Appendix A:
Air Quality, Greenhouse Gas Emissions and Energy Analysis Report

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FIRSTCARBONSOLUTIONS™

Air Quality, Greenhouse Gas Emissions, and Energy Analysis Report
Legacy Anaheim Project
City of Anaheim, Orange County, California

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ACRONYMS AND ABBREVIATIONS

°C	degrees Celsius
°F	degrees Fahrenheit
µg/m^3	micrograms per cubic meter
AB	Assembly Bill
AQI	Air Quality Index
AQMP	Air Quality Management Plan
ARB	California Air Resources Board
APU	Anaheim Public Utilities
AQMP	Air Quality Management Plan
ATCM	Airborne Toxic Control Measure
ATE	Associated Transportation Engineers
BAU	business-as-usual
BMP	Best Management Practice
BTU	British Thermal Unit
CAA	Clean Air Act
CAFE	Corporate Average Fuel Economy
CalEEMod	California Emissions Estimator Model
CALGreen	California Green Building Standards Code
CCAA	California Clean Air Act
CDC	Center for Disease Control and Prevention
CDMG	California Division of Mines and Geology
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CH_4	methane
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
DPM	diesel particulate matter
EIA	United States Energy Information Administration
EIR	Environmental Impact Report
EMFAC	EMission FACtors
EPA	United States Environmental Protection Agency
GHG	greenhouse gas
HAP	Hazardous Air Pollutant
IPCC	United Nations Intergovernmental Panel on Climate Change

LCFS	Low Carbon Fuel Standard
LEV	Low Emission Vehicle
LST	localized significance threshold
MMRP	Mitigation Monitoring and Reporting Program
MMT	million metric ton
mph	miles per hour
MT	metric ton
MWh	megawatt-hour
NAAQS	National Ambient Air Quality Standards
NF_3	nitrogen trifluoride
NHTSA	National Highway Traffic Safety Administration
N_2O	nitrous oxide
NO_2	nitrogen dioxide
NO_X	oxides of nitrogen
OAL	Office of Administrative Law
PM_{10}	particulate matter less than 10 microns in diameter
$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
ppb	parts per billion
ppm	parts per million
PV	photovoltaic
ROC	reactive organic compound
RPS	renewable 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
SCE	Southern California Edison
SEIR	Supplemental Environmental Impact Report
SIP	State Implementation Plan
SLCP	Short-Lived Climate Pollutant
SoCAB	South Coast Air Basin
SO_X	sulfur oxides
SP	service population
SRA	Source Receptor Area
TAC	toxic air contaminant
UNFCCC	United Nations Framework Convention on Climate Change
VMT	Vehicle Miles Traveled
VOC	volatile organic compound

ZEV	Zero Emission Vehicle

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SECTION 1: EXECUTIVE SUMMARY

1.1 - Purpose and Methods of Analysis

This Air Quality, Greenhouse Gas (GHG) Emissions, and Energy Analysis Report was prepared to evaluate whether the estimated criteria air pollutant emissions, ozone precursor emissions, GHG emissions, and energy demand generated from the proposed Legacy Anaheim Project (proposed project) would cause significant impacts related to air quality, GHG emissions and/or energy. This assessment was conducted within the context of the California Environmental Quality Act (CEQA), California Public Resources Code Section 21000, *et seq*. The methodology follows the South Coast Air Quality Management District (SCAQMD) and City of Anaheim recommendations for the quantification of emissions and evaluation of potential impacts to air resources.

Previously, the City of Anaheim certified the General Plan and Zoning Code Update Program Environmental Impact Report (EIR) No. 330 (Program EIR No. 330), which evaluated impacts associated with implementation of the Anaheim General Plan and Zoning Code Update (Update Project) and a Mitigation Monitoring and Reporting Program (MMRP) No. 122 to mitigate those impacts in 2004. In September 2013, the City certified Supplemental EIR No. 346 (SEIR No. 346) for the Anaheim Housing Opportunities Site Rezoning Project (Rezoning Project). The City also approved an MMRP (MMRP No. 122A) as part of SEIR No. 346. SEIR No. 346 supplemented Program EIR No. 330 in the areas of air quality, GHG emissions, noise, and transportation and traffic.

One of the City's goals in the Rezoning Project was to provide updated community-level environmental review to facilitate redevelopment. The Rezoning and application of overlay zones provides the opportunity for applicants to utilize Public Resources Code Section 21159.24, which allows for an exemption from further CEQA review for urban infill residential development that meets certain criteria. Properties designated as Housing Opportunity Sites by the General Plan would quality for a Statutory Infill Housing Exemption, as defined by Public Resources Code Section 21159.20. The City also intended for future projects consistent with the Certified EIR and Approved Project to be able to utilize the streamlining provisions of Senate Bill (SB) 266, as implemented through CEQA Guidelines Section 15183.3, Streamlining for Infill Projects, which went into effect January 1, 2013.

Given that the proposed project constitutes development pursuant to Program EIR No. 330 and SEIR No. 346, this analysis compares the air quality and GHG-related environmental effects of the proposed project with the air quality and GHG-related environmental effects identified in Program EIR No. 330 and SEIR No. 346 and incorporates associated mitigation measures.

1.2 - Project Summary

The project proposes to develop 156 residential townhomes in 21 structures, which would represent a density of 24 dwelling units per acre (du/ac). The proposed development would include 3-bedroom units with either 3-car garages or 2-car tandem or side-by-side garages. The proposed project would provide resident amenities such as a swimming pool, an outdoor lounging area, and a

dog run. The proposed project would locate surface parking in the southwestern, center, and eastern portions of the project site. Vehicles would access the site via one main entry from West Midway Drive, and four side entries (two on the east end and two on the west end of the site.) These entry roads would connect to the internal roadways throughout the site. Similarly, pedestrians would access the project site via four pedestrian entry ways from West Midway Drive and could circulate within the proposed project via a series of internal pedestrian walkways located throughout the site. The proposed project would include the demolition of all existing structures on-site and would vacate the existing Zeyn Street, Clementine Street, and Lemon Street. The applicant anticipates that construction of the proposed project would begin in August 2021 and end in May 2023. Construction activities would include demolition of the existing paved surfaces and structures, site preparation, grading, building construction, architectural coatings, and paving.

1.3 - Summary of Analysis Results

The following is a summary of the analysis results. As previously discussed, the proposed project is part of the study area analyzed in the City's Program EIR No. 330 and SEIR No. 346. As noted below, the proposed project would be required to implement air quality mitigation measures contained in Program EIR No. 330 and SEIR No. 346, where applicable, to reduce potential impacts. A summary of the proposed project's air quality impacts is provided below.

Impact AIR-1 The proposed project would not conflict with or obstruct implementation of the applicable air quality plan. **Less than significant impact.**

Impact AIR-2 The proposed project would not violate an air quality standard or contribute substantially to an existing or projected air quality violation. **Less than significant impact.**

Impact AIR-3 The proposed project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors). **Less than significant impact.**

Impact AIR-4 The proposed project would not expose sensitive receptors to substantial pollutant concentrations. **Less than significant impact.**

Impact AIR-5 The proposed project would not create objectionable odors affecting a substantial number of people. **Less than significant impact.**

Impact GHG-1 The proposed project would not generate direct and indirect GHG emissions that would result in a significant impact on the environment. **Less than significant impact.**

Impact GHG-2 The proposed project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs or otherwise conflict with State goals for reducing GHG emissions. **Less than significant impact**

Impact ENER-1 The proposed project would not result in potentially significant environmental impacts due to the wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation. **Less than significant impact.**

Impact ENER-2 The proposed project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. **Less than significant impact.**

1.4 - Mitigation Measures from Program EIR No. 330 and SEIR No. 346 Applied to the Proposed Project

Air Quality and Greenhouse Gas Mitigation Measures

MM 5.2-1 Prior to the issuance of grading permits, the property owner/developer shall include a note on all grading plans which requires the construction contractor to implement the following measures during grading. These measures shall also be discussed at the pregrade conference.

- Use low emission construction equipment.
- Maintain construction equipment engines by keeping them tuned.
- Use low sulfur fuel for stationary construction equipment.
- Utilize existing power sources (i.e., power poles) when feasible.
- Configure construction parking to minimize traffic interference.
- Minimize obstruction of through-traffic lanes. When feasible, construction should be planned so that lane closures on existing streets are kept to a minimum.
- Schedule construction operations affecting traffic for off-peak hours.
- Develop a traffic plan to minimize traffic flow interference from construction activities (the plan may include advance public notice of routing, use of public transportation and satellite parking areas with a shuttle service).

MM 5.2-2 The City shall reduce vehicle emissions caused by traffic congestion by implementing transportation systems management techniques that include synchronized traffic signals and limiting on-street parking.

MM 5.2-3 The City shall encourage major employers, tenants in business parks and other activity centers, and developers of large new developments to participate in transportation management associations.

MM 5.2-4 The City shall consider the feasibility of diverting commercial truck traffic to off-peak periods to alleviate non-recurrent congestion as a means to improve roadway efficiency.

MM 5.2-5 The City will encourage the incorporation of energy conservation techniques (i.e., installation of energy saving devices, construction of electric vehicle charging stations, use of sunlight filtering window coatings or double-paned windows, utilization of light-colored roofing materials as opposed to dark-colored roofing materials, and placement of shady trees next to habitable structures) in new developments.

MM 5.2-6 The City will encourage the incorporation of bus stands, bicycle racks, bicycle lanes, and other alternative transportation related infrastructure in new developments.

SECTION 2: AIR QUALITY SETTING

2.1 - Environmental Setting

The proposed project is located in the City of Anaheim and is within the South Coast Air Basin (SoCAB or Air Basin). The following section describes local air quality and climate conditions as they pertain to the Air Basin, as well as a description of pollutants and their health effects.

2.1.1 - Climate of the South Coast Air Basin

The SoCAB includes all of Orange County as well as the non-desert portions of Los Angeles, Riverside, and San Bernardino counties. The distinctive climate of the SoCAB is determined by its terrain and geographical location. The Air Basin is located in a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean in the southwest quadrant with high mountains forming the remainder of the perimeter. The general region 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. This usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds.

The annual average temperature varies little throughout the 6,600-square-mile Air Basin, ranging from the low 60°F (degrees Fahrenheit) to high 80°F. However, with a less pronounced oceanic influence, the inland portion shows greater variability in the annual minimum and maximum temperatures. The mean annual high and low temperatures in the project area are 77°F and 49°F, respectively. The overall climate is a mild Mediterranean, with temperatures reaching to over 88°F in the summer and dipping to 41°F in the winter.

In contrast to a very steady pattern of temperature, rainfall is seasonally and annually highly variable. The total average annual precipitation is 14.51 inches (at Yorba Linda), and the majority of precipitation occurs between December and March.

Although the Air Basin has a semi-arid climate, the air near the surface is typically moist because of the presence of a shallow marine layer. Except for infrequent periods when dry, continental air is brought into the Air Basin by offshore winds, the ocean effect is dominant. Periods of heavy fog, especially along the coastline, are frequent; and low stratus clouds, often referred to as "high fog" are a characteristic climatic feature. Annual average humidity ranges from a high of about 72 percent at the coast to about 58 percent in the eastern portion of the Air Basin. The average relative humidity for the Anaheim area is reported at 76 percent.

Wind patterns across the south coastal region are characterized by westerly and southwesterly on-shore winds during the day and easterly or northeasterly breezes at night. Wind speed is somewhat greater during the dry summer months than during the rainy winter season. Typical summer winds range from 4 to 7 miles per hour (mph) during the day and 2 to 6 mph during the night.

Between the periods of dominant airflow, periods of air stagnation may occur, both in the morning and evening hours. Whether such a period of stagnation occurs is one of the critical determinants of

air quality conditions on any given day. During the winter and fall months, surface high-pressure systems over the Air Basin, combined with other meteorological conditions, can result in very strong, downslope Santa Ana winds. These winds normally have a duration of a few days before predominant meteorological conditions are reestablished. Santa Ana winds have a decidedly distinct pattern. Santa Ana winds from a northerly direction flow through the Cajon Pass and then follow the Santa Ana River in a southwestward motion direction to the coast. The highest wind speeds typically occur during the afternoon due to daytime thermal convection caused by surface heating. This convection brings about a downward transfer of momentum from stronger winds aloft. While the maximum wind speed during Santa Ana conditions is undefined, sustained winds of 60 mph with higher gusts are not uncommon in the project vicinity.

In conjunction with the two characteristic wind patterns that affect the rate and orientation of horizontal pollutant transport, there are two similarly distinct types of temperature inversions that control the vertical depth through which pollutants are mixed. These inversions are the marine/subsidence inversion and the radiation inversion. The height of the base of the inversion at any given time is known as the "mixing height." This mixing height can change under conditions when the top of the inversion does not change. The combination of winds and inversions are critical determinants in leading to the highly degraded air quality in summer, and the generally good air quality in the winter in the project area.[1]

2.2 - Regulatory Setting

Air pollutants are regulated to protect human health and for secondary effects such as visibility and building soiling. The Clean Air Act (CAA) of 1970 tasks the United States Environmental Protection Agency (EPA) with setting air quality standards. The State of California also sets air quality standards that are in some cases more stringent than federal standards and address additional pollutants. The following section describes these federal and State standards and the health effects of the regulated pollutants.

2.2.1 - Clean Air Act

Congress established much of the basic structure of the CAA in 1970 and made major revisions in 1977 and 1990. Six common air pollutants (also known as criteria pollutants) are addressed in the CAA. The EPA calls these pollutants criteria air pollutants because it regulates them by developing human health-based and environmentally-based criteria (science-based guidelines) for setting permissible levels. The set of limits based on human health are called primary standards. Primary federal standards are the levels of air quality necessary, with an adequate margin of safety, to protect the public health. Another set of limits intended to prevent environmental and property damage are called secondary standards. The federal standards are called National Ambient Air Quality Standards (NAAQS). The air quality standards provide benchmarks for determining whether air quality is healthy at specific locations and whether development activities will cause or contribute to a violation of the standards. The criteria pollutants are:

[1] City of Anaheim. 2004. Anaheim General Plan and Zoning Code Update Environmental Impact Report: 5.2 Air Quality. Website: http://www.anaheim.net/DocumentCenter/View/2184/52-Air-Quality-?bidId= Accessed February 16, 2021.

- Ozone
- Nitrogen dioxide (NO_2)
- Lead
- Particulate matter (PM_{10} and $PM_{2.5}$)
- Carbon monoxide (CO)
- Sulfur dioxide (SO_2)

The federal standards were set to protect public health, including that of sensitive individuals; thus, the EPA is tasked with updating the standards as more medical research is available regarding the health effects of the criteria pollutants.

2.2.2 - California Clean Air Act

The California Legislature enacted the California Clean Air Act (CCAA) in 1988 to address air quality issues of concern not adequately addressed by the federal CAA at the time. California's air quality problems were and continue to be some of the most severe in the nation and required additional actions beyond the federal mandates. The California Air Resources Board (ARB) administers California Ambient Air Quality Standards (CAAQS) for the 10 air pollutants designated in the CCAA. The 10 State air pollutants are the six federal standards listed above as well as visibility-reducing particulates, hydrogen sulfide, sulfates, and vinyl chloride. The EPA authorized a waiver to California to adopt its own regulations for motor vehicles and other sources that are more stringent than similar federal regulations implementing the CAA. Note that in 2020, the EPA rescinded this waiver; however, the California regulations are still in place at the time of this writing. Generally, the planning requirements of the CCAA are more stringent than the federal CAA; therefore, consistency with the CCAA will also demonstrate consistency with the CAA.

2.2.3 - Air Pollutant Description and Health Effects

The federal and State ambient air quality standards, relevant effects, properties, and sources of the air pollutants of concern are summarized in Table 1.

Several pollutants listed in Table 1 are not addressed in this analysis. Analysis of lead is not included in this report because no new sources of lead emissions are anticipated with the proposed project. Visibility-reducing particles are not explicitly addressed in this analysis because particulate matter is addressed as PM_{10} and $PM_{2.5}$. Also, no components of the proposed project would result in vinyl chloride or hydrogen sulfide emissions in any substantial quantity.

