | 0.0000 | 5.8800e-003 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0663 | 0.6800 | 0.3774 | 7.1000e-004 | | 0.0335 | 0.0335 | | 0.0311 | 0.0311 | 0.0000 | 63.2224 | 63.2224 | 0.0180 | 0.0000 | 63.6729 |
| **Total** | **0.0663** | **0.6800** | **0.3774** | **7.1000e-004** | **0.0388** | **0.0335** | **0.0723** | **5.8800e-003** | **0.0311** | **0.0370** | **0.0000** | **63.2224** | **63.2224** | **0.0180** | **0.0000** | **63.6729** |

## 3.2 Demolition - 2019

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 1.3300e-003 | 0.0443 | 9.4100e-003 | 1.1000e-004 | 2.4100e-003 | 1.6000e-004 | 2.5600e-003 | 6.6000e-004 | 1.5000e-004 | 8.1000e-004 | 0.0000 | 10.9016 | 10.9016 | 7.7000e-004 | 0.0000 | 10.9208 |
| Vendor | 2.5000e-004 | 7.0900e-003 | 1.9400e-003 | 2.0000e-005 | 3.8000e-004 | 4.0000e-005 | 4.2000e-004 | 1.1000e-004 | 4.0000e-005 | 1.5000e-004 | 0.0000 | 1.5004 | 1.5004 | 1.0000e-004 | 0.0000 | 1.5029 |
| Worker | 1.2000e-003 | 1.0000e-003 | 0.0109 | 3.0000e-005 | 2.6300e-003 | 2.0000e-005 | 2.6500e-003 | 7.0000e-004 | 2.0000e-005 | 7.2000e-004 | 0.0000 | 2.5281 | 2.5281 | 9.0000e-005 | 0.0000 | 2.5302 |
| **Total** | **2.7800e-003** | **0.0524** | **0.0223** | **1.6000e-004** | **5.4200e-003** | **2.2000e-004** | **5.6300e-003** | **1.4700e-003** | **2.1000e-004** | **1.6800e-003** | **0.0000** | **14.9301** | **14.9301** | **9.6000e-004** | **0.0000** | **14.9539** |

### 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 | | | | | 0.0152 | 0.0000 | 0.0152 | 2.2900e-003 | 0.0000 | 2.2900e-003 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0663 | 0.6800 | 0.3774 | 7.1000e-004 | | 0.0335 | 0.0335 | | 0.0311 | 0.0311 | 0.0000 | 63.2224 | 63.2224 | 0.0180 | 0.0000 | 63.6728 |
| **Total** | **0.0663** | **0.6800** | **0.3774** | **7.1000e-004** | **0.0152** | **0.0335** | **0.0486** | **2.2900e-003** | **0.0311** | **0.0334** | **0.0000** | **63.2224** | **63.2224** | **0.0180** | **0.0000** | **63.6728** |

## 3.2 Demolition - 2019

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 1.3300e-003 | 0.0443 | 9.4100e-003 | 1.1000e-004 | 2.4100e-003 | 1.6000e-004 | 2.5600e-003 | 6.6000e-004 | 1.5000e-004 | 8.1000e-004 | 0.0000 | 10.9016 | 10.9016 | 7.7000e-004 | 0.0000 | 10.9208 |
| Vendor | 2.5000e-004 | 7.0900e-003 | 1.9400e-003 | 2.0000e-005 | 3.8000e-004 | 4.0000e-005 | 4.2000e-004 | 1.1000e-004 | 4.0000e-005 | 1.5000e-004 | 0.0000 | 1.5004 | 1.5004 | 1.0000e-004 | 0.0000 | 1.5029 |
| Worker | 1.2000e-003 | 1.0000e-003 | 0.0109 | 3.0000e-005 | 2.6300e-003 | 2.0000e-005 | 2.6500e-003 | 7.0000e-004 | 2.0000e-005 | 7.2000e-004 | 0.0000 | 2.5281 | 2.5281 | 9.0000e-005 | 0.0000 | 2.5302 |
| **Total** | **2.7800e-003** | **0.0524** | **0.0223** | **1.6000e-004** | **5.4200e-003** | **2.2000e-004** | **5.6300e-003** | **1.4700e-003** | **2.1000e-004** | **1.6800e-003** | **0.0000** | **14.9301** | **14.9301** | **9.6000e-004** | **0.0000** | **14.9539** |

## 3.3 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 | | | | | 0.0570 | 0.0000 | 0.0570 | 0.0248 | 0.0000 | 0.0248 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0287 | 0.3239 | 0.1651 | 3.9000e-004 | | 0.0134 | 0.0134 | | 0.0123 | 0.0123 | 0.0000 | 34.6723 | 34.6723 | 0.0112 | 0.0000 | 34.9527 |
| **Total** | **0.0287** | **0.3239** | **0.1651** | **3.9000e-004** | **0.0570** | **0.0134** | **0.0704** | **0.0248** | **0.0123** | **0.0371** | **0.0000** | **34.6723** | **34.6723** | **0.0112** | **0.0000** | **34.9527** |

## 3.3 Site Preparation - 2020

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 4.0800e-003 | 0.1372 | 0.0302 | 3.6000e-004 | 7.9400e-003 | 4.3000e-004 | 8.3700e-003 | 2.1800e-003 | 4.1000e-004 | 2.5900e-003 | 0.0000 | 35.6101 | 35.6101 | 2.4800e-003 | 0.0000 | 35.6722 |
| Vendor | 8.6000e-004 | 0.0258 | 6.9800e-003 | 6.0000e-005 | 1.5000e-003 | 1.2000e-004 | 1.6200e-003 | 4.3000e-004 | 1.1000e-004 | 5.5000e-004 | 0.0000 | 5.9125 | 5.9125 | 3.8000e-004 | 0.0000 | 5.9219 |
| Worker | 6.5000e-004 | 5.2000e-004 | 5.7600e-003 | 2.0000e-005 | 1.5300e-003 | 1.0000e-005 | 1.5500e-003 | 4.1000e-004 | 1.0000e-005 | 4.2000e-004 | 0.0000 | 1.4299 | 1.4299 | 5.0000e-005 | 0.0000 | 1.4310 |
| **Total** | **5.5900e-003** | **0.1635** | **0.0430** | **4.4000e-004** | **0.0110** | **5.6000e-004** | **0.0115** | **3.0200e-003** | **5.3000e-004** | **3.5600e-003** | **0.0000** | **42.9526** | **42.9526** | **2.9100e-003** | **0.0000** | **43.0251** |

### 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 | | | | | 0.0222 | 0.0000 | 0.0222 | 9.6600e-003 | 0.0000 | 9.6600e-003 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0287 | 0.3239 | 0.1651 | 3.9000e-004 | | 0.0134 | 0.0134 | | 0.0123 | 0.0123 | 0.0000 | 34.6723 | 34.6723 | 0.0112 | 0.0000 | 34.9526 |
| **Total** | **0.0287** | **0.3239** | **0.1651** | **3.9000e-004** | **0.0222** | **0.0134** | **0.0356** | **9.6600e-003** | **0.0123** | **0.0220** | **0.0000** | **34.6723** | **34.6723** | **0.0112** | **0.0000** | **34.9526** |

## 3.3 Site Preparation - 2020

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 4.0800e-003 | 0.1372 | 0.0302 | 3.6000e-004 | 7.9400e-003 | 4.3000e-004 | 8.3700e-003 | 2.1800e-003 | 4.1000e-004 | 2.5900e-003 | 0.0000 | 35.6101 | 35.6101 | 2.4800e-003 | 0.0000 | 35.6722 |
| Vendor | 8.6000e-004 | 0.0258 | 6.9800e-003 | 6.0000e-005 | 1.5000e-003 | 1.2000e-004 | 1.6200e-003 | 4.3000e-004 | 1.1000e-004 | 5.5000e-004 | 0.0000 | 5.9125 | 5.9125 | 3.8000e-004 | 0.0000 | 5.9219 |
| Worker | 6.5000e-004 | 5.2000e-004 | 5.7600e-003 | 2.0000e-005 | 1.5300e-003 | 1.0000e-005 | 1.5500e-003 | 4.1000e-004 | 1.0000e-005 | 4.2000e-004 | 0.0000 | 1.4299 | 1.4299 | 5.0000e-005 | 0.0000 | 1.4310 |
| **Total** | **5.5900e-003** | **0.1635** | **0.0430** | **4.4000e-004** | **0.0110** | **5.6000e-004** | **0.0115** | **3.0200e-003** | **5.3000e-004** | **3.5600e-003** | **0.0000** | **42.9526** | **42.9526** | **2.9100e-003** | **0.0000** | **43.0251** |

## 3.4 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 | | | | | 0.1414 | 0.0000 | 0.1414 | 0.0687 | 0.0000 | 0.0687 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0562 | 0.6001 | 0.3298 | 7.7000e-004 | | 0.0261 | 0.0261 | | 0.0241 | 0.0241 | 0.0000 | 67.3432 | 67.3432 | 0.0218 | 0.0000 | 67.8877 |
| **Total** | **0.0562** | **0.6001** | **0.3298** | **7.7000e-004** | **0.1414** | **0.0261** | **0.1675** | **0.0687** | **0.0241** | **0.0927** | **0.0000** | **67.3432** | **67.3432** | **0.0218** | **0.0000** | **67.8877** |

## 3.4 Grading - 2020

### 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 | 0.0491 | 1.6519 | 0.3641 | 4.3600e-003 | 0.0956 | 5.1400e-003 | 0.1007 | 0.0263 | 4.9200e-003 | 0.0312 | 0.0000 | 428.7476 | 428.7476 | 0.0299 | 0.0000 | 429.4942 |
| Vendor | 3.9900e-003 | 0.1192 | 0.0323 | 2.8000e-004 | 6.9300e-003 | 5.5000e-004 | 7.4800e-003 | 2.0000e-003 | 5.3000e-004 | 2.5300e-003 | 0.0000 | 27.3269 | 27.3269 | 1.7400e-003 | 0.0000 | 27.3703 |
| Worker | 1.2900e-003 | 1.0400e-003 | 0.0115 | 3.0000e-005 | 3.0700e-003 | 3.0000e-005 | 3.0900e-003 | 8.1000e-004 | 2.0000e-005 | 8.4000e-004 | 0.0000 | 2.8598 | 2.8598 | 9.0000e-005 | 0.0000 | 2.8620 |
| **Total** | **0.0544** | **1.7721** | **0.4079** | **4.6700e-003** | **0.1056** | **5.7200e-003** | **0.1113** | **0.0291** | **5.4700e-003** | **0.0345** | **0.0000** | **458.9343** | **458.9343** | **0.0317** | **0.0000** | **459.7265** |

### 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 | | | | | 0.0551 | 0.0000 | 0.0551 | 0.0268 | 0.0000 | 0.0268 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0562 | 0.6001 | 0.3298 | 7.7000e-004 | | 0.0261 | 0.0261 | | 0.0241 | 0.0241 | 0.0000 | 67.3431 | 67.3431 | 0.0218 | 0.0000 | 67.8876 |
| **Total** | **0.0562** | **0.6001** | **0.3298** | **7.7000e-004** | **0.0551** | **0.0261** | **0.0813** | **0.0268** | **0.0241** | **0.0508** | **0.0000** | **67.3431** | **67.3431** | **0.0218** | **0.0000** | **67.8876** |

## 3.4 Grading - 2020

**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 | 0.0491 | 1.6519 | 0.3641 | 4.3600e-003 | 0.0956 | 5.1400e-003 | 0.1007 | 0.0263 | 4.9200e-003 | 0.0312 | 0.0000 | 428.7476 | 428.7476 | 0.0299 | 0.0000 | 429.4942 |
| Vendor | 3.9900e-003 | 0.1192 | 0.0323 | 2.8000e-004 | 6.9300e-003 | 5.5000e-004 | 7.4800e-003 | 2.0000e-003 | 5.3000e-004 | 2.5300e-003 | 0.0000 | 27.3269 | 27.3269 | 1.7400e-003 | 0.0000 | 27.3703 |
| Worker | 1.2900e-003 | 1.0400e-003 | 0.0115 | 3.0000e-005 | 3.0700e-003 | 3.0000e-005 | 3.0900e-003 | 8.1000e-004 | 2.0000e-005 | 8.4000e-004 | 0.0000 | 2.8598 | 2.8598 | 9.0000e-005 | 0.0000 | 2.8620 |
| **Total** | **0.0544** | **1.7721** | **0.4079** | **4.6700e-003** | **0.1056** | **5.7200e-003** | **0.1113** | **0.0291** | **5.4700e-003** | **0.0345** | **0.0000** | **458.9343** | **458.9343** | **0.0317** | **0.0000** | **459.7265** |

## 3.5 Building Construction - 2020

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.0942 | 0.8703 | 0.6663 | 1.2000e-003 | | 0.0455 | 0.0455 | | 0.0430 | 0.0430 | 0.0000 | 102.6353 | 102.6353 | 0.0234 | 0.0000 | 103.2202 |
| **Total** | **0.0942** | **0.8703** | **0.6663** | **1.2000e-003** | | **0.0455** | **0.0455** | | **0.0430** | **0.0430** | **0.0000** | **102.6353** | **102.6353** | **0.0234** | **0.0000** | **103.2202** |

## 3.5 Building Construction - 2020

### 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 | 7.5200e-003 | 0.2530 | 0.0558 | 6.7000e-004 | 0.0723 | 7.9000e-004 | 0.0731 | 0.0182 | 7.5000e-004 | 0.0189 | 0.0000 | 65.6707 | 65.6707 | 4.5700e-003 | 0.0000 | 65.7850 |
| Vendor | 7.7000e-004 | 0.0231 | 6.2500e-003 | 5.0000e-005 | 1.3400e-003 | 1.1000e-004 | 1.4500e-003 | 3.9000e-004 | 1.0000e-004 | 4.9000e-004 | 0.0000 | 5.2915 | 5.2915 | 3.4000e-004 | 0.0000 | 5.2999 |
| Worker | 0.0279 | 0.0225 | 0.2484 | 6.8000e-004 | 0.0661 | 5.6000e-004 | 0.0667 | 0.0176 | 5.2000e-004 | 0.0181 | 0.0000 | 61.6385 | 61.6385 | 1.9400e-003 | 0.0000 | 61.6871 |
| **Total** | **0.0362** | **0.2986** | **0.3104** | **1.4000e-003** | **0.1398** | **1.4600e-003** | **0.1413** | **0.0361** | **1.3700e-003** | **0.0375** | **0.0000** | **132.6006** | **132.6006** | **6.8500e-003** | **0.0000** | **132.7720** |

### 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 | 0.0942 | 0.8703 | 0.6663 | 1.2000e-003 | | 0.0455 | 0.0455 | | 0.0430 | 0.0430 | 0.0000 | 102.6352 | 102.6352 | 0.0234 | 0.0000 | 103.2201 |
| **Total** | **0.0942** | **0.8703** | **0.6663** | **1.2000e-003** | | **0.0455** | **0.0455** | | **0.0430** | **0.0430** | **0.0000** | **102.6352** | **102.6352** | **0.0234** | **0.0000** | **103.2201** |

## 3.5 Building Construction - 2020

**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 | 7.5200e-003 | 0.2530 | 0.0558 | 6.7000e-004 | 0.0723 | 7.9000e-004 | 0.0731 | 0.0182 | 7.5000e-004 | 0.0189 | 0.0000 | 65.6707 | 65.6707 | 4.5700e-003 | 0.0000 | 65.7850 |
| Vendor | 7.7000e-004 | 0.0231 | 6.2500e-003 | 5.0000e-005 | 1.3400e-003 | 1.1000e-004 | 1.4500e-003 | 3.9000e-004 | 1.0000e-004 | 4.9000e-004 | 0.0000 | 5.2915 | 5.2915 | 3.4000e-004 | 0.0000 | 5.2999 |
| Worker | 0.0279 | 0.0225 | 0.2484 | 6.8000e-004 | 0.0661 | 5.6000e-004 | 0.0667 | 0.0176 | 5.2000e-004 | 0.0181 | 0.0000 | 61.6385 | 61.6385 | 1.9400e-003 | 0.0000 | 61.6871 |
| **Total** | **0.0362** | **0.2986** | **0.3104** | **1.4000e-003** | **0.1398** | **1.4600e-003** | **0.1413** | **0.0361** | **1.3700e-003** | **0.0375** | **0.0000** | **132.6006** | **132.6006** | **6.8500e-003** | **0.0000** | **132.7720** |

## 3.5 Building Construction - 2021

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.1866 | 1.7428 | 1.4354 | 2.6400e-003 | | 0.0865 | 0.0865 | | 0.0819 | 0.0819 | 0.0000 | 226.2428 | 226.2428 | 0.0508 | 0.0000 | 227.5136 |
| **Total** | **0.1866** | **1.7428** | **1.4354** | **2.6400e-003** | | **0.0865** | **0.0865** | | **0.0819** | **0.0819** | **0.0000** | **226.2428** | **226.2428** | **0.0508** | **0.0000** | **227.5136** |

## 3.5 Building Construction - 2021

### 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 | 0.0158 | 0.5199 | 0.1212 | 1.4500e-003 | 0.0767 | 1.5600e-003 | 0.0783 | 0.0198 | 1.4900e-003 | 0.0213 | 0.0000 | 143.1592 | 143.1592 | 9.9400e-003 | 0.0000 | 143.4076 |
| Vendor | 1.4600e-003 | 0.0463 | 0.0126 | 1.2000e-004 | 2.9600e-003 | 9.0000e-005 | 3.0500e-003 | 8.5000e-004 | 9.0000e-005 | 9.4000e-004 | 0.0000 | 11.5730 | 11.5730 | 7.1000e-004 | 0.0000 | 11.5908 |
| Worker | 0.0572 | 0.0446 | 0.5031 | 1.4600e-003 | 0.1458 | 1.2000e-003 | 0.1470 | 0.0387 | 1.1100e-003 | 0.0398 | 0.0000 | 131.5507 | 131.5507 | 3.8700e-003 | 0.0000 | 131.6475 |
| **Total** | **0.0745** | **0.6108** | **0.6368** | **3.0300e-003** | **0.2254** | **2.8500e-003** | **0.2283** | **0.0593** | **2.6900e-003** | **0.0620** | **0.0000** | **286.2829** | **286.2829** | **0.0145** | **0.0000** | **286.6459** |

### 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 | 0.1866 | 1.7428 | 1.4354 | 2.6400e-003 | | 0.0865 | 0.0865 | | 0.0819 | 0.0819 | 0.0000 | 226.2425 | 226.2425 | 0.0508 | 0.0000 | 227.5133 |
| **Total** | **0.1866** | **1.7428** | **1.4354** | **2.6400e-003** | | **0.0865** | **0.0865** | | **0.0819** | **0.0819** | **0.0000** | **226.2425** | **226.2425** | **0.0508** | **0.0000** | **227.5133** |

## 3.5 Building Construction - 2021

**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 | 0.0158 | 0.5199 | 0.1212 | 1.4500e-003 | 0.0767 | 1.5600e-003 | 0.0783 | 0.0198 | 1.4900e-003 | 0.0213 | 0.0000 | 143.1592 | 143.1592 | 9.9400e-003 | 0.0000 | 143.4076 |
| Vendor | 1.4600e-003 | 0.0463 | 0.0126 | 1.2000e-004 | 2.9600e-003 | 9.0000e-005 | 3.0500e-003 | 8.5000e-004 | 9.0000e-005 | 9.4000e-004 | 0.0000 | 11.5730 | 11.5730 | 7.1000e-004 | 0.0000 | 11.5908 |
| Worker | 0.0572 | 0.0446 | 0.5031 | 1.4600e-003 | 0.1458 | 1.2000e-003 | 0.1470 | 0.0387 | 1.1100e-003 | 0.0398 | 0.0000 | 131.5507 | 131.5507 | 3.8700e-003 | 0.0000 | 131.6475 |
| **Total** | **0.0745** | **0.6108** | **0.6368** | **3.0300e-003** | **0.2254** | **2.8500e-003** | **0.2283** | **0.0593** | **2.6900e-003** | **0.0620** | **0.0000** | **286.2829** | **286.2829** | **0.0145** | **0.0000** | **286.6459** |

## 3.5 Building Construction - 2022

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.1687 | 1.5563 | 1.4123 | 2.6400e-003 | | 0.0742 | 0.0742 | | 0.0703 | 0.0703 | 0.0000 | 226.3039 | 226.3039 | 0.0504 | 0.0000 | 227.5635 |
| **Total** | **0.1687** | **1.5563** | **1.4123** | **2.6400e-003** | | **0.0742** | **0.0742** | | **0.0703** | **0.0703** | **0.0000** | **226.3039** | **226.3039** | **0.0504** | **0.0000** | **227.5635** |

## 3.5 Building Construction - 2022

### 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 | 0.0151 | 0.4825 | 0.1199 | 1.4400e-003 | 0.0767 | 1.3500e-003 | 0.0781 | 0.0198 | 1.2900e-003 | 0.0211 | 0.0000 | 141.4568 | 141.4568 | 9.7800e-003 | 0.0000 | 141.7014 |
| Vendor | 1.3700e-003 | 0.0440 | 0.0119 | 1.2000e-004 | 2.9600e-003 | 8.0000e-005 | 3.0400e-003 | 8.5000e-004 | 8.0000e-005 | 9.3000e-004 | 0.0000 | 11.4714 | 11.4714 | 6.9000e-004 | 0.0000 | 11.4885 |
| Worker | 0.0537 | 0.0403 | 0.4635 | 1.4000e-003 | 0.1458 | 1.1600e-003 | 0.1469 | 0.0387 | 1.0700e-003 | 0.0398 | 0.0000 | 126.9264 | 126.9264 | 3.5000e-003 | 0.0000 | 127.0138 |
| **Total** | **0.0701** | **0.5668** | **0.5953** | **2.9600e-003** | **0.2254** | **2.5900e-003** | **0.2280** | **0.0593** | **2.4400e-003** | **0.0618** | **0.0000** | **279.8546** | **279.8546** | **0.0140** | **0.0000** | **280.2037** |

### 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 | 0.1687 | 1.5563 | 1.4123 | 2.6400e-003 | | 0.0742 | 0.0742 | | 0.0703 | 0.0703 | 0.0000 | 226.3036 | 226.3036 | 0.0504 | 0.0000 | 227.5633 |
| **Total** | **0.1687** | **1.5563** | **1.4123** | **2.6400e-003** | | **0.0742** | **0.0742** | | **0.0703** | **0.0703** | **0.0000** | **226.3036** | **226.3036** | **0.0504** | **0.0000** | **227.5633** |

## 3.5 Building Construction - 2022

**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 | 0.0151 | 0.4825 | 0.1199 | 1.4400e-003 | 0.0767 | 1.3500e-003 | 0.0781 | 0.0198 | 1.2900e-003 | 0.0211 | 0.0000 | 141.4568 | 141.4568 | 9.7800e-003 | 0.0000 | 141.7014 |
| Vendor | 1.3700e-003 | 0.0440 | 0.0119 | 1.2000e-004 | 2.9600e-003 | 8.0000e-005 | 3.0400e-003 | 8.5000e-004 | 8.0000e-005 | 9.3000e-004 | 0.0000 | 11.4714 | 11.4714 | 6.9000e-004 | 0.0000 | 11.4885 |
| Worker | 0.0537 | 0.0403 | 0.4635 | 1.4000e-003 | 0.1458 | 1.1600e-003 | 0.1469 | 0.0387 | 1.0700e-003 | 0.0398 | 0.0000 | 126.9264 | 126.9264 | 3.5000e-003 | 0.0000 | 127.0138 |
| **Total** | **0.0701** | **0.5668** | **0.5953** | **2.9600e-003** | **0.2254** | **2.5900e-003** | **0.2280** | **0.0593** | **2.4400e-003** | **0.0618** | **0.0000** | **279.8546** | **279.8546** | **0.0140** | **0.0000** | **280.2037** |

## 3.5 Building Construction - 2023

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.0590 | 0.5412 | 0.5272 | 1.0000e-003 | | 0.0246 | 0.0246 | | 0.0233 | 0.0233 | 0.0000 | 85.3333 | 85.3333 | 0.0188 | 0.0000 | 85.8039 |
| **Total** | **0.0590** | **0.5412** | **0.5272** | **1.0000e-003** | | **0.0246** | **0.0246** | | **0.0233** | **0.0233** | **0.0000** | **85.3333** | **85.3333** | **0.0188** | **0.0000** | **85.8039** |

## 3.5 Building Construction - 2023

### 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 | 3.7200e-003 | 0.1194 | 0.0410 | 5.2000e-004 | 0.0717 | 2.1000e-004 | 0.0719 | 0.0180 | 2.0000e-004 | 0.0182 | 0.0000 | 51.1078 | 51.1078 | 3.4200e-003 | 0.0000 | 51.1934 |
| Vendor | 3.8000e-004 | 0.0125 | 4.0200e-003 | 4.0000e-005 | 1.1100e-003 | 1.0000e-005 | 1.1300e-003 | 3.2000e-004 | 1.0000e-005 | 3.4000e-004 | 0.0000 | 4.1893 | 4.1893 | 2.3000e-004 | 0.0000 | 4.1950 |
| Worker | 0.0190 | 0.0137 | 0.1607 | 5.1000e-004 | 0.0550 | 4.3000e-004 | 0.0554 | 0.0146 | 3.9000e-004 | 0.0150 | 0.0000 | 46.0999 | 46.0999 | 1.1900e-003 | 0.0000 | 46.1295 |
| **Total** | **0.0231** | **0.1456** | **0.2057** | **1.0700e-003** | **0.1278** | **6.5000e-004** | **0.1284** | **0.0329** | **6.0000e-004** | **0.0335** | **0.0000** | **101.3969** | **101.3969** | **4.8400e-003** | **0.0000** | **101.5179** |

### 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 | 0.0590 | 0.5412 | 0.5272 | 1.0000e-003 | | 0.0246 | 0.0246 | | 0.0233 | 0.0233 | 0.0000 | 85.3332 | 85.3332 | 0.0188 | 0.0000 | 85.8038 |
| **Total** | **0.0590** | **0.5412** | **0.5272** | **1.0000e-003** | | **0.0246** | **0.0246** | | **0.0233** | **0.0233** | **0.0000** | **85.3332** | **85.3332** | **0.0188** | **0.0000** | **85.8038** |

## 3.5 Building Construction - 2023

**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 | 3.7200e-003 | 0.1194 | 0.0410 | 5.2000e-004 | 0.0717 | 2.1000e-004 | 0.0719 | 0.0180 | 2.0000e-004 | 0.0182 | 0.0000 | 51.1078 | 51.1078 | 3.4200e-003 | 0.0000 | 51.1934 |
| Vendor | 3.8000e-004 | 0.0125 | 4.0200e-003 | 4.0000e-005 | 1.1100e-003 | 1.0000e-005 | 1.1300e-003 | 3.2000e-004 | 1.0000e-005 | 3.4000e-004 | 0.0000 | 4.1893 | 4.1893 | 2.3000e-004 | 0.0000 | 4.1950 |
| Worker | 0.0190 | 0.0137 | 0.1607 | 5.1000e-004 | 0.0550 | 4.3000e-004 | 0.0554 | 0.0146 | 3.9000e-004 | 0.0150 | 0.0000 | 46.0999 | 46.0999 | 1.1900e-003 | 0.0000 | 46.1295 |
| **Total** | **0.0231** | **0.1456** | **0.2057** | **1.0700e-003** | **0.1278** | **6.5000e-004** | **0.1284** | **0.0329** | **6.0000e-004** | **0.0335** | **0.0000** | **101.3969** | **101.3969** | **4.8400e-003** | **0.0000** | **101.5179** |

## 3.6 Paving - 2023

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 3.7900e-003 | 0.0367 | 0.0514 | 8.0000e-005 | | 1.8200e-003 | 1.8200e-003 | | 1.6800e-003 | 1.6800e-003 | 0.0000 | 6.9086 | 6.9086 | 2.1900e-003 | 0.0000 | 6.9634 |
| Paving | 0.0000 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **3.7900e-003** | **0.0367** | **0.0514** | **8.0000e-005** | | **1.8200e-003** | **1.8200e-003** | | **1.6800e-003** | **1.6800e-003** | **0.0000** | **6.9086** | **6.9086** | **2.1900e-003** | **0.0000** | **6.9634** |