Table 1: Description of Air Pollutants

Air Pollutant	Averaging Time	California Standard	Federal Standard[a]	Most Relevant Effects from Pollutant Exposure	Properties	Sources
Ozone	1 Hour	0.09 ppm	—	Irritate respiratory system; reduce lung function; breathing pattern changes; reduction of breathing capacity; inflame and damage cells that line the lungs; make lungs more susceptible to infection; aggravate asthma; aggravate other chronic lung diseases; cause permanent lung damage; some immunological changes; increased mortality risk; vegetation and property damage.	Ozone is a photochemical pollutant as it is not emitted directly into the atmosphere but is formed by a complex series of chemical reactions between volatile organic compounds (or reactive organic gases [ROG]), nitrogen oxides (NO_X), and sunlight. Ozone is a regional pollutant that is generated over a large area and is transported and spread by the wind. Hot, sunny, and calm weather conditions are favorable to ozone formation.	Ozone is a secondary pollutant; thus, it is not emitted directly into the lower level of the atmosphere. The primary sources of ozone precursors (ROG and NO_X) are mobile sources (on-road and off-road vehicle exhaust).
	8 Hour	0.070 ppm	0.070 ppm[f]			
Carbon monoxide (CO)	1 Hour	20 ppm	35 ppm	Ranges depending on exposure: slight headaches; nausea; aggravation of angina pectoris (chest pain) and other aspects of coronary heart disease; decreased exercise tolerance in persons with peripheral vascular disease and lung disease; impairment of central nervous system functions; possible increased risk to fetuses; death.	CO is a colorless, odorless, toxic gas. CO is somewhat soluble in water; therefore, rainfall and fog can suppress CO conditions. CO enters the body through the lungs, dissolves in the blood, replaces oxygen as an attachment to hemoglobin, and reduces available oxygen in the blood.	CO is produced by incomplete combustion of carbon-containing fuels (e.g., gasoline, diesel fuel, and biomass). Sources include motor vehicle exhaust, industrial processes (metals processing and chemical manufacturing), residential wood burning, and natural sources.
	8 Hour	9.0 ppm	9 ppm			
Nitrogen dioxide[b] (NO_2)	1 Hour	0.18 ppm	0.100 ppm	Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; contribution to atmospheric discoloration; increased visits to hospital for respiratory illnesses.	During combustion of fossil fuels, oxygen reacts with nitrogen to produce nitrogen oxides—NO_X (NO, NO_2, NO_3, N_2O, N_2O_3, N_2O_4, and N_2O_5). NO_X is a precursor to ozone, PM_{10}, and $PM_{2.5}$ formation. NO_X can react with compounds to form nitric acid and related small particles and result in PM-related health effects.	NO_X is produced in motor vehicle internal combustion engines and fossil fuel-fired electric utility and industrial boilers. Nitrogen dioxide (NO_2) forms quickly from NO_X emissions. NO_2 concentrations near major roads can be 30 to 100 percent higher than those at monitoring stations.
	Annual	0.030 ppm	0.053 ppm			

Air Pollutant	Averaging Time	California Standard	Federal Standard[a]	Most Relevant Effects from Pollutant Exposure	Properties	Sources
Sulfur dioxide[c] (SO_2)	1 Hour	0.25 ppm	0.075 ppm	Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma. Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient sulfur dioxide levels. It is not clear whether the two pollutants act synergistically, or one pollutant alone is the predominant factor.	Sulfur dioxide is a colorless, pungent gas. At levels greater than 0.5 ppm, the gas has a strong odor, similar to rotten eggs. Sulfur oxides (SO_X) include sulfur dioxide and sulfur trioxide. Sulfuric acid is formed from sulfur dioxide, which can lead to acid deposition and can harm natural resources and materials. Although sulfur dioxide concentrations have been reduced to levels well below State and federal standards, further reductions are desirable because sulfur dioxide is a precursor to sulfate and PM_{10}.	Human caused sources include fossil-fuel combustion, mineral ore processing, and chemical manufacturing. Volcanic emissions are a natural source of sulfur dioxide. The gas can also be produced in the air by dimethyl sulfide and hydrogen sulfide. Sulfur dioxide is removed from the air by dissolution in water, chemical reactions, and transfer to soils and ice caps. The sulfur dioxide levels in the State are well below the maximum standards.
	3 Hour	—	0.5 ppm			
	24 Hour	0.04 ppm	0.14 (for certain areas)			
	Annual	—	0.030 ppm (for certain areas)			
Particulate matter (PM_{10})	24 hour	50 µg/m^3	150 µg/m^3	• Short-term exposure (hours/days): irritation of the eyes, nose, throat; coughing; phlegm; chest tightness; shortness of breath; aggravate existing lung disease, causing asthma attacks and acute bronchitis; those with heart disease can suffer heart attacks and arrhythmias. • Long-term exposure: reduced lung function; chronic bronchitis; changes in lung morphology; death.	Suspended particulate matter is a mixture of small particles that consist of dry solid fragments, droplets of water, or solid cores with liquid coatings. The particles vary in shape, size, and composition. PM_{10} refers to particulate matter that is between 2.5 and 10 microns in diameter, (1 micron is one-millionth of a meter). $PM_{2.5}$ refers to particulate matter that is 2.5 microns or less in diameter, about one-thirtieth the size of the average human hair.	Stationary sources include fuel or wood combustion for electrical utilities, residential space heating, and industrial processes; construction and demolition; metals, minerals, and petrochemicals; wood products processing; mills and elevators used in agriculture; erosion from tilled lands; waste disposal, and recycling. Mobile or transportation-related sources are from vehicle exhaust and road dust. Secondary particles form from reactions in the atmosphere.
	Mean	20 µg/m^3	—			
Particulate matter ($PM_{2.5}$)	24 Hour	—	35 µg/m^3			
	Annual	12 µg/m^3	12 µg/m^3			
Visibility-reducing particles	8 Hour	See note below[d]				

Air Pollutant	Averaging Time	California Standard	Federal Standard[a]	Most Relevant Effects from Pollutant Exposure	Properties	Sources
Sulfates	24 Hour	25 µg/m^3	—	(a) Decrease in ventilatory function; (b) aggravation of asthmatic symptoms; (c) aggravation of cardio-pulmonary disease; (d) vegetation damage; (e) degradation of visibility; (f) property damage.	The sulfate ion is a polyatomic anion with the empirical formula SO_4^{2-}. Sulfates occur in combination with metal and/or hydrogen ions. Many sulfates are soluble in water.	Sulfates are particulates formed through the photochemical oxidation of sulfur dioxide. In California, the main source of sulfur compounds is combustion of gasoline and diesel fuel.
Lead[e]	30-day	1.5 µg/m^3	—	Lead accumulates in bones, soft tissue, and blood and can affect the kidneys, liver, and nervous system. It can cause impairment of blood formation and nerve conduction, behavior disorders, mental retardation, neurological impairment, learning deficiencies, and low IQs.	Lead is a solid heavy metal that can exist in air pollution as an aerosol particle component. Leaded gasoline was used in motor vehicles until around 1970. Lead concentrations have not exceeded State or federal standards at any monitoring station since 1982.	Lead ore crushing, lead-ore smelting, and battery manufacturing are currently the largest sources of lead in the atmosphere in the United States. Other sources include dust from soils contaminated with lead-based paint, solid waste disposal, and crustal physical weathering.
	Quarter	—	1.5 µg/m^3			
	Rolling 3-month average	—	0.15 µg/m^3			
Vinyl chloride[e]	24 Hour	0.01 ppm	—	Short-term exposure to high levels of vinyl chloride in the air causes central nervous system effects, such as dizziness, drowsiness, and headaches. Epidemiological studies of occupationally exposed workers have linked vinyl chloride exposure to development of a rare cancer, liver angiosarcoma, and have suggested a relationship between exposure and lung and brain cancers.	Vinyl chloride, or chloroethene, is a chlorinated hydrocarbon and a colorless gas with a mild, sweet odor. In 1990, ARB identified vinyl chloride as a toxic air contaminant (TAC) and estimated a cancer unit risk factor.	Most vinyl chloride is used to make polyvinyl chloride plastic and vinyl products, including pipes, wire and cable coatings, and packaging materials. It can be formed when plastics containing these substances are left to decompose in solid waste landfills. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites.
Hydrogen sulfide	1 Hour	0.03 ppm	—	High levels of hydrogen sulfide can cause immediate respiratory arrest. It can irritate the eyes and respiratory tract and cause headache, nausea, vomiting, and cough. Long exposure can cause pulmonary edema.	Hydrogen sulfide (H_2S) is a flammable, colorless, poisonous gas that smells like rotten eggs.	Manure, storage tanks, ponds, anaerobic lagoons, and land application sites are the primary sources of hydrogen sulfide. Anthropogenic sources include the combustion of sulfur containing fuels (oil and coal).

Air Pollutant	Averaging Time	California Standard	Federal Standard[a]	Most Relevant Effects from Pollutant Exposure	Properties	Sources
Reactive organic gases (ROG)/Volatile organic compounds (VOC)		There are no State or federal standards for ROGs because they are not classified as criteria pollutants.		Although health-based standards have not been established for VOCs, health effects can occur from exposures to high concentrations because of interference with oxygen uptake. In general, concentrations of ROGs are suspected to cause eye, nose, and throat irritation; headaches; loss of coordination; nausea; and damage to the liver, the kidneys, and the central nervous system. Many VOCs have been classified as TACs.	Reactive organic gases (ROG) are defined as any compound of carbon—excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate—that participates in atmospheric photochemical reactions.	Indoor sources of ROGs include paints, solvents, aerosol sprays, cleansers, tobacco smoke, etc. Outdoor sources of ROGs are from combustion and fuel evaporation. A reduction in ROG emissions reduces certain chemical reactions that contribute to the formulation of ozone. ROGs are transformed into organic aerosols in the atmosphere, which contribute to higher PM_{10} and lower visibility.
Diesel particulate matter (DPM)		There are no ambient air quality standards for DPM.		Some short-term (acute) effects of DPM exposure include eye, nose, throat, and lung irritation, coughs, headaches, light-headedness, and nausea. Studies have linked elevated particle levels in the air to increased hospital admissions, emergency room visits, asthma attacks, and premature deaths among those suffering from respiratory problems. Human studies on the carcinogenicity of DPM demonstrate an increased risk of lung cancer, although the increased risk cannot be clearly attributed to diesel exhaust exposure.	DPM is a source of $PM_{2.5}$—diesel particles are typically 2.5 microns and smaller. Diesel exhaust is a complex mixture of thousands of particles and gases that is produced when an engine burns diesel fuel. Organic compounds account for 80 percent of the total particulate matter mass, which consists of compounds such as hydrocarbons and their derivatives, and polycyclic aromatic hydrocarbons and their derivatives. Fifteen polycyclic aromatic hydrocarbons are confirmed carcinogens, a number of which are found in diesel exhaust.	Diesel exhaust is a major source of ambient particulate matter pollution in urban environments. Typically, the main source of DPM is from combustion of diesel fuel in diesel-powered engines. Such engines are in on-road vehicles such as diesel trucks, off-road construction vehicles, diesel electrical generators, and various pieces of stationary construction equipment.

Air Pollutant	Averaging Time	California Standard	Federal Standard[a]	Most Relevant Effects from Pollutant Exposure	Properties	Sources

Notes:
ppm = parts per million (concentration)
$\mu g/m^3$ = micrograms per cubic meter
Annual = Annual Arithmetic Mean
30-day = 30-day average
Quarter = Calendar quarter

[a] Federal standard refers to the primary national ambient air quality standard, or the levels of air quality necessary, with an adequate margin of safety to protect the public health. All standards listed are primary standards except for 3-hour SO_2, which is a secondary standard. A secondary standard is the level of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

[b] To attain the 1-hour NO_2 national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 parts per billion (ppb) (0.100 ppm).

[c] On June 2, 2010, a new 1-hour SO_2 standard was established, and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until 1 year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

[d] Visibility-reducing particles: In 1989, the ARB converted both the general Statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are “extinction of 0.23 per kilometer” and “extinction of 0.07 per kilometer” for the Statewide and Lake Tahoe Air Basin standards, respectively.

[e] The ARB has identified lead and vinyl chloride as ‘TACs’ with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

[f] The EPA Administrator approved a revised 8-hour ozone standard of 0.07 ppb on October 1, 2015. The new standard went into effect 60 days after publication of the Final Rule in the Federal Register. The Final Rule was published in the Federal Register on October 26, 2015 and became effective on December 28, 2015.

Source of effects, properties, and sources: South Coast Air Quality Management District (SCAQMD) 2007; California Environmental Protection Agency (Cal/EPA) 2002; California Air Resources Board (ARB) 2009; United States Environmental Protection Agency (EPA) 2003, 2009,2010, 2011, and 2012; National Toxicology Program 2011 and 2016.
Source of standards: California Air Resources Board (ARB). 2016.

2.2.4 - Toxic Air Contaminants Health Effects

A toxic air contaminant (TAC) is defined as an air pollutant that may cause or contribute to an increase in mortality or serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations. There are no ambient air quality standards for TAC emissions. TACs are regulated in terms of health risks to individuals and populations exposed to the pollutants. The 1990 CAA Amendments significantly expanded the EPA's authority to regulate Hazardous Air Pollutants (HAP). Section 112 of the CAA lists 187 hazardous air pollutants to be regulated by source category. Authority to regulate these pollutants was delegated to individual states. The ARB and local air districts regulate TACs and HAPs in California.

The California Almanac of Emissions and Air Quality—2009 Edition presents the relevant concentration and cancer risk data for the 10 TACs that pose the most substantial health risk in California based on available data. The 10 TACs are acetaldehyde, benzene, 1.3-butadiene, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, perchloroethylene, and diesel particulate matter (DPM).

Studies indicate that DPM poses the greatest health risk among the TACs listed above. A 10-year research program demonstrated that DPM from diesel-fueled engines is a human carcinogen and that chronic (long-term) inhalation exposure to DPM poses a chronic health risk. In addition to increasing the risk of lung cancer, exposure to diesel exhaust can have other health effects including eye, nose, throat, and lung irritation, and it can cause coughs, headaches, lightheadedness, and nausea. Diesel exhaust is a major source of fine particulate pollution as well, and studies have linked elevated particle levels in the air to increased hospital admissions, emergency room visits, asthma attacks, and premature deaths among those suffering from respiratory problems.

DPM differs from other TACs in that it is not a single substance, but a complex mixture of hundreds of substances. 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. Unlike the other TACs, however, no ambient monitoring data are available for DPM because no routine measurement method currently exists. The ARB has made preliminary concentration estimates based on a DPM exposure method. This method uses the ARB emissions inventory's PM_{10} database, ambient PM_{10} monitoring data, and the results from several studies to estimate concentrations of DPM.

Asbestos

Asbestos is the name given several naturally occurring fibrous silicate minerals that have been mined for their useful properties such as thermal insulation, chemical and thermal stability, and high tensile strength. The three most common types of asbestos are chrysotile, amosite, and crocidolite. Chrysotile, also known as white asbestos, is the most common type of asbestos found in buildings. Chrysotile makes up approximately 90 to 95 percent of all asbestos contained in buildings in the United States. Exposure to asbestos fibers may result in health issues such as lung cancer, mesothelioma (a rare cancer of the thin membranes lining the lungs, chest, and abdominal cavity), and asbestosis (a non-cancerous lung disease that causes scarring of the lungs). Exposure to

asbestos can occur during demolition or remodeling of buildings that were constructed before the 1977 ban on asbestos use in buildings. Demolition of all structures on-site would occur as part of the proposed project. Exposure to naturally occurring asbestos can occur during soil-disturbing activities in areas with deposits present. No naturally occurring asbestos is located near the proposed project site.[2]

2.3 - Existing Local Air Quality Conditions

The existing local air quality can be evaluated by reviewing relevant air pollution concentrations near the project area. Table 2 summarizes 2017 through 2019 published monitoring data, which is the most recent 3-year period available. Data displayed therein is from the closest monitoring stations to the project site, Anaheim-812 West Vermont Street Station (located approximately 0.74 mile from the project site) and the Anaheim-Pampas Lane Station (located approximately 2.13 miles from the project site.) The data shows that during the past few years, the project area has exceeded the standards for ozone (State and national), PM_{10} (State), and $PM_{2.5}$ (national). The data in the table reflects the concentration of the pollutants in the air, measured using air monitoring equipment. The air quality concentrations differ from emissions, which are calculations of a pollutant being emitted over a specific time period. No recent monitoring data for Orange County or the SoCAB was available for CO or SO_2. Generally, monitoring is not conducted for pollutants that are no longer likely to exceed ambient air quality standards.

Table 2: Air Quality Monitoring Summary

Air Pollutant	Averaging Time	Item	2017	2018	2019
Ozone[1]	1 Hour	Maximum 1 Hour (ppm)	0.090	**0.112**	**0.096**
		Days > State Standard (0.09 ppm)	0	**1**	**1**
	8 Hours	Maximum 8 Hours (ppm)	**0.076**	**0.071**	**0.082**
		Days > State Standard (0.07 ppm)	4	**1**	**1**
		Days > National Standard (0.070 ppm)	**4**	**1**	**1**
Carbon monoxide (CO)	8 Hours	Maximum 8 Hours (ppm)	ND	ND	ND
		Days > State Standard (9.0 ppm)	ND	ND	ND
		Days > National Standard (9 ppm)	ND	ND	ND
Nitrogen dioxide (NO_2)[1]	Annual	Annual Average (ppm)	0.022	0.089	0.098
	1 Hour	Maximum 1 Hour (ppm)	0.0864	0.0617	0.0594
		Days > State Standard (0.18 ppm)	0	0	0

[2] Department of Conservation. 2000. A General Location Guide For Ultramafic Rocks In California – Areas More Likely To Contain Naturally Occurring Asbestos. Website: https://www.placer.ca.gov/DocumentCenter/View/1433/General-Location-Guide-PDF Accessed February 16, 2021.

Air Pollutant	Averaging Time	Item	2017	2018	2019
Sulfur dioxide (SO_2)	Annual	Annual Average (ppm)	ND	ND	ND
	24 Hours	Maximum 24 Hours (ppm)	ND	ND	ND
		Days > State Standard (0.04 ppm)	ND	ND	ND
Inhalable coarse particles (PM_{10}) [2]	Annual	Annual Average (µg/m^3)	**26.9**	**27.9**	**24.6**
	24 Hours	Maximum 24 Hours (µg/m^3)	**95.7**	**94.6**	**127.6**
		Days > State Standard (50 µg/m^3)	**32.8**	**12.0**	**24.4**
		Days > National Standard (150 µg/m^3)	0.0	0.0	0.0
Fine particulate matter ($PM_{2.5}$) [2]	Annual	Annual Average (µg/m^3)	ND	12.3	9.4
	24 Hours	Maximum 24 Hours (µg/m^3)	**56.2**	**68.0**	**37.1**
		Days > National Standard (35 µg/m^3)	ND	**7.2**	**4.2**

Notes:
> = exceed ppm = parts per million µg/m^3 = micrograms per cubic meter
ID = insufficient data ND = no data
Bold = Exceedance of State Standards
State Standard = California Ambient Air Quality Standard
National Standard = National Ambient Air Quality Standard
[1] Anaheim-812 West Vermont Street Station
[2] Anaheim-Pampas Lane Station
Source: ARB 2020.

The health impacts of the various air pollutants of concern can be presented in several ways. The most meaningful comparison is to the State and federal ozone standards. Air concentrations below standards indicate that health risks are sufficiently low enough to have a minimal impact on public health, as there is no zero-risk level. When concentrations exceed the standards, impacts will vary based on the amount by which the standard is exceeded and the sensitivity of the exposed individual. The EPA developed the Air Quality Index (AQI) as an easy-to-understand measure of health impacts compared with concentrations in the air. Table 3 describes the health impacts of ozone at different concentrations.

Table 3: Air Quality Index and Health Effects from Ozone

Air Quality Index/ 8-hour Ozone Concentration	Health Effects Description
AQI 100—Moderate	**Sensitive Groups**: Children and people with asthma are the groups most at risk.
Concentration 75 ppb	**Health Effects Statements**: Unusually sensitive individuals may experience respiratory symptoms.
	Cautionary Statements: Unusually sensitive people should consider limiting prolonged outdoor exertion.
AQI 150—Unhealthy for Sensitive Groups	**Sensitive Groups**: Children and people with asthma are the groups most at risk.

Air Quality Index/ 8-hour Ozone Concentration	Health Effects Description
Concentration 95 ppb	**Health Effects Statements**: Increasing likelihood of respiratory symptoms and breathing discomfort in active children and adults and people with respiratory disease, such as asthma.
	Cautionary Statements: Active children and adults, and people with respiratory disease, such as asthma, should limit prolonged outdoor exertion.
AQI 200—Unhealthy	**Sensitive Groups**: Children and people with asthma are the groups most at risk.
Concentration 115 ppb	**Health Effects Statements**: Greater likelihood of respiratory symptoms and breathing difficulty in active children and adults and people with respiratory disease, such as asthma; possible respiratory effects in general population.
	Cautionary Statements: Active children and adults, and people with respiratory disease, such as asthma, should avoid prolonged outdoor exertion; everyone else, especially children, should limit prolonged outdoor exertion.
AQI 210—Very Unhealthy	**Sensitive Groups**: Children and people with asthma are the groups most at risk.
Concentration 139 ppb	**Health Effects Statements**: Increasingly severe symptoms and impaired breathing likely in active children and adults and people with respiratory disease, such as asthma; increasing likelihood of respiratory effects in general population.
	Cautionary Statements: Active children and adults, and people with respiratory disease, such as asthma, should avoid all outdoor exertion; everyone else, especially children, should limit outdoor exertion.
Notes: AQI = Air Quality Index ppb = parts per billion Source: Air Now 2015.	

Based on the AQI scale for the 8-hour ozone standard, the highest 8-hour ozone reading for 2017, 2018, and 2019 were 76, 71, and 82 parts per billion (ppb), respectively. The 2017 and 2019 readings exceed the 75 ppb cutoff point for Moderate Sensitive Groups.

2.3.1 - Attainment Status

The EPA and the ARB designate air basins where ambient air quality standards are exceeded as "nonattainment" areas. If standards are met, the area is designated as an "attainment" area. If there is inadequate or inconclusive data to make a definitive attainment designation, they are considered "unclassified." National nonattainment areas are further designated as marginal, moderate, serious, severe, or extreme as a function of deviation from standards.

Each standard has a different definition, or "form" of what constitutes attainment, based on specific air quality statistics. For example, the federal 8-hour CO standard is not to be exceeded more than

once per year; therefore, an area is in attainment of the CO standard if no more than one 8-hour ambient air monitoring values exceed the threshold per year. In contrast, the federal annual $PM_{2.5}$ standard is met if the 3-year average of the annual average $PM_{2.5}$ concentration is less than or equal to the standard.

Table 4 shows the current attainment designations for the Orange County portion of the Air Basin. The Orange County portion of the Air Basin is designated as nonattainment for ozone (State and federal), PM_{10} (State), and $PM_{2.5}$ (State and federal).

Table 4: Orange County Portion of the South Coast Air Basin Attainment Status

Pollutant	State Status	National Status
Ozone	Nonattainment	Nonattainment
Carbon monoxide (CO)	Attainment	Unclassified/Attainment
Nitrogen dioxide (NO_2)	Attainment	Unclassified/Attainment
Sulfur dioxide (SO_2)	Attainment	Unclassified/Attainment
PM_{10}	Nonattainment	Attainment
$PM_{2.5}$	Nonattainment	Nonattainment
Lead	Attainment	Unclassified/Attainment
Source: ARB 2019.		

2.4 - Air Quality Plans and Regulations

Air pollutants are regulated at the national, State, and air basin or county level; each agency has a different level of regulatory responsibility. The EPA regulates at the national level. The ARB regulates at the State level. The SCAQMD regulates at the local district level.

The EPA is responsible for national and interstate air pollution issues and policies. The EPA sets national vehicle and stationary source emission standards, oversees approval of all State Implementation Plans (SIP), provides research and guidance for air pollution programs, and sets National Ambient Air Quality Standards, also known as the federal standards, described earlier.

A SIP is a document prepared by each State describing existing air quality conditions and measures that will be followed to attain and maintain federal air standards. The SIP for the State of California is administered by the ARB, which has overall responsibility for statewide air quality maintenance and air pollution prevention. California's SIP incorporates individual federal attainment plans prepared by the regional air districts. An air district prepares their federal attainment plan (referred to as an Air Quality Management Plan [AQMP]), which is sent to the ARB to be approved and incorporated into the California SIP. Federal attainment plans include the technical foundation for understanding air quality (e.g., emission inventories and air quality monitoring), control measures and strategies, and enforcement mechanisms.

Areas designated non-attainment must develop air quality plans and regulations to achieve standards by specified dates, depending on the severity of the exceedances. For much of the country, implementation of federal motor vehicle standards and compliance with federal permitting requirements for industrial sources are adequate to attain air quality standards on schedule. However, the severity of the air quality in many regions of the state requires additional state and local regulations to achieve the standards. The regulations adopted by California are described below.

California Regulations

The EPA authorized California to adopt its own regulations for motor vehicles and other sources that are more stringent than similar federal regulations implementing the CAA. It should be noted that the EPA recently rescinded California's waiver for its GHG and zero-emission vehicle mandates; however, all ARB standards are still in effect at the time of this writing.

Low Emission Vehicle Program

The ARB first adopted Low Emission Vehicle (LEV) program standards in 1990. These first LEV standards ran from 1994 through 2003. LEV II regulations, running from 2004 through 2010, represent continuing progress in emission reductions. As the State's passenger vehicle fleet continues to grow and more sport utility vehicles and pickup trucks are used as passenger cars rather than work vehicles, more stringent LEV II standards were adopted to provide reductions necessary for California to meet federally mandated clean air goals outlined in the 1994 State Implementation Plan. In 2012, ARB adopted the LEV III amendments to California's LEV regulations. These amendments, also known as the Advanced Clean Car Program, include more stringent emission standards for model years 2017 through 2025 for both criteria pollutants and GHGs for new passenger vehicles.[3]

On-Road Heavy-Duty Vehicle Program

The ARB has adopted standards for emissions from various types of new on-road heavy-duty vehicles. Section 1956.8, Title 13, of the California Code of Regulations contains California's emission standards for on-road heavy-duty engines and vehicles and test procedures. ARB has also adopted programs to reduce emissions from in-use heavy-duty vehicles including the Heavy-Duty Diesel Vehicle Idling Reduction Program, the Heavy-Duty Diesel In-Use Compliance Program, the Public Bus Fleet Rule and Engine Standards, and the School Bus Program, among others.[4]

ARB Regulation for In-Use Off-Road Diesel Vehicles

On July 26, 2007, the ARB adopted a regulation to reduce DPM and NOX emissions from in-use (existing) off-road heavy-duty diesel vehicles in California. Such vehicles are used in construction, mining, and industrial operations. The regulation limits idling to no more than five consecutive minutes, requires reporting and labeling, and requires disclosure of the regulation upon vehicle sale.

[3] California Air Resources Board (ARB). 2012. Advanced Clean Car Program. Website: https://ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program Accessed February 11, 2021.

[4] California Air Resources Board (ARB). 2012. Advanced Clean Car Program. Website: https://ww2.arb.ca.gov/our-work/programs/resource-center/technical-assistance/air-quality-and-emissions-data/almanac Accessed February 11, 2021.

The ARB enforces that part of the rule with fines up to $10,000 per day for each vehicle in violation. Performance requirements of the rule are based on a fleet's average NOX emissions, which can be met by replacing older vehicles with newer, cleaner vehicles or by applying exhaust retrofits. The regulation was amended in 2010 to delay the original timeline of the performance requirements, making the first compliance deadline January 1, 2014 for large fleets (over 5,000 horsepower), 2017 for medium fleets (2,501-5,000 horsepower), and 2019 for small fleets (2,500 horsepower or less).

The latest amendments to the Truck and Bus regulation became effective on December 31, 2014. The amended regulation requires diesel trucks and buses that operate in California to be upgraded to reduce emissions. Newer heavier trucks and buses must meet PM filter requirements beginning January 1, 2012. Lighter and older heavier trucks must be replaced starting January 1, 2015. By January 1, 2023, nearly all trucks and buses will need to have 2010 model year engines or equivalent.

The regulation applies to nearly all privately and federally owned diesel-fueled trucks and buses and to privately and publicly owned school buses with a gross vehicle weight rating greater than 14,000 pounds. The regulation provides a variety of flexible options tailored to fleets operating low use vehicles, fleets operating in selected vocations like agricultural and construction, and small fleets of three or fewer trucks.

ARB Airborne Toxic Control Measure for Asbestos

In July 2001, the ARB approved an Air Toxic Control Measure (ATCM) for construction, grading, quarrying, and surface mining operations to minimize emissions of naturally occurring asbestos. The regulation requires the application of Best Management Practices (BMPs) to control fugitive dust in areas known to have naturally occurring asbestos and requires notification to the local air district before commencement of ground-disturbing activities. The measure establishes specific testing, notification, and engineering controls before grading, quarrying, or surface mining in construction zones where naturally occurring asbestos is located on projects of any size. There are additional notification and engineering controls at worksites larger than one acre in size. These projects require the submittal of a Dust Mitigation Plan and approval by the ARB before the start of a project.

Construction sometimes requires the demolition of existing buildings where construction occurs; however, no demolition is proposed as part of the proposed project. Also, asbestos is also found in a natural state, known as naturally occurring asbestos. Exposure and disturbance of rock and soil that naturally contain asbestos can result in the release of fibers into the air and consequent exposure to the public. Asbestos most commonly occurs in ultramafic rock that has undergone partial or complete alteration to serpentine rock (serpentinite) and often contains chrysotile asbestos. In addition, another form of asbestos, tremolite, can be found associated with ultramafic rock, particularly near faults. Sources of asbestos emissions include unpaved roads or driveways surfaced with ultramafic rock, construction activities in ultramafic rock deposits, or rock quarrying activities where ultramafic rock is present.

The ARB has an Air Toxics Control Measure for construction, grading, quarrying, and surface mining operations, requiring the implementation of mitigation measures to minimize emissions of asbestos-

laden dust. The measure applies to road construction and maintenance, construction and grading operations, and quarries and surface mines when the activity occurs in an area where naturally occurring asbestos is likely to be found. Areas are subject to the regulation, if they are identified on maps published by the Department of Conservation as ultramafic rock units or if the Air Pollution Control Officer or owner/operator has knowledge of the presence of ultramafic rock, serpentine, or naturally occurring asbestos on the site. The measure also applies if ultramafic rock, serpentine, or asbestos is discovered during any operation or activity. Review of the Department of Conservation maps indicates that no ultramafic rock has been found near the project site.

Diesel Risk Reduction Plan

The ARB's Diesel Risk Reduction Plan has led to the adoption of new State regulatory standards for all new on-road, off-road, and stationary diesel-fueled engines and vehicles to reduce DPM emissions by about 90 percent overall from year 2000 levels. The projected emission benefits associated with the full implementation of this plan, including federal measures, are reductions in DPM emissions and associated cancer risks of 75 percent by 2010, and 85 percent by 2020.[5]

2.4.1 - South Coast Air Quality Management District

The agency for regulating air pollution control in the City of Anaheim and the SoCAB is the SCAQMD. The SCAQMD is responsible for controlling emissions, primarily from stationary sources, and for developing, updating, and implementing the AQMP for the region. The SCAQMD also has roles under CEQA.

South Coast Air Pollution Control District Rules and Regulations

During construction and operation, the proposed project must comply with applicable rules and regulations adopted by the SCAQMD. These rules and regulations with which the proposed project may be required to comply (either directly or indirectly) include, but are not limited to, the following:

Rule 402–Nuisance

Rule 402 prohibits a person from discharging from any source whatsoever such quantities of air contaminants or other material which causes injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. Compliance with Rule 402 will reduce local air quality and odor impacts to nearby sensitive receptors.

Rule 403–Fugitive Dust

Rule 403 governs emissions of fugitive dust during construction activities and requires that no person shall cause or allow the emissions of fugitive dust such that dust remains visible in the atmosphere beyond the property line or the dust emission exceeds 20 percent opacity if the dust is from the operation of a motorized vehicle. Compliance with this rule is achieved through application

[5] California Air Resources Board (ARB). 2000. Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-fueled Engines and Vehicles. Website: http://www.arb.ca.gov/diesel /documents/rrpfinal.pdf.

of standard Best Available Control Measures, which include but are not limited to the measures below. Compliance with these rules would reduce local air quality impacts to nearby sensitive receptors.

- Utilize either a pad of washed gravel 50 feet long, 100 feet of paved surface, a wheel shaker, or a wheel washing device to remove material from vehicle tires and undercarriages before leaving project site.
- Do not allow any track out of material to extend more than 25 feet onto a public roadway and remove all track out at the end of each workday.
- Water all exposed areas on active sites at least three times per day and pre-water all areas prior to clearing and soil moving activities.
- Apply nontoxic chemical stabilizers according to manufacturer specifications to all construction areas that will remain inactive for 10 days or longer.
- Pre-water all material to be exported prior to loading, and either cover all loads or maintain at least 2 feet of freeboard in accordance with the requirements of California Vehicle Code Section 23114.
- Replant all disturbed area as soon as practical.
- Suspend all grading activities when wind speeds (including wind gusts) exceed 25 miles per hour.
- Restrict traffic speeds on all unpaved roads to 15 miles per hour or less.

Rule 1113–Architectural Coatings

Rule 1113 governs the sale, use, and manufacturing of architectural coatings and limits the VOC content in sealers, coatings, paints and solvents. This rule regulates the VOC contents of paints available during construction. Therefore, all paints and solvents used during construction and operation of the proposed project must comply with SCAQMD Rule 1113.

Rule 1143–Paint Thinners

Rule 1143 governs the sale, use, and manufacturing of paint thinners and multi-purpose solvents that are used in thinning of coating materials, cleaning of coating application equipment, and other solvent cleaning operations. This rule regulates the VOC content of solvents used during construction. Solvents used during construction and operation of the proposed project must comply with SCAQMD Rule 1143.

Air Quality Management Plans

An AQMP is a plan prepared and implemented by an air pollution district for a county or region designated as nonattainment for the federal ambient air quality standards. The term nonattainment area is used to refer to an air basin where one or more ambient air quality standards are exceeded.

2016 South Coast Air Quality Management Plan

The SCAQMD is responsible for attaining and maintaining federal and State air quality standards in the SoCAB, as established by the federal CAA and the CCAA, respectively. The CAA and CCAA require that plans be developed for areas that do not meet air quality standards. The SCAQMD adopted the AQMP in 2016. This AQMP builds upon previous South Coast AQMPs and includes integrated strategies and measures needed to meet the NAAQS. The AQMP demonstrates attainment of the 1-hr and 8-hr ozone NAAQS as well as the latest 24-hour and annual $PM_{2.5}$ standards.