## 3.6 Paving - 2023

### 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 | 6.0000e-005 | 2.0200e-003 | 6.9000e-004 | 1.0000e-005 | 2.1000e-004 | 0.0000 | 2.1000e-004 | 6.0000e-005 | 0.0000 | 6.0000e-005 | 0.0000 | 0.8662 | 0.8662 | 6.0000e-005 | 0.0000 | 0.8677 |
| Vendor | 1.0000e-005 | 4.3000e-004 | 1.4000e-004 | 0.0000 | 4.0000e-005 | 0.0000 | 4.0000e-005 | 1.0000e-005 | 0.0000 | 1.0000e-005 | 0.0000 | 0.1420 | 0.1420 | 1.0000e-005 | 0.0000 | 0.1422 |
| Worker | 2.3000e-004 | 1.6000e-004 | 1.9200e-003 | 1.0000e-005 | 6.6000e-004 | 1.0000e-005 | 6.6000e-004 | 1.7000e-004 | 0.0000 | 1.8000e-004 | 0.0000 | 0.5515 | 0.5515 | 1.0000e-005 | 0.0000 | 0.5519 |
| **Total** | **3.0000e-004** | **2.6100e-003** | **2.7500e-003** | **2.0000e-005** | **9.1000e-004** | **1.0000e-005** | **9.1000e-004** | **2.4000e-004** | **0.0000** | **2.5000e-004** | **0.0000** | **1.5598** | **1.5598** | **8.0000e-005** | **0.0000** | **1.5618** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 3.7900e-003 | 0.0367 | 0.0514 | 8.0000e-005 | | 1.8200e-003 | 1.8200e-003 | | 1.6800e-003 | 1.6800e-003 | 0.0000 | 6.9086 | 6.9086 | 2.1900e-003 | 0.0000 | 6.9634 |
| Paving | 0.0000 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **3.7900e-003** | **0.0367** | **0.0514** | **8.0000e-005** | | **1.8200e-003** | **1.8200e-003** | | **1.6800e-003** | **1.6800e-003** | **0.0000** | **6.9086** | **6.9086** | **2.1900e-003** | **0.0000** | **6.9634** |

## 3.6 Paving - 2023

**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 | 6.0000e-005 | 2.0200e-003 | 6.9000e-004 | 1.0000e-005 | 2.1000e-004 | 0.0000 | 2.1000e-004 | 6.0000e-005 | 0.0000 | 6.0000e-005 | 0.0000 | 0.8662 | 0.8662 | 6.0000e-005 | 0.0000 | 0.8677 |
| Vendor | 1.0000e-005 | 4.3000e-004 | 1.4000e-004 | 0.0000 | 4.0000e-005 | 0.0000 | 4.0000e-005 | 1.0000e-005 | 0.0000 | 1.0000e-005 | 0.0000 | 0.1420 | 0.1420 | 1.0000e-005 | 0.0000 | 0.1422 |
| Worker | 2.3000e-004 | 1.6000e-004 | 1.9200e-003 | 1.0000e-005 | 6.6000e-004 | 1.0000e-005 | 6.6000e-004 | 1.7000e-004 | 0.0000 | 1.8000e-004 | 0.0000 | 0.5515 | 0.5515 | 1.0000e-005 | 0.0000 | 0.5519 |
| **Total** | **3.0000e-004** | **2.6100e-003** | **2.7500e-003** | **2.0000e-005** | **9.1000e-004** | **1.0000e-005** | **9.1000e-004** | **2.4000e-004** | **0.0000** | **2.5000e-004** | **0.0000** | **1.5598** | **1.5598** | **8.0000e-005** | **0.0000** | **1.5618** |

## 3.7 Architectural Coating - 2023

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Archit. Coating | 1.4326 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 2.3000e-003 | 0.0156 | 0.0217 | 4.0000e-005 | | 8.5000e-004 | 8.5000e-004 | | 8.5000e-004 | 8.5000e-004 | 0.0000 | 3.0639 | 3.0639 | 1.8000e-004 | 0.0000 | 3.0685 |
| **Total** | **1.4349** | **0.0156** | **0.0217** | **4.0000e-005** | | **8.5000e-004** | **8.5000e-004** | | **8.5000e-004** | **8.5000e-004** | **0.0000** | **3.0639** | **3.0639** | **1.8000e-004** | **0.0000** | **3.0685** |

## 3.7 Architectural Coating - 2023

**Unmitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 5.0000e-005 | 1.5200e-003 | 5.2000e-004 | 1.0000e-005 | 1.5000e-004 | 0.0000 | 1.6000e-004 | 4.0000e-005 | 0.0000 | 5.0000e-005 | 0.0000 | 0.6497 | 0.6497 | 4.0000e-005 | 0.0000 | 0.6508 |
| Vendor | 2.0000e-005 | 6.4000e-004 | 2.0000e-004 | 0.0000 | 6.0000e-005 | 0.0000 | 6.0000e-005 | 2.0000e-005 | 0.0000 | 2.0000e-005 | 0.0000 | 0.2130 | 0.2130 | 1.0000e-005 | 0.0000 | 0.2133 |
| Worker | 1.7000e-004 | 1.2000e-004 | 1.4400e-003 | 0.0000 | 4.9000e-004 | 0.0000 | 5.0000e-004 | 1.3000e-004 | 0.0000 | 1.3000e-004 | 0.0000 | 0.4137 | 0.4137 | 1.0000e-005 | 0.0000 | 0.4139 |
| **Total** | **2.4000e-004** | **2.2800e-003** | **2.1600e-003** | **1.0000e-005** | **7.0000e-004** | **0.0000** | **7.2000e-004** | **1.9000e-004** | **0.0000** | **2.0000e-004** | **0.0000** | **1.2763** | **1.2763** | **6.0000e-005** | **0.0000** | **1.2780** |

**Mitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Archit. Coating | 1.4326 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 2.3000e-003 | 0.0156 | 0.0217 | 4.0000e-005 | | 8.5000e-004 | 8.5000e-004 | | 8.5000e-004 | 8.5000e-004 | 0.0000 | 3.0639 | 3.0639 | 1.8000e-004 | 0.0000 | 3.0685 |
| **Total** | **1.4349** | **0.0156** | **0.0217** | **4.0000e-005** | | **8.5000e-004** | **8.5000e-004** | | **8.5000e-004** | **8.5000e-004** | **0.0000** | **3.0639** | **3.0639** | **1.8000e-004** | **0.0000** | **3.0685** |

## 3.7 Architectural Coating - 2023

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 5.0000e-005 | 1.5200e-003 | 5.2000e-004 | 1.0000e-005 | 1.5000e-004 | 0.0000 | 1.6000e-004 | 4.0000e-005 | 0.0000 | 5.0000e-005 | 0.0000 | 0.6497 | 0.6497 | 4.0000e-005 | 0.0000 | 0.6508 |
| Vendor | 2.0000e-005 | 6.4000e-004 | 2.0000e-004 | 0.0000 | 6.0000e-005 | 0.0000 | 6.0000e-005 | 2.0000e-005 | 0.0000 | 2.0000e-005 | 0.0000 | 0.2130 | 0.2130 | 1.0000e-005 | 0.0000 | 0.2133 |
| Worker | 1.7000e-004 | 1.2000e-004 | 1.4400e-003 | 0.0000 | 4.9000e-004 | 0.0000 | 5.0000e-004 | 1.3000e-004 | 0.0000 | 1.3000e-004 | 0.0000 | 0.4137 | 0.4137 | 1.0000e-005 | 0.0000 | 0.4139 |
| **Total** | **2.4000e-004** | **2.2800e-003** | **2.1600e-003** | **1.0000e-005** | **7.0000e-004** | **0.0000** | **7.2000e-004** | **1.9000e-004** | **0.0000** | **2.0000e-004** | **0.0000** | **1.2763** | **1.2763** | **6.0000e-005** | **0.0000** | **1.2780** |

# 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 | 0.8860 | 3.9453 | 11.1710 | 0.0411 | 3.4583 | 0.0315 | 3.4898 | 0.9270 | 0.0293 | 0.9562 | 0.0000 | 3,802.7650 | 3,802.7650 | 0.1908 | 0.0000 | 3,807.5345 |
| Unmitigated | 0.8860 | 3.9453 | 11.1710 | 0.0411 | 3.4583 | 0.0315 | 3.4898 | 0.9270 | 0.0293 | 0.9562 | 0.0000 | 3,802.7650 | 3,802.7650 | 0.1908 | 0.0000 | 3,807.5345 |

## 4.2 Trip Summary Information

| | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|---|---|---|---|---|---|
| Land Use | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| Apartments Mid Rise | 2,116.80 | 2,116.80 | 2116.80 | 7,233,427 | 7,233,427 |
| Enclosed Parking with Elevator | 0.00 | 0.00 | 0.00 | | |
| High Turnover (Sit Down Restaurant) | 614.00 | 614.00 | 614.00 | 836,778 | 836,778 |
| Pharmacy/Drugstore with Drive Thru | 784.00 | 784.00 | 784.00 | 1,041,658 | 1,041,658 |
| Total | 3,514.80 | 3,514.80 | 3,514.80 | 9,111,863 | 9,111,863 |

## 4.3 Trip Type Information

| | Miles | | | Trip % | | | Trip Purpose % | | |
|---|---|---|---|---|---|---|---|---|---|
| Land Use | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary | Diverted | Pass-by |
| Apartments Mid Rise | 14.70 | 5.90 | 8.70 | 40.20 | 19.20 | 40.60 | 86 | 11 | 3 |
| Enclosed Parking with Elevator | 16.60 | 8.40 | 6.90 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 |
| High Turnover (Sit Down | 16.60 | 8.40 | 6.90 | 8.50 | 72.50 | 19.00 | 37 | 20 | 43 |
| Pharmacy/Drugstore with Drive | 16.60 | 8.40 | 6.90 | 7.50 | 73.50 | 19.00 | 38 | 13 | 49 |

## 4.4 Fleet Mix

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Apartments Mid Rise | 0.545842 | 0.044768 | 0.205288 | 0.119317 | 0.015350 | 0.006227 | 0.020460 | 0.031333 | 0.002546 | 0.002133 | 0.005184 | 0.000692 | 0.000862 |
| Enclosed Parking with Elevator | 0.545842 | 0.044768 | 0.205288 | 0.119317 | 0.015350 | 0.006227 | 0.020460 | 0.031333 | 0.002546 | 0.002133 | 0.005184 | 0.000692 | 0.000862 |
| High Turnover (Sit Down Restaurant) | 0.545842 | 0.044768 | 0.205288 | 0.119317 | 0.015350 | 0.006227 | 0.020460 | 0.031333 | 0.002546 | 0.002133 | 0.005184 | 0.000692 | 0.000862 |
| Pharmacy/Drugstore with Drive Thru | 0.545842 | 0.044768 | 0.205288 | 0.119317 | 0.015350 | 0.006227 | 0.020460 | 0.031333 | 0.002546 | 0.002133 | 0.005184 | 0.000692 | 0.000862 |

## 5.0 Energy Detail

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

Install Energy Efficient Appliances

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 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 | 1,072.1664 | 1,072.1664 | 0.0417 | 4.8100e-003 | 1,074.6409 |
| Electricity Unmitigated | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 1,080.7162 | 1,080.7162 | 0.0420 | 4.8500e-003 | 1,083.2104 |
| NaturalGas Mitigated | 0.0357 | 0.3102 | 0.1700 | 1.9400e-003 | | 0.0246 | 0.0246 | | 0.0246 | 0.0246 | 0.0000 | 352.8209 | 352.8209 | 6.7600e-003 | 6.4700e-003 | 354.9175 |
| NaturalGas Unmitigated | 0.0357 | 0.3102 | 0.1700 | 1.9400e-003 | | 0.0246 | 0.0246 | | 0.0246 | 0.0246 | 0.0000 | 352.8209 | 352.8209 | 6.7600e-003 | 6.4700e-003 | 354.9175 |

## 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 Mid Rise | 4.74257e+006 | 0.0256 | 0.2185 | 0.0930 | 1.3900e-003 | | 0.0177 | 0.0177 | | 0.0177 | 0.0177 | 0.0000 | 253.0818 | 253.0818 | 4.8500e-003 | 4.6400e-003 | 254.5857 |
| Enclosed Parking with Elevator | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| High Turnover (Sit Down Restaurant) | 1.84608e+006 | 9.9500e-003 | 0.0905 | 0.0760 | 5.4000e-004 | | 6.8800e-003 | 6.8800e-003 | | 6.8800e-003 | 6.8800e-003 | 0.0000 | 98.5139 | 98.5139 | 1.8900e-003 | 1.8100e-003 | 99.0993 |
| Pharmacy/Drugstore with Drive Thru | 22960 | 1.2000e-004 | 1.1300e-003 | 9.5000e-004 | 1.0000e-005 | | 9.0000e-005 | 9.0000e-005 | | 9.0000e-005 | 9.0000e-005 | 0.0000 | 1.2252 | 1.2252 | 2.0000e-005 | 2.0000e-005 | 1.2325 |
| **Total** | | **0.0356** | **0.3102** | **0.1700** | **1.9400e-003** | | **0.0246** | **0.0246** | | **0.0246** | **0.0246** | **0.0000** | **352.8209** | **352.8209** | **6.7600e-003** | **6.4700e-003** | **354.9175** |

## 5.2 Energy by Land Use - NaturalGas

**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 Mid Rise | 4.74257e+006 | 0.0256 | 0.2185 | 0.0930 | 1.3900e-003 | | 0.0177 | 0.0177 | | 0.0177 | 0.0177 | 0.0000 | 253.0818 | 253.0818 | 4.8500e-003 | 4.6400e-003 | 254.5857 |
| Enclosed Parking with Elevator | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| High Turnover (Sit Down Restaurant) | 1.84608e+006 | 9.9500e-003 | 0.0905 | 0.0760 | 5.4000e-004 | | 6.8800e-003 | 6.8800e-003 | | 6.8800e-003 | 6.8800e-003 | 0.0000 | 98.5139 | 98.5139 | 1.8900e-003 | 1.8100e-003 | 99.0993 |
| Pharmacy/Drugstore with Drive Thru | 22960 | 1.2000e-004 | 1.1300e-003 | 9.5000e-004 | 1.0000e-005 | | 9.0000e-005 | 9.0000e-005 | | 9.0000e-005 | 9.0000e-005 | 0.0000 | 1.2252 | 1.2252 | 2.0000e-005 | 2.0000e-005 | 1.2325 |
| **Total** | | **0.0356** | **0.3102** | **0.1700** | **1.9400e-003** | | **0.0246** | **0.0246** | | **0.0246** | **0.0246** | **0.0000** | **352.8209** | **352.8209** | **6.7600e-003** | **6.4700e-003** | **354.9175** |

## 5.3 Energy by Land Use - Electricity

**Unmitigated**

| | Electricity Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | kWh/yr | MT/yr | | | |
| Apartments Mid Rise | 1.75117e+006 | 531.3978 | 0.0207 | 2.3800e-003 | 532.6242 |
| Enclosed Parking with Elevator | 1.2681e+006 | 384.8103 | 0.0150 | 1.7300e-003 | 385.6985 |
| High Turnover (Sit Down Restaurant) | 353120 | 107.1554 | 4.1600e-003 | 4.8000e-004 | 107.4027 |
| Pharmacy/Drugstore with Drive Thru | 189000 | 57.3527 | 2.2300e-003 | 2.6000e-004 | 57.4850 |
| **Total** | | **1,080.7162** | **0.0420** | **4.8500e-003** | **1,083.2104** |

## 5.3 Energy by Land Use - Electricity

**Mitigated**

| | Electricity Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | kWh/yr | MT/yr | | | |
| Apartments Mid Rise | 1.72299e+006 | 522.8479 | 0.0203 | 2.3400e-003 | 524.0546 |
| Enclosed Parking with Elevator | 1.2681e+006 | 384.8103 | 0.0150 | 1.7300e-003 | 385.6985 |
| High Turnover (Sit Down Restaurant) | 353120 | 107.1554 | 4.1600e-003 | 4.8000e-004 | 107.4027 |
| Pharmacy/Drugstore with Drive Thru | 189000 | 57.3527 | 2.2300e-003 | 2.6000e-004 | 57.4850 |
| **Total** | | **1,072.1664** | **0.0417** | **4.8100e-003** | **1,074.6409** |

# 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 | 1.9331 | 0.0551 | 4.4648 | 2.6000e-004 | | 0.0250 | 0.0250 | | 0.0250 | 0.0250 | 0.0000 | 11.5177 | 11.5177 | 7.1200e-003 | 8.0000e-005 | 11.7186 |
| Unmitigated | 1.9331 | 0.0551 | 4.4648 | 2.6000e-004 | | 0.0250 | 0.0250 | | 0.0250 | 0.0250 | 0.0000 | 11.5177 | 11.5177 | 7.1200e-003 | 8.0000e-005 | 11.7186 |

## 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 | 0.1433 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Consumer Products | 1.6545 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Hearth | 4.3000e-004 | 3.6500e-003 | 1.5500e-003 | 2.0000e-005 | | 3.0000e-004 | 3.0000e-004 | | 3.0000e-004 | 3.0000e-004 | 0.0000 | 4.2264 | 4.2264 | 8.0000e-005 | 8.0000e-005 | 4.2515 |
| Landscaping | 0.1349 | 0.0514 | 4.4633 | 2.4000e-004 | | 0.0247 | 0.0247 | | 0.0247 | 0.0247 | 0.0000 | 7.2913 | 7.2913 | 7.0300e-003 | 0.0000 | 7.4671 |
| **Total** | **1.9331** | **0.0551** | **4.4648** | **2.6000e-004** | | **0.0250** | **0.0250** | | **0.0250** | **0.0250** | **0.0000** | **11.5177** | **11.5177** | **7.1100e-003** | **8.0000e-005** | **11.7186** |

## 6.2 Area by SubCategory

**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 | 0.1433 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Consumer Products | 1.6545 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Hearth | 4.3000e-004 | 3.6500e-003 | 1.5500e-003 | 2.0000e-005 | | 3.0000e-004 | 3.0000e-004 | | 3.0000e-004 | 3.0000e-004 | 0.0000 | 4.2264 | 4.2264 | 8.0000e-005 | 8.0000e-005 | 4.2515 |
| Landscaping | 0.1349 | 0.0514 | 4.4633 | 2.4000e-004 | | 0.0247 | 0.0247 | | 0.0247 | 0.0247 | 0.0000 | 7.2913 | 7.2913 | 7.0300e-003 | 0.0000 | 7.4671 |
| **Total** | **1.9331** | **0.0551** | **4.4648** | **2.6000e-004** | | **0.0250** | **0.0250** | | **0.0250** | **0.0250** | **0.0000** | **11.5177** | **11.5177** | **7.1100e-003** | **8.0000e-005** | **11.7186** |

# 7.0 Water Detail

## 7.1 Mitigation Measures Water

Apply Water Conservation Strategy

| | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|
| Category | MT/yr | | | |
| Mitigated | 170.1591 | 0.8290 | 0.0202 | 196.8908 |
| Unmitigated | 197.1029 | 1.0357 | 0.0251 | 230.4816 |

## 7.2 Water by Land Use

**Unmitigated**

| | Indoor/Outdoor Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | Mgal | MT/yr | | | |
| Apartments Mid Rise | 28.1465 / 17.7446 | 179.9674 | 0.9238 | 0.0224 | 209.7446 |
| Enclosed Parking with Elevator | 0 / 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| High Turnover (Sit Down Restaurant) | 2.42827 / 0.154996 | 10.8877 | 0.0795 | 1.9100e-003 | 13.4459 |
| Pharmacy/Drugstore with Drive Thru | 0.986265 / 0.604485 | 6.2478 | 0.0324 | 7.9000e-004 | 7.2911 |
| **Total** | | **197.1029** | **1.0357** | **0.0251** | **230.4816** |

## 7.2 Water by Land Use

**Mitigated**

| | Indoor/Outdoor Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | Mgal | MT/yr | | | |
| Apartments Mid Rise | 22.5172 / 17.7446 | 155.9386 | 0.7395 | 0.0180 | 179.7879 |
| Enclosed Parking with Elevator | 0 / 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| High Turnover (Sit Down Restaurant) | 1.94262 / 0.154996 | 8.8146 | 0.0636 | 1.5300e-003 | 10.8615 |
| Pharmacy/Drugstore with Drive Thru | 0.789012 / 0.604485 | 5.4059 | 0.0259 | 6.3000e-004 | 6.2414 |
| **Total** | | **170.1591** | **0.8290** | **0.0202** | **196.8908** |

# 8.0 Waste Detail

## 8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

**Category/Year**

| | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|
| | MT/yr | | | |
| Mitigated | 16.3702 | 0.9675 | 0.0000 | 40.5564 |
| Unmitigated | 68.2090 | 4.0310 | 0.0000 | 168.9850 |

## 8.2 Waste by Land Use

**Unmitigated**

| | Waste Disposed | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | tons | MT/yr | | | |
| Apartments Mid Rise | 198.72 | 40.3384 | 2.3839 | 0.0000 | 99.9366 |
| Enclosed Parking with Elevator | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| High Turnover (Sit Down Restaurant) | 95.2 | 19.3247 | 1.1421 | 0.0000 | 47.8762 |
| Pharmacy/Drugstore with Drive Thru | 42.1 | 8.5459 | 0.5051 | 0.0000 | 21.1722 |
| **Total** | | **68.2090** | **4.0310** | **0.0000** | **168.9850** |

## 8.2 Waste by Land Use

**Mitigated**

| | Waste Disposed | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | tons | MT/yr | | | |
| Apartments Mid Rise | 47.6928 | 9.6812 | 0.5721 | 0.0000 | 23.9848 |
| Enclosed Parking with Elevator | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| High Turnover (Sit Down Restaurant) | 22.848 | 4.6379 | 0.2741 | 0.0000 | 11.4903 |
| Pharmacy/Drugstore with Drive Thru | 10.104 | 2.0510 | 0.1212 | 0.0000 | 5.0813 |
| **Total** | | **16.3702** | **0.9674** | **0.0000** | **40.5564** |

## 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

# 7940 Lankershim Boulevard - with PDFs

**Los Angeles-South Coast County, Summer**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Pharmacy/Drugstore with Drive Thru | 14.00 | 1000sqft | 0.00 | 14,000.00 | 0 |
| Enclosed Parking with Elevator | 541.00 | Space | 0.00 | 216,400.00 | 0 |
| High Turnover (Sit Down Restaurant) | 8.00 | 1000sqft | 0.00 | 8,000.00 | 0 |
| Apartments Mid Rise | 432.00 | Dwelling Unit | 4.69 | 432,000.00 | 1236 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.2 | **Precipitation Freq (Days)** | 33 |
| **Climate Zone** | 12 | | | **Operational Year** | 2023 |
| **Utility Company** | Los Angeles Department of Water & Power | | | | |
| **CO2 Intensity (lb/MWhr)** | 669 | **CH4 Intensity (lb/MWhr)** | 0.026 | **N2O Intensity (lb/MWhr)** | 0.003 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics - Accounts for RPS for LADWP

Land Use - 4.69-acre site; 541 parking spaces associated with proposed project parking structure

Construction Phase - Construction to occur 6 days/week

Off-road Equipment - Architectural coating equip

Off-road Equipment - Building equip

Off-road Equipment - Demolition equip

Off-road Equipment - Grading equip

Off-road Equipment - Paving equip

Off-road Equipment - Site prep equip

Trips and VMT - Anticipated construction vehicle trips

Demolition - Based on 7 daily haul truck trips over 40 days, and assuming building debris density is 1,620 lbs/cyd

Grading - 89,000 cy of soil export

Architectural Coating - Use of super-complaint coatings

Vehicle Trips - Accounts for less trips from walk-in/transit reduction, internal apture, and pass-by reductions

Woodstoves - Accounts for outdoor courtyard fireplaces (2) and firepits (2); Assumes these outdoor amenites would be used 30% of the year.

Area Coating - SCAQMD Rule 1113 compliance

Energy Use -

Construction Off-road Equipment Mitigation - SCAQMD Rule 403; use of tier 4 off-road equipment

Energy Mitigation - Use of Energy Star appliances

Water Mitigation - CALGreen

Waste Mitigation -

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblApplianceMitigation | PercentImprovement | 30.00 | 25.00 |
| tblApplianceMitigation | PercentImprovement | 15.00 | 12.00 |
| tblApplianceMitigation | PercentImprovement | 50.00 | 40.00 |
| tblApplianceMitigation | PercentImprovement | 15.00 | 9.00 |

| | | | |
|---|---|---|---|
| tblArchitecturalCoating | EF_Nonresidential_Exterior | 100.00 | 10.00 |
| tblArchitecturalCoating | EF_Nonresidential_Interior | 100.00 | 10.00 |
| tblArchitecturalCoating | EF_Residential_Exterior | 50.00 | 10.00 |
| tblArchitecturalCoating | EF_Residential_Interior | 50.00 | 10.00 |
| tblAreaCoating | Area_EF_Nonresidential_Exterior | 100 | 50 |
| tblAreaCoating | Area_EF_Nonresidential_Interior | 100 | 50 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 3.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 2.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 4.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 4.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 2.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 4.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Final |

| | | | |
|---|---|---|---|
| tblConstEquipMitigation | Tier | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Final |
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| tblConstructionPhase | NumDays | 5.00 | 28.00 |
| tblConstructionPhase | NumDays | 8.00 | 40.00 |
| tblConstructionPhase | NumDays | 230.00 | 886.00 |
| tblConstructionPhase | NumDays | 18.00 | 12.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblFireplaces | FireplaceDayYear | 25.00 | 110.00 |
| tblFireplaces | FireplaceWoodMass | 1,019.20 | 0.00 |
| tblFireplaces | NumberGas | 367.20 | 4.00 |
| tblFireplaces | NumberNoFireplace | 43.20 | 428.00 |
| tblFireplaces | NumberWood | 21.60 | 0.00 |
| tblGrading | MaterialExported | 0.00 | 89,000.00 |

| | | | |
|---|---|---|---|
| tblLandUse | LotAcreage | 0.32 | 0.00 |
| tblLandUse | LotAcreage | 4.87 | 0.00 |
| tblLandUse | LotAcreage | 0.18 | 0.00 |
| tblLandUse | LotAcreage | 11.37 | 4.69 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 2.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 1.00 |
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| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 4.00 | 1.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 6.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 4.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 4.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 4.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 8.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 6.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 6.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 8.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 6.00 |
| tblOffRoadEquipment | UsageHours | 6.00 | 8.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 6.00 |
| tblOffRoadEquipment | UsageHours | 6.00 | 8.00 |
| tblProjectCharacteristics | CH4IntensityFactor | 0.029 | 0.026 |
| tblProjectCharacteristics | CO2IntensityFactor | 1227.89 | 669 |

| | | | |
|---|---|---|---|
| tblProjectCharacteristics | N2OIntensityFactor | 0.006 | 0.003 |
| tblTripsAndVMT | HaulingTripNumber | 359.00 | 280.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 924.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 10,632.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 24.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 18.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 3.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 17.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 55.00 |
| tblTripsAndVMT | VendorTripNumber | 85.00 | 3.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 1.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 1.00 |
| tblTripsAndVMT | WorkerTripNumber | 15.00 | 12.00 |
| tblTripsAndVMT | WorkerTripNumber | 13.00 | 10.00 |
| tblTripsAndVMT | WorkerTripNumber | 18.00 | 14.00 |
| tblTripsAndVMT | WorkerTripNumber | 410.00 | 85.00 |
| tblTripsAndVMT | WorkerTripNumber | 13.00 | 10.00 |
| tblTripsAndVMT | WorkerTripNumber | 82.00 | 5.00 |
| tblVehicleTrips | ST_TR | 6.39 | 4.90 |
| tblVehicleTrips | ST_TR | 158.37 | 76.75 |
| tblVehicleTrips | ST_TR | 96.91 | 56.00 |
| tblVehicleTrips | SU_TR | 5.86 | 4.90 |
| tblVehicleTrips | SU_TR | 131.84 | 76.75 |
| tblVehicleTrips | SU_TR | 96.91 | 56.00 |
| tblVehicleTrips | WD_TR | 6.65 | 4.90 |
| tblVehicleTrips | WD_TR | 127.15 | 76.75 |
| tblVehicleTrips | WD_TR | 96.91 | 56.00 |

| | | | |
|---|---|---|---|
| tblWoodstoves | NumberCatalytic | 21.60 | 0.00 |
| tblWoodstoves | NumberNoncatalytic | 21.60 | 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 | | | | | |
| 2019 | 3.4528 | 36.5366 | 19.9983 | 0.0432 | 2.2177 | 1.6848 | 3.9025 | 0.3687 | 1.5642 | 1.9328 | 0.0000 | 4,318.8972 | 4,318.8972 | 1.0452 | 0.0000 | 4,345.0262 |
| 2020 | 5.4984 | 115.8738 | 36.3588 | 0.2739 | 12.4406 | 1.5913 | 14.0319 | 4.9101 | 1.4744 | 6.3844 | 0.0000 | 29,202.7731 | 29,202.7731 | 2.9188 | 0.0000 | 29,275.7423 |
| 2021 | 1.6658 | 14.8964 | 13.4261 | 0.0367 | 1.4696 | 0.5710 | 2.0406 | 0.3863 | 0.5402 | 0.9265 | 0.0000 | 3,659.7003 | 3,659.7003 | 0.4604 | 0.0000 | 3,671.2090 |
| 2022 | 1.5230 | 13.4379 | 13.0022 | 0.0363 | 1.4696 | 0.4909 | 1.9605 | 0.3863 | 0.4646 | 0.8509 | 0.0000 | 3,613.3498 | 3,613.3498 | 0.4533 | 0.0000 | 3,624.6812 |
| 2023 | 35.4744 | 11.5606 | 12.5906 | 0.0355 | 2.2118 | 0.4282 | 2.6400 | 0.5685 | 0.4051 | 0.9736 | 0.0000 | 3,535.0628 | 3,535.0628 | 0.4473 | 0.0000 | 3,546.1203 |
| **Maximum** | **35.4744** | **115.8738** | **36.3588** | **0.2739** | **12.4406** | **1.6848** | **14.0319** | **4.9101** | **1.5642** | **6.3844** | **0.0000** | **29,202.7731** | **29,202.7731** | **2.9188** | **0.0000** | **29,275.7423** |