The 2016 AQMP uses a control strategy that relies on emission reductions from federal, state, and local levels. The 2016 AQMP is composed of stationary and mobile source emission reductions from traditional regulatory control measures, incentive-based programs, co-benefits from climate programs, mobile source strategies and reductions from federal sources, which include aircraft, locomotives and ocean-going vessels. These strategies are to be implemented in partnership with the California Air Resources Board (ARB) and EPA. In addition, the 2016 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) that includes transportation programs, measures, and strategies generally designed to reduce Vehicle Miles Traveled (VMT), which are contained within baseline emissions inventory in the AQMP.

The 2016 AQMP includes additional control measures to reduce emissions from sources that are primarily under State and federal jurisdiction, including on-road and off-road mobile sources. These reductions are needed to achieve the remaining emission reductions necessary for ozone and $PM_{2.5}$ attainment.

The ARB released the Proposed 2016 State Strategy for the SIP (State SIP Strategy) on May 17, 2016. The new measures contained in the State SIP Strategy commitment reflect a combination of state actions, petitions for federal action, as well as actions that outline a pathway for achieving further deployment of the cleanest technologies in each sector. These measures, in conjunction with the existing control program, identify all of the reductions needed to achieve a 70 percent reduction in NOx emissions from mobile sources in 2023, and an 80 percent reduction in 2031 in the SoCAB. Current control programs will reduce NO_X emissions from today's levels by 209 tons per day by 2031. As part of the proposed State SIP Strategy, the ARB will provide an enforceable commitment to achieve in aggregate an additional 107 tons per day of NO_X reductions in 2023, and 97 tons per day in 2031. The State SIP Strategy will also provide 48 and 60 tons per day, respectively, of VOC reductions in 2023 and 2031 which provide supplemental benefits in reducing ozone in some portions of the Basin. Any additional commitments to address $PM_{2.5}$ attainment needs in 2025 will be identified separately, if needed.

CEQA Guidance

Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning

The SCAQMD prepared this guidance document as a reference for cities and counties within AQMD's jurisdiction. It provides suggested policies that local governments can use to prevent or reduce potential air pollution impacts and protect public health in their General Plans or through local planning. The objective of the guidance document is to facilitate stronger collaboration between

local governments and the AQMD to reduce community exposure to source-specific and cumulative air pollution impacts.[6]

Southern California Association of Governments

Regional Transportation Plan/Sustainable Communities Strategy and Transportation Control Measures

The Southern California Association of Governments (SCAG), the Metropolitan Planning Organization for Southern California, is mandated to comply with federal and State transportation and air quality regulations. Federal transportation law authorizes federal funding for highway, highway safety, transit, and other surface transportation programs. The federal CAA establishes air quality standards and planning requirements for various criteria air pollutants.

Transportation conformity is required under CAA Section 176(c) to ensure that federally supported highway and transit project activities "conform to" the purpose of the SIP. Conformity currently applies to areas that are designated nonattainment, and those re-designated to attainment after 1990 ("maintenance areas" with plans developed under CAA Section 175(A)) for the specific transportation related criteria pollutants. Conformity for the purpose of the SIP means that transportation activities will not cause new air quality violations, worsen existing violations, or delay timely attainment of the relevant NAAQS. The transportation conformity regulation is found in Title 40 Code of Federal Regulations Part 93.

Pursuant to California Health and Safety Code Section 40460, SCAG has the responsibility of preparing and approving the portions of the AQMP relating to regional demographic projections and integrated regional land use, housing, employment, and transportation programs, measures, and strategies. The SCAQMD combines its portion of the Plan with those prepared by SCAG.

The RTP/SCS and Transportation Control Measures are based on SCAG's Final 2016 RTP/SCS.

2.4.2 - Local

City of Anaheim

General Plan

The City of Anaheim's General Plan, adopted in 2003 and revised several times since, includes the following applicable goals and implementing policies aimed to reduce GHG emissions.

Land Use Element

Goal 3.2 **Maximize development opportunities along transportation routes.**

Policies

Policy 1 Where appropriate, designate land adjacent to freeways, proposed Bus Rapid Transit stops and Metrolink stations for employment intensive land uses.

[6] South Coast Air Quality Management District (SCAQMD). 2005. Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning. Website: https://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/complete-guidance-document.pdf?sfvrsn=4. Accessed February 17, 2021.

Goal 4.1 **Promote development that integrates with and minimizes impacts to surrounding land uses.**

Policies

Policy 1 Ensure that land uses develop in accordance with the Land Use Plan and Zoning Code in an effort to attain land use compatibility.

Policy 3 Ensure that developers consider and address project impacts upon surrounding neighborhoods during the design and development process.

Policy 4 Require new or expanded uses to provide mitigation or buffers between existing uses where potential adverse impacts could occur.

Circulation Element

Goal 5.1 **Promote bus service and paratransit improvements.**

Policies

Policy 3 Support transit supportive land uses in new development.

Policy 5 Intensify land uses in close proximity to future BRT stop(s) where appropriate.

Green Element

Goal 8.1 **Reduce locally generated emissions through improved traffic flows and construction management practices.**

Policies

Policy 1 Reduce vehicle emissions through traffic flow improvements, such as traffic signal synchronization, Intelligent Transportation Systems, the Scoot Adaptive Traffic Control System, and related capital improvements.

Policy 2 Regulate construction practices, including grading, dust suppression, chemical management, and encourage pre-determined construction routes that minimize dust and particulate matter pollution.

Goal 11.1 **Encourage land planning and urban design that support alternatives to the private automobile such as mixed-use, provision of pedestrian and bicycle amenities, and transit-oriented development.**

Policies

Policy 2 Encourage mixed-use development in accordance with the Land Use Element.

Policy 4 Encourage higher densities and mixed-use development in the vicinity of major rail and transit stops.

Growth Management Element:

Goal 1.4 **Develop land use strategies and incentives to reduce the amount of vehicle miles traveled within the City.**

Policies

Policy 1 Promote the location of housing near and/or within employment centers to enable shorter commutes and encourage transit-oriented, home-to-work mobility.

Policy 2 Encourage higher density and/or mixed-use development along major transit corridors and/or at transit stops.

Goal 2.1 **Reduce traffic congestion on the City's arterial highway system.**

Policies

Policy 3 Use the Citywide transportation model to create and monitor development phasing plans.

Policy 4 Continue to maintain consistency between the City and County Master Plan of Arterial Highways.

Goal 2.2 **Evaluate the traffic-related impacts of proposed developments and/or intensification of existing land uses, and address said impacts.**

Policies

Policy 1 Continue to review development projects to ensure traffic-related impacts are addressed appropriately.

Policy 4 Prior to issuing building permits for new development forecast to generate 100 or more peak hour (morning or evening) trip ends, require traffic impact analyses be completed that identify arterial and intersection improvements that may potentially be needed to provide not worse than LOS E along Interstates/State Routes/Smart Streets (unless current operation is LOS F), and not worse than LOS D along the balance of the arterials on the City's Circulation Element that are measurably impacted by the new development and are under the City's jurisdiction.

Policy 5 Require development projects that exceed LOS standards beyond acceptable levels to provide necessary improvements and/or funding to mitigate said impacts, if determined necessary by the City.

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SECTION 3: CLIMATE CHANGE SETTING

3.1 - Climate Change

Climate change is a change in the average weather of the Earth that is measured by alterations in wind patterns, storms, precipitation, and temperature. These changes are assessed using historical records of temperature changes occurring in the past, such as during previous ice ages. Many of the concerns regarding climate change use this data to extrapolate a level of statistical significance specifically focusing on temperature records from the last 150 years (the Industrial Age) that differ from previous climate changes in rate and magnitude.

The United Nations Intergovernmental Panel on Climate Change (IPCC) constructed several emission trajectories of GHGs needed to stabilize global temperatures and climate change impacts. In its Fourth Assessment Report, the IPCC predicted that the global mean temperature changes from 1990 to 2100, given six scenarios, could range from 1.1°C (degrees Celsius) to 6.4°C. Regardless of analytical methodology, global average temperatures and sea levels are expected to rise under all scenarios.[7] The report also concluded that "[w]arming of the climate system is unequivocal," and that "[m]ost of the observed increase in global average temperatures since the mid-20th Century is very likely due to the observed increase in anthropogenic greenhouse gas concentrations."

An individual project cannot generate enough GHG emissions to effect a discernible change in global climate. However, the project participates in the potential for global climate change by its incremental contribution of GHGs combined with the cumulative increase of all other sources of GHGs, which when taken together constitute potential influences on global climate change.

3.1.1 - Consequences of Climate Change in California

In California, climate change may result in consequences such as the following.[8,9]

- **A reduction in the quality and supply of water from the Sierra snowpack.** If heat-trapping emissions continue unabated, more precipitation will fall as rain instead of snow, and the snow that does fall will melt earlier, reducing the Sierra Nevada spring snowpack by as much as 70 to 90 percent. This reduction can lead to challenges in securing adequate water supplies. It can also lead to a potential reduction in hydropower.

[7] Intergovernmental Panel on Climate Change (IPCC). 2007. Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA. Website: www.ipcc.ch/publications_and_data/ar4/wg1/en/contents.html.

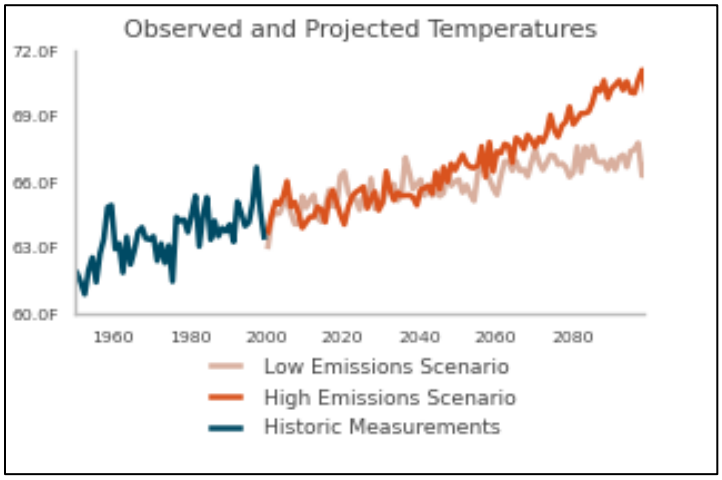
[8] California Climate Change Center. 2006. Our Changing Climate, Assessing the Risks to California: A Summary Report from the California Climate Change Center. July 2006. CEC-500-2006-077. Website: www.scc.ca.gov/webmaster/ftp/pdf/climate_change/assessing _risks.pdf. Accessed March 16, 2021.

[9] Moser et al. 2009. Moser, Susie, Guido Franco, Sarah Pittiglio, Wendy Chou, Dan Cayan. 2009. The Future Is Now: An Update on Climate Change Science Impacts and Response Options for California. California Energy Commission, PIER Energy-Related Environmental Research Program. CEC-500-2008-071. Website: www.energy.ca.gov/2008publications/CEC-500-2008-071/CEC-500-2008-071.PDF. Accessed March 9, 2021.

- **Increased risk of large wildfires.** If rain increases as temperatures rise, wildfires in the grasslands and chaparral ecosystems of southern California are estimated to increase by approximately 30 percent toward the end of the 21st Century because more winter rain will stimulate the growth of more plant "fuel" available to burn in the fall. In contrast, a hotter, drier climate could promote up to 90 percent more northern California fires by the end of the century by drying out and increasing the flammability of forest vegetation.
- **Reductions in the quality and quantity of certain agricultural products.** The crops and products likely to be adversely affected include wine grapes, fruit, nuts, and milk.
- **Exacerbation of air quality problems.** If temperatures rise to the medium warming range, there could be 75 to 85 percent more days with weather conducive to ozone formation in Los Angeles and the San Joaquin Valley, relative to today's conditions. This is more than twice the increase expected if rising temperatures remain in the lower warming range. This increase in air quality problems could increase asthma and other health-related problems.
- **A rise in sea levels resulting in the displacement of coastal businesses and residences.** During the past century, sea levels along California's coast have risen about 7 inches. If emissions continue unabated and temperatures rise into the higher anticipated warming range, sea level is expected to rise an additional 22 to 35 inches by the end of the century. Elevations of this magnitude would inundate coastal areas with saltwater, accelerate coastal erosion, threaten vital levees and inland water systems, and disrupt wetlands and natural habitats.
- **Increase temperature and extreme weather events.** Climate change is expected to lead to increases in the frequency, intensity, and duration of extreme heat events and heatwaves in California. More heat waves can exacerbate chronic disease or heat-related illness.
- **A decrease in the health and productivity of California's forests.** Climate change can cause an increase in wildfires, an enhanced insect population, and establishment of non-native species.

City of Anaheim Area

Figure 1 displays a chart of measured historical and projected annual average temperatures in the Anaheim area. As shown in the figure, temperatures are expected to rise in the low and high GHG emissions scenarios. The results indicate that temperatures are predicted to increase by 3.5°F under the low emission scenario and 5.9°F under the high emissions scenario.



Source: CalAdapt 2017

Figure 1: Observed and Projected Temperatures for Climate Change in the City of Anaheim Area

Human Health Effects of GHG Emissions

GHG emissions from development projects would not result in concentrations that would directly impact public health. However, the cumulative effects of GHG emissions on climate change have the potential to cause adverse effects on human health.

The United States Global Change Research Program, in its report, Global Climate Change Impacts in the United States (2009),[10] has analyzed the degree to which impacts on human health are expected to impact the United States.

Potential effects of climate change on public health include:

- **Direct Temperature Effects:** Climate change may directly affect human health through increases in average temperatures, which are predicted to increase the incidence of heatwaves and hot extremes.
- **Extreme Events:** Climate change may affect the frequency and severity of extreme weather events, such as hurricanes and extreme heat and floods, which can be destructive to human health and well-being.
- **Climate-Sensitive Diseases:** Climate change may increase the risk of some infectious diseases, particularly those diseases that appear in warm areas and are spread by mosquitoes and other insects, such as malaria, dengue fever, yellow fever, and encephalitis.
- **Air Quality:** Respiratory disorders may be exacerbated by warming-induced increases in the frequency of smog (ground-level ozone) events and particulate air pollution.[11]

[10] The United States Global Change Research Program. Global Climate Change Impacts in the United States. 2009. Website: https://downloads.globalchange.gov/usimpacts/pdfs/climate-impacts-report.pdf. Accessed March 16, 2021.
[11] Ibid.

Although there could be health effects resulting from changes in the climate and the consequences that can occur, inhalation of GHGs at levels currently in the atmosphere would not result in adverse health effects, except for ozone and aerosols (particulate matter). The potential health effects of ozone and particulate matter are discussed in criteria pollutant analyses. At very high indoor concentrations (not at levels existing outside), carbon dioxide, methane, sulfur hexafluoride, and some chlorofluorocarbons can cause suffocation as the gases can displace oxygen.[12,13]

3.2 - Greenhouse Gases

Gases that trap heat in the atmosphere are referred to as GHGs. The effect is analogous to the way a greenhouse retains heat. Common GHGs include water vapor, carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, ozone, and aerosols. Natural processes and human activities emit GHGs. The presence of GHGs in the atmosphere affects the Earth's temperature. Emissions from human activities, such as electricity production and vehicle use, have elevated the concentration of these gases in the atmosphere beyond the level of naturally occurring concentrations.

Climate change is driven by forcing and feedback processes. Radiative forcing is the difference between the incoming energy and outgoing energy in the climate system. Positive forcing tends to warm the surface while negative forcing tends to cool it. Radiative forcing values are typically expressed in watts per square meter. Feedback is a climate process that can strengthen or weaken a forcing. For example, when ice or snow melts, it reveals darker land underneath, which absorbs more radiation and causes more warming. The global warming potential is the potential of a gas or aerosol to trap heat in the atmosphere. The global warming potential of a gas is essentially a measurement of the radiative forcing of a GHG compared with the reference gas, CO_2.

Individual GHG compounds have different global warming potential and atmospheric lifetimes. CO_2, the reference gas for global warming potential, has a global warming potential of one. The global warming potential of a GHG is a measure of how much a given mass of a GHG is estimated to contribute to global warming. The carbon dioxide equivalent is used to describe how much global warming a given type and amount of GHG may cause. The calculation of the carbon dioxide equivalent is a consistent methodology for comparing GHG emissions since it normalizes various GHG emissions to a consistent reference gas, CO_2. For example, CH_4's warming potential of 25 indicates that CH_4 has a 25 times greater warming effect than CO_2 on a molecule-per-molecule basis. A carbon dioxide equivalent is the mass emissions of an individual GHG multiplied by its global warming potential. Table 5 describes the GHGs defined by AB 32 (see the Climate Change Regulatory Environment section for a description) that includes CO_2, CH_4, N_2O, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. A seventh GHG, nitrogen trifluoride (NF_3), was added to Health and Safety Code Section 38505(g)(7) as a GHG of concern.