## 2.1 Overall Construction (Maximum Daily Emission)

**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 | | | | | |
| 2019 | 0.5617 | 4.3705 | 21.0068 | 0.0432 | 1.0331 | 0.0677 | 1.1008 | 0.1893 | 0.0672 | 0.2565 | 0.0000 | 4,318.8972 | 4,318.8972 | 1.0452 | 0.0000 | 4,345.0262 |
| 2020 | 3.1592 | 87.9041 | 38.8340 | 0.2739 | 8.1284 | 0.3467 | 8.4752 | 2.8152 | 0.3344 | 3.1496 | 0.0000 | 29,202.7731 | 29,202.7731 | 2.9188 | 0.0000 | 29,275.7423 |
| 2021 | 0.6787 | 5.2604 | 14.2319 | 0.0367 | 1.4696 | 0.0433 | 1.5129 | 0.3863 | 0.0423 | 0.4286 | 0.0000 | 3,659.7003 | 3,659.7003 | 0.4604 | 0.0000 | 3,671.2090 |
| 2022 | 0.6503 | 4.9932 | 13.9552 | 0.0363 | 1.4696 | 0.0417 | 1.5113 | 0.3863 | 0.0407 | 0.4270 | 0.0000 | 3,613.3498 | 3,613.3498 | 0.4533 | 0.0000 | 3,624.6812 |
| 2023 | 34.8274 | 3.8873 | 13.6333 | 0.0355 | 2.2118 | 0.0392 | 2.2480 | 0.5685 | 0.0390 | 0.6040 | 0.0000 | 3,535.0628 | 3,535.0628 | 0.4473 | 0.0000 | 3,546.1203 |
| **Maximum** | **34.8274** | **87.9041** | **38.8340** | **0.2739** | **8.1284** | **0.3467** | **8.4752** | **2.8152** | **0.3344** | **3.1496** | **0.0000** | **29,202.7731** | **29,202.7731** | **2.9188** | **0.0000** | **29,275.7423** |

| | ROG | NOx | 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** | **16.25** | **44.66** | **-6.59** | **0.00** | **27.75** | **88.70** | **39.58** | **34.35** | **88.23** | **56.04** | **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 | 10.9379 | 0.4778 | 35.7342 | 2.3100e-003 | | 0.2029 | 0.2029 | | 0.2029 | 0.2029 | 0.0000 | 149.0037 | 149.0037 | 0.0637 | 1.5500e-003 | 151.0579 |
| Energy | 0.1954 | 1.6995 | 0.9312 | 0.0107 | | 0.1350 | 0.1350 | | 0.1350 | 0.1350 | | 2,131.0600 | 2,131.0600 | 0.0409 | 0.0391 | 2,143.7239 |
| Mobile | 5.1657 | 20.8957 | 63.3973 | 0.2342 | 19.3757 | 0.1727 | 19.5484 | 5.1851 | 0.1606 | 5.3457 | | 23,859.4066 | 23,859.4066 | 1.1610 | | 23,888.4309 |
| **Total** | **16.2989** | **23.0729** | **100.0628** | **0.2471** | **19.3757** | **0.5106** | **19.8863** | **5.1851** | **0.4985** | **5.6835** | **0.0000** | **26,139.4703** | **26,139.4703** | **1.2655** | **0.0406** | **26,183.2127** |

### 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 | 10.9379 | 0.4778 | 35.7342 | 2.3100e-003 | | 0.2029 | 0.2029 | | 0.2029 | 0.2029 | 0.0000 | 149.0037 | 149.0037 | 0.0637 | 1.5500e-003 | 151.0579 |
| Energy | 0.1954 | 1.6995 | 0.9312 | 0.0107 | | 0.1350 | 0.1350 | | 0.1350 | 0.1350 | | 2,131.0600 | 2,131.0600 | 0.0409 | 0.0391 | 2,143.7239 |
| Mobile | 5.1657 | 20.8957 | 63.3973 | 0.2342 | 19.3757 | 0.1727 | 19.5484 | 5.1851 | 0.1606 | 5.3457 | | 23,859.4066 | 23,859.4066 | 1.1610 | | 23,888.4309 |
| **Total** | **16.2989** | **23.0729** | **100.0628** | **0.2471** | **19.3757** | **0.5106** | **19.8863** | **5.1851** | **0.4985** | **5.6835** | **0.0000** | **26,139.4703** | **26,139.4703** | **1.2655** | **0.0406** | **26,183.2127** |

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

## 3.0 Construction Detail

**Construction Phase**

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|---|---|---|---|---|---|---|---|
| 1 | Demolition | Demolition | 10/1/2019 | 11/15/2019 | 6 | 40 | |
| 2 | Site Preparation | Site Preparation | 5/1/2020 | 6/2/2020 | 6 | 28 | |
| 3 | Grading | Grading | 6/3/2020 | 7/18/2020 | 6 | 40 | |
| 4 | Building Construction | Building Construction | 7/19/2020 | 5/18/2023 | 6 | 886 | |
| 5 | Paving | Paving | 5/19/2023 | 6/1/2023 | 6 | 12 | |
| 6 | Architectural Coating | Architectural Coating | 5/19/2023 | 6/8/2023 | 6 | 18 | |

**Acres of Grading (Site Preparation Phase): 28**

**Acres of Grading (Grading Phase): 30**

**Acres of Paving: 0**

**Residential Indoor: 874,800; Residential Outdoor: 291,600; Non-Residential Indoor: 33,000; Non-Residential Outdoor: 11,000; Striped Parking Area: 12,984 (Architectural Coating – sqft)**

**OffRoad Equipment**

7940 Lankershim Boulevard - with PDFs - Los Angeles-South Coast County, Summer

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|---|---|---|---|---|---|
| Demolition | Concrete/Industrial Saws | 1 | 6.00 | 81 | 0.73 |
| Demolition | Excavators | 2 | 8.00 | 158 | 0.38 |
| Demolition | Off-Highway Trucks | 1 | 2.00 | 402 | 0.38 |
| Demolition | Rubber Tired Dozers | 2 | 8.00 | 247 | 0.40 |
| Site Preparation | Graders | 1 | 8.00 | 187 | 0.41 |
| Site Preparation | Off-Highway Trucks | 1 | 4.00 | 402 | 0.38 |
| Site Preparation | Rubber Tired Dozers | 1 | 4.00 | 247 | 0.40 |
| Site Preparation | Scrapers | 1 | 4.00 | 367 | 0.48 |
| Site Preparation | Tractors/Loaders/Backhoes | 1 | 8.00 | 97 | 0.37 |
| Grading | Excavators | 1 | 4.00 | 158 | 0.38 |
| Grading | Graders | 1 | 4.00 | 187 | 0.41 |
| Grading | Off-Highway Trucks | 2 | 4.00 | 402 | 0.38 |
| Grading | Rubber Tired Dozers | 1 | 8.00 | 247 | 0.40 |
| Grading | Scrapers | 1 | 4.00 | 367 | 0.48 |
| Grading | Tractors/Loaders/Backhoes | 1 | 8.00 | 97 | 0.37 |
| Building Construction | Cranes | 1 | 8.00 | 231 | 0.29 |
| Building Construction | Forklifts | 1 | 6.00 | 89 | 0.20 |
| Building Construction | Generator Sets | 1 | 6.00 | 84 | 0.74 |
| Building Construction | Tractors/Loaders/Backhoes | 1 | 8.00 | 97 | 0.37 |
| Building Construction | Welders | 1 | 6.00 | 46 | 0.45 |
| Paving | Cement and Mortar Mixers | 1 | 6.00 | 9 | 0.56 |
| Paving | Pavers | 1 | 8.00 | 130 | 0.42 |
| Paving | Paving Equipment | 1 | 6.00 | 132 | 0.36 |
| Paving | Rollers | 1 | 8.00 | 80 | 0.38 |
| Paving | Tractors/Loaders/Backhoes | 1 | 6.00 | 97 | 0.37 |
| Architectural Coating | Air Compressors | 1 | 8.00 | 78 | 0.48 |

**Trips and VMT**

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|
| Demolition | 6 | 12.00 | 3.00 | 280.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Site Preparation | 5 | 10.00 | 17.00 | 924.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Grading | 7 | 14.00 | 55.00 | 11,125.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Building Construction | 5 | 85.00 | 3.00 | 10,632.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Paving | 5 | 10.00 | 1.00 | 24.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Architectural Coating | 1 | 5.00 | 1.00 | 18.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |

## 3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

## 3.2 Demolition - 2019

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 1.9420 | 0.0000 | 1.9420 | 0.2940 | 0.0000 | 0.2940 | | | 0.0000 | | | 0.0000 |
| Off-Road | 3.3146 | 34.0014 | 18.8705 | 0.0354 | | 1.6736 | 1.6736 | | 1.5535 | 1.5535 | | 3,484.5403 | 3,484.5403 | 0.9931 | | 3,509.3683 |
| **Total** | **3.3146** | **34.0014** | **18.8705** | **0.0354** | **1.9420** | **1.6736** | **3.6155** | **0.2940** | **1.5535** | **1.8475** | | **3,484.5403** | **3,484.5403** | **0.9931** | | **3,509.3683** |

## 3.2 Demolition - 2019

### 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 | 0.0658 | 2.1440 | 0.4571 | 5.5900e-003 | 0.1224 | 7.8700e-003 | 0.1303 | 0.0336 | 7.5300e-003 | 0.0411 | | 605.1582 | 605.1582 | 0.0417 | | 606.2001 |
| Vendor | 0.0125 | 0.3472 | 0.0921 | 7.8000e-004 | 0.0192 | 2.2100e-003 | 0.0214 | 5.5300e-003 | 2.1200e-003 | 7.6500e-003 | | 83.6444 | 83.6444 | 5.3600e-003 | | 83.7784 |
| Worker | 0.0600 | 0.0441 | 0.5786 | 1.4600e-003 | 0.1341 | 1.1600e-003 | 0.1353 | 0.0356 | 1.0700e-003 | 0.0366 | | 145.5544 | 145.5544 | 5.0000e-003 | | 145.6793 |
| **Total** | **0.1382** | **2.5352** | **1.1278** | **7.8300e-003** | **0.2757** | **0.0112** | **0.2870** | **0.0747** | **0.0107** | **0.0854** | | **834.3570** | **834.3570** | **0.0520** | | **835.6579** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 0.7574 | 0.0000 | 0.7574 | 0.1147 | 0.0000 | 0.1147 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.4235 | 1.8352 | 19.8790 | 0.0354 | | 0.0565 | 0.0565 | | 0.0565 | 0.0565 | 0.0000 | 3,484.5403 | 3,484.5403 | 0.9931 | | 3,509.3683 |
| **Total** | **0.4235** | **1.8352** | **19.8790** | **0.0354** | **0.7574** | **0.0565** | **0.8138** | **0.1147** | **0.0565** | **0.1711** | **0.0000** | **3,484.5403** | **3,484.5403** | **0.9931** | | **3,509.3683** |

## 3.2 Demolition - 2019

**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 | 0.0658 | 2.1440 | 0.4571 | 5.5900e-003 | 0.1224 | 7.8700e-003 | 0.1303 | 0.0336 | 7.5300e-003 | 0.0411 | | 605.1582 | 605.1582 | 0.0417 | | 606.2001 |
| Vendor | 0.0125 | 0.3472 | 0.0921 | 7.8000e-004 | 0.0192 | 2.2100e-003 | 0.0214 | 5.5300e-003 | 2.1200e-003 | 7.6500e-003 | | 83.6444 | 83.6444 | 5.3600e-003 | | 83.7784 |
| Worker | 0.0600 | 0.0441 | 0.5786 | 1.4600e-003 | 0.1341 | 1.1600e-003 | 0.1353 | 0.0356 | 1.0700e-003 | 0.0366 | | 145.5544 | 145.5544 | 5.0000e-003 | | 145.6793 |
| **Total** | **0.1382** | **2.5352** | **1.1278** | **7.8300e-003** | **0.2757** | **0.0112** | **0.2870** | **0.0747** | **0.0107** | **0.0854** | | **834.3570** | **834.3570** | **0.0520** | | **835.6579** |

## 3.3 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 | | | | | 4.0715 | 0.0000 | 4.0715 | 1.7696 | 0.0000 | 1.7696 | | | 0.0000 | | | 0.0000 |
| Off-Road | 2.0531 | 23.1342 | 11.7943 | 0.0282 | | 0.9572 | 0.9572 | | 0.8806 | 0.8806 | | 2,729.9770 | 2,729.9770 | 0.8829 | | 2,752.0502 |
| **Total** | **2.0531** | **23.1342** | **11.7943** | **0.0282** | **4.0715** | **0.9572** | **5.0287** | **1.7696** | **0.8806** | **2.6502** | | **2,729.9770** | **2,729.9770** | **0.8829** | | **2,752.0502** |

## 3.3 Site Preparation - 2020

### 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 | 0.2883 | 9.4888 | 2.1026 | 0.0261 | 0.5770 | 0.0303 | 0.6073 | 0.1582 | 0.0290 | 0.1871 | | 2,824.2450 | 2,824.2450 | 0.1922 | | 2,829.0509 |
| Vendor | 0.0605 | 1.8083 | 0.4738 | 4.4100e-003 | 0.1088 | 8.5100e-003 | 0.1174 | 0.0313 | 8.1400e-003 | 0.0395 | | 470.9420 | 470.9420 | 0.0287 | | 471.6604 |
| Worker | 0.0460 | 0.0327 | 0.4378 | 1.1800e-003 | 0.1118 | 9.3000e-004 | 0.1127 | 0.0296 | 8.6000e-004 | 0.0305 | | 117.6113 | 117.6113 | 3.7100e-003 | | 117.7040 |
| **Total** | **0.3947** | **11.3299** | **3.0143** | **0.0317** | **0.7976** | **0.0397** | **0.8373** | **0.2191** | **0.0380** | **0.2571** | | **3,412.7983** | **3,412.7983** | **0.2247** | | **3,418.4153** |

### 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 | | | | | 1.5879 | 0.0000 | 1.5879 | 0.6902 | 0.0000 | 0.6902 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.3454 | 1.4968 | 13.6150 | 0.0282 | | 0.0461 | 0.0461 | | 0.0461 | 0.0461 | 0.0000 | 2,729.9770 | 2,729.9770 | 0.8829 | | 2,752.0502 |
| **Total** | **0.3454** | **1.4968** | **13.6150** | **0.0282** | **1.5879** | **0.0461** | **1.6340** | **0.6902** | **0.0461** | **0.7362** | **0.0000** | **2,729.9770** | **2,729.9770** | **0.8829** | | **2,752.0502** |

## 3.3 Site Preparation - 2020

**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 | 0.2883 | 9.4888 | 2.1026 | 0.0261 | 0.5770 | 0.0303 | 0.6073 | 0.1582 | 0.0290 | 0.1871 | | 2,824.2450 | 2,824.2450 | 0.1922 | | 2,829.0509 |
| Vendor | 0.0605 | 1.8083 | 0.4738 | 4.4100e-003 | 0.1088 | 8.5100e-003 | 0.1174 | 0.0313 | 8.1400e-003 | 0.0395 | | 470.9420 | 470.9420 | 0.0287 | | 471.6604 |
| Worker | 0.0460 | 0.0327 | 0.4378 | 1.1800e-003 | 0.1118 | 9.3000e-004 | 0.1127 | 0.0296 | 8.6000e-004 | 0.0305 | | 117.6113 | 117.6113 | 3.7100e-003 | | 117.7040 |
| **Total** | **0.3947** | **11.3299** | **3.0143** | **0.0317** | **0.7976** | **0.0397** | **0.8373** | **0.2191** | **0.0380** | **0.2571** | | **3,412.7983** | **3,412.7983** | **0.2247** | | **3,418.4153** |

## 3.4 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 | | | | | 7.0691 | 0.0000 | 7.0691 | 3.4342 | 0.0000 | 3.4342 | | | 0.0000 | | | 0.0000 |
| Off-Road | 2.8090 | 30.0053 | 16.4918 | 0.0383 | | 1.3072 | 1.3072 | | 1.2026 | 1.2026 | | 3,711.6591 | 3,711.6591 | 1.2004 | | 3,741.6698 |
| **Total** | **2.8090** | **30.0053** | **16.4918** | **0.0383** | **7.0691** | **1.3072** | **8.3763** | **3.4342** | **1.2026** | **4.6368** | | **3,711.6591** | **3,711.6591** | **1.2004** | | **3,741.6698** |

## 3.4 Grading - 2020

### 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 | 2.4294 | 79.9723 | 17.7211 | 0.2197 | 4.8629 | 0.2552 | 5.1181 | 1.3330 | 0.2442 | 1.5772 | | 23,802.8224 | 23,802.8224 | 1.6202 | | 23,843.3267 |
| Vendor | 0.1956 | 5.8505 | 1.5329 | 0.0143 | 0.3521 | 0.0275 | 0.3797 | 0.1014 | 0.0263 | 0.1277 | | 1,523.6358 | 1,523.6358 | 0.0930 | | 1,525.9603 |
| Worker | 0.0644 | 0.0458 | 0.6130 | 1.6500e-003 | 0.1565 | 1.3100e-003 | 0.1578 | 0.0415 | 1.2100e-003 | 0.0427 | | 164.6558 | 164.6558 | 5.1900e-003 | | 164.7856 |
| **Total** | **2.6895** | **85.8686** | **19.8670** | **0.2356** | **5.3715** | **0.2841** | **5.6556** | **1.4759** | **0.2717** | **1.7476** | | **25,491.1140** | **25,491.1140** | **1.7183** | | **25,534.0725** |

### 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 | | | | | 2.7569 | 0.0000 | 2.7569 | 1.3393 | 0.0000 | 1.3393 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.4697 | 2.0355 | 18.9670 | 0.0383 | | 0.0626 | 0.0626 | | 0.0626 | 0.0626 | 0.0000 | 3,711.6591 | 3,711.6591 | 1.2004 | | 3,741.6698 |
| **Total** | **0.4697** | **2.0355** | **18.9670** | **0.0383** | **2.7569** | **0.0626** | **2.8196** | **1.3393** | **0.0626** | **1.4020** | **0.0000** | **3,711.6591** | **3,711.6591** | **1.2004** | | **3,741.6698** |

## 3.4 Grading - 2020

**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 | 2.4294 | 79.9723 | 17.7211 | 0.2197 | 4.8629 | 0.2552 | 5.1181 | 1.3330 | 0.2442 | 1.5772 | | 23,802.8224 | 23,802.8224 | 1.6202 | | 23,843.3267 |
| Vendor | 0.1956 | 5.8505 | 1.5329 | 0.0143 | 0.3521 | 0.0275 | 0.3797 | 0.1014 | 0.0263 | 0.1277 | | 1,523.6358 | 1,523.6358 | 0.0930 | | 1,525.9603 |
| Worker | 0.0644 | 0.0458 | 0.6130 | 1.6500e-003 | 0.1565 | 1.3100e-003 | 0.1578 | 0.0415 | 1.2100e-003 | 0.0427 | | 164.6558 | 164.6558 | 5.1900e-003 | | 164.7856 |
| **Total** | **2.6895** | **85.8686** | **19.8670** | **0.2356** | **5.3715** | **0.2841** | **5.6556** | **1.4759** | **0.2717** | **1.7476** | | **25,491.1140** | **25,491.1140** | **1.7183** | | **25,534.0725** |

## 3.5 Building Construction - 2020

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.3268 | 12.2573 | 9.3847 | 0.0169 | | 0.6402 | 0.6402 | | 0.6060 | 0.6060 | | 1,593.4655 | 1,593.4655 | 0.3632 | | 1,602.5459 |
| **Total** | **1.3268** | **12.2573** | **9.3847** | **0.0169** | | **0.6402** | **0.6402** | | **0.6060** | **0.6060** | | **1,593.4655** | **1,593.4655** | **0.3632** | | **1,602.5459** |

## 3.5 Building Construction - 2020

### 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 | 0.1048 | 3.4505 | 0.7646 | 9.4800e-003 | 1.0411 | 0.0110 | 1.0521 | 0.2616 | 0.0105 | 0.2721 | | 1,026.9982 | 1,026.9982 | 0.0699 | | 1,028.7458 |
| Vendor | 0.0107 | 0.3191 | 0.0836 | 7.8000e-004 | 0.0192 | 1.5000e-003 | 0.0207 | 5.5300e-003 | 1.4400e-003 | 6.9700e-003 | | 83.1074 | 83.1074 | 5.0700e-003 | | 83.2342 |
| Worker | 0.3912 | 0.2783 | 3.7217 | 0.0100 | 0.9501 | 7.9400e-003 | 0.9580 | 0.2520 | 7.3200e-003 | 0.2593 | | 999.6959 | 999.6959 | 0.0315 | | 1,000.4839 |
| **Total** | **0.5067** | **4.0479** | **4.5699** | **0.0203** | **2.0104** | **0.0205** | **2.0308** | **0.5191** | **0.0193** | **0.5383** | | **2,109.8015** | **2,109.8015** | **0.1065** | | **2,112.4639** |

### 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 | 0.2052 | 1.4998 | 9.9775 | 0.0169 | | 0.0252 | 0.0252 | | 0.0252 | 0.0252 | 0.0000 | 1,593.4655 | 1,593.4655 | 0.3632 | | 1,602.5459 |
| **Total** | **0.2052** | **1.4998** | **9.9775** | **0.0169** | | **0.0252** | **0.0252** | | **0.0252** | **0.0252** | **0.0000** | **1,593.4655** | **1,593.4655** | **0.3632** | | **1,602.5459** |

## 3.5 Building Construction - 2020

**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 | 0.1048 | 3.4505 | 0.7646 | 9.4800e-003 | 1.0411 | 0.0110 | 1.0521 | 0.2616 | 0.0105 | 0.2721 | | 1,026.9982 | 1,026.9982 | 0.0699 | | 1,028.7458 |
| Vendor | 0.0107 | 0.3191 | 0.0836 | 7.8000e-004 | 0.0192 | 1.5000e-003 | 0.0207 | 5.5300e-003 | 1.4400e-003 | 6.9700e-003 | | 83.1074 | 83.1074 | 5.0700e-003 | | 83.2342 |
| Worker | 0.3912 | 0.2783 | 3.7217 | 0.0100 | 0.9501 | 7.9400e-003 | 0.9580 | 0.2520 | 7.3200e-003 | 0.2593 | | 999.6959 | 999.6959 | 0.0315 | | 1,000.4839 |
| **Total** | **0.5067** | **4.0479** | **4.5699** | **0.0203** | **2.0104** | **0.0205** | **2.0308** | **0.5191** | **0.0193** | **0.5383** | | **2,109.8015** | **2,109.8015** | **0.1065** | | **2,112.4639** |

## 3.5 Building Construction - 2021

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.1922 | 11.1358 | 9.1716 | 0.0169 | | 0.5528 | 0.5528 | | 0.5231 | 0.5231 | | 1,593.5462 | 1,593.5462 | 0.3580 | | 1,602.4972 |
| **Total** | **1.1922** | **11.1358** | **9.1716** | **0.0169** | | **0.5528** | **0.5528** | | **0.5231** | **0.5231** | | **1,593.5462** | **1,593.5462** | **0.3580** | | **1,602.4972** |

## 3.5 Building Construction - 2021

### 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 | 0.1001 | 3.2189 | 0.7548 | 9.3600e-003 | 0.5003 | 9.8800e-003 | 0.5102 | 0.1288 | 9.4500e-003 | 0.1383 | | 1,015.7355 | 1,015.7355 | 0.0689 | | 1,017.4588 |
| Vendor | 9.1200e-003 | 0.2913 | 0.0762 | 7.7000e-004 | 0.0192 | 6.0000e-004 | 0.0198 | 5.5300e-003 | 5.7000e-004 | 6.1000e-003 | | 82.4642 | 82.4642 | 4.8600e-003 | | 82.5856 |
| Worker | 0.3644 | 0.2504 | 3.4236 | 9.7200e-003 | 0.9501 | 7.6800e-003 | 0.9578 | 0.2520 | 7.0700e-003 | 0.2590 | | 967.9544 | 967.9544 | 0.0285 | | 968.6674 |
| **Total** | **0.4735** | **3.7606** | **4.2545** | **0.0199** | **1.4696** | **0.0182** | **1.4877** | **0.3863** | **0.0171** | **0.4034** | | **2,066.1541** | **2,066.1541** | **0.1023** | | **2,068.7118** |

### 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 | 0.2052 | 1.4998 | 9.9775 | 0.0169 | | 0.0252 | 0.0252 | | 0.0252 | 0.0252 | 0.0000 | 1,593.5462 | 1,593.5462 | 0.3580 | | 1,602.4972 |
| **Total** | **0.2052** | **1.4998** | **9.9775** | **0.0169** | | **0.0252** | **0.0252** | | **0.0252** | **0.0252** | **0.0000** | **1,593.5462** | **1,593.5462** | **0.3580** | | **1,602.4972** |

## 3.5 Building Construction - 2021

**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 | 0.1001 | 3.2189 | 0.7548 | 9.3600e-003 | 0.5003 | 9.8800e-003 | 0.5102 | 0.1288 | 9.4500e-003 | 0.1383 | | 1,015.7355 | 1,015.7355 | 0.0689 | | 1,017.4588 |
| Vendor | 9.1200e-003 | 0.2913 | 0.0762 | 7.7000e-004 | 0.0192 | 6.0000e-004 | 0.0198 | 5.5300e-003 | 5.7000e-004 | 6.1000e-003 | | 82.4642 | 82.4642 | 4.8600e-003 | | 82.5856 |
| Worker | 0.3644 | 0.2504 | 3.4236 | 9.7200e-003 | 0.9501 | 7.6800e-003 | 0.9578 | 0.2520 | 7.0700e-003 | 0.2590 | | 967.9544 | 967.9544 | 0.0285 | | 968.6674 |
| **Total** | **0.4735** | **3.7606** | **4.2545** | **0.0199** | **1.4696** | **0.0182** | **1.4877** | **0.3863** | **0.0171** | **0.4034** | | **2,066.1541** | **2,066.1541** | **0.1023** | | **2,068.7118** |

## 3.5 Building Construction - 2022

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.0779 | 9.9445 | 9.0244 | 0.0169 | | 0.4744 | 0.4744 | | 0.4491 | 0.4491 | | 1,593.9766 | 1,593.9766 | 0.3549 | | 1,602.8489 |
| **Total** | **1.0779** | **9.9445** | **9.0244** | **0.0169** | | **0.4744** | **0.4744** | | **0.4491** | **0.4491** | | **1,593.9766** | **1,593.9766** | **0.3549** | | **1,602.8489** |

## 3.5 Building Construction - 2022

### 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 | 0.0952 | 2.9902 | 0.7471 | 9.2400e-003 | 0.5003 | 8.5800e-003 | 0.5089 | 0.1288 | 8.2100e-003 | 0.1370 | | 1,003.7220 | 1,003.7220 | 0.0679 | | 1,005.4194 |
| Vendor | 8.5600e-003 | 0.2770 | 0.0720 | 7.6000e-004 | 0.0192 | 5.2000e-004 | 0.0197 | 5.5300e-003 | 5.0000e-004 | 6.0300e-003 | | 81.7458 | 81.7458 | 4.6900e-003 | | 81.8630 |
| Worker | 0.3413 | 0.2262 | 3.1586 | 9.3700e-003 | 0.9501 | 7.4400e-003 | 0.9575 | 0.2520 | 6.8500e-003 | 0.2588 | | 933.9055 | 933.9055 | 0.0258 | | 934.5499 |
| **Total** | **0.4451** | **3.4935** | **3.9777** | **0.0194** | **1.4696** | **0.0165** | **1.4861** | **0.3863** | **0.0156** | **0.4019** | | **2,019.3732** | **2,019.3732** | **0.0984** | | **2,021.8323** |

### 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 | 0.2052 | 1.4998 | 9.9775 | 0.0169 | | 0.0252 | 0.0252 | | 0.0252 | 0.0252 | 0.0000 | 1,593.9766 | 1,593.9766 | 0.3549 | | 1,602.8489 |
| **Total** | **0.2052** | **1.4998** | **9.9775** | **0.0169** | | **0.0252** | **0.0252** | | **0.0252** | **0.0252** | **0.0000** | **1,593.9766** | **1,593.9766** | **0.3549** | | **1,602.8489** |

## 3.5 Building Construction - 2022

**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 | 0.0952 | 2.9902 | 0.7471 | 9.2400e-003 | 0.5003 | 8.5800e-003 | 0.5089 | 0.1288 | 8.2100e-003 | 0.1370 | | 1,003.7220 | 1,003.7220 | 0.0679 | | 1,005.4194 |
| Vendor | 8.5600e-003 | 0.2770 | 0.0720 | 7.6000e-004 | 0.0192 | 5.2000e-004 | 0.0197 | 5.5300e-003 | 5.0000e-004 | 6.0300e-003 | | 81.7458 | 81.7458 | 4.6900e-003 | | 81.8630 |
| Worker | 0.3413 | 0.2262 | 3.1586 | 9.3700e-003 | 0.9501 | 7.4400e-003 | 0.9575 | 0.2520 | 6.8500e-003 | 0.2588 | | 933.9055 | 933.9055 | 0.0258 | | 934.5499 |
| **Total** | **0.4451** | **3.4935** | **3.9777** | **0.0194** | **1.4696** | **0.0165** | **1.4861** | **0.3863** | **0.0156** | **0.4019** | | **2,019.3732** | **2,019.3732** | **0.0984** | | **2,021.8323** |

## 3.5 Building Construction - 2023

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.9999 | 9.1731 | 8.9348 | 0.0169 | | 0.4172 | 0.4172 | | 0.3948 | 0.3948 | | 1,594.3031 | 1,594.3031 | 0.3517 | | 1,603.0958 |
| **Total** | **0.9999** | **9.1731** | **8.9348** | **0.0169** | | **0.4172** | **0.4172** | | **0.3948** | **0.3948** | | **1,594.3031** | **1,594.3031** | **0.3517** | | **1,603.0958** |

## 3.5 Building Construction - 2023

### 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 | 0.0625 | 1.9727 | 0.6820 | 8.8300e-003 | 1.2424 | 3.5700e-003 | 1.2460 | 0.3110 | 3.4200e-003 | 0.3144 | | 961.8778 | 961.8778 | 0.0632 | | 963.4576 |
| Vendor | 6.3500e-003 | 0.2102 | 0.0651 | 7.4000e-004 | 0.0192 | 2.4000e-004 | 0.0195 | 5.5300e-003 | 2.3000e-004 | 5.7600e-003 | | 79.1722 | 79.1722 | 4.1600e-003 | | 79.2762 |
| Worker | 0.3205 | 0.2047 | 2.9088 | 9.0300e-003 | 0.9501 | 7.2300e-003 | 0.9573 | 0.2520 | 6.6500e-003 | 0.2586 | | 899.7097 | 899.7097 | 0.0232 | | 900.2907 |
| **Total** | **0.3893** | **2.3875** | **3.6558** | **0.0186** | **2.2118** | **0.0110** | **2.2228** | **0.5685** | **0.0103** | **0.5788** | | **1,940.7597** | **1,940.7597** | **0.0906** | | **1,943.0245** |

### 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 | 0.2052 | 1.4998 | 9.9775 | 0.0169 | | 0.0252 | 0.0252 | | 0.0252 | 0.0252 | 0.0000 | 1,594.3031 | 1,594.3031 | 0.3517 | | 1,603.0958 |
| **Total** | **0.2052** | **1.4998** | **9.9775** | **0.0169** | | **0.0252** | **0.0252** | | **0.0252** | **0.0252** | **0.0000** | **1,594.3031** | **1,594.3031** | **0.3517** | | **1,603.0958** |

## 3.5 Building Construction - 2023

**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 | 0.0625 | 1.9727 | 0.6820 | 8.8300e-003 | 1.2424 | 3.5700e-003 | 1.2460 | 0.3110 | 3.4200e-003 | 0.3144 | | 961.8778 | 961.8778 | 0.0632 | | 963.4576 |
| Vendor | 6.3500e-003 | 0.2102 | 0.0651 | 7.4000e-004 | 0.0192 | 2.4000e-004 | 0.0195 | 5.5300e-003 | 2.3000e-004 | 5.7600e-003 | | 79.1722 | 79.1722 | 4.1600e-003 | | 79.2762 |
| Worker | 0.3205 | 0.2047 | 2.9088 | 9.0300e-003 | 0.9501 | 7.2300e-003 | 0.9573 | 0.2520 | 6.6500e-003 | 0.2586 | | 899.7097 | 899.7097 | 0.0232 | | 900.2907 |
| **Total** | **0.3893** | **2.3875** | **3.6558** | **0.0186** | **2.2118** | **0.0110** | **2.2228** | **0.5685** | **0.0103** | **0.5788** | | **1,940.7597** | **1,940.7597** | **0.0906** | | **1,943.0245** |

## 3.6 Paving - 2023

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.6313 | 6.1230 | 8.5577 | 0.0133 | | 0.3032 | 0.3032 | | 0.2798 | 0.2798 | | 1,269.2449 | 1,269.2449 | 0.4022 | | 1,279.2994 |
| Paving | 0.0000 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| **Total** | **0.6313** | **6.1230** | **8.5577** | **0.0133** | | **0.3032** | **0.3032** | | **0.2798** | **0.2798** | | **1,269.2449** | **1,269.2449** | **0.4022** | | **1,279.2994** |

## 3.6 Paving - 2023

### 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 | 0.0104 | 0.3288 | 0.1137 | 1.4700e-003 | 0.0350 | 6.0000e-004 | 0.0356 | 9.5900e-003 | 5.7000e-004 | 0.0102 | | 160.3130 | 160.3130 | 0.0105 | | 160.5763 |
| Vendor | 2.1200e-003 | 0.0701 | 0.0217 | 2.5000e-004 | 6.4000e-003 | 8.0000e-005 | 6.4800e-003 | 1.8400e-003 | 8.0000e-005 | 1.9200e-003 | | 26.3907 | 26.3907 | 1.3900e-003 | | 26.4254 |
| Worker | 0.0377 | 0.0241 | 0.3422 | 1.0600e-003 | 0.1118 | 8.5000e-004 | 0.1126 | 0.0296 | 7.8000e-004 | 0.0304 | | 105.8482 | 105.8482 | 2.7300e-003 | | 105.9166 |
| **Total** | **0.0502** | **0.4229** | **0.4776** | **2.7800e-003** | **0.1532** | **1.5300e-003** | **0.1547** | **0.0411** | **1.4300e-003** | **0.0425** | | **292.5519** | **292.5519** | **0.0147** | | **292.9182** |

### 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 | 0.2002 | 0.9528 | 9.8604 | 0.0133 | | 0.0316 | 0.0316 | | 0.0316 | 0.0316 | 0.0000 | 1,269.2449 | 1,269.2449 | 0.4022 | | 1,279.2994 |
| Paving | 0.0000 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| **Total** | **0.2002** | **0.9528** | **9.8604** | **0.0133** | | **0.0316** | **0.0316** | | **0.0316** | **0.0316** | **0.0000** | **1,269.2449** | **1,269.2449** | **0.4022** | | **1,279.2994** |

## 3.6 Paving - 2023

**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 | 0.0104 | 0.3288 | 0.1137 | 1.4700e-003 | 0.0350 | 6.0000e-004 | 0.0356 | 9.5900e-003 | 5.7000e-004 | 0.0102 | | 160.3130 | 160.3130 | 0.0105 | | 160.5763 |
| Vendor | 2.1200e-003 | 0.0701 | 0.0217 | 2.5000e-004 | 6.4000e-003 | 8.0000e-005 | 6.4800e-003 | 1.8400e-003 | 8.0000e-005 | 1.9200e-003 | | 26.3907 | 26.3907 | 1.3900e-003 | | 26.4254 |
| Worker | 0.0377 | 0.0241 | 0.3422 | 1.0600e-003 | 0.1118 | 8.5000e-004 | 0.1126 | 0.0296 | 7.8000e-004 | 0.0304 | | 105.8482 | 105.8482 | 2.7300e-003 | | 105.9166 |
| **Total** | **0.0502** | **0.4229** | **0.4776** | **2.7800e-003** | **0.1532** | **1.5300e-003** | **0.1547** | **0.0411** | **1.4300e-003** | **0.0425** | | **292.5519** | **292.5519** | **0.0147** | | **292.9182** |

## 3.7 Architectural Coating - 2023

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Archit. Coating | 34.5112 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.2556 | 1.7373 | 2.4148 | 3.9600e-003 | | 0.0944 | 0.0944 | | 0.0944 | 0.0944 | | 375.2641 | 375.2641 | 0.0225 | | 375.8253 |
| **Total** | **34.7667** | **1.7373** | **2.4148** | **3.9600e-003** | | **0.0944** | **0.0944** | | **0.0944** | **0.0944** | | **375.2641** | **375.2641** | **0.0225** | | **375.8253** |

## 3.7 Architectural Coating - 2023

### 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 | 5.2000e-003 | 0.1644 | 0.0568 | 7.4000e-004 | 0.0175 | 3.0000e-004 | 0.0178 | 4.7900e-003 | 2.8000e-004 | 5.0800e-003 | | 80.1565 | 80.1565 | 5.2700e-003 | | 80.2881 |
| Vendor | 2.1200e-003 | 0.0701 | 0.0217 | 2.5000e-004 | 6.4000e-003 | 8.0000e-005 | 6.4800e-003 | 1.8400e-003 | 8.0000e-005 | 1.9200e-003 | | 26.3907 | 26.3907 | 1.3900e-003 | | 26.4254 |
| Worker | 0.0189 | 0.0120 | 0.1711 | 5.3000e-004 | 0.0559 | 4.3000e-004 | 0.0563 | 0.0148 | 3.9000e-004 | 0.0152 | | 52.9241 | 52.9241 | 1.3700e-003 | | 52.9583 |
| **Total** | **0.0262** | **0.2465** | **0.2496** | **1.5200e-003** | **0.0798** | **8.1000e-004** | **0.0806** | **0.0215** | **7.5000e-004** | **0.0222** | | **159.4713** | **159.4713** | **8.0300e-003** | | **159.6718** |

### 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 | 34.5112 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.0396 | 0.1717 | 2.4432 | 3.9600e-003 | | 5.2800e-003 | 5.2800e-003 | | 5.2800e-003 | 5.2800e-003 | 0.0000 | 375.2641 | 375.2641 | 0.0225 | | 375.8253 |
| **Total** | **34.5508** | **0.1717** | **2.4432** | **3.9600e-003** | | **5.2800e-003** | **5.2800e-003** | | **5.2800e-003** | **5.2800e-003** | **0.0000** | **375.2641** | **375.2641** | **0.0225** | | **375.8253** |

## 3.7 Architectural Coating - 2023

**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 | 5.2000e-003 | 0.1644 | 0.0568 | 7.4000e-004 | 0.0175 | 3.0000e-004 | 0.0178 | 4.7900e-003 | 2.8000e-004 | 5.0800e-003 | | 80.1565 | 80.1565 | 5.2700e-003 | | 80.2881 |
| Vendor | 2.1200e-003 | 0.0701 | 0.0217 | 2.5000e-004 | 6.4000e-003 | 8.0000e-005 | 6.4800e-003 | 1.8400e-003 | 8.0000e-005 | 1.9200e-003 | | 26.3907 | 26.3907 | 1.3900e-003 | | 26.4254 |
| Worker | 0.0189 | 0.0120 | 0.1711 | 5.3000e-004 | 0.0559 | 4.3000e-004 | 0.0563 | 0.0148 | 3.9000e-004 | 0.0152 | | 52.9241 | 52.9241 | 1.3700e-003 | | 52.9583 |
| **Total** | **0.0262** | **0.2465** | **0.2496** | **1.5200e-003** | **0.0798** | **8.1000e-004** | **0.0806** | **0.0215** | **7.5000e-004** | **0.0222** | | **159.4713** | **159.4713** | **8.0300e-003** | | **159.6718** |

# 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 | 5.1657 | 20.8957 | 63.3973 | 0.2342 | 19.3757 | 0.1727 | 19.5484 | 5.1851 | 0.1606 | 5.3457 | | 23,859.4066 | 23,859.4066 | 1.1610 | | 23,888.4309 |
| Unmitigated | 5.1657 | 20.8957 | 63.3973 | 0.2342 | 19.3757 | 0.1727 | 19.5484 | 5.1851 | 0.1606 | 5.3457 | | 23,859.4066 | 23,859.4066 | 1.1610 | | 23,888.4309 |

## 4.2 Trip Summary Information

| | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|---|---|---|---|---|---|
| Land Use | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| Apartments Mid Rise | 2,116.80 | 2,116.80 | 2116.80 | 7,233,427 | 7,233,427 |
| Enclosed Parking with Elevator | 0.00 | 0.00 | 0.00 | | |
| High Turnover (Sit Down Restaurant) | 614.00 | 614.00 | 614.00 | 836,778 | 836,778 |
| Pharmacy/Drugstore with Drive Thru | 784.00 | 784.00 | 784.00 | 1,041,658 | 1,041,658 |
| Total | 3,514.80 | 3,514.80 | 3,514.80 | 9,111,863 | 9,111,863 |

## 4.3 Trip Type Information

| | Miles | | | Trip % | | | Trip Purpose % | | |
|---|---|---|---|---|---|---|---|---|---|
| Land Use | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary | Diverted | Pass-by |
| Apartments Mid Rise | 14.70 | 5.90 | 8.70 | 40.20 | 19.20 | 40.60 | 86 | 11 | 3 |
| Enclosed Parking with Elevator | 16.60 | 8.40 | 6.90 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 |
| High Turnover (Sit Down | 16.60 | 8.40 | 6.90 | 8.50 | 72.50 | 19.00 | 37 | 20 | 43 |
| Pharmacy/Drugstore with Drive | 16.60 | 8.40 | 6.90 | 7.50 | 73.50 | 19.00 | 38 | 13 | 49 |

## 4.4 Fleet Mix

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Apartments Mid Rise | 0.545842 | 0.044768 | 0.205288 | 0.119317 | 0.015350 | 0.006227 | 0.020460 | 0.031333 | 0.002546 | 0.002133 | 0.005184 | 0.000692 | 0.000862 |
| Enclosed Parking with Elevator | 0.545842 | 0.044768 | 0.205288 | 0.119317 | 0.015350 | 0.006227 | 0.020460 | 0.031333 | 0.002546 | 0.002133 | 0.005184 | 0.000692 | 0.000862 |
| High Turnover (Sit Down Restaurant) | 0.545842 | 0.044768 | 0.205288 | 0.119317 | 0.015350 | 0.006227 | 0.020460 | 0.031333 | 0.002546 | 0.002133 | 0.005184 | 0.000692 | 0.000862 |
| Pharmacy/Drugstore with Drive Thru | 0.545842 | 0.044768 | 0.205288 | 0.119317 | 0.015350 | 0.006227 | 0.020460 | 0.031333 | 0.002546 | 0.002133 | 0.005184 | 0.000692 | 0.000862 |

## 5.0 Energy Detail

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

Install Energy Efficient Appliances

| | ROG | NOx | CO | SO2 | Fugitive 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 | 0.1954 | 1.6995 | 0.9312 | 0.0107 | | 0.1350 | 0.1350 | | 0.1350 | 0.1350 | | 2,131.0600 | 2,131.0600 | 0.0409 | 0.0391 | 2,143.7239 |
| NaturalGas Unmitigated | 0.1954 | 1.6995 | 0.9312 | 0.0107 | | 0.1350 | 0.1350 | | 0.1350 | 0.1350 | | 2,131.0600 | 2,131.0600 | 0.0409 | 0.0391 | 2,143.7239 |

## 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 Mid Rise | 12993.4 | 0.1401 | 1.1974 | 0.5095 | 7.6400e-003 | | 0.0968 | 0.0968 | | 0.0968 | 0.0968 | | 1,528.6297 | 1,528.6297 | 0.0293 | 0.0280 | 1,537.7136 |
| Enclosed Parking with Elevator | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| High Turnover (Sit Down Restaurant) | 5057.75 | 0.0545 | 0.4959 | 0.4165 | 2.9800e-003 | | 0.0377 | 0.0377 | | 0.0377 | 0.0377 | | 595.0298 | 595.0298 | 0.0114 | 0.0109 | 598.5658 |
| Pharmacy/Drugstore with Drive Thru | 62.9041 | 6.8000e-004 | 6.1700e-003 | 5.1800e-003 | 4.0000e-005 | | 4.7000e-004 | 4.7000e-004 | | 4.7000e-004 | 4.7000e-004 | | 7.4005 | 7.4005 | 1.4000e-004 | 1.4000e-004 | 7.4445 |
| **Total** | | **0.1953** | **1.6995** | **0.9312** | **0.0107** | | **0.1350** | **0.1350** | | **0.1350** | **0.1350** | | **2,131.0600** | **2,131.0600** | **0.0408** | **0.0391** | **2,143.7239** |

## 5.2 Energy by Land Use - NaturalGas

**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 Mid Rise | 12.9934 | 0.1401 | 1.1974 | 0.5095 | 7.6400e-003 | | 0.0968 | 0.0968 | | 0.0968 | 0.0968 | | 1,528.6297 | 1,528.6297 | 0.0293 | 0.0280 | 1,537.7136 |
| Enclosed Parking with Elevator | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| High Turnover (Sit Down Restaurant) | 5.05775 | 0.0545 | 0.4959 | 0.4165 | 2.9800e-003 | | 0.0377 | 0.0377 | | 0.0377 | 0.0377 | | 595.0298 | 595.0298 | 0.0114 | 0.0109 | 598.5658 |
| Pharmacy/Drugstore with Drive Thru | 0.0629041 | 6.8000e-004 | 6.1700e-003 | 5.1800e-003 | 4.0000e-005 | | 4.7000e-004 | 4.7000e-004 | | 4.7000e-004 | 4.7000e-004 | | 7.4005 | 7.4005 | 1.4000e-004 | 1.4000e-004 | 7.4445 |
| **Total** | | **0.1953** | **1.6995** | **0.9312** | **0.0107** | | **0.1350** | **0.1350** | | **0.1350** | **0.1350** | | **2,131.0600** | **2,131.0600** | **0.0408** | **0.0391** | **2,143.7239** |

# 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 | 10.9379 | 0.4778 | 35.7342 | 2.3100e-003 | | 0.2029 | 0.2029 | | 0.2029 | 0.2029 | 0.0000 | 149.0037 | 149.0037 | 0.0637 | 1.5500e-003 | 151.0579 |
| Unmitigated | 10.9379 | 0.4778 | 35.7342 | 2.3100e-003 | | 0.2029 | 0.2029 | | 0.2029 | 0.2029 | 0.0000 | 149.0037 | 149.0037 | 0.0637 | 1.5500e-003 | 151.0579 |

## 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 | 0.7850 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 9.0659 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Hearth | 7.7600e-003 | 0.0664 | 0.0282 | 4.2000e-004 | | 5.3600e-003 | 5.3600e-003 | | 5.3600e-003 | 5.3600e-003 | 0.0000 | 84.7059 | 84.7059 | 1.6200e-003 | 1.5500e-003 | 85.2093 |
| Landscaping | 1.0793 | 0.4115 | 35.7060 | 1.8900e-003 | | 0.1975 | 0.1975 | | 0.1975 | 0.1975 | | 64.2978 | 64.2978 | 0.0620 | | 65.8487 |
| **Total** | **10.9379** | **0.4778** | **35.7342** | **2.3100e-003** | | **0.2029** | **0.2029** | | **0.2029** | **0.2029** | **0.0000** | **149.0037** | **149.0037** | **0.0637** | **1.5500e-003** | **151.0579** |

## 6.2 Area by SubCategory

**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 | 0.7850 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 9.0659 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Hearth | 7.7600e-003 | 0.0664 | 0.0282 | 4.2000e-004 | | 5.3600e-003 | 5.3600e-003 | | 5.3600e-003 | 5.3600e-003 | 0.0000 | 84.7059 | 84.7059 | 1.6200e-003 | 1.5500e-003 | 85.2093 |
| Landscaping | 1.0793 | 0.4115 | 35.7060 | 1.8900e-003 | | 0.1975 | 0.1975 | | 0.1975 | 0.1975 | | 64.2978 | 64.2978 | 0.0620 | | 65.8487 |
| **Total** | **10.9379** | **0.4778** | **35.7342** | **2.3100e-003** | | **0.2029** | **0.2029** | | **0.2029** | **0.2029** | **0.0000** | **149.0037** | **149.0037** | **0.0637** | **1.5500e-003** | **151.0579** |

# 7.0 Water Detail

## 7.1 Mitigation Measures Water

Apply Water Conservation Strategy

# 8.0 Waste Detail

## 8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

# 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

# 7940 Lankershim Boulevard - with PDFs

**Los Angeles-South Coast County, Winter**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Pharmacy/Drugstore with Drive Thru | 14.00 | 1000sqft | 0.00 | 14,000.00 | 0 |
| Enclosed Parking with Elevator | 541.00 | Space | 0.00 | 216,400.00 | 0 |
| High Turnover (Sit Down Restaurant) | 8.00 | 1000sqft | 0.00 | 8,000.00 | 0 |
| Apartments Mid Rise | 432.00 | Dwelling Unit | 4.69 | 432,000.00 | 1236 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.2 | **Precipitation Freq (Days)** | 33 |
| **Climate Zone** | 12 | | | **Operational Year** | 2023 |
| **Utility Company** | Los Angeles Department of Water & Power | | | | |
| **CO2 Intensity (lb/MWhr)** | 669 | **CH4 Intensity (lb/MWhr)** | 0.026 | **N2O Intensity (lb/MWhr)** | 0.003 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics - Accounts for RPS for LADWP

Land Use - 4.69-acre site; 541 parking spaces associated with proposed project parking structure

Construction Phase - Construction to occur 6 days/week

Off-road Equipment - Architectural coating equip

Off-road Equipment - Building equip

Off-road Equipment - Demolition equip

Off-road Equipment - Grading equip

Off-road Equipment - Paving equip

Off-road Equipment - Site prep equip

Trips and VMT - Anticipated construction vehicle trips

Demolition - Based on 7 daily haul truck trips over 40 days, and assuming building debris density is 1,620 lbs/cyd

Grading - 89,000 cy of soil export

Architectural Coating - Use of super-complaint coatings

Vehicle Trips - Accounts for less trips from walk-in/transit reduction, internal apture, and pass-by reductions

Woodstoves - Accounts for outdoor courtyard fireplaces (2) and firepits (2); Assumes these outdoor amenites would be used 30% of the year.

Area Coating - SCAQMD Rule 1113 compliance

Energy Use -

Construction Off-road Equipment Mitigation - SCAQMD Rule 403; use of tier 4 off-road equipment

Energy Mitigation - Use of Energy Star appliances

Water Mitigation - CALGreen

Waste Mitigation -

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblApplianceMitigation | PercentImprovement | 30.00 | 25.00 |
| tblApplianceMitigation | PercentImprovement | 15.00 | 12.00 |
| tblApplianceMitigation | PercentImprovement | 50.00 | 40.00 |
| tblApplianceMitigation | PercentImprovement | 15.00 | 9.00 |

| | | | |
|---|---|---|---|
| tblArchitecturalCoating | EF_Nonresidential_Exterior | 100.00 | 10.00 |
| tblArchitecturalCoating | EF_Nonresidential_Interior | 100.00 | 10.00 |
| tblArchitecturalCoating | EF_Residential_Exterior | 50.00 | 10.00 |
| tblArchitecturalCoating | EF_Residential_Interior | 50.00 | 10.00 |
| tblAreaCoating | Area_EF_Nonresidential_Exterior | 100 | 50 |
| tblAreaCoating | Area_EF_Nonresidential_Interior | 100 | 50 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 3.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 2.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 4.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 4.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 2.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 4.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Final |

| | | | |
|---|---|---|---|
| tblConstEquipMitigation | Tier | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Final |
| tblConstructionPhase | NumDays | 20.00 | 40.00 |
| tblConstructionPhase | NumDays | 5.00 | 28.00 |
| tblConstructionPhase | NumDays | 8.00 | 40.00 |
| tblConstructionPhase | NumDays | 230.00 | 886.00 |
| tblConstructionPhase | NumDays | 18.00 | 12.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblFireplaces | FireplaceDayYear | 25.00 | 110.00 |
| tblFireplaces | FireplaceWoodMass | 1,019.20 | 0.00 |
| tblFireplaces | NumberGas | 367.20 | 4.00 |
| tblFireplaces | NumberNoFireplace | 43.20 | 428.00 |
| tblFireplaces | NumberWood | 21.60 | 0.00 |
| tblGrading | MaterialExported | 0.00 | 89,000.00 |

| | | | |
|---|---|---|---|
| tblLandUse | LotAcreage | 0.32 | 0.00 |
| tblLandUse | LotAcreage | 4.87 | 0.00 |
| tblLandUse | LotAcreage | 0.18 | 0.00 |
| tblLandUse | LotAcreage | 11.37 | 4.69 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 2.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 4.00 | 1.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 6.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 4.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 4.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 4.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 8.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 6.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 6.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 8.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 6.00 |
| tblOffRoadEquipment | UsageHours | 6.00 | 8.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 6.00 |
| tblOffRoadEquipment | UsageHours | 6.00 | 8.00 |
| tblProjectCharacteristics | CH4IntensityFactor | 0.029 | 0.026 |
| tblProjectCharacteristics | CO2IntensityFactor | 1227.89 | 669 |

| | | | |
|---|---|---|---|
| tblProjectCharacteristics | N2OIntensityFactor | 0.006 | 0.003 |
| tblTripsAndVMT | HaulingTripNumber | 359.00 | 280.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 924.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 10,632.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 24.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 18.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 3.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 17.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 55.00 |
| tblTripsAndVMT | VendorTripNumber | 85.00 | 3.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 1.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 1.00 |
| tblTripsAndVMT | WorkerTripNumber | 15.00 | 12.00 |
| tblTripsAndVMT | WorkerTripNumber | 13.00 | 10.00 |
| tblTripsAndVMT | WorkerTripNumber | 18.00 | 14.00 |
| tblTripsAndVMT | WorkerTripNumber | 410.00 | 85.00 |
| tblTripsAndVMT | WorkerTripNumber | 13.00 | 10.00 |
| tblTripsAndVMT | WorkerTripNumber | 82.00 | 5.00 |
| tblVehicleTrips | ST_TR | 6.39 | 4.90 |
| tblVehicleTrips | ST_TR | 158.37 | 76.75 |
| tblVehicleTrips | ST_TR | 96.91 | 56.00 |
| tblVehicleTrips | SU_TR | 5.86 | 4.90 |
| tblVehicleTrips | SU_TR | 131.84 | 76.75 |
| tblVehicleTrips | SU_TR | 96.91 | 56.00 |
| tblVehicleTrips | WD_TR | 6.65 | 4.90 |
| tblVehicleTrips | WD_TR | 127.15 | 76.75 |
| tblVehicleTrips | WD_TR | 96.91 | 56.00 |

| | | | |
|---|---|---|---|
| tblWoodstoves | NumberCatalytic | 21.60 | 0.00 |
| tblWoodstoves | NumberNoncatalytic | 21.60 | 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 | | | | | |
| 2019 | 3.4615 | 36.5704 | 19.9910 | 0.0430 | 2.2177 | 1.6850 | 3.9027 | 0.3687 | 1.5643 | 1.9330 | 0.0000 | 4,297.8739 | 4,297.8739 | 1.0468 | 0.0000 | 4,324.0444 |
| 2020 | 5.5734 | 116.9127 | 37.5772 | 0.2697 | 12.4406 | 1.5956 | 14.0362 | 4.9101 | 1.4785 | 6.3886 | 0.0000 | 28,741.5966 | 28,741.5966 | 2.9835 | 0.0000 | 28,816.1838 |
| 2021 | 1.7096 | 14.9620 | 13.1863 | 0.0360 | 1.4696 | 0.5711 | 2.0407 | 0.3863 | 0.5404 | 0.9267 | 0.0000 | 3,583.3030 | 3,583.3030 | 0.4614 | 0.0000 | 3,594.8379 |
| 2022 | 1.5651 | 13.4954 | 12.7777 | 0.0355 | 1.4696 | 0.4911 | 1.9606 | 0.3863 | 0.4648 | 0.8511 | 0.0000 | 3,539.0318 | 3,539.0318 | 0.4543 | 0.0000 | 3,550.3897 |
| 2023 | 35.4818 | 11.5953 | 12.3668 | 0.0348 | 2.2118 | 0.4283 | 2.6401 | 0.5685 | 0.4052 | 0.9737 | 0.0000 | 3,463.7038 | 3,463.7038 | 0.4477 | 0.0000 | 3,474.7766 |
| **Maximum** | **35.4818** | **116.9127** | **37.5772** | **0.2697** | **12.4406** | **1.6850** | **14.0362** | **4.9101** | **1.5643** | **6.3886** | **0.0000** | **28,741.5966** | **28,741.5966** | **2.9835** | **0.0000** | **28,816.1838** |