[12] Center for Disease Control and Prevention (CDC). 2010. Department of Health and Human Services, the National Institute for Occupational Safety and Health. Carbon Dioxide. Website: www.cdc.gov/niosh/npg/npgd0103.html. Accessed February 14, 2021.

[13] Occupational Safety and Health Administration (OSHA). 2003. United States Department of Labor. Safety and Health Topics: Methane. Website: www.osha.gov/dts/chemicalsampling/data/CH_250700.html. Accessed March 16, 2021.

Table 5: Description of Greenhouse Gases

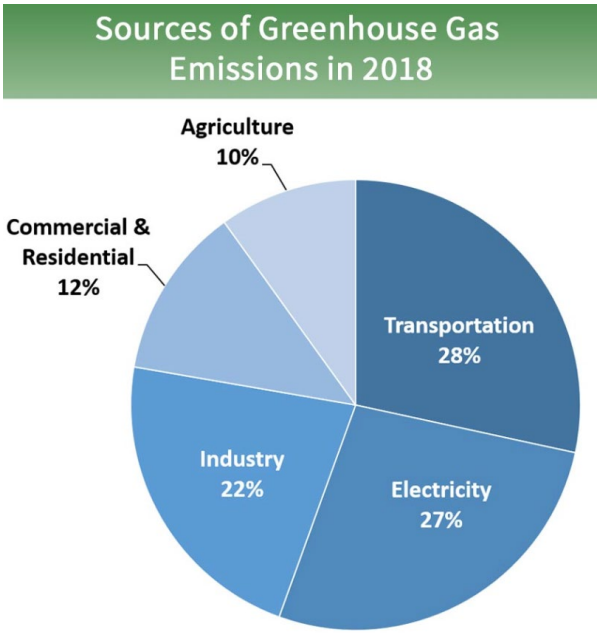
Greenhouse Gas	Description and Physical Properties	Sources
Nitrous oxide	Nitrous oxide (laughing gas) is a colorless GHG. It has a lifetime of 114 years. Its global warming potential is 298.	Microbial processes in soil and water, fuel combustion, and industrial processes.
Methane	Methane is a flammable gas and is the main component of natural gas. It has a lifetime of 12 years. Its global warming potential is 25.	Methane is extracted from geological deposits (natural gas fields). Other sources are landfills, fermentation of manure, and decay of organic matter.
Carbon dioxide	Carbon dioxide (CO_2) is an odorless, colorless, natural GHG. Carbon dioxide's global warming potential is 1. The concentration in 2005 was 379 parts per million (ppm), which is an increase of about 1.4 ppm per year since 1960.	Natural sources include decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources are from burning coal, oil, natural gas, and wood.
Chlorofluorocarbons	These are gases formed synthetically by replacing all hydrogen atoms in methane or ethane with chlorine and/or fluorine atoms. They are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the earth's surface). Global warming potentials range from 3,800 to 8,100.	Chlorofluorocarbons were synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. They destroy stratospheric ozone. The Montreal Protocol on Substances that Deplete the Ozone Layer prohibited their production in 1987.
Hydrofluorocarbons	Hydrofluorocarbons are a group of GHGs containing carbon, chlorine, and at least one hydrogen atom. Global warming potentials range from 140 to 11,700.	Hydrofluorocarbons are synthetic manmade chemicals used as a substitute for chlorofluorocarbons in applications such as automobile air conditioners and refrigerants.
Perfluorocarbons	Perfluorocarbons have stable molecular structures and only break down by ultraviolet rays about 60 kilometers above Earth's surface. Because of this, they have long lifetimes, between 10,000 and 50,000 years. Global warming potentials range from 6,500 to 9,200.	Two main sources of perfluorocarbons are primary aluminum production and semiconductor manufacturing.
Sulfur hexafluoride	Sulfur hexafluoride (SF_6) is an inorganic, odorless, colorless, and nontoxic, nonflammable gas. It has a lifetime of 3,200 years. It has a high global warming potential, 23,900.	This gas is manmade and used for insulation in electric power transmission equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas.
Nitrogen trifluoride	Nitrogen trifluoride (NF_3) was added to Health and Safety Code Section 38505(g)(7) as a GHG of concern. It has a high global warming potential of 17,200.	This gas is used in electronics manufacture for semiconductors and liquid crystal displays.
Sources: Compiled from a variety of sources; primarily Intergovernmental Panel on Climate Change 2007.		

The State of California has begun the process of addressing pollutants referred to as Short-Lived Climate Pollutants (SLCP). The SLCPs include three main components: black carbon, fluorinated gases, and methane. The ARB approved the Short-Lived Climate Pollutant Reduction Strategy in March 2017. The ARB has completed an emission inventory of these pollutants, identified research needs, identified existing and potential new control measures that offer co-benefits, and coordinate with other State agencies and districts to develop measures. Sources of black carbon are already regulated by the ARB, and air district criteria pollutant and toxic regulations that control fine particulate emissions from diesel engines and other combustion sources.[14] Additional controls on the sources of black carbon specifically for their GHG impacts beyond those required for toxic and fine particulates are not likely to be needed.

3.2.1 - Emissions Inventories

United States GHG Inventory

United States GHG inventory shows that GHGs increased from 1990 (6,437 million metric ton [MMT] CO_2e) to a peak in 2007 (7,414 MMT CO_2e), whereupon the GHG emissions have shown a steady decline to 2018 (6,678 MMT CO_2e). Figure 2 presents the 2018 United States GHG emissions by economic sector.



Note: Emissions shown do not include carbon sinks such as a change in land uses and forestry.

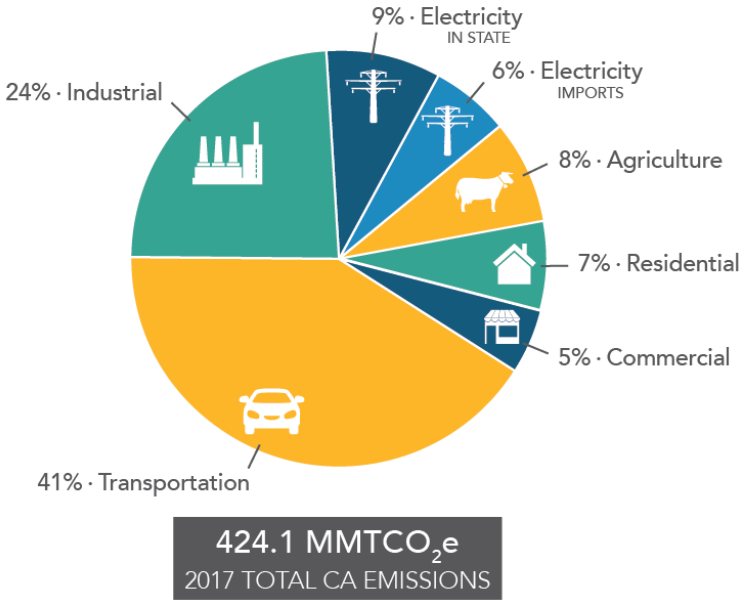
Source: United States Environmental Protection Agency (EPA). 2016. Inventory of United States Greenhouse Gas Emissions and Sinks: 1990-2014. EPA 430-R-16-002. Website: https://www.epa.gov/sites/production/files/2017-04/documents/us-ghg-inventory-2016-main-text.pdf. Accessed March 16, 2021.

Figure 2: 2018 United States Greenhouse Gas Emissions by Gas

[14] California Air Resources Board (ARB). 2015. Short-Lived Climate Pollutant Reduction Strategy, Concept Paper. May. Website: http://www.arb.ca.gov/cc/shortlived/concept_paper.pdf. Accessed March 16, 2021.

California GHG Inventory

California contributes a large quantity of GHG emissions to the atmosphere. In 2017, emissions from GHG emitting activities statewide were 424.1 MMT CO_2e, 5 MMT CO_2e lower than 2016 levels and 7 MMT CO_2e below the 2020 GHG Limit of 431 MMT CO_2e. Emissions of CO_2 are byproducts of fossil-fuel combustion and are attributable in large part to human activities associated with transportation, industry, electricity and natural gas consumption, and agriculture. In California, the transportation sector is the largest emitter at 41 percent of GHG emissions, followed by industry at 24 percent of GHG emissions (Figure 3). [15]



Source: California Air Resources Board (ARB). 2019. California Greenhouse Gas Emissions for 2000 to 2017. Website: https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2016/ghg_inventory_trends_00-16.pdf. Accessed March 16, 2021.

Figure 3: 2017 California Greenhouse Gas Emissions by Sector

3.3 - Regulatory Environment

3.3.1 - International

International organizations such as the ones discussed below have made substantial efforts to reduce GHGs. Preventing human-induced climate change will require the participation of all nations in solutions to address the issue.

Kyoto Protocol

The Kyoto Protocol is an international agreement linked to the United Nations Framework Convention on Climate Change. The major feature of the Kyoto Protocol is that it sets binding targets for 37 industrialized countries and the European community for reducing GHG emissions at an average of 5 percent against 1990 levels over the 5 years from 2008–2012. The Convention (as discussed above) encouraged industrialized countries to stabilize emissions; however, the Protocol

[15] California Air Resources Board (ARB). 2019. California Greenhouse Gas Emissions for 2000 to 2017. Website: https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2016/ghg_inventory_trends_00-16.pdf. Accessed March 16, 2021.

commits them to do so. Developed countries have contributed more emissions over the last 150 years; therefore, the Protocol places a heavier burden on developed nations under the principle of "common but differentiated responsibilities."

In 2001, President George W. Bush indicated that he would not submit the treaty to the United States Senate for ratification, which effectively ended American involvement in the Kyoto Protocol. In December 2009, international leaders met in Copenhagen to address the future of international climate change commitments post-Kyoto. No binding agreement was reached in Copenhagen; however, the Committee identified the long-term goal of limiting the maximum global average temperature increase to no more than 2°C above pre-industrial levels, subject to review in 2015. The Climate Change Committee held additional meetings in Durban, South Africa in November 2011; Doha, Qatar in November 2012; and Warsaw, Poland in November 2013. The meetings are gradually gaining consensus among participants on individual climate change issues.

On September 23, 2014, more than 100 heads of state and government, and leaders from the private sector and civil society met at the Climate Summit in New York hosted by the United Nations. At the Summit, heads of government, business, and civil society announced actions in areas that would have the greatest impact on reducing emissions, including climate finance, energy, transport, industry, agriculture, cities, forests, and building resilience.

United Nations Climate Change Framework Convention

On March 21, 1994, the United States joined several countries around the world in signing the United Nations Climate Change Framework Convention. Under the Convention, governments agreed to gather and share information on GHG emissions, national policies, and best practices; launch national strategies for addressing GHG emissions and adapting to expected impacts, including the provision of financial and technological support to developing countries; and cooperate in preparing for adaptation to the impacts of climate change.

Paris Climate Change Agreement

Parties to the United Nations Framework Convention on Climate Change (UNFCCC) reached a landmark agreement on December 12 in Paris, charting a fundamentally new course in the two-decade-old global climate effort. Culminating a 4-year negotiating round, the new treaty ended the strict differentiation between developed and developing countries that characterized earlier efforts, replacing it with a common framework that commits all countries to put forward their best efforts and to strengthen them in the years ahead. This treaty included requirements that all parties regularly report on their emissions and implementation efforts and undergo international review.

The agreement and a companion decision by parties were the key outcomes of the conference, known as the 21st session of the UNFCCC Conference of the Parties, or "COP 21." Together, the Paris Agreement and the accompanying COP decision:

- Reaffirm the goal of limiting global temperature increase well below 2 degrees Celsius, while urging efforts to limit the increase to 1.5 degrees;
- Establish binding commitments by all parties to make "nationally determined contributions" (NDCs), and to pursue domestic measures aimed at achieving them;

- Commit all countries to report regularly on their emissions and "progress made in implementing and achieving" their NDCs, and to undergo international review;
- Commit all countries to submit new NDCs every 5 years, with the clear expectation that they will "represent a progression" beyond previous ones;
- Reaffirm the binding obligations of developed countries under the UNFCCC to support the efforts of developing countries, while for the first time encouraging voluntary contributions by developing countries too;
- Extend the current goal of mobilizing $100 billion a year in support by 2020 through 2025, with a new, higher goal to be set for the period after 2025;
- Extend a mechanism to address "loss and damage" resulting from climate change, which explicitly will not "involve or provide a basis for any liability or compensation";
- Require parties engaging in international emissions trading to avoid "double counting"; and
- Call for a new mechanism, similar to the Clean Development Mechanism under the Kyoto Protocol, enabling emission reductions in one country to be counted toward another country's NDC.[16]

On June 1, 2017, President Trump announced the decision for the United States to withdraw from the Paris Climate Accord and the United States officially filed its intent to withdraw on November 4, 2019. Following the 1-year grace period for withdrawal from the Agreement, the United States formally withdrew from the Agreement on November 4, 2020. President Joe Biden rejoined the Agreement on his first day in office, January 20, 2021. The United States officially became a party to the Agreement once again on February 19, 2021, after a mandatory 30-day waiting period.[17]

Western Climate Initiative (Western North America Cap-and-Trade Program)

Cap-and-trade refers to a policy tool where emissions are limited to a certain amount and can be traded or provides flexibility on how the emitter can comply. Each emitter caps carbon dioxide emissions from power plants, auctions carbon dioxide emission allowances, and invests the proceeds in strategic energy programs that further reduce emissions, save consumers money, create jobs, and build a clean energy economy. The Western Climate Initiative partner jurisdictions have developed a comprehensive initiative to reduce North America GHG emissions to 15 percent below 2005 levels by 2020. The partners are California, British Columbia, Manitoba, Ontario, and Quebec. Currently, only California and Quebec are participating in the cap-and-trade program.

Federal

Clean Air Act

Coinciding with the 2009 meeting in Copenhagen, on December 7, 2009, the EPA issued an Endangerment Finding under Section 202(a) of the CAA, opening the door to federal regulation of GHGs. The Endangerment Finding notes that GHGs threaten public health and welfare and are

[16] Center for Climate and Energy Solutions (C2ES). 2015. Outcomes of the U.N. Climate Change Conference. Website: http://www.c2es.org/international/negotiations/cop21-paris/summary. Accessed March 16, 2021.

[17] United States Department of State. 2021. The United States Officially Rejoins the Paris Agreement. https://www.state.gov/the-united-states-officially-rejoins-the-paris-agreement/. Accessed February 23, 2021.

subject to regulation under the CAA. To date, the EPA has not promulgated regulations on GHG emissions, but it has already begun to develop them.

Previously the EPA had not regulated GHGs under the CAA, because it asserted that the Act did not authorize it to issue mandatory regulations to address global climate change. Such regulation would be unwise without an unequivocally established causal link between GHGs and the increase in global surface air temperatures. In *Massachusetts v. Environmental Protection Agency et al. (127 S. Ct. 1438) (2007)*; however, the United States Supreme Court held that GHGs are pollutants under the CAA and directed the EPA to decide whether the gases endangered public health or welfare (see discussion below).

The EPA had also not moved aggressively to regulate GHGs because it expected Congress to make progress on GHG legislation, primarily from the standpoint of a cap-and-trade system. However, proposals circulated in both the House of Representative and Senate have been controversial, and it may be some time before the United States Congress adopts significant climate change legislation. The EPA's Endangerment Finding paves the way for federal regulation of GHGs with or without Congress.

United States Clean Air Act Permitting Programs (New GHG Source Review)

The EPA issued a final rule on May 13, 2010, that establishes thresholds for GHGs that define when permits under the New Source Review Prevention of Significant Deterioration and Title V Operating Permit programs are required for new and existing industrial facilities. This final rule "tailors" the requirements of these CAA permitting programs to limit which facilities will be required to obtain Prevention of Significant Deterioration and Title V permits. In the preamble to the revisions to the federal code of regulations, the EPA states:

> This rulemaking is necessary because without it the Prevention of Significant Deterioration and Title V requirements would apply, as of January 2, 2011, at the 100 or 250 tons per year levels provided under the Clean Air Act, greatly increasing the number of required permits, imposing undue costs on small sources, overwhelming the resources of permitting authorities, and severely impairing the functioning of the programs. EPA is relieving these resource burdens by phasing in the applicability of these programs to greenhouse gas sources, starting with the largest greenhouse gas emitters. This rule establishes two initial steps of the phase-in. The rule also commits the agency to take certain actions on future steps addressing smaller sources but excludes certain smaller sources from Prevention of Significant Deterioration and Title V permitting for greenhouse gas emissions until at least April 30, 2016.

The EPA estimates that facilities responsible for nearly 70 percent of the national GHG emissions from stationary sources will be subject to permitting requirements under this rule. This rule includes the nation's largest GHG emitters—power plants, refineries, and cement production facilities.