## 2.1 Overall Construction (Maximum Daily Emission)

**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 | | | | | |
| 2019 | 0.5704 | 4.4043 | 20.9995 | 0.0430 | 1.0331 | 0.0679 | 1.1010 | 0.1893 | 0.0674 | 0.2567 | 0.0000 | 4,297.8739 | 4,297.8739 | 1.0468 | 0.0000 | 4,324.0444 |
| 2020 | 3.2342 | 88.9429 | 40.0524 | 0.2697 | 8.1284 | 0.3511 | 8.4795 | 2.8152 | 0.3385 | 3.1537 | 0.0000 | 28,741.5966 | 28,741.5966 | 2.9835 | 0.0000 | 28,816.1838 |
| 2021 | 0.7225 | 5.3260 | 13.9922 | 0.0360 | 1.4696 | 0.0435 | 1.5131 | 0.3863 | 0.0424 | 0.4287 | 0.0000 | 3,583.3030 | 3,583.3030 | 0.4614 | 0.0000 | 3,594.8379 |
| 2022 | 0.6924 | 5.0508 | 13.7307 | 0.0355 | 1.4696 | 0.0419 | 1.5114 | 0.3863 | 0.0409 | 0.4272 | 0.0000 | 3,539.0318 | 3,539.0318 | 0.4543 | 0.0000 | 3,550.3897 |
| 2023 | 34.8348 | 3.9220 | 13.4094 | 0.0348 | 2.2118 | 0.0392 | 2.2481 | 0.5685 | 0.0391 | 0.6041 | 0.0000 | 3,463.7038 | 3,463.7038 | 0.4477 | 0.0000 | 3,474.7766 |
| **Maximum** | **34.8348** | **88.9429** | **40.0524** | **0.2697** | **8.1284** | **0.3511** | **8.4795** | **2.8152** | **0.3385** | **3.1537** | **0.0000** | **28,741.5966** | **28,741.5966** | **2.9835** | **0.0000** | **28,816.1838** |

| | ROG | NOx | 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** | **16.19** | **44.38** | **-6.55** | **0.00** | **27.75** | **88.61** | **39.57** | **34.35** | **88.14** | **56.02** | **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 | 10.9379 | 0.4778 | 35.7342 | 2.3100e-003 | | 0.2029 | 0.2029 | | 0.2029 | 0.2029 | 0.0000 | 149.0037 | 149.0037 | 0.0637 | 1.5500e-003 | 151.0579 |
| Energy | 0.1954 | 1.6995 | 0.9312 | 0.0107 | | 0.1350 | 0.1350 | | 0.1350 | 0.1350 | | 2,131.0600 | 2,131.0600 | 0.0409 | 0.0391 | 2,143.7239 |
| Mobile | 4.9992 | 21.3206 | 60.6045 | 0.2227 | 19.3757 | 0.1737 | 19.5494 | 5.1851 | 0.1615 | 5.3466 | | 22,699.3546 | 22,699.3546 | 1.1615 | | 22,728.3932 |
| **Total** | **16.1325** | **23.4978** | **97.2699** | **0.2356** | **19.3757** | **0.5115** | **19.8872** | **5.1851** | **0.4994** | **5.6844** | **0.0000** | **24,979.4183** | **24,979.4183** | **1.2661** | **0.0406** | **25,023.1749** |

### 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 | 10.9379 | 0.4778 | 35.7342 | 2.3100e-003 | | 0.2029 | 0.2029 | | 0.2029 | 0.2029 | 0.0000 | 149.0037 | 149.0037 | 0.0637 | 1.5500e-003 | 151.0579 |
| Energy | 0.1954 | 1.6995 | 0.9312 | 0.0107 | | 0.1350 | 0.1350 | | 0.1350 | 0.1350 | | 2,131.0600 | 2,131.0600 | 0.0409 | 0.0391 | 2,143.7239 |
| Mobile | 4.9992 | 21.3206 | 60.6045 | 0.2227 | 19.3757 | 0.1737 | 19.5494 | 5.1851 | 0.1615 | 5.3466 | | 22,699.3546 | 22,699.3546 | 1.1615 | | 22,728.3932 |
| **Total** | **16.1325** | **23.4978** | **97.2699** | **0.2356** | **19.3757** | **0.5115** | **19.8872** | **5.1851** | **0.4994** | **5.6844** | **0.0000** | **24,979.4183** | **24,979.4183** | **1.2661** | **0.0406** | **25,023.1749** |

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

## 3.0 Construction Detail

**Construction Phase**

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|---|---|---|---|---|---|---|---|
| 1 | Demolition | Demolition | 10/1/2019 | 11/15/2019 | 6 | 40 | |
| 2 | Site Preparation | Site Preparation | 5/1/2020 | 6/2/2020 | 6 | 28 | |
| 3 | Grading | Grading | 6/3/2020 | 7/18/2020 | 6 | 40 | |
| 4 | Building Construction | Building Construction | 7/19/2020 | 5/18/2023 | 6 | 886 | |
| 5 | Paving | Paving | 5/19/2023 | 6/1/2023 | 6 | 12 | |
| 6 | Architectural Coating | Architectural Coating | 5/19/2023 | 6/8/2023 | 6 | 18 | |

**Acres of Grading (Site Preparation Phase): 28**

**Acres of Grading (Grading Phase): 30**

**Acres of Paving: 0**

**Residential Indoor: 874,800; Residential Outdoor: 291,600; Non-Residential Indoor: 33,000; Non-Residential Outdoor: 11,000; Striped Parking Area: 12,984 (Architectural Coating – sqft)**

**OffRoad Equipment**

7940 Lankershim Boulevard - with PDFs - Los Angeles-South Coast County, Winter

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|---|---|---|---|---|---|
| Demolition | Concrete/Industrial Saws | 1 | 6.00 | 81 | 0.73 |
| Demolition | Excavators | 2 | 8.00 | 158 | 0.38 |
| Demolition | Off-Highway Trucks | 1 | 2.00 | 402 | 0.38 |
| Demolition | Rubber Tired Dozers | 2 | 8.00 | 247 | 0.40 |
| Site Preparation | Graders | 1 | 8.00 | 187 | 0.41 |
| Site Preparation | Off-Highway Trucks | 1 | 4.00 | 402 | 0.38 |
| Site Preparation | Rubber Tired Dozers | 1 | 4.00 | 247 | 0.40 |
| Site Preparation | Scrapers | 1 | 4.00 | 367 | 0.48 |
| Site Preparation | Tractors/Loaders/Backhoes | 1 | 8.00 | 97 | 0.37 |
| Grading | Excavators | 1 | 4.00 | 158 | 0.38 |
| Grading | Graders | 1 | 4.00 | 187 | 0.41 |
| Grading | Off-Highway Trucks | 2 | 4.00 | 402 | 0.38 |
| Grading | Rubber Tired Dozers | 1 | 8.00 | 247 | 0.40 |
| Grading | Scrapers | 1 | 4.00 | 367 | 0.48 |
| Grading | Tractors/Loaders/Backhoes | 1 | 8.00 | 97 | 0.37 |
| Building Construction | Cranes | 1 | 8.00 | 231 | 0.29 |
| Building Construction | Forklifts | 1 | 6.00 | 89 | 0.20 |
| Building Construction | Generator Sets | 1 | 6.00 | 84 | 0.74 |
| Building Construction | Tractors/Loaders/Backhoes | 1 | 8.00 | 97 | 0.37 |
| Building Construction | Welders | 1 | 6.00 | 46 | 0.45 |
| Paving | Cement and Mortar Mixers | 1 | 6.00 | 9 | 0.56 |
| Paving | Pavers | 1 | 8.00 | 130 | 0.42 |
| Paving | Paving Equipment | 1 | 6.00 | 132 | 0.36 |
| Paving | Rollers | 1 | 8.00 | 80 | 0.38 |
| Paving | Tractors/Loaders/Backhoes | 1 | 6.00 | 97 | 0.37 |
| Architectural Coating | Air Compressors | 1 | 8.00 | 78 | 0.48 |

**Trips and VMT**

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|
| Demolition | 6 | 12.00 | 3.00 | 280.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Site Preparation | 5 | 10.00 | 17.00 | 924.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Grading | 7 | 14.00 | 55.00 | 11,125.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Building Construction | 5 | 85.00 | 3.00 | 10,632.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Paving | 5 | 10.00 | 1.00 | 24.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Architectural Coating | 1 | 5.00 | 1.00 | 18.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |

## 3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

## 3.2 Demolition - 2019

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 1.9420 | 0.0000 | 1.9420 | 0.2940 | 0.0000 | 0.2940 | | | 0.0000 | | | 0.0000 |
| Off-Road | 3.3146 | 34.0014 | 18.8705 | 0.0354 | | 1.6736 | 1.6736 | | 1.5535 | 1.5535 | | 3,484.5403 | 3,484.5403 | 0.9931 | | 3,509.3683 |
| **Total** | **3.3146** | **34.0014** | **18.8705** | **0.0354** | **1.9420** | **1.6736** | **3.6155** | **0.2940** | **1.5535** | **1.8475** | | **3,484.5403** | **3,484.5403** | **0.9931** | | **3,509.3683** |

## 3.2 Demolition - 2019

### 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 | 0.0674 | 2.1726 | 0.4880 | 5.5000e-003 | 0.1224 | 8.0100e-003 | 0.1304 | 0.0336 | 7.6700e-003 | 0.0412 | | 594.8948 | 594.8948 | 0.0433 | | 595.9764 |
| Vendor | 0.0130 | 0.3477 | 0.1015 | 7.6000e-004 | 0.0192 | 2.2500e-003 | 0.0215 | 5.5300e-003 | 2.1500e-003 | 7.6800e-003 | | 81.3831 | 81.3831 | 5.7200e-003 | | 81.5261 |
| Worker | 0.0665 | 0.0488 | 0.5310 | 1.3800e-003 | 0.1341 | 1.1600e-003 | 0.1353 | 0.0356 | 1.0700e-003 | 0.0366 | | 137.0557 | 137.0557 | 4.7100e-003 | | 137.1736 |
| **Total** | **0.1469** | **2.5690** | **1.1205** | **7.6400e-003** | **0.2757** | **0.0114** | **0.2872** | **0.0747** | **0.0109** | **0.0855** | | **813.3336** | **813.3336** | **0.0537** | | **814.6760** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 0.7574 | 0.0000 | 0.7574 | 0.1147 | 0.0000 | 0.1147 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.4235 | 1.8352 | 19.8790 | 0.0354 | | 0.0565 | 0.0565 | | 0.0565 | 0.0565 | 0.0000 | 3,484.5403 | 3,484.5403 | 0.9931 | | 3,509.3683 |
| **Total** | **0.4235** | **1.8352** | **19.8790** | **0.0354** | **0.7574** | **0.0565** | **0.8138** | **0.1147** | **0.0565** | **0.1711** | **0.0000** | **3,484.5403** | **3,484.5403** | **0.9931** | | **3,509.3683** |

## 3.2 Demolition - 2019

**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 | 0.0674 | 2.1726 | 0.4880 | 5.5000e-003 | 0.1224 | 8.0100e-003 | 0.1304 | 0.0336 | 7.6700e-003 | 0.0412 | | 594.8948 | 594.8948 | 0.0433 | | 595.9764 |
| Vendor | 0.0130 | 0.3477 | 0.1015 | 7.6000e-004 | 0.0192 | 2.2500e-003 | 0.0215 | 5.5300e-003 | 2.1500e-003 | 7.6800e-003 | | 81.3831 | 81.3831 | 5.7200e-003 | | 81.5261 |
| Worker | 0.0665 | 0.0488 | 0.5310 | 1.3800e-003 | 0.1341 | 1.1600e-003 | 0.1353 | 0.0356 | 1.0700e-003 | 0.0366 | | 137.0557 | 137.0557 | 4.7100e-003 | | 137.1736 |
| **Total** | **0.1469** | **2.5690** | **1.1205** | **7.6400e-003** | **0.2757** | **0.0114** | **0.2872** | **0.0747** | **0.0109** | **0.0855** | | **813.3336** | **813.3336** | **0.0537** | | **814.6760** |

## 3.3 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 | | | | | 4.0715 | 0.0000 | 4.0715 | 1.7696 | 0.0000 | 1.7696 | | | 0.0000 | | | 0.0000 |
| Off-Road | 2.0531 | 23.1342 | 11.7943 | 0.0282 | | 0.9572 | 0.9572 | | 0.8806 | 0.8806 | | 2,729.9770 | 2,729.9770 | 0.8829 | | 2,752.0502 |
| **Total** | **2.0531** | **23.1342** | **11.7943** | **0.0282** | **4.0715** | **0.9572** | **5.0287** | **1.7696** | **0.8806** | **2.6502** | | **2,729.9770** | **2,729.9770** | **0.8829** | | **2,752.0502** |

## 3.3 Site Preparation - 2020

### 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 | 0.2953 | 9.6117 | 2.2346 | 0.0256 | 0.5770 | 0.0308 | 0.6077 | 0.1582 | 0.0294 | 0.1876 | | 2,775.6104 | 2,775.6104 | 0.1992 | | 2,780.5911 |
| Vendor | 0.0632 | 1.8080 | 0.5226 | 4.2900e-003 | 0.1088 | 8.6500e-003 | 0.1175 | 0.0313 | 8.2700e-003 | 0.0396 | | 458.0634 | 458.0634 | 0.0306 | | 458.8292 |
| Worker | 0.0511 | 0.0363 | 0.4010 | 1.1100e-003 | 0.1118 | 9.3000e-004 | 0.1127 | 0.0296 | 8.6000e-004 | 0.0305 | | 110.7420 | 110.7420 | 3.4900e-003 | | 110.8293 |
| **Total** | **0.4096** | **11.4559** | **3.1582** | **0.0310** | **0.7976** | **0.0403** | **0.8379** | **0.2191** | **0.0386** | **0.2577** | | **3,344.4159** | **3,344.4159** | **0.2334** | | **3,350.2495** |

### 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 | | | | | 1.5879 | 0.0000 | 1.5879 | 0.6902 | 0.0000 | 0.6902 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.3454 | 1.4968 | 13.6150 | 0.0282 | | 0.0461 | 0.0461 | | 0.0461 | 0.0461 | 0.0000 | 2,729.9770 | 2,729.9770 | 0.8829 | | 2,752.0502 |
| **Total** | **0.3454** | **1.4968** | **13.6150** | **0.0282** | **1.5879** | **0.0461** | **1.6340** | **0.6902** | **0.0461** | **0.7362** | **0.0000** | **2,729.9770** | **2,729.9770** | **0.8829** | | **2,752.0502** |

## 3.3 Site Preparation - 2020

**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 | 0.2953 | 9.6117 | 2.2346 | 0.0256 | 0.5770 | 0.0308 | 0.6077 | 0.1582 | 0.0294 | 0.1876 | | 2,775.6104 | 2,775.6104 | 0.1992 | | 2,780.5911 |
| Vendor | 0.0632 | 1.8080 | 0.5226 | 4.2900e-003 | 0.1088 | 8.6500e-003 | 0.1175 | 0.0313 | 8.2700e-003 | 0.0396 | | 458.0634 | 458.0634 | 0.0306 | | 458.8292 |
| Worker | 0.0511 | 0.0363 | 0.4010 | 1.1100e-003 | 0.1118 | 9.3000e-004 | 0.1127 | 0.0296 | 8.6000e-004 | 0.0305 | | 110.7420 | 110.7420 | 3.4900e-003 | | 110.8293 |
| **Total** | **0.4096** | **11.4559** | **3.1582** | **0.0310** | **0.7976** | **0.0403** | **0.8379** | **0.2191** | **0.0386** | **0.2577** | | **3,344.4159** | **3,344.4159** | **0.2334** | | **3,350.2495** |

## 3.4 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 | | | | | 7.0691 | 0.0000 | 7.0691 | 3.4342 | 0.0000 | 3.4342 | | | 0.0000 | | | 0.0000 |
| Off-Road | 2.8090 | 30.0053 | 16.4918 | 0.0383 | | 1.3072 | 1.3072 | | 1.2026 | 1.2026 | | 3,711.6591 | 3,711.6591 | 1.2004 | | 3,741.6698 |
| **Total** | **2.8090** | **30.0053** | **16.4918** | **0.0383** | **7.0691** | **1.3072** | **8.3763** | **3.4342** | **1.2026** | **4.6368** | | **3,711.6591** | **3,711.6591** | **1.2004** | | **3,741.6698** |

## 3.4 Grading - 2020

### 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 | 2.4884 | 81.0074 | 18.8333 | 0.2159 | 4.8629 | 0.2592 | 5.1220 | 1.3330 | 0.2479 | 1.5809 | | 23,392.9288 | 23,392.9288 | 1.6791 | | 23,434.9057 |
| Vendor | 0.2045 | 5.8493 | 1.6906 | 0.0139 | 0.3521 | 0.0280 | 0.3801 | 0.1014 | 0.0268 | 0.1281 | | 1,481.9699 | 1,481.9699 | 0.0991 | | 1,484.4473 |
| Worker | 0.0715 | 0.0508 | 0.5614 | 1.5600e-003 | 0.1565 | 1.3100e-003 | 0.1578 | 0.0415 | 1.2100e-003 | 0.0427 | | 155.0389 | 155.0389 | 4.8900e-003 | | 155.1610 |
| **Total** | **2.7645** | **86.9074** | **21.0854** | **0.2313** | **5.3715** | **0.2884** | **5.6599** | **1.4759** | **0.2759** | **1.7518** | | **25,029.9375** | **25,029.9375** | **1.7831** | | **25,074.5141** |

### 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 | | | | | 2.7569 | 0.0000 | 2.7569 | 1.3393 | 0.0000 | 1.3393 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.4697 | 2.0355 | 18.9670 | 0.0383 | | 0.0626 | 0.0626 | | 0.0626 | 0.0626 | 0.0000 | 3,711.6591 | 3,711.6591 | 1.2004 | | 3,741.6698 |
| **Total** | **0.4697** | **2.0355** | **18.9670** | **0.0383** | **2.7569** | **0.0626** | **2.8196** | **1.3393** | **0.0626** | **1.4020** | **0.0000** | **3,711.6591** | **3,711.6591** | **1.2004** | | **3,741.6698** |

## 3.4 Grading - 2020

**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 | 2.4884 | 81.0074 | 18.8333 | 0.2159 | 4.8629 | 0.2592 | 5.1220 | 1.3330 | 0.2479 | 1.5809 | | 23,392.9288 | 23,392.9288 | 1.6791 | | 23,434.9057 |
| Vendor | 0.2045 | 5.8493 | 1.6906 | 0.0139 | 0.3521 | 0.0280 | 0.3801 | 0.1014 | 0.0268 | 0.1281 | | 1,481.9699 | 1,481.9699 | 0.0991 | | 1,484.4473 |
| Worker | 0.0715 | 0.0508 | 0.5614 | 1.5600e-003 | 0.1565 | 1.3100e-003 | 0.1578 | 0.0415 | 1.2100e-003 | 0.0427 | | 155.0389 | 155.0389 | 4.8900e-003 | | 155.1610 |
| **Total** | **2.7645** | **86.9074** | **21.0854** | **0.2313** | **5.3715** | **0.2884** | **5.6599** | **1.4759** | **0.2759** | **1.7518** | | **25,029.9375** | **25,029.9375** | **1.7831** | | **25,074.5141** |

## 3.5 Building Construction - 2020

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.3268 | 12.2573 | 9.3847 | 0.0169 | | 0.6402 | 0.6402 | | 0.6060 | 0.6060 | | 1,593.4655 | 1,593.4655 | 0.3632 | | 1,602.5459 |
| **Total** | **1.3268** | **12.2573** | **9.3847** | **0.0169** | | **0.6402** | **0.6402** | | **0.6060** | **0.6060** | | **1,593.4655** | **1,593.4655** | **0.3632** | | **1,602.5459** |

## 3.5 Building Construction - 2020

### 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 | 0.1074 | 3.4952 | 0.8126 | 9.3100e-003 | 1.0411 | 0.0112 | 1.0523 | 0.2616 | 0.0107 | 0.2723 | | 1,009.3129 | 1,009.3129 | 0.0725 | | 1,011.1240 |
| Vendor | 0.0112 | 0.3191 | 0.0922 | 7.6000e-004 | 0.0192 | 1.5300e-003 | 0.0207 | 5.5300e-003 | 1.4600e-003 | 6.9900e-003 | | 80.8347 | 80.8347 | 5.4100e-003 | | 80.9699 |
| Worker | 0.4344 | 0.3081 | 3.4086 | 9.4500e-003 | 0.9501 | 7.9400e-003 | 0.9580 | 0.2520 | 7.3200e-003 | 0.2593 | | 941.3073 | 941.3073 | 0.0297 | | 942.0491 |
| **Total** | **0.5529** | **4.1223** | **4.3134** | **0.0195** | **2.0104** | **0.0207** | **2.0310** | **0.5191** | **0.0195** | **0.5385** | | **2,031.4549** | **2,031.4549** | **0.1075** | | **2,034.1429** |

### 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 | 0.2052 | 1.4998 | 9.9775 | 0.0169 | | 0.0252 | 0.0252 | | 0.0252 | 0.0252 | 0.0000 | 1,593.4655 | 1,593.4655 | 0.3632 | | 1,602.5459 |
| **Total** | **0.2052** | **1.4998** | **9.9775** | **0.0169** | | **0.0252** | **0.0252** | | **0.0252** | **0.0252** | **0.0000** | **1,593.4655** | **1,593.4655** | **0.3632** | | **1,602.5459** |

## 3.5 Building Construction - 2020

**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 | 0.1074 | 3.4952 | 0.8126 | 9.3100e-003 | 1.0411 | 0.0112 | 1.0523 | 0.2616 | 0.0107 | 0.2723 | | 1,009.3129 | 1,009.3129 | 0.0725 | | 1,011.1240 |
| Vendor | 0.0112 | 0.3191 | 0.0922 | 7.6000e-004 | 0.0192 | 1.5300e-003 | 0.0207 | 5.5300e-003 | 1.4600e-003 | 6.9900e-003 | | 80.8347 | 80.8347 | 5.4100e-003 | | 80.9699 |
| Worker | 0.4344 | 0.3081 | 3.4086 | 9.4500e-003 | 0.9501 | 7.9400e-003 | 0.9580 | 0.2520 | 7.3200e-003 | 0.2593 | | 941.3073 | 941.3073 | 0.0297 | | 942.0491 |
| **Total** | **0.5529** | **4.1223** | **4.3134** | **0.0195** | **2.0104** | **0.0207** | **2.0310** | **0.5191** | **0.0195** | **0.5385** | | **2,031.4549** | **2,031.4549** | **0.1075** | | **2,034.1429** |

## 3.5 Building Construction - 2021

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.1922 | 11.1358 | 9.1716 | 0.0169 | | 0.5528 | 0.5528 | | 0.5231 | 0.5231 | | 1,593.5462 | 1,593.5462 | 0.3580 | | 1,602.4972 |
| **Total** | **1.1922** | **11.1358** | **9.1716** | **0.0169** | | **0.5528** | **0.5528** | | **0.5231** | **0.5231** | | **1,593.5462** | **1,593.5462** | **0.3580** | | **1,602.4972** |

## 3.5 Building Construction - 2021

### 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 | 0.1025 | 3.2584 | 0.8003 | 9.2000e-003 | 0.5003 | 0.0100 | 0.5103 | 0.1288 | 9.6000e-003 | 0.1384 | | 998.1397 | 998.1397 | 0.0714 | | 999.9238 |
| Vendor | 9.5700e-003 | 0.2907 | 0.0842 | 7.5000e-004 | 0.0192 | 6.1000e-004 | 0.0198 | 5.5300e-003 | 5.9000e-004 | 6.1200e-003 | | 80.2037 | 80.2037 | 5.1800e-003 | | 80.3331 |
| Worker | 0.4053 | 0.2772 | 3.1302 | 9.1500e-003 | 0.9501 | 7.6800e-003 | 0.9578 | 0.2520 | 7.0700e-003 | 0.2590 | | 911.4134 | 911.4134 | 0.0268 | | 912.0839 |
| **Total** | **0.5173** | **3.8263** | **4.0147** | **0.0191** | **1.4696** | **0.0183** | **1.4879** | **0.3863** | **0.0173** | **0.4036** | | **1,989.7568** | **1,989.7568** | **0.1034** | | **1,992.3408** |

### 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 | 0.2052 | 1.4998 | 9.9775 | 0.0169 | | 0.0252 | 0.0252 | | 0.0252 | 0.0252 | 0.0000 | 1,593.5462 | 1,593.5462 | 0.3580 | | 1,602.4972 |
| **Total** | **0.2052** | **1.4998** | **9.9775** | **0.0169** | | **0.0252** | **0.0252** | | **0.0252** | **0.0252** | **0.0000** | **1,593.5462** | **1,593.5462** | **0.3580** | | **1,602.4972** |

## 3.5 Building Construction - 2021

**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 | 0.1025 | 3.2584 | 0.8003 | 9.2000e-003 | 0.5003 | 0.0100 | 0.5103 | 0.1288 | 9.6000e-003 | 0.1384 | | 998.1397 | 998.1397 | 0.0714 | | 999.9238 |
| Vendor | 9.5700e-003 | 0.2907 | 0.0842 | 7.5000e-004 | 0.0192 | 6.1000e-004 | 0.0198 | 5.5300e-003 | 5.9000e-004 | 6.1200e-003 | | 80.2037 | 80.2037 | 5.1800e-003 | | 80.3331 |
| Worker | 0.4053 | 0.2772 | 3.1302 | 9.1500e-003 | 0.9501 | 7.6800e-003 | 0.9578 | 0.2520 | 7.0700e-003 | 0.2590 | | 911.4134 | 911.4134 | 0.0268 | | 912.0839 |
| **Total** | **0.5173** | **3.8263** | **4.0147** | **0.0191** | **1.4696** | **0.0183** | **1.4879** | **0.3863** | **0.0173** | **0.4036** | | **1,989.7568** | **1,989.7568** | **0.1034** | | **1,992.3408** |

## 3.5 Building Construction - 2022

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.0779 | 9.9445 | 9.0244 | 0.0169 | | 0.4744 | 0.4744 | | 0.4491 | 0.4491 | | 1,593.9766 | 1,593.9766 | 0.3549 | | 1,602.8489 |
| **Total** | **1.0779** | **9.9445** | **9.0244** | **0.0169** | | **0.4744** | **0.4744** | | **0.4491** | **0.4491** | | **1,593.9766** | **1,593.9766** | **0.3549** | | **1,602.8489** |

## 3.5 Building Construction - 2022

### 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 | 0.0975 | 3.0244 | 0.7905 | 9.0800e-003 | 0.5003 | 8.7200e-003 | 0.5090 | 0.1288 | 8.3400e-003 | 0.1372 | | 986.1801 | 986.1801 | 0.0702 | | 987.9354 |
| Vendor | 8.9900e-003 | 0.2762 | 0.0797 | 7.4000e-004 | 0.0192 | 5.4000e-004 | 0.0197 | 5.5300e-003 | 5.1000e-004 | 6.0400e-003 | | 79.4911 | 79.4911 | 5.0000e-003 | | 79.6160 |
| Worker | 0.3807 | 0.2504 | 2.8830 | 8.8200e-003 | 0.9501 | 7.4400e-003 | 0.9575 | 0.2520 | 6.8500e-003 | 0.2588 | | 879.3840 | 879.3840 | 0.0242 | | 879.9894 |
| **Total** | **0.4872** | **3.5510** | **3.7533** | **0.0186** | **1.4696** | **0.0167** | **1.4863** | **0.3863** | **0.0157** | **0.4020** | | **1,945.0552** | **1,945.0552** | **0.0994** | | **1,947.5408** |

### 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 | 0.2052 | 1.4998 | 9.9775 | 0.0169 | | 0.0252 | 0.0252 | | 0.0252 | 0.0252 | 0.0000 | 1,593.9766 | 1,593.9766 | 0.3549 | | 1,602.8489 |
| **Total** | **0.2052** | **1.4998** | **9.9775** | **0.0169** | | **0.0252** | **0.0252** | | **0.0252** | **0.0252** | **0.0000** | **1,593.9766** | **1,593.9766** | **0.3549** | | **1,602.8489** |

## 3.5 Building Construction - 2022

**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 | 0.0975 | 3.0244 | 0.7905 | 9.0800e-003 | 0.5003 | 8.7200e-003 | 0.5090 | 0.1288 | 8.3400e-003 | 0.1372 | | 986.1801 | 986.1801 | 0.0702 | | 987.9354 |
| Vendor | 8.9900e-003 | 0.2762 | 0.0797 | 7.4000e-004 | 0.0192 | 5.4000e-004 | 0.0197 | 5.5300e-003 | 5.1000e-004 | 6.0400e-003 | | 79.4911 | 79.4911 | 5.0000e-003 | | 79.6160 |
| Worker | 0.3807 | 0.2504 | 2.8830 | 8.8200e-003 | 0.9501 | 7.4400e-003 | 0.9575 | 0.2520 | 6.8500e-003 | 0.2588 | | 879.3840 | 879.3840 | 0.0242 | | 879.9894 |
| **Total** | **0.4872** | **3.5510** | **3.7533** | **0.0186** | **1.4696** | **0.0167** | **1.4863** | **0.3863** | **0.0157** | **0.4020** | | **1,945.0552** | **1,945.0552** | **0.0994** | | **1,947.5408** |

## 3.5 Building Construction - 2023

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.9999 | 9.1731 | 8.9348 | 0.0169 | | 0.4172 | 0.4172 | | 0.3948 | 0.3948 | | 1,594.3031 | 1,594.3031 | 0.3517 | | 1,603.0958 |
| **Total** | **0.9999** | **9.1731** | **8.9348** | **0.0169** | | **0.4172** | **0.4172** | | **0.3948** | **0.3948** | | **1,594.3031** | **1,594.3031** | **0.3517** | | **1,603.0958** |

## 3.5 Building Construction - 2023

### 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 | 0.0640 | 1.9865 | 0.7111 | 8.6800e-003 | 1.2424 | 3.6700e-003 | 1.2461 | 0.3110 | 3.5100e-003 | 0.3145 | | 945.1659 | 945.1659 | 0.0650 | | 946.7909 |
| Vendor | 6.6800e-003 | 0.2092 | 0.0709 | 7.2000e-004 | 0.0192 | 2.6000e-004 | 0.0195 | 5.5300e-003 | 2.4000e-004 | 5.7700e-003 | | 77.0224 | 77.0224 | 4.4000e-003 | | 77.1323 |
| Worker | 0.3586 | 0.2264 | 2.6500 | 8.5000e-003 | 0.9501 | 7.2300e-003 | 0.9573 | 0.2520 | 6.6500e-003 | 0.2586 | | 847.2125 | 847.2125 | 0.0218 | | 847.7576 |
| **Total** | **0.4293** | **2.4222** | **3.4320** | **0.0179** | **2.2118** | **0.0112** | **2.2229** | **0.5685** | **0.0104** | **0.5789** | | **1,869.4007** | **1,869.4007** | **0.0912** | | **1,871.6808** |

### 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 | 0.2052 | 1.4998 | 9.9775 | 0.0169 | | 0.0252 | 0.0252 | | 0.0252 | 0.0252 | 0.0000 | 1,594.3031 | 1,594.3031 | 0.3517 | | 1,603.0958 |
| **Total** | **0.2052** | **1.4998** | **9.9775** | **0.0169** | | **0.0252** | **0.0252** | | **0.0252** | **0.0252** | **0.0000** | **1,594.3031** | **1,594.3031** | **0.3517** | | **1,603.0958** |

## 3.5 Building Construction - 2023

**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 | 0.0640 | 1.9865 | 0.7111 | 8.6800e-003 | 1.2424 | 3.6700e-003 | 1.2461 | 0.3110 | 3.5100e-003 | 0.3145 | | 945.1659 | 945.1659 | 0.0650 | | 946.7909 |
| Vendor | 6.6800e-003 | 0.2092 | 0.0709 | 7.2000e-004 | 0.0192 | 2.6000e-004 | 0.0195 | 5.5300e-003 | 2.4000e-004 | 5.7700e-003 | | 77.0224 | 77.0224 | 4.4000e-003 | | 77.1323 |
| Worker | 0.3586 | 0.2264 | 2.6500 | 8.5000e-003 | 0.9501 | 7.2300e-003 | 0.9573 | 0.2520 | 6.6500e-003 | 0.2586 | | 847.2125 | 847.2125 | 0.0218 | | 847.7576 |
| **Total** | **0.4293** | **2.4222** | **3.4320** | **0.0179** | **2.2118** | **0.0112** | **2.2229** | **0.5685** | **0.0104** | **0.5789** | | **1,869.4007** | **1,869.4007** | **0.0912** | | **1,871.6808** |

## 3.6 Paving - 2023

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.6313 | 6.1230 | 8.5577 | 0.0133 | | 0.3032 | 0.3032 | | 0.2798 | 0.2798 | | 1,269.2449 | 1,269.2449 | 0.4022 | | 1,279.2994 |
| Paving | 0.0000 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| **Total** | **0.6313** | **6.1230** | **8.5577** | **0.0133** | | **0.3032** | **0.3032** | | **0.2798** | **0.2798** | | **1,269.2449** | **1,269.2449** | **0.4022** | | **1,279.2994** |

## 3.6 Paving - 2023

### 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 | 0.0107 | 0.3311 | 0.1185 | 1.4500e-003 | 0.0350 | 6.1000e-004 | 0.0356 | 9.5900e-003 | 5.9000e-004 | 0.0102 | | 157.5276 | 157.5276 | 0.0108 | | 157.7985 |
| Vendor | 2.2300e-003 | 0.0697 | 0.0236 | 2.4000e-004 | 6.4000e-003 | 9.0000e-005 | 6.4900e-003 | 1.8400e-003 | 8.0000e-005 | 1.9200e-003 | | 25.6741 | 25.6741 | 1.4700e-003 | | 25.7108 |
| Worker | 0.0422 | 0.0266 | 0.3118 | 1.0000e-003 | 0.1118 | 8.5000e-004 | 0.1126 | 0.0296 | 7.8000e-004 | 0.0304 | | 99.6721 | 99.6721 | 2.5700e-003 | | 99.7362 |
| **Total** | **0.0551** | **0.4275** | **0.4539** | **2.6900e-003** | **0.1532** | **1.5500e-003** | **0.1547** | **0.0411** | **1.4500e-003** | **0.0425** | | **282.8738** | **282.8738** | **0.0149** | | **283.2455** |

### 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 | 0.2002 | 0.9528 | 9.8604 | 0.0133 | | 0.0316 | 0.0316 | | 0.0316 | 0.0316 | 0.0000 | 1,269.2449 | 1,269.2449 | 0.4022 | | 1,279.2994 |
| Paving | 0.0000 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| **Total** | **0.2002** | **0.9528** | **9.8604** | **0.0133** | | **0.0316** | **0.0316** | | **0.0316** | **0.0316** | **0.0000** | **1,269.2449** | **1,269.2449** | **0.4022** | | **1,279.2994** |

## 3.6 Paving - 2023

**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 | 0.0107 | 0.3311 | 0.1185 | 1.4500e-003 | 0.0350 | 6.1000e-004 | 0.0356 | 9.5900e-003 | 5.9000e-004 | 0.0102 | | 157.5276 | 157.5276 | 0.0108 | | 157.7985 |
| Vendor | 2.2300e-003 | 0.0697 | 0.0236 | 2.4000e-004 | 6.4000e-003 | 9.0000e-005 | 6.4900e-003 | 1.8400e-003 | 8.0000e-005 | 1.9200e-003 | | 25.6741 | 25.6741 | 1.4700e-003 | | 25.7108 |
| Worker | 0.0422 | 0.0266 | 0.3118 | 1.0000e-003 | 0.1118 | 8.5000e-004 | 0.1126 | 0.0296 | 7.8000e-004 | 0.0304 | | 99.6721 | 99.6721 | 2.5700e-003 | | 99.7362 |
| **Total** | **0.0551** | **0.4275** | **0.4539** | **2.6900e-003** | **0.1532** | **1.5500e-003** | **0.1547** | **0.0411** | **1.4500e-003** | **0.0425** | | **282.8738** | **282.8738** | **0.0149** | | **283.2455** |

## 3.7 Architectural Coating - 2023

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Archit. Coating | 34.5112 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.2556 | 1.7373 | 2.4148 | 3.9600e-003 | | 0.0944 | 0.0944 | | 0.0944 | 0.0944 | | 375.2641 | 375.2641 | 0.0225 | | 375.8253 |
| **Total** | **34.7667** | **1.7373** | **2.4148** | **3.9600e-003** | | **0.0944** | **0.0944** | | **0.0944** | **0.0944** | | **375.2641** | **375.2641** | **0.0225** | | **375.8253** |

## 3.7 Architectural Coating - 2023

**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 | 5.3300e-003 | 0.1656 | 0.0593 | 7.2000e-004 | 0.0175 | 3.1000e-004 | 0.0178 | 4.7900e-003 | 2.9000e-004 | 5.0900e-003 | | 78.7638 | 78.7638 | 5.4200e-003 | | 78.8992 |
| Vendor | 2.2300e-003 | 0.0697 | 0.0236 | 2.4000e-004 | 6.4000e-003 | 9.0000e-005 | 6.4900e-003 | 1.8400e-003 | 8.0000e-005 | 1.9200e-003 | | 25.6741 | 25.6741 | 1.4700e-003 | | 25.7108 |
| Worker | 0.0211 | 0.0133 | 0.1559 | 5.0000e-004 | 0.0559 | 4.3000e-004 | 0.0563 | 0.0148 | 3.9000e-004 | 0.0152 | | 49.8360 | 49.8360 | 1.2800e-003 | | 49.8681 |
| **Total** | **0.0287** | **0.2486** | **0.2388** | **1.4600e-003** | **0.0798** | **8.3000e-004** | **0.0806** | **0.0215** | **7.6000e-004** | **0.0222** | | **154.2740** | **154.2740** | **8.1700e-003** | | **154.4781** |

**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 | 34.5112 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.0396 | 0.1717 | 2.4432 | 3.9600e-003 | | 5.2800e-003 | 5.2800e-003 | | 5.2800e-003 | 5.2800e-003 | 0.0000 | 375.2641 | 375.2641 | 0.0225 | | 375.8253 |
| **Total** | **34.5508** | **0.1717** | **2.4432** | **3.9600e-003** | | **5.2800e-003** | **5.2800e-003** | | **5.2800e-003** | **5.2800e-003** | **0.0000** | **375.2641** | **375.2641** | **0.0225** | | **375.8253** |

## 3.7 Architectural Coating - 2023

**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 | 5.3300e-003 | 0.1656 | 0.0593 | 7.2000e-004 | 0.0175 | 3.1000e-004 | 0.0178 | 4.7900e-003 | 2.9000e-004 | 5.0900e-003 | | 78.7638 | 78.7638 | 5.4200e-003 | | 78.8992 |
| Vendor | 2.2300e-003 | 0.0697 | 0.0236 | 2.4000e-004 | 6.4000e-003 | 9.0000e-005 | 6.4900e-003 | 1.8400e-003 | 8.0000e-005 | 1.9200e-003 | | 25.6741 | 25.6741 | 1.4700e-003 | | 25.7108 |
| Worker | 0.0211 | 0.0133 | 0.1559 | 5.0000e-004 | 0.0559 | 4.3000e-004 | 0.0563 | 0.0148 | 3.9000e-004 | 0.0152 | | 49.8360 | 49.8360 | 1.2800e-003 | | 49.8681 |
| **Total** | **0.0287** | **0.2486** | **0.2388** | **1.4600e-003** | **0.0798** | **8.3000e-004** | **0.0806** | **0.0215** | **7.6000e-004** | **0.0222** | | **154.2740** | **154.2740** | **8.1700e-003** | | **154.4781** |

# 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 | 4.9992 | 21.3206 | 60.6045 | 0.2227 | 19.3757 | 0.1737 | 19.5494 | 5.1851 | 0.1615 | 5.3466 | | 22,699.3546 | 22,699.3546 | 1.1615 | | 22,728.3932 |
| Unmitigated | 4.9992 | 21.3206 | 60.6045 | 0.2227 | 19.3757 | 0.1737 | 19.5494 | 5.1851 | 0.1615 | 5.3466 | | 22,699.3546 | 22,699.3546 | 1.1615 | | 22,728.3932 |

## 4.2 Trip Summary Information

| | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|---|---|---|---|---|---|
| Land Use | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| Apartments Mid Rise | 2,116.80 | 2,116.80 | 2116.80 | 7,233,427 | 7,233,427 |
| Enclosed Parking with Elevator | 0.00 | 0.00 | 0.00 | | |
| High Turnover (Sit Down Restaurant) | 614.00 | 614.00 | 614.00 | 836,778 | 836,778 |
| Pharmacy/Drugstore with Drive Thru | 784.00 | 784.00 | 784.00 | 1,041,658 | 1,041,658 |
| Total | 3,514.80 | 3,514.80 | 3,514.80 | 9,111,863 | 9,111,863 |

## 4.3 Trip Type Information

| | Miles | | | Trip % | | | Trip Purpose % | | |
|---|---|---|---|---|---|---|---|---|---|
| Land Use | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary | Diverted | Pass-by |
| Apartments Mid Rise | 14.70 | 5.90 | 8.70 | 40.20 | 19.20 | 40.60 | 86 | 11 | 3 |
| Enclosed Parking with Elevator | 16.60 | 8.40 | 6.90 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 |
| High Turnover (Sit Down | 16.60 | 8.40 | 6.90 | 8.50 | 72.50 | 19.00 | 37 | 20 | 43 |
| Pharmacy/Drugstore with Drive | 16.60 | 8.40 | 6.90 | 7.50 | 73.50 | 19.00 | 38 | 13 | 49 |

## 4.4 Fleet Mix

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Apartments Mid Rise | 0.545842 | 0.044768 | 0.205288 | 0.119317 | 0.015350 | 0.006227 | 0.020460 | 0.031333 | 0.002546 | 0.002133 | 0.005184 | 0.000692 | 0.000862 |
| Enclosed Parking with Elevator | 0.545842 | 0.044768 | 0.205288 | 0.119317 | 0.015350 | 0.006227 | 0.020460 | 0.031333 | 0.002546 | 0.002133 | 0.005184 | 0.000692 | 0.000862 |
| High Turnover (Sit Down Restaurant) | 0.545842 | 0.044768 | 0.205288 | 0.119317 | 0.015350 | 0.006227 | 0.020460 | 0.031333 | 0.002546 | 0.002133 | 0.005184 | 0.000692 | 0.000862 |
| Pharmacy/Drugstore with Drive Thru | 0.545842 | 0.044768 | 0.205288 | 0.119317 | 0.015350 | 0.006227 | 0.020460 | 0.031333 | 0.002546 | 0.002133 | 0.005184 | 0.000692 | 0.000862 |

## 5.0 Energy Detail

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

Install Energy Efficient Appliances

| | ROG | NOx | CO | SO2 | Fugitive 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 | 0.1954 | 1.6995 | 0.9312 | 0.0107 | | 0.1350 | 0.1350 | | 0.1350 | 0.1350 | | 2,131.0600 | 2,131.0600 | 0.0409 | 0.0391 | 2,143.7239 |
| NaturalGas Unmitigated | 0.1954 | 1.6995 | 0.9312 | 0.0107 | | 0.1350 | 0.1350 | | 0.1350 | 0.1350 | | 2,131.0600 | 2,131.0600 | 0.0409 | 0.0391 | 2,143.7239 |

## 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 Mid Rise | 12993.4 | 0.1401 | 1.1974 | 0.5095 | 7.6400e-003 | | 0.0968 | 0.0968 | | 0.0968 | 0.0968 | | 1,528.6297 | 1,528.6297 | 0.0293 | 0.0280 | 1,537.7136 |
| Enclosed Parking with Elevator | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| High Turnover (Sit Down Restaurant) | 5057.75 | 0.0545 | 0.4959 | 0.4165 | 2.9800e-003 | | 0.0377 | 0.0377 | | 0.0377 | 0.0377 | | 595.0298 | 595.0298 | 0.0114 | 0.0109 | 598.5658 |
| Pharmacy/Drugstore with Drive Thru | 62.9041 | 6.8000e-004 | 6.1700e-003 | 5.1800e-003 | 4.0000e-005 | | 4.7000e-004 | 4.7000e-004 | | 4.7000e-004 | 4.7000e-004 | | 7.4005 | 7.4005 | 1.4000e-004 | 1.4000e-004 | 7.4445 |
| **Total** | | **0.1953** | **1.6995** | **0.9312** | **0.0107** | | **0.1350** | **0.1350** | | **0.1350** | **0.1350** | | **2,131.0600** | **2,131.0600** | **0.0408** | **0.0391** | **2,143.7239** |

## 5.2 Energy by Land Use - NaturalGas

**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 Mid Rise | 12.9934 | 0.1401 | 1.1974 | 0.5095 | 7.6400e-003 | | 0.0968 | 0.0968 | | 0.0968 | 0.0968 | | 1,528.6297 | 1,528.6297 | 0.0293 | 0.0280 | 1,537.7136 |
| Enclosed Parking with Elevator | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| High Turnover (Sit Down Restaurant) | 5.05775 | 0.0545 | 0.4959 | 0.4165 | 2.9800e-003 | | 0.0377 | 0.0377 | | 0.0377 | 0.0377 | | 595.0298 | 595.0298 | 0.0114 | 0.0109 | 598.5658 |
| Pharmacy/Drugstore with Drive Thru | 0.0629041 | 6.8000e-004 | 6.1700e-003 | 5.1800e-003 | 4.0000e-005 | | 4.7000e-004 | 4.7000e-004 | | 4.7000e-004 | 4.7000e-004 | | 7.4005 | 7.4005 | 1.4000e-004 | 1.4000e-004 | 7.4445 |
| **Total** | | **0.1953** | **1.6995** | **0.9312** | **0.0107** | | **0.1350** | **0.1350** | | **0.1350** | **0.1350** | | **2,131.0600** | **2,131.0600** | **0.0408** | **0.0391** | **2,143.7239** |

# 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 | 10.9379 | 0.4778 | 35.7342 | 2.3100e-003 | | 0.2029 | 0.2029 | | 0.2029 | 0.2029 | 0.0000 | 149.0037 | 149.0037 | 0.0637 | 1.5500e-003 | 151.0579 |
| Unmitigated | 10.9379 | 0.4778 | 35.7342 | 2.3100e-003 | | 0.2029 | 0.2029 | | 0.2029 | 0.2029 | 0.0000 | 149.0037 | 149.0037 | 0.0637 | 1.5500e-003 | 151.0579 |

## 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 | 0.7850 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 9.0659 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Hearth | 7.7600e-003 | 0.0664 | 0.0282 | 4.2000e-004 | | 5.3600e-003 | 5.3600e-003 | | 5.3600e-003 | 5.3600e-003 | 0.0000 | 84.7059 | 84.7059 | 1.6200e-003 | 1.5500e-003 | 85.2093 |
| Landscaping | 1.0793 | 0.4115 | 35.7060 | 1.8900e-003 | | 0.1975 | 0.1975 | | 0.1975 | 0.1975 | | 64.2978 | 64.2978 | 0.0620 | | 65.8487 |
| **Total** | **10.9379** | **0.4778** | **35.7342** | **2.3100e-003** | | **0.2029** | **0.2029** | | **0.2029** | **0.2029** | **0.0000** | **149.0037** | **149.0037** | **0.0637** | **1.5500e-003** | **151.0579** |

## 6.2 Area by SubCategory

**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 | 0.7850 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 9.0659 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Hearth | 7.7600e-003 | 0.0664 | 0.0282 | 4.2000e-004 | | 5.3600e-003 | 5.3600e-003 | | 5.3600e-003 | 5.3600e-003 | 0.0000 | 84.7059 | 84.7059 | 1.6200e-003 | 1.5500e-003 | 85.2093 |
| Landscaping | 1.0793 | 0.4115 | 35.7060 | 1.8900e-003 | | 0.1975 | 0.1975 | | 0.1975 | 0.1975 | | 64.2978 | 64.2978 | 0.0620 | | 65.8487 |
| **Total** | **10.9379** | **0.4778** | **35.7342** | **2.3100e-003** | | **0.2029** | **0.2029** | | **0.2029** | **0.2029** | **0.0000** | **149.0037** | **149.0037** | **0.0637** | **1.5500e-003** | **151.0579** |

# 7.0 Water Detail

## 7.1 Mitigation Measures Water

Apply Water Conservation Strategy

# 8.0 Waste Detail

## 8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

# 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

# 7940 Lankershim Boulevard - with PDFs

**Los Angeles-South Coast County, Annual**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Pharmacy/Drugstore with Drive Thru | 14.00 | 1000sqft | 0.00 | 14,000.00 | 0 |
| Enclosed Parking with Elevator | 541.00 | Space | 0.00 | 216,400.00 | 0 |
| High Turnover (Sit Down Restaurant) | 8.00 | 1000sqft | 0.00 | 8,000.00 | 0 |
| Apartments Mid Rise | 432.00 | Dwelling Unit | 4.69 | 432,000.00 | 1236 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.2 | **Precipitation Freq (Days)** | 33 |
| **Climate Zone** | 12 | | | **Operational Year** | 2023 |
| **Utility Company** | Los Angeles Department of Water & Power | | | | |
| **CO2 Intensity (lb/MWhr)** | 669 | **CH4 Intensity (lb/MWhr)** | 0.026 | **N2O Intensity (lb/MWhr)** | 0.003 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics - Accounts for RPS for LADWP

Land Use - 4.69-acre site; 541 parking spaces associated with proposed project parking structure

Construction Phase - Construction to occur 6 days/week

Off-road Equipment - Architectural coating equip

Off-road Equipment - Building equip

Off-road Equipment - Demolition equip

Off-road Equipment - Grading equip

Off-road Equipment - Paving equip

Off-road Equipment - Site prep equip

Trips and VMT - Anticipated construction vehicle trips

Demolition - Based on 7 daily haul truck trips over 40 days, and assuming building debris density is 1,620 lbs/cyd

Grading - 89,000 cy of soil export

Architectural Coating - Use of super-complaint coatings

Vehicle Trips - Accounts for less trips from walk-in/transit reduction, internal apture, and pass-by reductions

Woodstoves - Accounts for outdoor courtyard fireplaces (2) and firepits (2); Assumes these outdoor amenites would be used 30% of the year.

Area Coating - SCAQMD Rule 1113 compliance

Energy Use -

Construction Off-road Equipment Mitigation - SCAQMD Rule 403; use of tier 4 off-road equipment

Energy Mitigation - Use of Energy Star appliances

Water Mitigation - CALGreen

Waste Mitigation -

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblApplianceMitigation | PercentImprovement | 30.00 | 25.00 |
| tblApplianceMitigation | PercentImprovement | 15.00 | 12.00 |
| tblApplianceMitigation | PercentImprovement | 50.00 | 40.00 |
| tblApplianceMitigation | PercentImprovement | 15.00 | 9.00 |

| | | | |
|---|---|---|---|
| tblArchitecturalCoating | EF_Nonresidential_Exterior | 100.00 | 10.00 |
| tblArchitecturalCoating | EF_Nonresidential_Interior | 100.00 | 10.00 |
| tblArchitecturalCoating | EF_Residential_Exterior | 50.00 | 10.00 |
| tblArchitecturalCoating | EF_Residential_Interior | 50.00 | 10.00 |
| tblAreaCoating | Area_EF_Nonresidential_Exterior | 100 | 50 |
| tblAreaCoating | Area_EF_Nonresidential_Interior | 100 | 50 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 3.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 2.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 4.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 4.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 2.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 4.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 1.00 |
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| tblConstEquipMitigation | Tier | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Final |

| | | | |
|---|---|---|---|
| tblConstEquipMitigation | Tier | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Final |
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| tblConstructionPhase | NumDays | 5.00 | 28.00 |
| tblConstructionPhase | NumDays | 8.00 | 40.00 |
| tblConstructionPhase | NumDays | 230.00 | 886.00 |
| tblConstructionPhase | NumDays | 18.00 | 12.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblConstructionPhase | NumDaysWeek | 5.00 | 6.00 |
| tblFireplaces | FireplaceDayYear | 25.00 | 110.00 |
| tblFireplaces | FireplaceWoodMass | 1,019.20 | 0.00 |
| tblFireplaces | NumberGas | 367.20 | 4.00 |
| tblFireplaces | NumberNoFireplace | 43.20 | 428.00 |
| tblFireplaces | NumberWood | 21.60 | 0.00 |
| tblGrading | MaterialExported | 0.00 | 89,000.00 |

| | | | |
|---|---|---|---|
| tblLandUse | LotAcreage | 0.32 | 0.00 |
| tblLandUse | LotAcreage | 4.87 | 0.00 |
| tblLandUse | LotAcreage | 0.18 | 0.00 |
| tblLandUse | LotAcreage | 11.37 | 4.69 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 2.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 1.00 |
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| tblOffRoadEquipment | UsageHours | 8.00 | 6.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 4.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 4.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 4.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 8.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 6.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 6.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 8.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 6.00 |
| tblOffRoadEquipment | UsageHours | 6.00 | 8.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 6.00 |
| tblOffRoadEquipment | UsageHours | 6.00 | 8.00 |
| tblProjectCharacteristics | CH4IntensityFactor | 0.029 | 0.026 |
| tblProjectCharacteristics | CO2IntensityFactor | 1227.89 | 669 |

| | | | |
|---|---|---|---|
| tblProjectCharacteristics | N2OIntensityFactor | 0.006 | 0.003 |
| tblTripsAndVMT | HaulingTripNumber | 359.00 | 280.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 924.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 10,632.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 24.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 18.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 3.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 17.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 55.00 |
| tblTripsAndVMT | VendorTripNumber | 85.00 | 3.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 1.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 1.00 |
| tblTripsAndVMT | WorkerTripNumber | 15.00 | 12.00 |
| tblTripsAndVMT | WorkerTripNumber | 13.00 | 10.00 |
| tblTripsAndVMT | WorkerTripNumber | 18.00 | 14.00 |
| tblTripsAndVMT | WorkerTripNumber | 410.00 | 85.00 |
| tblTripsAndVMT | WorkerTripNumber | 13.00 | 10.00 |
| tblTripsAndVMT | WorkerTripNumber | 82.00 | 5.00 |
| tblVehicleTrips | ST_TR | 6.39 | 4.90 |
| tblVehicleTrips | ST_TR | 158.37 | 76.75 |
| tblVehicleTrips | ST_TR | 96.91 | 56.00 |
| tblVehicleTrips | SU_TR | 5.86 | 4.90 |
| tblVehicleTrips | SU_TR | 131.84 | 76.75 |
| tblVehicleTrips | SU_TR | 96.91 | 56.00 |
| tblVehicleTrips | WD_TR | 6.65 | 4.90 |
| tblVehicleTrips | WD_TR | 127.15 | 76.75 |
| tblVehicleTrips | WD_TR | 96.91 | 56.00 |

| | | | |
|---|---|---|---|
| tblWoodstoves | NumberCatalytic | 21.60 | 0.00 |
| tblWoodstoves | NumberNoncatalytic | 21.60 | 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 | | | | | |
| 2019 | 0.0691 | 0.7324 | 0.3997 | 8.6000e-004 | 0.0443 | 0.0337 | 0.0780 | 7.3500e-003 | 0.0313 | 0.0386 | 0.0000 | 78.1525 | 78.1525 | 0.0190 | 0.0000 | 78.6268 |
| 2020 | 0.2752 | 4.0285 | 1.9226 | 8.8800e-003 | 0.4548 | 0.0927 | 0.5475 | 0.1617 | 0.0868 | 0.2485 | 0.0000 | 839.1383 | 839.1383 | 0.0978 | 0.0000 | 841.5841 |
| 2021 | 0.2611 | 2.3535 | 2.0722 | 5.6700e-003 | 0.2254 | 0.0894 | 0.3148 | 0.0593 | 0.0846 | 0.1439 | 0.0000 | 512.5257 | 512.5257 | 0.0654 | 0.0000 | 514.1595 |
| 2022 | 0.2388 | 2.1231 | 2.0076 | 5.6000e-003 | 0.2254 | 0.0768 | 0.3023 | 0.0593 | 0.0727 | 0.1321 | 0.0000 | 506.1585 | 506.1585 | 0.0644 | 0.0000 | 507.7672 |
| 2023 | 0.3994 | 0.7441 | 0.8109 | 2.2100e-003 | 0.1294 | 0.0280 | 0.1573 | 0.0333 | 0.0265 | 0.0598 | 0.0000 | 199.5389 | 199.5389 | 0.0262 | 0.0000 | 200.1935 |
| **Maximum** | **0.3994** | **4.0285** | **2.0722** | **8.8800e-003** | **0.4548** | **0.0927** | **0.5475** | **0.1617** | **0.0868** | **0.2485** | **0.0000** | **839.1383** | **839.1383** | **0.0978** | **0.0000** | **841.5841** |

## 2.1 Overall Construction

**Mitigated Construction**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | tons/yr | | | | | | | | | | MT/yr | | | | | |
| 2019 | 0.0113 | 0.0891 | 0.4198 | 8.6000e-004 | 0.0206 | 1.3600e-003 | 0.0219 | 3.7600e-003 | 1.3500e-003 | 5.1100e-003 | 0.0000 | 78.1524 | 78.1524 | 0.0190 | 0.0000 | 78.6268 |
| 2020 | 0.1249 | 2.4024 | 2.0397 | 8.8800e-003 | 0.3337 | 0.0114 | 0.3452 | 0.1047 | 0.0111 | 0.1157 | 0.0000 | 839.1381 | 839.1381 | 0.0978 | 0.0000 | 841.5838 |
| 2021 | 0.1066 | 0.8455 | 2.1983 | 5.6700e-003 | 0.2254 | 6.7900e-003 | 0.2322 | 0.0593 | 6.6200e-003 | 0.0660 | 0.0000 | 512.5255 | 512.5255 | 0.0654 | 0.0000 | 514.1592 |
| 2022 | 0.1022 | 0.8015 | 2.1567 | 5.6000e-003 | 0.2254 | 6.5400e-003 | 0.2320 | 0.0593 | 6.3800e-003 | 0.0657 | 0.0000 | 506.1583 | 506.1583 | 0.0644 | 0.0000 | 507.7670 |
| 2023 | 0.3479 | 0.2463 | 0.8804 | 2.2100e-003 | 0.1294 | 2.3900e-003 | 0.1318 | 0.0333 | 2.3500e-003 | 0.0357 | 0.0000 | 199.5388 | 199.5388 | 0.0262 | 0.0000 | 200.1934 |
| **Maximum** | **0.3479** | **2.4024** | **2.1983** | **8.8800e-003** | **0.3337** | **0.0114** | **0.3452** | **0.1047** | **0.0111** | **0.1157** | **0.0000** | **839.1381** | **839.1381** | **0.0978** | **0.0000** | **841.5838** |

| | ROG | NOx | 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** | **44.28** | **56.07** | **-6.68** | **0.00** | **13.41** | **91.11** | **31.20** | **18.88** | **90.80** | **53.73** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** |

| Quarter | Start Date | End Date | Maximum Unmitigated ROG + NOX (tons/quarter) | Maximum Mitigated ROG + NOX (tons/quarter) |
|---|---|---|---|---|
| **1** | **10-1-2019** | **12-31-2019** | 0.7892 | 0.0981 |
| **3** | **4-1-2020** | **6-30-2020** | 1.9785 | 1.2846 |
| **4** | **7-1-2020** | **9-30-2020** | 1.5116 | 0.9010 |
| **5** | **10-1-2020** | **12-31-2020** | 0.7199 | 0.2516 |
| **6** | **1-1-2021** | **3-31-2021** | 0.6430 | 0.2333 |
| **7** | **4-1-2021** | **6-30-2021** | 0.6459 | 0.2316 |

| | | | | |
|---|---|---|---|---|
| **8** | **7-1-2021** | **9-30-2021** | 0.6530 | 0.2342 |
| **9** | **10-1-2021** | **12-31-2021** | 0.6573 | 0.2385 |
| **10** | **1-1-2022** | **3-31-2022** | 0.5809 | 0.2215 |
| **11** | **4-1-2022** | **6-30-2022** | 0.5835 | 0.2201 |
| **12** | **7-1-2022** | **9-30-2022** | 0.5899 | 0.2225 |
| **13** | **10-1-2022** | **12-31-2022** | 0.5938 | 0.2264 |
| **14** | **1-1-2023** | **3-31-2023** | 0.5024 | 0.1757 |
| **15** | **4-1-2023** | **6-30-2023** | 0.6408 | 0.4169 |
| | | **Highest** | 1.9785 | 1.2846 |