Energy Independence and Security Act

The Energy Policy Act of 2005 created the Renewable Fuel Standard program. The Energy Independence and Security Act of 2007 expanded this program by:

- Expanding the Renewable Fuel Standard program to include diesel in addition to gasoline;
- Increasing the volume of renewable fuel required to be blended into transportation fuel from 9 billion gallons in 2008 to 36 billion gallons by 2022;
- Establishing new categories of renewable fuel, and setting separate volume requirements for each one; and
- Requiring the EPA to apply life-cycle GHG performance threshold standards to ensure that each category of renewable fuel emits fewer GHGs than the petroleum fuel it replaces.

This expanded Renewable Fuel Standard program lays the foundation for achieving substantial reductions of GHG emissions from the use of renewable fuels, reducing the use of imported petroleum, and encouraging the development and expansion of the nation's renewable fuels sector.

Signed on December 19, 2007, by President George W. Bush, the Energy Independence and Security Act of 2007 aims to:

- Move the United States toward greater energy independence and security;
- Increase the production of clean renewable fuels;
- Protect consumers;
- Increase the efficiency of products, buildings, and vehicles;
- Promote research on and deploy GHG capture and storage options;
- Improve the energy performance of the Federal Government; and
- Increase United States energy security, develop renewable fuel production, and improve vehicle fuel economy.

The Energy Independence and Security Act reinforces the energy reduction goals for federal agencies put forth in Executive Order 13423, as well as introduces more aggressive requirements. The three key provisions enacted are the Corporate Average Fuel Economy Standards, the Renewable Fuel Standard, and the appliance/lighting efficiency standards.

The EPA is committed to developing, implementing, and revising both regulations and voluntary programs under the following subtitles in the Act, among others:

- Increased Corporate Average Fuel Economy Standards;
- Federal Vehicle Fleets;
- Renewable Fuel Standard;
- Biofuels Infrastructure; and
- Carbon Capture and Sequestration.

EPA and National Highway Traffic Safety Administration Light-Duty Vehicle GHG Emission Standards and Corporate Average Fuel Economy Standards Final Rule

Congress first passed the Corporate Average Fuel Economy law in 1975 to increase the fuel economy of cars and light-duty trucks. The law has become more stringent over time. On May 19, 2009, President Barack Obama put in motion a new national policy to increase fuel economy for all new

cars and trucks sold in the United States. On April 1, 2010, the EPA and the United States Department of Transportation's National Highway Traffic Safety Administration (NHTSA) announced a joint final rule establishing a national program that would reduce GHG emissions and improve fuel economy for new cars and trucks sold in the United States.

The first phase of the national program would apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. They require these vehicles to meet an estimated combined average emissions level of 250 grams of CO_2 per mile, equivalent to 35.5 miles per gallon if the automobile industry were to meet this CO_2 level solely through fuel economy improvements. Together, these standards would cut CO_2 emissions by an estimated 960 MMT and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012-2016).

The EPA and the NHTSA issued final rules on a second-phase joint rulemaking, establishing national standards for light-duty vehicles for model years 2017 through 2025 in August 2012. The new standards for model years 2017 through 2025 apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles. The final standards are projected to result in an average industry fleet-wide level of 163 grams/mile of CO_2 in model year 2025, which is equivalent to 54.5 miles per gallon (mpg) if achieved exclusively through fuel economy improvements.

On August 2, 2018, the EPA and United States Department of Transportation proposed the Safer Affordable Fuel-Efficient Vehicles rule (SAFE rule), which was finalized March 31, 2020. The rule reduced the federal fuel efficiency and carbon dioxide standards issued in 2012 by requiring a 1.5 percent annual improvement rather than the 5 percent annual improvement required beginning in 2012. The rule also removed California's waiver from the EPA that allowed the state to set its own efficiency standards.[18] Publication of this portion of the rule prompted a lawsuit from California in concert with 23 other states which is currently being litigated.[19]

The EPA and NHTSA issued final rules for the first national standards to reduce GHG emissions and improve fuel efficiency of heavy-duty trucks and buses on September 15, 2011, which became effective November 14, 2011. For combination tractors, the agencies are proposing engine and vehicle standards that began in the 2014 model year and achieve up to a 20 percent reduction in CO_2 emissions and fuel consumption by the 2018 model year. For heavy-duty pickup trucks and vans, the agencies are proposing separate gasoline and diesel truck standards, which phase in starting in the 2014 model year and achieve up to a 10 percent reduction for gasoline vehicles, and a 15 percent reduction for diesel vehicles by 2018 model year (12 and 17 percent respectively if accounting for air conditioning leakage). Lastly, for vocational vehicles, the engine and vehicle standards would achieve up to a 10 percent reduction in fuel consumption and CO_2 emissions from the 2014 to 2018 model years.

[18] United States Environmental Protection Agency (EPA). 2020. Website: https://www.epa.gov/regulations-emissions-vehicles-and-engines/final-rule-one-national-program-federal-preemption-state. Accessed February 2, 2021

[19] California Office of the Attorney General. 2021. Website: https://oag.ca.gov/news/press-releases/attorney-general-becerra-files-lawsuit-against-epa-attacking-california's. Accessed February 2, 2021.

Massachusetts et al. v. EPA (United States Supreme Court GHG Endangerment Ruling)

Massachusetts et al. v. EPA (Supreme Court Case 05-1120) was argued before the United States Supreme Court on November 29, 2006, in which it was petitioned that the EPA regulates four GHGs, including CO_2, under Section 202(a)(1) of the CAA. A decision was made on April 2, 2007, in which the Supreme Court found that GHGs are air pollutants covered by the CAA. The Court held that the Administrator must determine whether emissions of GHGs from new motor vehicles cause or contribute to air pollution, which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. On December 7, 2009, the EPA Administrator signed two distinct findings regarding GHGs under Section 202(a) of the CAA:

- **Endangerment Finding:** The Administrator finds that the current and projected concentrations of the six key well-mixed greenhouse gases—CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6—in the atmosphere threaten the public health and welfare of current and future generations; and
- **Cause or Contribute Finding:** The Administrator finds that the combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor vehicle engines contribute to the greenhouse gas pollution, which threatens public health and welfare.

These findings do not impose requirements on industry or other entities. However, this was a prerequisite for implementing GHG emissions standards for vehicles, as discussed under "Clean Vehicles" below. After a lengthy legal challenge, the United States Supreme Court declined to review an Appeals Court ruling upholding that upheld the EPA Administrator findings.

United States Consolidated Appropriations Act (Mandatory GHG Reporting)

The Consolidated Appropriations Act of 2008, passed in December 2007, requires the establishment of mandatory GHG reporting requirements. On September 22, 2009, the EPA issued the Final Mandatory Reporting of Greenhouse Gases Rule, which became effective January 1, 2010. The rule requires reporting of GHG emissions from large sources and suppliers in the United States and is intended to collect accurate and timely emissions data to inform future policy decisions. Under the rule, suppliers of fossil fuels or industrial GHGs, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons or more per year of GHG emissions are required to submit annual reports to the EPA. The first annual reports for the largest emitting facilities, covering the calendar year 2010, were submitted to the EPA in 2011.

3.3.2 - California

California Assembly Bill 1493: Pavley Regulations and Fuel Efficiency Standards

As previously noted, the EPA recently rescinded California's waiver for its GHG and zero-emission California Assembly Bill 1493 (AB 1493): Pavley Regulations and Fuel Efficiency Standards. However, these regulations are still in effect at the time of this writing.

California AB 1493, enacted on July 22, 2002, required the ARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light-duty trucks. Implementation of the regulation was delayed by lawsuits filed by automakers and by the EPA's denial of an implementation

waiver. The EPA subsequently granted the requested waiver in 2009, which was upheld by the United States District Court for the District of Columbia in 2011.

The standards phase in during the 2009 through 2016 model years. When fully phased in, the near-term (2009–2012) standards will result in an approximately 22-percent reduction compared with the 2002 fleet, and the mid-term (2013–2016) standards will result in about a 30-percent reduction. Several technologies stand out as providing significant reductions in emissions at favorable costs. These include discrete variable valve lift or camless valve actuation to optimize valve operation rather than relying on fixed valve timing and lift as has historically been done; turbocharging to boost power and allow for engine downsizing; improved multi-speed transmissions; and improved air conditioning systems that operate optimally, leak less, and/or use an alternative refrigerant.

The second phase of the implementation for the Pavley Bill was incorporated into Amendments to the LEV Program referred to as LEV III or the Advanced Clean Cars program. The Advanced Clean Car program combines the control of smog-causing pollutants and GHG emissions into a single coordinated package of requirements for model years 2017 through 2025. The regulation will reduce GHGs from new cars by 34 percent from 2016 levels by 2025. The new rules will reduce pollutants from gasoline and diesel-powered cars and deliver increasing numbers of zero-emission technologies, such as full battery-electric cars, newly emerging plug-in hybrid electric vehicles and hydrogen fuel cell cars. The regulations will also ensure adequate fueling infrastructure is available for the increasing numbers of hydrogen fuel cell vehicles planned for deployment in California.

California Senate Bill 1078: Renewable Electricity Standards

On September 12, 2002, Governor Gray Davis signed SB 1078, requiring California to generate 20 percent of its electricity from renewable energy by 2017. SB 107 changed the due date to 2010 instead of 2017. On November 17, 2008, Governor Arnold Schwarzenegger signed Executive Order S-14-08, which established a renewable portfolio standard (RPS) target for California, requiring that all retail sellers of electricity serve 33 percent of their load with renewable energy by 2020. Governor Schwarzenegger also directed the ARB (Executive Order S-21-09) to adopt a regulation by July 31, 2010, requiring the State's load-serving utilities to meet a 33 percent renewable energy target by 2020. The ARB approved the Renewable Electricity Standard on September 23, 2010 by Resolution 10-23.

California Senate Bill 100: California Renewable Energy Portfolio Standard Program

Approved by Governor Brown on September 10, 2018, SB 100 amends the State's RPS program from 33 percent of electricity generation from renewable sources by 2020 and 50 percent by 2030 to greater requirements of renewable and carbon-free electricity generation for retail sales of electricity in California. Below are the amended RPS benchmark years and portfolio standards.

- By 2020, 33 percent of electricity generation from renewable sources.
- By 2026, 50 percent of electricity generation from renewable sources.
- By 2030, 60 percent of electricity generation from renewable sources.
- By 2050, 100 percent of electricity generation from carbon-free sources.

California Executive Order S-3-05 (GHG Emissions Reduction Targets)

Former California Governor Arnold Schwarzenegger announced on June 1, 2005, through Executive Order S-3-05, the following reduction targets for GHG emissions:

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

The 2050 reduction goal represents what some scientists believe is necessary to reach levels that will stabilize the climate. The 2020 goal was established to be a mid-term target. Because this is an executive order, the goals are not legally enforceable for local governments or the private sector.

California Assembly Bill 32: Global Warming Solutions Act and Scoping Plan

The California State Legislature enacted AB 32, the California Global Warming Solutions Act of 2006. AB 32 requires that GHGs emitted in California be reduced to 1990 levels by the year 2020. "Greenhouse gases" as defined under AB 32 include CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6. Since AB 32 was enacted, a seventh chemical, nitrogen trifluoride, has also been added to the list of GHGs. The ARB is the State agency charged with monitoring and regulating sources of GHGs. AB 32 states the following:

> Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems.

The ARB approved the 1990 GHG emissions level of 427 MMT CO_2e on December 6, 2007 (ARB 2020d). Therefore, to meet the State's target, emissions generated in California in 2020 are required to be equal to or less than 427 MMT CO_2e. Emissions in 2020 in a business-as-usual (BAU) scenario were estimated to be 596 MMT CO_2e, which do not account for reductions from AB 32 regulations. At that rate, a 28 percent reduction was required to achieve the 427 MMT CO_2e 1990 inventory. In October 2010, the ARB prepared an updated 2020 forecast to account for the effects of the 2008 recession and slower forecasted growth. The 2020 inventory without the benefits of adopted regulation is now estimated at 545 MMT CO_2e. Therefore, under the updated forecast, a 21.7 percent reduction from BAU is required to achieve 1990 levels.

California has made steady progress in implementing AB 32 and achieving targets included in Executive Order S-3-05. The progress is shown in updated emission inventories prepared by the ARB for 2000 through 2012 to show progress achieved to date. California has also achieved the Executive Order S-3-05 target for 2010 of reducing GHG emissions to 2000 levels. As shown below, the 2010 emission inventory achieved this target. Also shown are the average reductions needed from all Statewide sources (including all existing sources) to reduce GHG emissions back to 1990 levels.

- **1990:** 427 MMT CO_2e (AB 32 2020 Target)

- **2000:** 463 MMT CO_2e (an average 8-percent reduction needed to achieve 1990 base)
- **2010:** 450 MMT CO_2e (an average 5-percent reduction needed to achieve 1990 base)
- **2020:** 545 MMT CO_2e BAU (an average 21.7-percent reduction from BAU needed to achieve 1990 base)

The ARB Climate Change Scoping Plan (Scoping Plan) contains measures designed to reduce the State's emissions to 1990 levels by the year 2020 to comply with AB 32. The Scoping Plan identifies recommended measures for multiple GHG emission sectors and the associated emission reductions needed to achieve the year 2020 emissions target—each sector has a different emission reduction target. Most of the measures target the transportation and electricity sectors. As stated in the Scoping Plan, the key elements of the strategy for achieving the 2020 GHG target include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a statewide renewables energy mix of 33 percent;
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system;
- Establishing targets for transportation-related GHG emissions for regions throughout California and pursuing policies and incentives to achieve those targets;
- Adopting and implementing measures according to existing State laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard; and
- Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the State's long-term commitment to AB 32 implementation.

Also, the Scoping Plan differentiates between "capped" and "uncapped" strategies. Capped strategies are subject to the proposed cap-and-trade program. The Scoping Plan states that the inclusion of these emissions within the cap-and trade program will help ensure that the year 2020 emission targets are met despite some degree of uncertainty in the emission reduction estimates for any individual measure. Implementation of the capped strategies is calculated to achieve a sufficient amount of reductions by 2020 to achieve the emission target contained in AB 32. Uncapped strategies that will not be subject to the cap-and-trade emissions caps and requirements are provided as a margin of safety by accounting for additional GHG emission reductions.

The ARB approved the First Update to the Scoping Plan (Update) on May 22, 2014. The Update identifies the next steps for California's climate change strategy. The Update shows how California continues on its path to meet the near-term 2020 GHG limit, but also sets a path toward long-term, deep GHG emission reductions. The report establishes a broad framework for continued emission reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050. The Update identifies the progress made to meet the near-term objectives of AB 32 and defines California's climate change

priorities and activities for the next several years. The Update does not set new targets for the State, but describes a path that would achieve the long term 2050 goal of Executive Order S-05-03 for emissions to decline to 80 percent below 1990 levels by 2050.

AB 32 does not give the ARB a legislative mandate to set a target beyond the 2020 target from AB 32 or to adopt additional regulations to achieve a post-2020 target. The Update estimates that reductions averaging 5.2 percent per year would be required after 2020 to achieve the 2050 goal. With no estimate of future reduction commitments from the State, identifying a feasible strategy, including plans and measures to be adopted by local agencies is not currently possible.

The Cap-and-Trade Program is a key element of the Scoping Plan. It sets a statewide limit on sources responsible for 85 percent of California's GHG emissions and it establishes a price signal needed to drive long-term investment in cleaner fuels and more efficient use of energy. The program is designed to provide covered entities with the flexibility to seek out and implement the lowest-cost options to reduce emissions. The program conducted its first auction in November 2012. Compliance obligations began for power plants and large industrial sources in January 2013. Other significant milestones include linkage to Quebec's cap-and-trade system in January 2014 and starting the compliance obligation for distributors of transportation fuels, natural gas, and other fuels in January 2015.

The Cap-and-Trade Program provides a firm cap, ensuring that the 2020 Statewide emission limit will not be exceeded. An inherent feature of the Cap-and-Trade program is that it does not guarantee GHG emissions reductions in any discrete location or by any particular source. Rather, GHG emissions reductions are only guaranteed on an accumulative basis. As summarized by the ARB in the First Update:

> The Cap-and-Trade Regulation gives companies the flexibility to trade allowances with others or take steps to cost-effectively reduce emissions at their own facilities. Companies that emit more have to turn in more allowances or other compliance instruments. Companies that can cut their GHG emissions have to turn in fewer allowances. But as the cap declines, aggregate emissions must be reduced. In other words, a covered entity theoretically could increase its GHG emissions every year and still comply with the Cap-and-Trade Program if there is a reduction in GHG emissions from other covered entities. Such a focus on aggregate GHG emissions is considered appropriate because climate change is a global phenomenon, and the effects of GHG emissions are considered cumulative.