## 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 | 1.9331 | 0.0551 | 4.4648 | 2.6000e-004 | | 0.0250 | 0.0250 | | 0.0250 | 0.0250 | 0.0000 | 11.5177 | 11.5177 | 7.1200e-003 | 8.0000e-005 | 11.7186 |
| Energy | 0.0357 | 0.3102 | 0.1700 | 1.9400e-003 | | 0.0246 | 0.0246 | | 0.0246 | 0.0246 | 0.0000 | 1,433.5371 | 1,433.5371 | 0.0488 | 0.0113 | 1,438.1279 |
| Mobile | 0.8860 | 3.9453 | 11.1710 | 0.0411 | 3.4583 | 0.0315 | 3.4898 | 0.9270 | 0.0293 | 0.9562 | 0.0000 | 3,802.7650 | 3,802.7650 | 0.1908 | 0.0000 | 3,807.5345 |
| Waste | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 68.2090 | 0.0000 | 68.2090 | 4.0310 | 0.0000 | 168.9850 |
| Water | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 10.0129 | 187.0901 | 197.1029 | 1.0357 | 0.0251 | 230.4816 |
| **Total** | **2.8547** | **4.3106** | **15.8057** | **0.0433** | **3.4583** | **0.0811** | **3.5394** | **0.9270** | **0.0789** | **1.0059** | **78.2219** | **5,434.9098** | **5,513.1317** | **5.3134** | **0.0365** | **5,656.8476** |

## 2.2 Overall Operational

**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 | 1.9331 | 0.0551 | 4.4648 | 2.6000e-004 | | 0.0250 | 0.0250 | | 0.0250 | 0.0250 | 0.0000 | 11.5177 | 11.5177 | 7.1200e-003 | 8.0000e-005 | 11.7186 |
| Energy | 0.0357 | 0.3102 | 0.1700 | 1.9400e-003 | | 0.0246 | 0.0246 | | 0.0246 | 0.0246 | 0.0000 | 1,424.9873 | 1,424.9873 | 0.0484 | 0.0113 | 1,429.5584 |
| Mobile | 0.8860 | 3.9453 | 11.1710 | 0.0411 | 3.4583 | 0.0315 | 3.4898 | 0.9270 | 0.0293 | 0.9562 | 0.0000 | 3,802.7650 | 3,802.7650 | 0.1908 | 0.0000 | 3,807.5345 |
| Waste | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 16.3702 | 0.0000 | 16.3702 | 0.9675 | 0.0000 | 40.5564 |
| Water | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 8.0103 | 162.1488 | 170.1591 | 0.8290 | 0.0202 | 196.8908 |
| **Total** | **2.8547** | **4.3106** | **15.8057** | **0.0433** | **3.4583** | **0.0811** | **3.5394** | **0.9270** | **0.0789** | **1.0059** | **24.3805** | **5,401.4188** | **5,425.7993** | **2.0428** | **0.0315** | **5,486.2588** |

| | ROG | NOx | 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** | **68.83** | **0.62** | **1.58** | **61.55** | **13.69** | **3.02** |

## 3.0 Construction Detail

**Construction Phase**

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|---|---|---|---|---|---|---|---|
| 1 | Demolition | Demolition | 10/1/2019 | 11/15/2019 | 6 | 40 | |
| 2 | Site Preparation | Site Preparation | 5/1/2020 | 6/2/2020 | 6 | 28 | |
| 3 | Grading | Grading | 6/3/2020 | 7/18/2020 | 6 | 40 | |
| 4 | Building Construction | Building Construction | 7/19/2020 | 5/18/2023 | 6 | 886 | |
| 5 | Paving | Paving | 5/19/2023 | 6/1/2023 | 6 | 12 | |
| 6 | Architectural Coating | Architectural Coating | 5/19/2023 | 6/8/2023 | 6 | 18 | |

**Acres of Grading (Site Preparation Phase): 28**

**Acres of Grading (Grading Phase): 30**

**Acres of Paving: 0**

**Residential Indoor: 874,800; Residential Outdoor: 291,600; Non-Residential Indoor: 33,000; Non-Residential Outdoor: 11,000; Striped Parking Area: 12,984 (Architectural Coating – sqft)**

**<u>OffRoad Equipment</u>**

7940 Lankershim Boulevard - with PDFs - Los Angeles-South Coast County, Annual

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|---|---|---|---|---|---|
| Demolition | Concrete/Industrial Saws | 1 | 6.00 | 81 | 0.73 |
| Demolition | Excavators | 2 | 8.00 | 158 | 0.38 |
| Demolition | Off-Highway Trucks | 1 | 2.00 | 402 | 0.38 |
| Demolition | Rubber Tired Dozers | 2 | 8.00 | 247 | 0.40 |
| Site Preparation | Graders | 1 | 8.00 | 187 | 0.41 |
| Site Preparation | Off-Highway Trucks | 1 | 4.00 | 402 | 0.38 |
| Site Preparation | Rubber Tired Dozers | 1 | 4.00 | 247 | 0.40 |
| Site Preparation | Scrapers | 1 | 4.00 | 367 | 0.48 |
| Site Preparation | Tractors/Loaders/Backhoes | 1 | 8.00 | 97 | 0.37 |
| Grading | Excavators | 1 | 4.00 | 158 | 0.38 |
| Grading | Graders | 1 | 4.00 | 187 | 0.41 |
| Grading | Off-Highway Trucks | 2 | 4.00 | 402 | 0.38 |
| Grading | Rubber Tired Dozers | 1 | 8.00 | 247 | 0.40 |
| Grading | Scrapers | 1 | 4.00 | 367 | 0.48 |
| Grading | Tractors/Loaders/Backhoes | 1 | 8.00 | 97 | 0.37 |
| Building Construction | Cranes | 1 | 8.00 | 231 | 0.29 |
| Building Construction | Forklifts | 1 | 6.00 | 89 | 0.20 |
| Building Construction | Generator Sets | 1 | 6.00 | 84 | 0.74 |
| Building Construction | Tractors/Loaders/Backhoes | 1 | 8.00 | 97 | 0.37 |
| Building Construction | Welders | 1 | 6.00 | 46 | 0.45 |
| Paving | Cement and Mortar Mixers | 1 | 6.00 | 9 | 0.56 |
| Paving | Pavers | 1 | 8.00 | 130 | 0.42 |
| Paving | Paving Equipment | 1 | 6.00 | 132 | 0.36 |
| Paving | Rollers | 1 | 8.00 | 80 | 0.38 |
| Paving | Tractors/Loaders/Backhoes | 1 | 6.00 | 97 | 0.37 |
| Architectural Coating | Air Compressors | 1 | 8.00 | 78 | 0.48 |

**Trips and VMT**

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|
| Demolition | 6 | 12.00 | 3.00 | 280.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Site Preparation | 5 | 10.00 | 17.00 | 924.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Grading | 7 | 14.00 | 55.00 | 11,125.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Building Construction | 5 | 85.00 | 3.00 | 10,632.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Paving | 5 | 10.00 | 1.00 | 24.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Architectural Coating | 1 | 5.00 | 1.00 | 18.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |

## 3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

## 3.2 Demolition - 2019

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 0.0388 | 0.0000 | 0.0388 | 5.8800e-003 | 0.0000 | 5.8800e-003 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0663 | 0.6800 | 0.3774 | 7.1000e-004 | | 0.0335 | 0.0335 | | 0.0311 | 0.0311 | 0.0000 | 63.2224 | 63.2224 | 0.0180 | 0.0000 | 63.6729 |
| **Total** | **0.0663** | **0.6800** | **0.3774** | **7.1000e-004** | **0.0388** | **0.0335** | **0.0723** | **5.8800e-003** | **0.0311** | **0.0370** | **0.0000** | **63.2224** | **63.2224** | **0.0180** | **0.0000** | **63.6729** |

## 3.2 Demolition - 2019

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 1.3300e-003 | 0.0443 | 9.4100e-003 | 1.1000e-004 | 2.4100e-003 | 1.6000e-004 | 2.5600e-003 | 6.6000e-004 | 1.5000e-004 | 8.1000e-004 | 0.0000 | 10.9016 | 10.9016 | 7.7000e-004 | 0.0000 | 10.9208 |
| Vendor | 2.5000e-004 | 7.0900e-003 | 1.9400e-003 | 2.0000e-005 | 3.8000e-004 | 4.0000e-005 | 4.2000e-004 | 1.1000e-004 | 4.0000e-005 | 1.5000e-004 | 0.0000 | 1.5004 | 1.5004 | 1.0000e-004 | 0.0000 | 1.5029 |
| Worker | 1.2000e-003 | 1.0000e-003 | 0.0109 | 3.0000e-005 | 2.6300e-003 | 2.0000e-005 | 2.6500e-003 | 7.0000e-004 | 2.0000e-005 | 7.2000e-004 | 0.0000 | 2.5281 | 2.5281 | 9.0000e-005 | 0.0000 | 2.5302 |
| **Total** | **2.7800e-003** | **0.0524** | **0.0223** | **1.6000e-004** | **5.4200e-003** | **2.2000e-004** | **5.6300e-003** | **1.4700e-003** | **2.1000e-004** | **1.6800e-003** | **0.0000** | **14.9301** | **14.9301** | **9.6000e-004** | **0.0000** | **14.9539** |

### 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 | | | | | 0.0152 | 0.0000 | 0.0152 | 2.2900e-003 | 0.0000 | 2.2900e-003 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 8.4700e-003 | 0.0367 | 0.3976 | 7.1000e-004 | | 1.1300e-003 | 1.1300e-003 | | 1.1300e-003 | 1.1300e-003 | 0.0000 | 63.2224 | 63.2224 | 0.0180 | 0.0000 | 63.6728 |
| **Total** | **8.4700e-003** | **0.0367** | **0.3976** | **7.1000e-004** | **0.0152** | **1.1300e-003** | **0.0163** | **2.2900e-003** | **1.1300e-003** | **3.4200e-003** | **0.0000** | **63.2224** | **63.2224** | **0.0180** | **0.0000** | **63.6728** |

## 3.2 Demolition - 2019

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 1.3300e-003 | 0.0443 | 9.4100e-003 | 1.1000e-004 | 2.4100e-003 | 1.6000e-004 | 2.5600e-003 | 6.6000e-004 | 1.5000e-004 | 8.1000e-004 | 0.0000 | 10.9016 | 10.9016 | 7.7000e-004 | 0.0000 | 10.9208 |
| Vendor | 2.5000e-004 | 7.0900e-003 | 1.9400e-003 | 2.0000e-005 | 3.8000e-004 | 4.0000e-005 | 4.2000e-004 | 1.1000e-004 | 4.0000e-005 | 1.5000e-004 | 0.0000 | 1.5004 | 1.5004 | 1.0000e-004 | 0.0000 | 1.5029 |
| Worker | 1.2000e-003 | 1.0000e-003 | 0.0109 | 3.0000e-005 | 2.6300e-003 | 2.0000e-005 | 2.6500e-003 | 7.0000e-004 | 2.0000e-005 | 7.2000e-004 | 0.0000 | 2.5281 | 2.5281 | 9.0000e-005 | 0.0000 | 2.5302 |
| **Total** | **2.7800e-003** | **0.0524** | **0.0223** | **1.6000e-004** | **5.4200e-003** | **2.2000e-004** | **5.6300e-003** | **1.4700e-003** | **2.1000e-004** | **1.6800e-003** | **0.0000** | **14.9301** | **14.9301** | **9.6000e-004** | **0.0000** | **14.9539** |

## 3.3 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 | | | | | 0.0570 | 0.0000 | 0.0570 | 0.0248 | 0.0000 | 0.0248 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0287 | 0.3239 | 0.1651 | 3.9000e-004 | | 0.0134 | 0.0134 | | 0.0123 | 0.0123 | 0.0000 | 34.6723 | 34.6723 | 0.0112 | 0.0000 | 34.9527 |
| **Total** | **0.0287** | **0.3239** | **0.1651** | **3.9000e-004** | **0.0570** | **0.0134** | **0.0704** | **0.0248** | **0.0123** | **0.0371** | **0.0000** | **34.6723** | **34.6723** | **0.0112** | **0.0000** | **34.9527** |

## 3.3 Site Preparation - 2020

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 4.0800e-003 | 0.1372 | 0.0302 | 3.6000e-004 | 7.9400e-003 | 4.3000e-004 | 8.3700e-003 | 2.1800e-003 | 4.1000e-004 | 2.5900e-003 | 0.0000 | 35.6101 | 35.6101 | 2.4800e-003 | 0.0000 | 35.6722 |
| Vendor | 8.6000e-004 | 0.0258 | 6.9800e-003 | 6.0000e-005 | 1.5000e-003 | 1.2000e-004 | 1.6200e-003 | 4.3000e-004 | 1.1000e-004 | 5.5000e-004 | 0.0000 | 5.9125 | 5.9125 | 3.8000e-004 | 0.0000 | 5.9219 |
| Worker | 6.5000e-004 | 5.2000e-004 | 5.7600e-003 | 2.0000e-005 | 1.5300e-003 | 1.0000e-005 | 1.5500e-003 | 4.1000e-004 | 1.0000e-005 | 4.2000e-004 | 0.0000 | 1.4299 | 1.4299 | 5.0000e-005 | 0.0000 | 1.4310 |
| **Total** | **5.5900e-003** | **0.1635** | **0.0430** | **4.4000e-004** | **0.0110** | **5.6000e-004** | **0.0115** | **3.0200e-003** | **5.3000e-004** | **3.5600e-003** | **0.0000** | **42.9526** | **42.9526** | **2.9100e-003** | **0.0000** | **43.0251** |

### 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 | | | | | 0.0222 | 0.0000 | 0.0222 | 9.6600e-003 | 0.0000 | 9.6600e-003 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 4.8400e-003 | 0.0210 | 0.1906 | 3.9000e-004 | | 6.4000e-004 | 6.4000e-004 | | 6.4000e-004 | 6.4000e-004 | 0.0000 | 34.6723 | 34.6723 | 0.0112 | 0.0000 | 34.9526 |
| **Total** | **4.8400e-003** | **0.0210** | **0.1906** | **3.9000e-004** | **0.0222** | **6.4000e-004** | **0.0229** | **9.6600e-003** | **6.4000e-004** | **0.0103** | **0.0000** | **34.6723** | **34.6723** | **0.0112** | **0.0000** | **34.9526** |

## 3.3 Site Preparation - 2020

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 4.0800e-003 | 0.1372 | 0.0302 | 3.6000e-004 | 7.9400e-003 | 4.3000e-004 | 8.3700e-003 | 2.1800e-003 | 4.1000e-004 | 2.5900e-003 | 0.0000 | 35.6101 | 35.6101 | 2.4800e-003 | 0.0000 | 35.6722 |
| Vendor | 8.6000e-004 | 0.0258 | 6.9800e-003 | 6.0000e-005 | 1.5000e-003 | 1.2000e-004 | 1.6200e-003 | 4.3000e-004 | 1.1000e-004 | 5.5000e-004 | 0.0000 | 5.9125 | 5.9125 | 3.8000e-004 | 0.0000 | 5.9219 |
| Worker | 6.5000e-004 | 5.2000e-004 | 5.7600e-003 | 2.0000e-005 | 1.5300e-003 | 1.0000e-005 | 1.5500e-003 | 4.1000e-004 | 1.0000e-005 | 4.2000e-004 | 0.0000 | 1.4299 | 1.4299 | 5.0000e-005 | 0.0000 | 1.4310 |
| **Total** | **5.5900e-003** | **0.1635** | **0.0430** | **4.4000e-004** | **0.0110** | **5.6000e-004** | **0.0115** | **3.0200e-003** | **5.3000e-004** | **3.5600e-003** | **0.0000** | **42.9526** | **42.9526** | **2.9100e-003** | **0.0000** | **43.0251** |

## 3.4 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 | | | | | 0.1414 | 0.0000 | 0.1414 | 0.0687 | 0.0000 | 0.0687 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0562 | 0.6001 | 0.3298 | 7.7000e-004 | | 0.0261 | 0.0261 | | 0.0241 | 0.0241 | 0.0000 | 67.3432 | 67.3432 | 0.0218 | 0.0000 | 67.8877 |
| **Total** | **0.0562** | **0.6001** | **0.3298** | **7.7000e-004** | **0.1414** | **0.0261** | **0.1675** | **0.0687** | **0.0241** | **0.0927** | **0.0000** | **67.3432** | **67.3432** | **0.0218** | **0.0000** | **67.8877** |

## 3.4 Grading - 2020

### 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 | 0.0491 | 1.6519 | 0.3641 | 4.3600e-003 | 0.0956 | 5.1400e-003 | 0.1007 | 0.0263 | 4.9200e-003 | 0.0312 | 0.0000 | 428.7476 | 428.7476 | 0.0299 | 0.0000 | 429.4942 |
| Vendor | 3.9900e-003 | 0.1192 | 0.0323 | 2.8000e-004 | 6.9300e-003 | 5.5000e-004 | 7.4800e-003 | 2.0000e-003 | 5.3000e-004 | 2.5300e-003 | 0.0000 | 27.3269 | 27.3269 | 1.7400e-003 | 0.0000 | 27.3703 |
| Worker | 1.2900e-003 | 1.0400e-003 | 0.0115 | 3.0000e-005 | 3.0700e-003 | 3.0000e-005 | 3.0900e-003 | 8.1000e-004 | 2.0000e-005 | 8.4000e-004 | 0.0000 | 2.8598 | 2.8598 | 9.0000e-005 | 0.0000 | 2.8620 |
| **Total** | **0.0544** | **1.7721** | **0.4079** | **4.6700e-003** | **0.1056** | **5.7200e-003** | **0.1113** | **0.0291** | **5.4700e-003** | **0.0345** | **0.0000** | **458.9343** | **458.9343** | **0.0317** | **0.0000** | **459.7265** |

### 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 | | | | | 0.0551 | 0.0000 | 0.0551 | 0.0268 | 0.0000 | 0.0268 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 9.3900e-003 | 0.0407 | 0.3793 | 7.7000e-004 | | 1.2500e-003 | 1.2500e-003 | | 1.2500e-003 | 1.2500e-003 | 0.0000 | 67.3431 | 67.3431 | 0.0218 | 0.0000 | 67.8876 |
| **Total** | **9.3900e-003** | **0.0407** | **0.3793** | **7.7000e-004** | **0.0551** | **1.2500e-003** | **0.0564** | **0.0268** | **1.2500e-003** | **0.0280** | **0.0000** | **67.3431** | **67.3431** | **0.0218** | **0.0000** | **67.8876** |

## 3.4 Grading - 2020

**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 | 0.0491 | 1.6519 | 0.3641 | 4.3600e-003 | 0.0956 | 5.1400e-003 | 0.1007 | 0.0263 | 4.9200e-003 | 0.0312 | 0.0000 | 428.7476 | 428.7476 | 0.0299 | 0.0000 | 429.4942 |
| Vendor | 3.9900e-003 | 0.1192 | 0.0323 | 2.8000e-004 | 6.9300e-003 | 5.5000e-004 | 7.4800e-003 | 2.0000e-003 | 5.3000e-004 | 2.5300e-003 | 0.0000 | 27.3269 | 27.3269 | 1.7400e-003 | 0.0000 | 27.3703 |
| Worker | 1.2900e-003 | 1.0400e-003 | 0.0115 | 3.0000e-005 | 3.0700e-003 | 3.0000e-005 | 3.0900e-003 | 8.1000e-004 | 2.0000e-005 | 8.4000e-004 | 0.0000 | 2.8598 | 2.8598 | 9.0000e-005 | 0.0000 | 2.8620 |
| **Total** | **0.0544** | **1.7721** | **0.4079** | **4.6700e-003** | **0.1056** | **5.7200e-003** | **0.1113** | **0.0291** | **5.4700e-003** | **0.0345** | **0.0000** | **458.9343** | **458.9343** | **0.0317** | **0.0000** | **459.7265** |

## 3.5 Building Construction - 2020

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.0942 | 0.8703 | 0.6663 | 1.2000e-003 | | 0.0455 | 0.0455 | | 0.0430 | 0.0430 | 0.0000 | 102.6353 | 102.6353 | 0.0234 | 0.0000 | 103.2202 |
| **Total** | **0.0942** | **0.8703** | **0.6663** | **1.2000e-003** | | **0.0455** | **0.0455** | | **0.0430** | **0.0430** | **0.0000** | **102.6353** | **102.6353** | **0.0234** | **0.0000** | **103.2202** |

## 3.5 Building Construction - 2020

### 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 | 7.5200e-003 | 0.2530 | 0.0558 | 6.7000e-004 | 0.0723 | 7.9000e-004 | 0.0731 | 0.0182 | 7.5000e-004 | 0.0189 | 0.0000 | 65.6707 | 65.6707 | 4.5700e-003 | 0.0000 | 65.7850 |
| Vendor | 7.7000e-004 | 0.0231 | 6.2500e-003 | 5.0000e-005 | 1.3400e-003 | 1.1000e-004 | 1.4500e-003 | 3.9000e-004 | 1.0000e-004 | 4.9000e-004 | 0.0000 | 5.2915 | 5.2915 | 3.4000e-004 | 0.0000 | 5.2999 |
| Worker | 0.0279 | 0.0225 | 0.2484 | 6.8000e-004 | 0.0661 | 5.6000e-004 | 0.0667 | 0.0176 | 5.2000e-004 | 0.0181 | 0.0000 | 61.6385 | 61.6385 | 1.9400e-003 | 0.0000 | 61.6871 |
| **Total** | **0.0362** | **0.2986** | **0.3104** | **1.4000e-003** | **0.1398** | **1.4600e-003** | **0.1413** | **0.0361** | **1.3700e-003** | **0.0375** | **0.0000** | **132.6006** | **132.6006** | **6.8500e-003** | **0.0000** | **132.7720** |

### 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 | 0.0146 | 0.1065 | 0.7084 | 1.2000e-003 | | 1.7900e-003 | 1.7900e-003 | | 1.7900e-003 | 1.7900e-003 | 0.0000 | 102.6352 | 102.6352 | 0.0234 | 0.0000 | 103.2201 |
| **Total** | **0.0146** | **0.1065** | **0.7084** | **1.2000e-003** | | **1.7900e-003** | **1.7900e-003** | | **1.7900e-003** | **1.7900e-003** | **0.0000** | **102.6352** | **102.6352** | **0.0234** | **0.0000** | **103.2201** |

## 3.5 Building Construction - 2020

**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 | 7.5200e-003 | 0.2530 | 0.0558 | 6.7000e-004 | 0.0723 | 7.9000e-004 | 0.0731 | 0.0182 | 7.5000e-004 | 0.0189 | 0.0000 | 65.6707 | 65.6707 | 4.5700e-003 | 0.0000 | 65.7850 |
| Vendor | 7.7000e-004 | 0.0231 | 6.2500e-003 | 5.0000e-005 | 1.3400e-003 | 1.1000e-004 | 1.4500e-003 | 3.9000e-004 | 1.0000e-004 | 4.9000e-004 | 0.0000 | 5.2915 | 5.2915 | 3.4000e-004 | 0.0000 | 5.2999 |
| Worker | 0.0279 | 0.0225 | 0.2484 | 6.8000e-004 | 0.0661 | 5.6000e-004 | 0.0667 | 0.0176 | 5.2000e-004 | 0.0181 | 0.0000 | 61.6385 | 61.6385 | 1.9400e-003 | 0.0000 | 61.6871 |
| **Total** | **0.0362** | **0.2986** | **0.3104** | **1.4000e-003** | **0.1398** | **1.4600e-003** | **0.1413** | **0.0361** | **1.3700e-003** | **0.0375** | **0.0000** | **132.6006** | **132.6006** | **6.8500e-003** | **0.0000** | **132.7720** |

## 3.5 Building Construction - 2021

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.1866 | 1.7428 | 1.4354 | 2.6400e-003 | | 0.0865 | 0.0865 | | 0.0819 | 0.0819 | 0.0000 | 226.2428 | 226.2428 | 0.0508 | 0.0000 | 227.5136 |
| **Total** | **0.1866** | **1.7428** | **1.4354** | **2.6400e-003** | | **0.0865** | **0.0865** | | **0.0819** | **0.0819** | **0.0000** | **226.2428** | **226.2428** | **0.0508** | **0.0000** | **227.5136** |

## 3.5 Building Construction - 2021

### 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 | 0.0158 | 0.5199 | 0.1212 | 1.4500e-003 | 0.0767 | 1.5600e-003 | 0.0783 | 0.0198 | 1.4900e-003 | 0.0213 | 0.0000 | 143.1592 | 143.1592 | 9.9400e-003 | 0.0000 | 143.4076 |
| Vendor | 1.4600e-003 | 0.0463 | 0.0126 | 1.2000e-004 | 2.9600e-003 | 9.0000e-005 | 3.0500e-003 | 8.5000e-004 | 9.0000e-005 | 9.4000e-004 | 0.0000 | 11.5730 | 11.5730 | 7.1000e-004 | 0.0000 | 11.5908 |
| Worker | 0.0572 | 0.0446 | 0.5031 | 1.4600e-003 | 0.1458 | 1.2000e-003 | 0.1470 | 0.0387 | 1.1100e-003 | 0.0398 | 0.0000 | 131.5507 | 131.5507 | 3.8700e-003 | 0.0000 | 131.6475 |
| **Total** | **0.0745** | **0.6108** | **0.6368** | **3.0300e-003** | **0.2254** | **2.8500e-003** | **0.2283** | **0.0593** | **2.6900e-003** | **0.0620** | **0.0000** | **286.2829** | **286.2829** | **0.0145** | **0.0000** | **286.6459** |

### 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 | 0.0321 | 0.2347 | 1.5615 | 2.6400e-003 | | 3.9400e-003 | 3.9400e-003 | | 3.9400e-003 | 3.9400e-003 | 0.0000 | 226.2425 | 226.2425 | 0.0508 | 0.0000 | 227.5133 |
| **Total** | **0.0321** | **0.2347** | **1.5615** | **2.6400e-003** | | **3.9400e-003** | **3.9400e-003** | | **3.9400e-003** | **3.9400e-003** | **0.0000** | **226.2425** | **226.2425** | **0.0508** | **0.0000** | **227.5133** |

## 3.5 Building Construction - 2021

**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 | 0.0158 | 0.5199 | 0.1212 | 1.4500e-003 | 0.0767 | 1.5600e-003 | 0.0783 | 0.0198 | 1.4900e-003 | 0.0213 | 0.0000 | 143.1592 | 143.1592 | 9.9400e-003 | 0.0000 | 143.4076 |
| Vendor | 1.4600e-003 | 0.0463 | 0.0126 | 1.2000e-004 | 2.9600e-003 | 9.0000e-005 | 3.0500e-003 | 8.5000e-004 | 9.0000e-005 | 9.4000e-004 | 0.0000 | 11.5730 | 11.5730 | 7.1000e-004 | 0.0000 | 11.5908 |
| Worker | 0.0572 | 0.0446 | 0.5031 | 1.4600e-003 | 0.1458 | 1.2000e-003 | 0.1470 | 0.0387 | 1.1100e-003 | 0.0398 | 0.0000 | 131.5507 | 131.5507 | 3.8700e-003 | 0.0000 | 131.6475 |
| **Total** | **0.0745** | **0.6108** | **0.6368** | **3.0300e-003** | **0.2254** | **2.8500e-003** | **0.2283** | **0.0593** | **2.6900e-003** | **0.0620** | **0.0000** | **286.2829** | **286.2829** | **0.0145** | **0.0000** | **286.6459** |

## 3.5 Building Construction - 2022

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.1687 | 1.5563 | 1.4123 | 2.6400e-003 | | 0.0742 | 0.0742 | | 0.0703 | 0.0703 | 0.0000 | 226.3039 | 226.3039 | 0.0504 | 0.0000 | 227.5635 |
| **Total** | **0.1687** | **1.5563** | **1.4123** | **2.6400e-003** | | **0.0742** | **0.0742** | | **0.0703** | **0.0703** | **0.0000** | **226.3039** | **226.3039** | **0.0504** | **0.0000** | **227.5635** |