The Cap-and-Trade Program works with other direct regulatory measures and provides an economic incentive to reduce emissions. If California's direct regulatory measures reduce GHG emissions more than expected, then the Cap-and-Trade Program will be responsible for relatively fewer emissions reductions. If California's direct regulatory measures reduce GHG emissions less than expected, then the Cap-and-Trade Program will be responsible for relatively more emissions reductions. Thus, the Cap-and-Trade Program assures that California will meet its 2020 GHG emissions reduction mandate:

> The Cap-and-Trade Program establishes an overall limit on GHG emissions from most of the California economy—the "capped sectors." Within the capped sectors, some of the reductions are being accomplished through direct regulations, such as improved building and appliance efficiency standards, the LCFS [Low Carbon Fuel Standard], and the 33 percent RPS [renewables portfolio standard]. Whatever additional reductions are needed to bring emissions within the cap is accomplished through price incentives posed by emissions allowance prices. Together, direct regulation and price incentives assure that emissions are brought down cost-effectively to the level of the overall cap. The Cap-and-Trade Regulation assures that California's 2020 limit will be met because the regulation sets a firm limit on 85 percent of California's GHG emissions. In sum, the Cap-and-Trade Program will achieve aggregate, rather than site-specific or project-level GHG emissions reductions. Also, due to the regulatory architecture adopted by ARB in AB 32, the reductions attributed to the Cap-and-Trade Program can change over time depending on the State's emissions forecasts and the effectiveness of direct regulatory measures.

California SB 375: Sustainable Communities and Climate Protection Act

SB 375 was signed into law on September 30, 2008. According to SB 375, the transportation sector is the largest contributor to GHG emissions, which emits over 40 percent of the total GHG emissions in California. SB 375 states, "Without improved land use and transportation policy, California will not be able to achieve the goals of AB 32." SB 375 does the following: (1) requires metropolitan planning organizations to include sustainable community strategies in their regional transportation plans for reducing GHG emissions, (2) aligns planning for transportation and housing, and (3) creates specified incentives for the implementation of the strategies.

SB 375, as codified in Public Resources Code Section 21159.28, states that CEQA findings determinations for certain projects are not required to reference, describe, or discuss (1) growth inducing impacts or (2) any project-specific or cumulative impacts from cars and light-duty truck trips generated by the project on global warming or the regional transportation network if the project:

1. Is in an area with an approved sustainable communities strategy or an alternative planning strategy that the ARB accepts as achieving the greenhouse gas emission reduction targets;
2. Is consistent with that strategy (in designation, density, building intensity, and applicable policies); and
3. Incorporates the mitigation measures required by an applicable prior environmental document.

California SB 1368: Emission Performance Standards

In 2006, the State Legislature adopted SB 1368, which was subsequently signed into law by the Governor. SB 1368 directs the California Public Utilities Commission to adopt a performance standard for GHG emissions for the future power purchases of California utilities. SB 1368 seeks to limit carbon emissions associated with electrical energy consumed in California by forbidding procurement arrangements for energy longer than 5 years from resources that exceed the emissions

of a relatively clean, combined-cycle natural gas power plant. Because of the carbon content of its fuel source, a coal-fired plant cannot meet this standard because such plants emit roughly twice as much carbon as natural gas, combined-cycle plants. Accordingly, the new law effectively prevents California's utilities from investing in, otherwise financially supporting, or purchasing power from new coal plants located in or out of the State. The California Public Utilities Commission adopted the regulations required by SB 1368 on August 29, 2007. The regulations implementing SB 1368 establish a standard for baseload generation owned by, or under long-term contract to publicly owned utilities, of 1,100 pounds CO_2 per megawatt-hour (MWh).

California Executive Order S-01-07: Low Carbon Fuel Standard

The Governor signed Executive Order S 01-07 on January 18, 2007. The order mandates that a statewide goal shall be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020. In particular, the executive order established an LCFS and directed the Secretary for Environmental Protection to coordinate the actions of the California Energy Commission (CEC), the ARB, the University of California, and other agencies to develop and propose protocols for measuring the "life-cycle carbon intensity" of transportation fuels. This analysis supporting the development of the protocols was included in the State Implementation Plan for alternative fuels (State Alternative Fuels Plan adopted by CEC on December 24, 2007) and was submitted to the ARB for consideration as an "early action" item under AB 32. The ARB adopted the LCFS on April 23, 2009.

The LCFS was subject to legal challenge in 2011. Ultimately, on August 8, 2013, the Fifth District Court of Appeal (California) ruled that the ARB failed to comply with CEQA and the Administrative Procedure Act when adopting regulations for LCFS. In a partially published opinion, the Court of Appeal directed that Resolution 09-31 and two executive orders of ARB approving LCFS regulations promulgated to reduce GHG emissions be set aside. However, the court tailored its remedy to protect the public interest by allowing the LCFS regulations to remain operative while ARB complies with the procedural requirements it failed to satisfy.

To address the Court ruling, the ARB was required to bring a new LCFS regulation to the Board for consideration in February 2015. The proposed LCFS regulation was required to contain revisions to the 2010 LCFS as well as new provisions designed to foster investments in the production of the low-carbon fuels, offer additional flexibility to regulated parties, update critical technical information, simplify and streamline program operations, and enhance enforcement. The second public hearing for the new LCFS regulation was held on September 24, 2015 and September 25, 2015, where the LCFS Regulation was adopted. The Final Rulemaking Package adopting the regulation was filed with the Office of Administrative Law (OAL) on October 2, 2015. The OAL approved the regulation on November 16, 2015 (ARB 2020f).

California Executive Order S-13-08

Executive Order S-13-08 states that "climate change in California during the next century is expected to shift precipitation patterns, accelerate sea level rise and increase temperatures, thereby posing a serious threat to California's economy, to the health and welfare of its population and to its natural resources." Pursuant to the requirements in the order, the 2009 California Climate Adaptation

Strategy was adopted, which is the ". . . first Statewide, multi-sector, region-specific, and information-based climate change adaptation strategy in the United States." Objectives include analyzing risks of climate change in California, identifying and exploring strategies to adapt to climate change, and specifying a direction for future research.

California SBX 7-7: Water Conservation Act

This 2009 legislation directs urban retail water suppliers to set individual 2020 per capita water use targets and begin implementing conservation measures to achieve those goals. Meeting this statewide goal of 20 percent decrease in demand will result in a reduction of almost 2 million acre-feet in urban water use in 2020.

California SB 350: Clean Energy and Pollution Reduction Act

In 2015, the State legislature approved, and the Governor signed SB 350 that reaffirms California's commitment to reducing its GHG emissions and addressing climate change. Key provisions include an increase in the RPS, higher energy efficiency requirements for buildings, initial strategies towards a regional electricity grid, and improved infrastructure for electric vehicle charging stations. Provisions for a 50 percent reduction in the use of petroleum Statewide were removed from the Bill due to opposition and concern that it would prevent the Bill's passage. Specifically, SB 350 requires the following to reduce Statewide GHG emissions:

- Increase the amount of electricity procured from renewable energy sources from 33 percent to 50 percent by 2030, with interim targets of 40 percent by 2024, and 25 percent by 2027.
- Double the energy efficiency in existing buildings by 2030. This target will be achieved through the California Public Utility Commission, the CEC, and local publicly owned utilities.
- Reorganize the Independent System Operator (ISO) to develop more regional electrify transmission markets and to improve accessibility in these markets, which will facilitate the growth of renewable energy markets in the western United States.

California Executive Order B-30-15

On April 29, 2015, an executive order was issued by the Governor to establish a California GHG emissions reduction target of 40 percent below 1990 levels by 2030. The Governor's executive order aligns California's GHG reduction targets with those of leading international governments ahead of the United Nations Climate Change Conference in Paris late 2015. The executive order sets a new interim statewide GHG emission reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030 in order to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050. The order also directs the ARB to update the Climate Change Scoping Plan to express the 2030 target in terms of MMT CO_2e. The executive order also requires the State's climate adaptation plan to be updated every 3 years and for the State to continue its climate change research program, among other provisions. As with Executive Order S-3-05, this executive order is not legally enforceable against local governments and the private sector. Legislation that would update AB 32 to make post-2020 targets and requirements a mandate is in process in the State Legislature.

California Senate Bill 32 and 2017 Scoping Plan

The Governor signed SB 32 in September of 2016, giving the ARB the statutory responsibility to include the 2030 target previously contained in Executive Order B-30-15 in the 2017 Scoping Plan Update. SB 32 states, "In adopting rules and regulations to achieve the maximum technologically feasible and cost-effective greenhouse gas emissions reductions authorized by this division, the state [air resources] board shall ensure that statewide greenhouse gas emissions are reduced to at least 40 percent below the statewide greenhouse gas emissions limit no later than December 31, 2030." The 2017 Climate Change Scoping Plan Update addressing the SB 32 targets was adopted on December 14, 2017. The major elements of the framework proposed to achieve the 2030 target are as follows:

1. SB 350
   - Achieve 50 percent renewables portfolio standard by 2030.
   - Doubling of energy efficiency savings by 2030.
2. Low Carbon Fuel Standard
   - Increased stringency (reducing carbon intensity 18 percent by 2030, up from 10 percent in 2020).
3. Mobile Source Strategy (Cleaner Technology and Fuels Scenario)
   - Maintaining existing GHG standards for light- and heavy-duty vehicles.
   - Put 4.2 million ZEVs on the roads.
   - Increase ZEV buses, delivery and other trucks.
4. Sustainable Freight Action Plan
   - Improve freight system efficiency.
   - Maximize the use of near-zero emission vehicles and equipment powered by renewable energy.
   - Deploy over 100,000 zero-emission trucks and equipment by 2030.
5. Short-Lived Climate Pollutant Reduction Strategy
   - Reduce emissions of methane and hydrofluorocarbons 40 percent below 2013 levels by 2030.
   - Reduce emissions of black carbon 50 percent below 2013 levels by 2030.
6. SB 375 Sustainable Communities Strategies
   - Increased stringency of 2035 targets.
7. Post-2020 Cap-and-Trade Program
   - Declining caps continued linkage with Québec, and linkage to Ontario, Canada.
   - The ARB will look for opportunities to strengthen the program to support more air quality co-benefits, including specific program design elements. In Fall 2016, the ARB staff described potential future amendments including reducing the offset usage limit, redesigning the allocation strategy to reduce free allocation to support increased technology and energy investment at covered entities, and reducing allocation if the covered entity increases criteria or toxics emissions over some baseline.
8. 20 percent reduction in GHG emissions from the refinery sector.

9. By 2018, develop Integrated Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.

California Code of Regulations Title 13: Motor Vehicles

California Code of Regulations, Title 13: Division 3, Chapter 10, Article 1, Section 2485: Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling. This measure seeks 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. Any person that owns, operates, or causes to operate any diesel-fueled commercial motor vehicle must not allow a vehicle to idle for more than 5 consecutive minutes at any location, or operate a diesel-fueled auxiliary power system for greater than 5 minutes at any location when within 100 feet of a restricted area.

California Code of Regulations, Title 13: Division 3, Chapter 9, Article 4.8, Section 2449: General Requirements for In-Use Off-Road Diesel-Fueled Fleets. This measure regulates NO_X, DPM, and other criteria pollutant emissions from in-use off-road diesel-fueled vehicles. This measure also requires each fleet to meet fleet average requirements or demonstrate that it has met "best available control technology" requirements. Additionally, this measure requires medium and large fleets to have a written idling policy that is made available to operators of the vehicles informing them that idling is limited to 5 consecutive minutes or less.

California Code of Regulations Title 20: Appliance Efficiency Regulations

California Code of Regulations, Title 20: Division 2, Chapter 4, Article 4, Sections 1601-1608: Appliance Efficiency Regulations regulates the sale of appliances in California. The Appliance Efficiency Regulations include standards for both federally regulated appliances and non-federally regulated appliances. Twenty-three categories of appliances are included in the scope of these regulations. The standards within these regulations apply to appliances that are sold or offered for sale in California, except those sold wholesale in California for final retail sale outside the State and those designed and sold exclusively for use in recreational vehicles or other mobile equipment (CEC 2012).

California Code of Regulations Title 24: Energy Efficiency Standards

California Code of Regulations Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings, was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions. The 2019 Building Energy Efficiency Standards went into effect on January 1, 2020.

California Code of Regulations Title 24: California Green Building Standards Code

California Code of Regulations Title 24, Part 11, is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings. The code is updated on a regular basis, with the

most recent update consisting of the 2019 California Green Building Standards Code (CALGreen) that became effective January 1, 2020. Local jurisdictions are permitted to adopt more stringent requirements, as California law provides methods for local enhancements. The code recognizes that many jurisdictions have developed existing construction and demolition ordinance and defers to them as the ruling guidance if they provide a minimum 50 percent diversion requirement. The code also provides exemptions for areas not served by construction and demolition recycling infrastructure. The California Building Code provides the minimum standard that buildings need to meet in order to be certified for occupancy and is enforced by the local building or planning department with jurisdiction over the building or residence location.

California Model Water Efficient Landscape Ordinance

The Model Water Efficient Landscape Ordinance (Ordinance) was required by the AB 1881 Water Conservation Act. As such, AB 1881 required local agencies to adopt a local landscape ordinance at least as effective in conserving water as the Model Ordinance by January 1, 2010. Reductions in water use of 20 percent consistent with the (SBX-7-7) 2020 mandate are expected as a result of the implementation of the Ordinance. Governor Brown's Drought Executive Order of April 1, 2015 (Executive Order B-29-15) directed the Department of Water Resources to update the Ordinance through expedited regulation. The revised Ordinance became effective on December 15, 2015. New development projects that include landscaped areas of 500 square feet or more are subject to the Ordinance. The update requires:

- More efficient irrigation systems
- Incentives for graywater usage
- Improvements in on-site stormwater capture
- Limiting the portion of landscapes that can be planted with high water use plants
- Reporting requirements for local agencies

As noted in the City's Municipal Code discussion below, Chapter 18.52 is the City's adopted applicable water-efficient landscape ordinance and is at least as effective as the updated 2015 State Model Water Efficient Landscape Ordinance.

California SB 97 and the CEQA Guidelines Update

Passed in August 2007, SB 97 added Section 21083.05 to the Public Resources Code. The Code states "(a) On or before July 1, 2009, the Office of Planning and Research shall prepare, develop, and transmit to the Resources Agency guidelines for the mitigation of GHG emissions or the effects of GHG emissions as required by this division, including, but not limited to, effects associated with transportation or energy consumption. (b) On or before January 1, 2010, the Resources Agency shall certify and adopt guidelines prepared and developed by the Office of Planning and Research according to subdivision (a)."

Section 21097 was also added to the Public Resources Code, which provided an exemption until January 1, 2010, for transportation projects funded by the Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006 or projects funded by the Disaster Preparedness and Flood Prevention Bond Act of 2006, in stating that the failure to analyze adequately the effects of

GHGs would not violate CEQA. The Natural Resources Agency completed the approval process, and the Amendments became effective on March 18, 2010.

The 2010 CEQA Amendments guide public agencies regarding the analysis and mitigation of the effects of GHG emissions in CEQA documents. The CEQA Amendments fit within the existing CEQA framework by amending existing CEQA Guidelines to reference climate change.

Section 15064.4(b) of the CEQA Guidelines provides direction for lead agencies for assessing the significance of impacts of GHG emissions:

- The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting;
- Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; or
- 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 greenhouse gas emissions. Such regulations or requirements must be adopted by the relevant public agency through a public review process and must include specific requirements that reduce or mitigate the project's incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable, notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.

The CEQA Guidelines amendments do not identify a threshold of significance for GHG emissions, nor do they prescribe assessment methodologies or specific mitigation measures. Instead, they call for a "good-faith effort, based on available information, to describe, calculate, or estimate the amount of greenhouse gas emissions resulting from a project." The amendments encourage lead agencies to consider many factors in performing a CEQA analysis and preserve lead agencies' discretion to make their own determinations based upon substantial evidence. The amendments also encourage public agencies to make use of programmatic mitigation plans and programs from which to tier when they perform individual project analyses.

Also amended were CEQA Guidelines Sections 15126.4 and 15130, which address mitigation measures and cumulative impacts, respectively. GHG mitigation measures are referenced in general terms, but no specific measures are championed. The revision to the cumulative impact discussion requirement (CEQA Guidelines § 15130) simply directs agencies to analyze GHG emissions in an EIR when a project's incremental contribution of emissions may be cumulatively considerable; however, it does not answer the question of what constitutes a cumulatively considerable contribution for CEQA purposes.

Section 15183.5 permits programmatic GHG analysis and later project-specific tiering, as well as the preparation of Greenhouse Gas Reduction Plans. Compliance with such plans can support a determination that a project's cumulative effect is not cumulatively considerable, according to Section 15183.5(b).

Also, the amendments revised Appendix F of the CEQA Guidelines, which focuses on Energy Conservation. The sample environmental checklist in Appendix G was amended to include GHG questions.

CEQA emphasizes that the effects of GHG emissions are cumulative and should be analyzed in the context of CEQA's requirements for cumulative impacts analysis (see CEQA Guidelines § 15130(f)).