## 3.5 Building Construction - 2022

### 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 | 0.0151 | 0.4825 | 0.1199 | 1.4400e-003 | 0.0767 | 1.3500e-003 | 0.0781 | 0.0198 | 1.2900e-003 | 0.0211 | 0.0000 | 141.4568 | 141.4568 | 9.7800e-003 | 0.0000 | 141.7014 |
| Vendor | 1.3700e-003 | 0.0440 | 0.0119 | 1.2000e-004 | 2.9600e-003 | 8.0000e-005 | 3.0400e-003 | 8.5000e-004 | 8.0000e-005 | 9.3000e-004 | 0.0000 | 11.4714 | 11.4714 | 6.9000e-004 | 0.0000 | 11.4885 |
| Worker | 0.0537 | 0.0403 | 0.4635 | 1.4000e-003 | 0.1458 | 1.1600e-003 | 0.1469 | 0.0387 | 1.0700e-003 | 0.0398 | 0.0000 | 126.9264 | 126.9264 | 3.5000e-003 | 0.0000 | 127.0138 |
| **Total** | **0.0701** | **0.5668** | **0.5953** | **2.9600e-003** | **0.2254** | **2.5900e-003** | **0.2280** | **0.0593** | **2.4400e-003** | **0.0618** | **0.0000** | **279.8546** | **279.8546** | **0.0140** | **0.0000** | **280.2037** |

### 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 | 0.0321 | 0.2347 | 1.5615 | 2.6400e-003 | | 3.9400e-003 | 3.9400e-003 | | 3.9400e-003 | 3.9400e-003 | 0.0000 | 226.3036 | 226.3036 | 0.0504 | 0.0000 | 227.5633 |
| **Total** | **0.0321** | **0.2347** | **1.5615** | **2.6400e-003** | | **3.9400e-003** | **3.9400e-003** | | **3.9400e-003** | **3.9400e-003** | **0.0000** | **226.3036** | **226.3036** | **0.0504** | **0.0000** | **227.5633** |

## 3.5 Building Construction - 2022

**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 | 0.0151 | 0.4825 | 0.1199 | 1.4400e-003 | 0.0767 | 1.3500e-003 | 0.0781 | 0.0198 | 1.2900e-003 | 0.0211 | 0.0000 | 141.4568 | 141.4568 | 9.7800e-003 | 0.0000 | 141.7014 |
| Vendor | 1.3700e-003 | 0.0440 | 0.0119 | 1.2000e-004 | 2.9600e-003 | 8.0000e-005 | 3.0400e-003 | 8.5000e-004 | 8.0000e-005 | 9.3000e-004 | 0.0000 | 11.4714 | 11.4714 | 6.9000e-004 | 0.0000 | 11.4885 |
| Worker | 0.0537 | 0.0403 | 0.4635 | 1.4000e-003 | 0.1458 | 1.1600e-003 | 0.1469 | 0.0387 | 1.0700e-003 | 0.0398 | 0.0000 | 126.9264 | 126.9264 | 3.5000e-003 | 0.0000 | 127.0138 |
| **Total** | **0.0701** | **0.5668** | **0.5953** | **2.9600e-003** | **0.2254** | **2.5900e-003** | **0.2280** | **0.0593** | **2.4400e-003** | **0.0618** | **0.0000** | **279.8546** | **279.8546** | **0.0140** | **0.0000** | **280.2037** |

## 3.5 Building Construction - 2023

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.0590 | 0.5412 | 0.5272 | 1.0000e-003 | | 0.0246 | 0.0246 | | 0.0233 | 0.0233 | 0.0000 | 85.3333 | 85.3333 | 0.0188 | 0.0000 | 85.8039 |
| **Total** | **0.0590** | **0.5412** | **0.5272** | **1.0000e-003** | | **0.0246** | **0.0246** | | **0.0233** | **0.0233** | **0.0000** | **85.3333** | **85.3333** | **0.0188** | **0.0000** | **85.8039** |

## 3.5 Building Construction - 2023

### 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 | 3.7200e-003 | 0.1194 | 0.0410 | 5.2000e-004 | 0.0717 | 2.1000e-004 | 0.0719 | 0.0180 | 2.0000e-004 | 0.0182 | 0.0000 | 51.1078 | 51.1078 | 3.4200e-003 | 0.0000 | 51.1934 |
| Vendor | 3.8000e-004 | 0.0125 | 4.0200e-003 | 4.0000e-005 | 1.1100e-003 | 1.0000e-005 | 1.1300e-003 | 3.2000e-004 | 1.0000e-005 | 3.4000e-004 | 0.0000 | 4.1893 | 4.1893 | 2.3000e-004 | 0.0000 | 4.1950 |
| Worker | 0.0190 | 0.0137 | 0.1607 | 5.1000e-004 | 0.0550 | 4.3000e-004 | 0.0554 | 0.0146 | 3.9000e-004 | 0.0150 | 0.0000 | 46.0999 | 46.0999 | 1.1900e-003 | 0.0000 | 46.1295 |
| **Total** | **0.0231** | **0.1456** | **0.2057** | **1.0700e-003** | **0.1278** | **6.5000e-004** | **0.1284** | **0.0329** | **6.0000e-004** | **0.0335** | **0.0000** | **101.3969** | **101.3969** | **4.8400e-003** | **0.0000** | **101.5179** |

### 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 | 0.0121 | 0.0885 | 0.5887 | 1.0000e-003 | | 1.4800e-003 | 1.4800e-003 | | 1.4800e-003 | 1.4800e-003 | 0.0000 | 85.3332 | 85.3332 | 0.0188 | 0.0000 | 85.8038 |
| **Total** | **0.0121** | **0.0885** | **0.5887** | **1.0000e-003** | | **1.4800e-003** | **1.4800e-003** | | **1.4800e-003** | **1.4800e-003** | **0.0000** | **85.3332** | **85.3332** | **0.0188** | **0.0000** | **85.8038** |

## 3.5 Building Construction - 2023

**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 | 3.7200e-003 | 0.1194 | 0.0410 | 5.2000e-004 | 0.0717 | 2.1000e-004 | 0.0719 | 0.0180 | 2.0000e-004 | 0.0182 | 0.0000 | 51.1078 | 51.1078 | 3.4200e-003 | 0.0000 | 51.1934 |
| Vendor | 3.8000e-004 | 0.0125 | 4.0200e-003 | 4.0000e-005 | 1.1100e-003 | 1.0000e-005 | 1.1300e-003 | 3.2000e-004 | 1.0000e-005 | 3.4000e-004 | 0.0000 | 4.1893 | 4.1893 | 2.3000e-004 | 0.0000 | 4.1950 |
| Worker | 0.0190 | 0.0137 | 0.1607 | 5.1000e-004 | 0.0550 | 4.3000e-004 | 0.0554 | 0.0146 | 3.9000e-004 | 0.0150 | 0.0000 | 46.0999 | 46.0999 | 1.1900e-003 | 0.0000 | 46.1295 |
| **Total** | **0.0231** | **0.1456** | **0.2057** | **1.0700e-003** | **0.1278** | **6.5000e-004** | **0.1284** | **0.0329** | **6.0000e-004** | **0.0335** | **0.0000** | **101.3969** | **101.3969** | **4.8400e-003** | **0.0000** | **101.5179** |

## 3.6 Paving - 2023

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 3.7900e-003 | 0.0367 | 0.0514 | 8.0000e-005 | | 1.8200e-003 | 1.8200e-003 | | 1.6800e-003 | 1.6800e-003 | 0.0000 | 6.9086 | 6.9086 | 2.1900e-003 | 0.0000 | 6.9634 |
| Paving | 0.0000 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **3.7900e-003** | **0.0367** | **0.0514** | **8.0000e-005** | | **1.8200e-003** | **1.8200e-003** | | **1.6800e-003** | **1.6800e-003** | **0.0000** | **6.9086** | **6.9086** | **2.1900e-003** | **0.0000** | **6.9634** |

## 3.6 Paving - 2023

### 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 | 6.0000e-005 | 2.0200e-003 | 6.9000e-004 | 1.0000e-005 | 2.1000e-004 | 0.0000 | 2.1000e-004 | 6.0000e-005 | 0.0000 | 6.0000e-005 | 0.0000 | 0.8662 | 0.8662 | 6.0000e-005 | 0.0000 | 0.8677 |
| Vendor | 1.0000e-005 | 4.3000e-004 | 1.4000e-004 | 0.0000 | 4.0000e-005 | 0.0000 | 4.0000e-005 | 1.0000e-005 | 0.0000 | 1.0000e-005 | 0.0000 | 0.1420 | 0.1420 | 1.0000e-005 | 0.0000 | 0.1422 |
| Worker | 2.3000e-004 | 1.6000e-004 | 1.9200e-003 | 1.0000e-005 | 6.6000e-004 | 1.0000e-005 | 6.6000e-004 | 1.7000e-004 | 0.0000 | 1.8000e-004 | 0.0000 | 0.5515 | 0.5515 | 1.0000e-005 | 0.0000 | 0.5519 |
| **Total** | **3.0000e-004** | **2.6100e-003** | **2.7500e-003** | **2.0000e-005** | **9.1000e-004** | **1.0000e-005** | **9.1000e-004** | **2.4000e-004** | **0.0000** | **2.5000e-004** | **0.0000** | **1.5598** | **1.5598** | **8.0000e-005** | **0.0000** | **1.5618** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 1.2000e-003 | 5.7200e-003 | 0.0592 | 8.0000e-005 | | 1.9000e-004 | 1.9000e-004 | | 1.9000e-004 | 1.9000e-004 | 0.0000 | 6.9086 | 6.9086 | 2.1900e-003 | 0.0000 | 6.9634 |
| Paving | 0.0000 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **1.2000e-003** | **5.7200e-003** | **0.0592** | **8.0000e-005** | | **1.9000e-004** | **1.9000e-004** | | **1.9000e-004** | **1.9000e-004** | **0.0000** | **6.9086** | **6.9086** | **2.1900e-003** | **0.0000** | **6.9634** |

## 3.6 Paving - 2023

**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 | 6.0000e-005 | 2.0200e-003 | 6.9000e-004 | 1.0000e-005 | 2.1000e-004 | 0.0000 | 2.1000e-004 | 6.0000e-005 | 0.0000 | 6.0000e-005 | 0.0000 | 0.8662 | 0.8662 | 6.0000e-005 | 0.0000 | 0.8677 |
| Vendor | 1.0000e-005 | 4.3000e-004 | 1.4000e-004 | 0.0000 | 4.0000e-005 | 0.0000 | 4.0000e-005 | 1.0000e-005 | 0.0000 | 1.0000e-005 | 0.0000 | 0.1420 | 0.1420 | 1.0000e-005 | 0.0000 | 0.1422 |
| Worker | 2.3000e-004 | 1.6000e-004 | 1.9200e-003 | 1.0000e-005 | 6.6000e-004 | 1.0000e-005 | 6.6000e-004 | 1.7000e-004 | 0.0000 | 1.8000e-004 | 0.0000 | 0.5515 | 0.5515 | 1.0000e-005 | 0.0000 | 0.5519 |
| **Total** | **3.0000e-004** | **2.6100e-003** | **2.7500e-003** | **2.0000e-005** | **9.1000e-004** | **1.0000e-005** | **9.1000e-004** | **2.4000e-004** | **0.0000** | **2.5000e-004** | **0.0000** | **1.5598** | **1.5598** | **8.0000e-005** | **0.0000** | **1.5618** |

## 3.7 Architectural Coating - 2023

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Archit. Coating | 0.3106 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 2.3000e-003 | 0.0156 | 0.0217 | 4.0000e-005 | | 8.5000e-004 | 8.5000e-004 | | 8.5000e-004 | 8.5000e-004 | 0.0000 | 3.0639 | 3.0639 | 1.8000e-004 | 0.0000 | 3.0685 |
| **Total** | **0.3129** | **0.0156** | **0.0217** | **4.0000e-005** | | **8.5000e-004** | **8.5000e-004** | | **8.5000e-004** | **8.5000e-004** | **0.0000** | **3.0639** | **3.0639** | **1.8000e-004** | **0.0000** | **3.0685** |

## 3.7 Architectural Coating - 2023

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 5.0000e-005 | 1.5200e-003 | 5.2000e-004 | 1.0000e-005 | 1.5000e-004 | 0.0000 | 1.6000e-004 | 4.0000e-005 | 0.0000 | 5.0000e-005 | 0.0000 | 0.6497 | 0.6497 | 4.0000e-005 | 0.0000 | 0.6508 |
| Vendor | 2.0000e-005 | 6.4000e-004 | 2.0000e-004 | 0.0000 | 6.0000e-005 | 0.0000 | 6.0000e-005 | 2.0000e-005 | 0.0000 | 2.0000e-005 | 0.0000 | 0.2130 | 0.2130 | 1.0000e-005 | 0.0000 | 0.2133 |
| Worker | 1.7000e-004 | 1.2000e-004 | 1.4400e-003 | 0.0000 | 4.9000e-004 | 0.0000 | 5.0000e-004 | 1.3000e-004 | 0.0000 | 1.3000e-004 | 0.0000 | 0.4137 | 0.4137 | 1.0000e-005 | 0.0000 | 0.4139 |
| **Total** | **2.4000e-004** | **2.2800e-003** | **2.1600e-003** | **1.0000e-005** | **7.0000e-004** | **0.0000** | **7.2000e-004** | **1.9000e-004** | **0.0000** | **2.0000e-004** | **0.0000** | **1.2763** | **1.2763** | **6.0000e-005** | **0.0000** | **1.2780** |

### 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 | 0.3106 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 3.6000e-004 | 1.5500e-003 | 0.0220 | 4.0000e-005 | | 5.0000e-005 | 5.0000e-005 | | 5.0000e-005 | 5.0000e-005 | 0.0000 | 3.0639 | 3.0639 | 1.8000e-004 | 0.0000 | 3.0685 |
| **Total** | **0.3110** | **1.5500e-003** | **0.0220** | **4.0000e-005** | | **5.0000e-005** | **5.0000e-005** | | **5.0000e-005** | **5.0000e-005** | **0.0000** | **3.0639** | **3.0639** | **1.8000e-004** | **0.0000** | **3.0685** |

## 3.7 Architectural Coating - 2023

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 5.0000e-005 | 1.5200e-003 | 5.2000e-004 | 1.0000e-005 | 1.5000e-004 | 0.0000 | 1.6000e-004 | 4.0000e-005 | 0.0000 | 5.0000e-005 | 0.0000 | 0.6497 | 0.6497 | 4.0000e-005 | 0.0000 | 0.6508 |
| Vendor | 2.0000e-005 | 6.4000e-004 | 2.0000e-004 | 0.0000 | 6.0000e-005 | 0.0000 | 6.0000e-005 | 2.0000e-005 | 0.0000 | 2.0000e-005 | 0.0000 | 0.2130 | 0.2130 | 1.0000e-005 | 0.0000 | 0.2133 |
| Worker | 1.7000e-004 | 1.2000e-004 | 1.4400e-003 | 0.0000 | 4.9000e-004 | 0.0000 | 5.0000e-004 | 1.3000e-004 | 0.0000 | 1.3000e-004 | 0.0000 | 0.4137 | 0.4137 | 1.0000e-005 | 0.0000 | 0.4139 |
| **Total** | **2.4000e-004** | **2.2800e-003** | **2.1600e-003** | **1.0000e-005** | **7.0000e-004** | **0.0000** | **7.2000e-004** | **1.9000e-004** | **0.0000** | **2.0000e-004** | **0.0000** | **1.2763** | **1.2763** | **6.0000e-005** | **0.0000** | **1.2780** |

# 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 | 0.8860 | 3.9453 | 11.1710 | 0.0411 | 3.4583 | 0.0315 | 3.4898 | 0.9270 | 0.0293 | 0.9562 | 0.0000 | 3,802.7650 | 3,802.7650 | 0.1908 | 0.0000 | 3,807.5345 |
| Unmitigated | 0.8860 | 3.9453 | 11.1710 | 0.0411 | 3.4583 | 0.0315 | 3.4898 | 0.9270 | 0.0293 | 0.9562 | 0.0000 | 3,802.7650 | 3,802.7650 | 0.1908 | 0.0000 | 3,807.5345 |

## 4.2 Trip Summary Information

| | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|---|---|---|---|---|---|
| Land Use | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| Apartments Mid Rise | 2,116.80 | 2,116.80 | 2116.80 | 7,233,427 | 7,233,427 |
| Enclosed Parking with Elevator | 0.00 | 0.00 | 0.00 | | |
| High Turnover (Sit Down Restaurant) | 614.00 | 614.00 | 614.00 | 836,778 | 836,778 |
| Pharmacy/Drugstore with Drive Thru | 784.00 | 784.00 | 784.00 | 1,041,658 | 1,041,658 |
| Total | 3,514.80 | 3,514.80 | 3,514.80 | 9,111,863 | 9,111,863 |

## 4.3 Trip Type Information

| | Miles | | | Trip % | | | Trip Purpose % | | |
|---|---|---|---|---|---|---|---|---|---|
| Land Use | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary | Diverted | Pass-by |
| Apartments Mid Rise | 14.70 | 5.90 | 8.70 | 40.20 | 19.20 | 40.60 | 86 | 11 | 3 |
| Enclosed Parking with Elevator | 16.60 | 8.40 | 6.90 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 |
| High Turnover (Sit Down | 16.60 | 8.40 | 6.90 | 8.50 | 72.50 | 19.00 | 37 | 20 | 43 |
| Pharmacy/Drugstore with Drive | 16.60 | 8.40 | 6.90 | 7.50 | 73.50 | 19.00 | 38 | 13 | 49 |

## 4.4 Fleet Mix

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Apartments Mid Rise | 0.545842 | 0.044768 | 0.205288 | 0.119317 | 0.015350 | 0.006227 | 0.020460 | 0.031333 | 0.002546 | 0.002133 | 0.005184 | 0.000692 | 0.000862 |
| Enclosed Parking with Elevator | 0.545842 | 0.044768 | 0.205288 | 0.119317 | 0.015350 | 0.006227 | 0.020460 | 0.031333 | 0.002546 | 0.002133 | 0.005184 | 0.000692 | 0.000862 |
| High Turnover (Sit Down Restaurant) | 0.545842 | 0.044768 | 0.205288 | 0.119317 | 0.015350 | 0.006227 | 0.020460 | 0.031333 | 0.002546 | 0.002133 | 0.005184 | 0.000692 | 0.000862 |
| Pharmacy/Drugstore with Drive Thru | 0.545842 | 0.044768 | 0.205288 | 0.119317 | 0.015350 | 0.006227 | 0.020460 | 0.031333 | 0.002546 | 0.002133 | 0.005184 | 0.000692 | 0.000862 |

## 5.0 Energy Detail

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

Install Energy Efficient Appliances

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 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 | 1,072.1664 | 1,072.1664 | 0.0417 | 4.8100e-003 | 1,074.6409 |
| Electricity Unmitigated | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 1,080.7162 | 1,080.7162 | 0.0420 | 4.8500e-003 | 1,083.2104 |
| NaturalGas Mitigated | 0.0357 | 0.3102 | 0.1700 | 1.9400e-003 | | 0.0246 | 0.0246 | | 0.0246 | 0.0246 | 0.0000 | 352.8209 | 352.8209 | 6.7600e-003 | 6.4700e-003 | 354.9175 |
| NaturalGas Unmitigated | 0.0357 | 0.3102 | 0.1700 | 1.9400e-003 | | 0.0246 | 0.0246 | | 0.0246 | 0.0246 | 0.0000 | 352.8209 | 352.8209 | 6.7600e-003 | 6.4700e-003 | 354.9175 |

## 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 Mid Rise | 4.74257e+006 | 0.0256 | 0.2185 | 0.0930 | 1.3900e-003 | | 0.0177 | 0.0177 | | 0.0177 | 0.0177 | 0.0000 | 253.0818 | 253.0818 | 4.8500e-003 | 4.6400e-003 | 254.5857 |
| Enclosed Parking with Elevator | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| High Turnover (Sit Down Restaurant) | 1.84608e+006 | 9.9500e-003 | 0.0905 | 0.0760 | 5.4000e-004 | | 6.8800e-003 | 6.8800e-003 | | 6.8800e-003 | 6.8800e-003 | 0.0000 | 98.5139 | 98.5139 | 1.8900e-003 | 1.8100e-003 | 99.0993 |
| Pharmacy/Drugstore with Drive Thru | 22960 | 1.2000e-004 | 1.1300e-003 | 9.5000e-004 | 1.0000e-005 | | 9.0000e-005 | 9.0000e-005 | | 9.0000e-005 | 9.0000e-005 | 0.0000 | 1.2252 | 1.2252 | 2.0000e-005 | 2.0000e-005 | 1.2325 |
| **Total** | | **0.0356** | **0.3102** | **0.1700** | **1.9400e-003** | | **0.0246** | **0.0246** | | **0.0246** | **0.0246** | **0.0000** | **352.8209** | **352.8209** | **6.7600e-003** | **6.4700e-003** | **354.9175** |

## 5.2 Energy by Land Use - NaturalGas

**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 Mid Rise | 4.74257e+006 | 0.0256 | 0.2185 | 0.0930 | 1.3900e-003 | | 0.0177 | 0.0177 | | 0.0177 | 0.0177 | 0.0000 | 253.0818 | 253.0818 | 4.8500e-003 | 4.6400e-003 | 254.5857 |
| Enclosed Parking with Elevator | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| High Turnover (Sit Down Restaurant) | 1.84608e+006 | 9.9500e-003 | 0.0905 | 0.0760 | 5.4000e-004 | | 6.8800e-003 | 6.8800e-003 | | 6.8800e-003 | 6.8800e-003 | 0.0000 | 98.5139 | 98.5139 | 1.8900e-003 | 1.8100e-003 | 99.0993 |
| Pharmacy/Drugstore with Drive Thru | 22960 | 1.2000e-004 | 1.1300e-003 | 9.5000e-004 | 1.0000e-005 | | 9.0000e-005 | 9.0000e-005 | | 9.0000e-005 | 9.0000e-005 | 0.0000 | 1.2252 | 1.2252 | 2.0000e-005 | 2.0000e-005 | 1.2325 |
| **Total** | | **0.0356** | **0.3102** | **0.1700** | **1.9400e-003** | | **0.0246** | **0.0246** | | **0.0246** | **0.0246** | **0.0000** | **352.8209** | **352.8209** | **6.7600e-003** | **6.4700e-003** | **354.9175** |

## 5.3 Energy by Land Use - Electricity

**Unmitigated**

| | Electricity Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | kWh/yr | MT/yr | | | |
| Apartments Mid Rise | 1.75117e+006 | 531.3978 | 0.0207 | 2.3800e-003 | 532.6242 |
| Enclosed Parking with Elevator | 1.2681e+006 | 384.8103 | 0.0150 | 1.7300e-003 | 385.6985 |
| High Turnover (Sit Down Restaurant) | 353120 | 107.1554 | 4.1600e-003 | 4.8000e-004 | 107.4027 |
| Pharmacy/Drugstore with Drive Thru | 189000 | 57.3527 | 2.2300e-003 | 2.6000e-004 | 57.4850 |
| **Total** | | **1,080.7162** | **0.0420** | **4.8500e-003** | **1,083.2104** |

## 5.3 Energy by Land Use - Electricity

**Mitigated**

| | Electricity Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | kWh/yr | MT/yr | | | |
| Apartments Mid Rise | 1.72299e+006 | 522.8479 | 0.0203 | 2.3400e-003 | 524.0546 |
| Enclosed Parking with Elevator | 1.2681e+006 | 384.8103 | 0.0150 | 1.7300e-003 | 385.6985 |
| High Turnover (Sit Down Restaurant) | 353120 | 107.1554 | 4.1600e-003 | 4.8000e-004 | 107.4027 |
| Pharmacy/Drugstore with Drive Thru | 189000 | 57.3527 | 2.2300e-003 | 2.6000e-004 | 57.4850 |
| **Total** | | **1,072.1664** | **0.0417** | **4.8100e-003** | **1,074.6409** |

# 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 | 1.9331 | 0.0551 | 4.4648 | 2.6000e-004 | | 0.0250 | 0.0250 | | 0.0250 | 0.0250 | 0.0000 | 11.5177 | 11.5177 | 7.1200e-003 | 8.0000e-005 | 11.7186 |
| Unmitigated | 1.9331 | 0.0551 | 4.4648 | 2.6000e-004 | | 0.0250 | 0.0250 | | 0.0250 | 0.0250 | 0.0000 | 11.5177 | 11.5177 | 7.1200e-003 | 8.0000e-005 | 11.7186 |

## 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 | 0.1433 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Consumer Products | 1.6545 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Hearth | 4.3000e-004 | 3.6500e-003 | 1.5500e-003 | 2.0000e-005 | | 3.0000e-004 | 3.0000e-004 | | 3.0000e-004 | 3.0000e-004 | 0.0000 | 4.2264 | 4.2264 | 8.0000e-005 | 8.0000e-005 | 4.2515 |
| Landscaping | 0.1349 | 0.0514 | 4.4633 | 2.4000e-004 | | 0.0247 | 0.0247 | | 0.0247 | 0.0247 | 0.0000 | 7.2913 | 7.2913 | 7.0300e-003 | 0.0000 | 7.4671 |
| **Total** | **1.9331** | **0.0551** | **4.4648** | **2.6000e-004** | | **0.0250** | **0.0250** | | **0.0250** | **0.0250** | **0.0000** | **11.5177** | **11.5177** | **7.1100e-003** | **8.0000e-005** | **11.7186** |

## 6.2 Area by SubCategory

**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 | 0.1433 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Consumer Products | 1.6545 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Hearth | 4.3000e-004 | 3.6500e-003 | 1.5500e-003 | 2.0000e-005 | | 3.0000e-004 | 3.0000e-004 | | 3.0000e-004 | 3.0000e-004 | 0.0000 | 4.2264 | 4.2264 | 8.0000e-005 | 8.0000e-005 | 4.2515 |
| Landscaping | 0.1349 | 0.0514 | 4.4633 | 2.4000e-004 | | 0.0247 | 0.0247 | | 0.0247 | 0.0247 | 0.0000 | 7.2913 | 7.2913 | 7.0300e-003 | 0.0000 | 7.4671 |
| **Total** | **1.9331** | **0.0551** | **4.4648** | **2.6000e-004** | | **0.0250** | **0.0250** | | **0.0250** | **0.0250** | **0.0000** | **11.5177** | **11.5177** | **7.1100e-003** | **8.0000e-005** | **11.7186** |

# 7.0 Water Detail

## 7.1 Mitigation Measures Water

Apply Water Conservation Strategy

| | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|
| Category | MT/yr | | | |
| Mitigated | 170.1591 | 0.8290 | 0.0202 | 196.8908 |
| Unmitigated | 197.1029 | 1.0357 | 0.0251 | 230.4816 |

## 7.2 Water by Land Use

**Unmitigated**

| | Indoor/Outdoor Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | Mgal | MT/yr | | | |
| Apartments Mid Rise | 28.1465 / 17.7446 | 179.9674 | 0.9238 | 0.0224 | 209.7446 |
| Enclosed Parking with Elevator | 0 / 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| High Turnover (Sit Down Restaurant) | 2.42827 / 0.154996 | 10.8877 | 0.0795 | 1.9100e-003 | 13.4459 |
| Pharmacy/Drugstore with Drive Thru | 0.986265 / 0.604485 | 6.2478 | 0.0324 | 7.9000e-004 | 7.2911 |
| **Total** | | **197.1029** | **1.0357** | **0.0251** | **230.4816** |

## 7.2 Water by Land Use

**Mitigated**

| | Indoor/Outdoor Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | Mgal | MT/yr | | | |
| Apartments Mid Rise | 22.5172 / 17.7446 | 155.9386 | 0.7395 | 0.0180 | 179.7879 |
| Enclosed Parking with Elevator | 0 / 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| High Turnover (Sit Down Restaurant) | 1.94262 / 0.154996 | 8.8146 | 0.0636 | 1.5300e-003 | 10.8615 |
| Pharmacy/Drugstore with Drive Thru | 0.789012 / 0.604485 | 5.4059 | 0.0259 | 6.3000e-004 | 6.2414 |
| **Total** | | **170.1591** | **0.8290** | **0.0202** | **196.8908** |

# 8.0 Waste Detail

## 8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

**Category/Year**

| | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|
| | MT/yr | | | |
| Mitigated | 16.3702 | 0.9675 | 0.0000 | 40.5564 |
| Unmitigated | 68.2090 | 4.0310 | 0.0000 | 168.9850 |

## 8.2 Waste by Land Use

**Unmitigated**

| | Waste Disposed | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | tons | MT/yr | | | |
| Apartments Mid Rise | 198.72 | 40.3384 | 2.3839 | 0.0000 | 99.9366 |
| Enclosed Parking with Elevator | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| High Turnover (Sit Down Restaurant) | 95.2 | 19.3247 | 1.1421 | 0.0000 | 47.8762 |
| Pharmacy/Drugstore with Drive Thru | 42.1 | 8.5459 | 0.5051 | 0.0000 | 21.1722 |
| **Total** | | **68.2090** | **4.0310** | **0.0000** | **168.9850** |

## 8.2 Waste by Land Use

**Mitigated**

| | Waste Disposed | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | tons | MT/yr | | | |
| Apartments Mid Rise | 47.6928 | 9.6812 | 0.5721 | 0.0000 | 23.9848 |
| Enclosed Parking with Elevator | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| High Turnover (Sit Down Restaurant) | 22.848 | 4.6379 | 0.2741 | 0.0000 | 11.4903 |
| Pharmacy/Drugstore with Drive Thru | 10.104 | 2.0510 | 0.1212 | 0.0000 | 5.0813 |
| **Total** | | **16.3702** | **0.9674** | **0.0000** | **40.5564** |

## 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