Center for Biological Diversity v. California Department of Fish and Wildlife (California Supreme Court GHG Ruling)

In a November 30, 2015 ruling, the California Supreme Court in *Center for Biological Diversity v. California Department of Fish and Wildlife* on the Newhall Ranch project concluded that whether the project was consistent with meeting Statewide emission reduction goals is a legally permissible criterion of significance, but the significance finding for the project was not supported by a reasoned explanation based on substantial evidence. The Court offered potential solutions on pages 25–27 of the ruling to address this issue, as summarized below:

Specifically, the Court advised that:

- **Substantiation of Project Reductions from BAU**. A lead agency may use a BAU comparison based on the Scoping Plan's methodology if it also substantiates the reduction a particular project must achieve to comply with statewide goals. The Court suggested a lead agency could examine the "data behind the Scoping Plan's business-as-usual model" to determine the necessary project-level reductions from new land use development at the proposed location (page 25).
- **Compliance with Regulatory Programs or Performance Based Standards**. A lead agency "might assess consistency with AB 32's goal in whole or part by looking to compliance with regulatory programs designed to reduce greenhouse gas emissions from particular activities. (See Final Statement of Reasons, supra, at page 64 [greenhouse gas emissions 'may be best analyzed and mitigated at a programmatic level.'].)" To the extent a project's design features comply with or exceed the regulations outlined in the Scoping Plan and adopted by the Air Resources Board or other state agencies, a lead agency could appropriately rely on their use as showing compliance with 'performance based standards' adopted to fulfill 'a statewide . . . plan for the reduction or mitigation of greenhouse gas emissions' (CEQA Guidelines § 15064.4(a)(2), (b)(3); see also id., § 15064(h)(3) [determination that impact is not cumulatively considerable may rest on compliance with previously adopted plans or regulations, including 'plans or regulations for the reduction of greenhouse gas emissions']) (page 26).
- **Compliance with GHG Reduction Plans or Climate Action Plans (CAPs)**. A lead agency may utilize "geographically specific GHG emission reduction plans" such as climate action plans or greenhouse gas emission reduction plans to provide a basis for the tiering or streamlining of project-level CEQA analysis (page 26).
- **Compliance with Local Air District Thresholds**. A lead agency may rely on "existing numerical thresholds of significance for greenhouse gas emissions" adopted by, for example, local air districts (page 27).

Therefore, consistent with CEQA Guidelines Appendix G, the three factors identified in CEQA Guidelines Section 15064.4 and the Newhall Ranch opinion, the GHG impacts would be considered significant if the proposed Master Plan would:

- Conflict with a compliant GHG Reduction Plan if adopted by the lead agency;
- Exceed the applicable GHG Reduction Threshold; or
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emission of GHGs.

3.3.3 - Regional

South Coast Air Quality Management District

CEQA Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning

The SCAQMD has an ongoing GHG CEQA Significance Threshold Working Group. Members of the working group include government agencies implementing CEQA and representatives from various stakeholder groups that provide input to the SCAQMD staff on developing GHG CEQA significance thresholds. On December 5, 2008, the SCAQMD Governing Board adopted the staff proposal for an interim GHG significance threshold for projects where the SCAQMD is lead agency.[20]

City of Anaheim

General Plan

The City of Anaheim's General Plan, adopted in 2003 and revised several times since, includes the following applicable goals and implementing policies relevant to improving air quality.

Land Use Element

Goal 3.2 **Maximize development opportunities along transportation routes.**

Policies

Policy 1 Where appropriate, designate land adjacent to freeways, proposed Bus Rapid Transit stops and Metrolink stations for employment intensive land uses.

Policy 2 Support the development of a Bus Rapid Transit System in the City that provides transit access to commercial and office development opportunities.

Goal 4.1 **Promote development that integrates with and minimizes impacts to surrounding land uses.**

[20] South Coast Air Quality Management District (SCAQMD). 2021. Greenhouse Gases (GHG) CEQA Significance Thresholds. Website: http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/ghg-significance-thresholds Accessed February 17, 2021.

Policies

Policy 1 Ensure that land uses develop in accordance with the Land Use Plan and Zoning Code in an effort to attain land use compatibility.

Policy 3 Ensure that developers consider and address project impacts upon surrounding neighborhoods during the design and development process.

Policy 4 Require new or expanded uses to provide mitigation or buffers between existing uses where potential adverse impacts could occur.

Policy 6 Require landscape and/or open space buffers to maintain a natural edge for proposed private development directly adjacent to natural, public open space areas.

Circulation Element

Goal 5.1 **Promote bus service and paratransit improvements.**

Policies

Policy 1 Support the efforts of regional, State and Federal agencies to provide additional local and express bus service in the City.

Policy 2 Support and encourage the provision of a range of paratransit opportunities to complement bus and rail service for specialized transit needs.

Policy 3 Support transit supportive land uses in new development.

Policy 4 Support OCTA's development of a Bus Rapid Transit (BRT) system that is sensitive to the City's aesthetic needs.

Policy 5 Intensify land uses in close proximity to future BRT stop(s) where appropriate.

Policy 6 Improve pedestrian access to transit facilities. 7) Integrate BRT with ARTIC.

Green Element

Goal 8.1 **Reduce locally generated emissions through improved traffic flows and construction management practices.**

Policies

Policy 1 Reduce vehicle emissions through traffic flow improvements, such as traffic signal synchronization, Intelligent Transportation Systems, the Scoot Adaptive Traffic Control System, and related capital improvements.

Policy 2 Regulate construction practices, including grading, dust suppression, chemical management, and encourage pre-determined construction routes that minimize dust and particulate matter pollution.

Goal 11.1 **Encourage land planning and urban design that support alternatives to the private automobile such as mixed-use, provision of pedestrian and bicycle amenities, and transit oriented development.**

Policies

Policy 2 Encourage mixed-use development in accordance with the Land Use Element.

Policy 4 Encourage higher densities and mixed-use development in the vicinity of major rail and transit stops.

Goal 12.1 **Continue to be a county leader in the use of electric and alternative fuel vehicles.**

Goal 17.1 **Encourage building and site design standards that reduce energy costs.**

Policy

Policy 1 Encourage designs that incorporate solar and wind exposure features such as daylighting design, natural ventilation, space planning and thermal massing.

Goal 18.1 **Provide sufficient indoor and outdoor park, recreation and community service opportunities for existing and future residents and employees.**

Policy

Policy 1 Maintain a Citywide standard of at least two acres of parkland per thousand residents.

Goal 23.1 **Continue to improve and expand the City's comprehensive tree programs.**

Policies

Policy 1 Preserve mature street trees where practical.

Policy 6 Continue to identify neighborhoods in need of additional parkway trees and plant them as funding becomes available.

Public Services and Facilities Element

Goal 3.1 **Generate electricity in a manner that is reliable, cost-effective, and sustainable.**

Policies

Policy 1 Coordinate with Southern California Edison and other suppliers regarding electricity supply and distribution to provide a continual source of reliable and efficient energy.

Policy 2 Ensure that adequate electricity capacity exists for planned development.

Policy 3 Encourage the development and use of renewable energy resources.

Goal 8.1 **Coordinate with private utilities to provide adequate natural gas and communications infrastructure to existing and new development in a manner compatible with the surrounding community.**

Policies

Policy 1 Coordinate with private utilities to provide Anaheim residents with highspeed, high-capacity information systems and adequate natural gas infrastructure.

Policy 2 Coordinate with private utilities on site design and land use compatibility issues.

Growth Management Element:

Goal 1.4 **Develop land use strategies and incentives to reduce the amount of vehicle miles traveled within the City.**

Policies

Policy 1 Promote the location of housing near and/or within employment centers to enable shorter commutes and encourage transit-oriented, home-to-work mobility.

Policy 2 Encourage higher density and/or mixed-use development along major transit corridors and/or at transit stops.

Goal 2.1 **Reduce traffic congestion on the City's arterial highway system.**

Policies

Policy 2 Participate in Inter-Jurisdictional Planning Forums at the GMA level to monitor development with multi-jurisdictional impacts and identify and prioritize appropriate mitigation measures.

Policy 3 Use the Citywide transportation model to create and monitor development phasing plans.

Policy 4 Continue to maintain consistency between the City and County Master Plan of Arterial Highways.

Goal 2.2 **Evaluate the traffic-related impacts of proposed developments and/or intensification of existing land uses, and address said impacts.**

Policies

Policy 1 Continue to review development projects to ensure traffic-related impacts are addressed appropriately.

Policy 4 Prior to issuing building permits for new development forecast to generate 100 or more peak hour (morning or evening) trip ends, require traffic impact analyses be completed that identify arterial and intersection improvements that may potentially be needed to provide not worse than LOS E along Interstates/State Routes/Smart Streets (unless current operation is LOS F), and not worse than LOS D along the balance of the arterials on the City's Circulation Element that are measurably impacted by the new development and are under the City's jurisdiction.

Policy 5 Require development projects that exceed LOS standards beyond acceptable levels to provide necessary improvements and/or funding to mitigate said impacts, if determined necessary by the City.

Housing Element

Guiding Principle D Sustainable design and the efficient utilization of resources create more livable neighborhoods and can have both environmental and financial benefits.

Policy Consideration 8.0 Infill and Redevelopment

- There are very few areas of undeveloped land remaining in the City and it must rely on infill and redevelopment sites, some of which are environmentally-challenged, to accommodate growth. Policies should allow and encourage creative solutions such as land assemblage and environmental cleanup of "brownfield" sites to maximize the potential in redeveloping areas of Anaheim.

SECTION 4: ENERGY SETTING

4.1 - Energy Supply

Energy use, through fossil fuel consumption, relates directly to environmental quality, since it can adversely affect air quality and can generate GHG emissions that contribute to climate change. Fossil fuels are burned to create electricity that powers residences and commercial/industrial buildings, heats and cools buildings, and powers vehicles. Transportation energy use is related to the fuel efficiency of cars, trucks, and public transportation; choice of different travel modes such as auto, carpool, and public transit; and miles traveled by these modes. Construction and routine operation and maintenance of transportation infrastructure also consume energy.

4.1.1 - Transportation Fuels

California

California is one of the top producers of petroleum in the nation, with drilling operations occurring throughout the State. A network of crude oil pipelines connects production areas to oil refineries in the Los Angeles area, the San Francisco Bay area, and the Central Valley. California oil refineries also process Alaskan and foreign crude oil received in ports in Los Angeles, Long Beach, and the San Francisco Bay area. Crude oil production in California and Alaska is in decline, and California refineries have become increasingly dependent on foreign imports.[21] Since 2012, foreign suppliers, led by Saudi Arabia, provide over half of the crude oil refined in California.[22,23] According to the United States Energy Information Administration (EIA), California's field production of crude oil has steadily declined since the mid-1980s, totaling approximately 161.5 million barrels in 2019.[24]

According to the EIA, transportation accounted for nearly 40 percent of California's total energy demand, amounting to approximately 3,170 trillion British Thermal Unit (BTU) in 2018.[25] California's transportation sector, including rail and aviation, consumed roughly 584 million barrels of petroleum fuels in 2018.[26] In 2018, petroleum-based fuels were used for approximately 86 percent of the state's total transportation activity.[27] The CEC produces the California Annual Retail Fuel Outlet Report, which is a compilation of gasoline and diesel fuel sales data from across the State available at the

[21] California Energy Commission (CEC). 2020. "Oil Supply Sources to California Refineries." Website: https://www.energy.ca.gov/data-reports/energy-almanac/californias-petroleum-market/oil-supply-sources-california-refineries. Accessed March 16, 2021.
[22] California Energy Commission (CEC). 2019. "Foreign Sources of Crude Oil Imports to California 2018." March. Website: https://www.energy.ca.gov/data-reports/energy-almanac/californias-petroleum-market/foreign-sources-crude-oil-imports. Accessed March 16, 2021.
[23] California Energy Commission (CEC). 2020. "Oil Supply Sources to California Refineries." Website: https://www.energy.ca.gov/data-reports/energy-almanac/californias-petroleum-market/oil-supply-sources-california-refineries. Accessed March 16, 2021.
[24] United States Department of Energy, Alternative Fuels Data Center. 2020. "Alternative Fueling Station Locator [Interactive Database]." Website: https://afdc.energy.gov/stations/#/find/nearest. Accessed March 16, 2021.
[25] United States Energy Information Administration (EIA). 2020. Table F33: Total Energy Consumption, Price, and Expenditure Estimates, 2018. May 29. Website: https://www.eia.gov/state/seds/sep_fuel/html/pdf/fuel_te.pdf. Accessed March 16, 2021.
[26] United States Energy Information Administration (EIA). 2020. Table F16: Total Petroleum Consumption Estimates, 2018. April 24. Website: https://www.eia.gov/state/seds/sep_fuel/html/pdf/fuel_use_pa.pdf. Accessed March 16, 2021.
[27] United States Energy Information Administration (EIA). 2020. Table F18: Natural Gas Consumption Estimates, 2018. January 3. Website: https://www.eia.gov/state/seds/seds-data-fuel.php?sid=CA#NaturalGas. Accessed March 16, 2021.

county level. According to the CEC, California's 2017 fuel sales totaled 15,471 million gallons of gasoline and 3,417 million gallons of diesel.[28]

City of Anaheim

Petroleum fuels are generally purchased by individual users such as residents and employees. While no petroleum refineries are located in the City,[29] there are 20 gasoline stations in the City, 13 of which are located within a 2-mile radius of the project site.[30]

Alternative Fuels

A variety of alternative fuels are used to reduce petroleum-based fuel demand. The use of these fuels is encouraged through various statewide regulations and plans, such as the LCFS and SB 32. Conventional gasoline and diesel may be replaced, depending on the capability of the vehicle, with transportation fuels including hydrogen, biodiesel, and electricity.

Electric Vehicles

Electricity can be used to power electric and plug-in hybrid electric vehicles directly from the power grid. Electricity used to power vehicles is generally provided by the electricity grid and stored in the vehicle's batteries. Fuel cells are being explored to use electricity generated onboard the vehicle to power electric motors.

4.1.2 - Electricity

California

In 2019, California's in-State electric generation totaled 200,475 gigawatt-hours (GWh).[31] Primary fuel sources for the State's electricity generation in 2019 included natural gas (43.0 percent), large hydro (16.5 percent), solar polar voltaic (PV) (14.2 percent), nuclear (8.1 percent), wind (6.8 percent), geothermal (5.5 percent), small hydro (2.7 percent), biomass (2.9 percent), coal (0.1 percent), petroleum coke and waste heat (0.2 percent), and oil (<0.1 percent).[32] In-state electricity generation capacity reached approximately 79,845 megawatts (MW) in 2019.[33]

City of Anaheim

The City of Anaheim is served solely by Anaheim Public Utilities (APU). APU's power supply comes from resources located in Anaheim and across the Western United States. APU created a

[28] California Energy Commission (CEC). 2019d. 2010-2018 CEC-A15 Results and Analysis. Website: https://www.energy.ca.gov/data-reports/energy-almanac/transportation-energy/california-retail-fuel-outlet-annual-reporting. Accessed March 16, 2021.
[29] United States Energy Information Administration (EIA). 2021. "U.S. Energy Mapping System [Interactive Database]." Website: https://www.eia.gov/state/maps.php. Accessed February 10, 2021.
[30] Google. 2021. "Google Maps [Interactive Database]." Website: https://www.google.com/maps/search/anaheim,+gas+station/@33.8031042,-117.9921396,12.19z. Accessed February 10, 2021.
[31] California Energy Commission (CEC) 2021. Electric Generation Capacity and Energy. Website: https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/electric-generation-capacity-and-energy. Accessed February 17, 2021.
[32] Ibid.
[33] Ibid.

Greenhouse Gas Reduction Plan in 2015 that is regularly updated and tracks APU's progress in complying with the Renewable Portfolio Standards.[34]

4.1.3 - Natural Gas

California

Natural gas continues to play an important and varied role in California; however, California continues to depend on out-of-state imports for nearly 90 percent of its natural gas supply[35]. The State's net natural gas marketed production for 2019 was approximately 192,998 million cubic feet, representing a decrease of approximately 2.4 percent from 2018 production.[36]

4.2 - Energy Demand

4.2.1 - Petroleum

California

According to the EIA, transportation accounted for nearly 40 percent of California's total energy demand, amounting to approximately 3,170 trillion BTU in 2018.[37] California's transportation sector, including rail and aviation, consumed roughly 584 million barrels of petroleum fuels in 2018.[38] In 2018, petroleum-based fuels were used for approximately 86 percent of the state's total transportation activity.[39] The CEC produces the California Annual Retail Fuel Outlet Report, which is a compilation of gasoline and diesel fuel sales data from across the State available at the county level. According to the CEC, California's 2017 fuel sales totaled 15,471 million gallons of gasoline and 3,417 million gallons of diesel.[40]

City of Anaheim

The smallest scale at which gasoline and diesel fuel sales information is readily available is the county level. Therefore, fuel sales in Orange County are used herein to characterize the City's existing gasoline and diesel fuel consumption. According to the CEC, Orange County consumed an estimated 1,325 million gallons of gasoline and 56 million gallons of diesel fuel in 2019.[41]

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[34] Anaheim Public Utilities (APU). 2020. Greenhouse Gas Reduction Plan. Website: https://www.anaheim.net/DocumentCenter/View/7987/Greenhouse-Gas-Reduction-Plan?bidId=. Accessed February 25, 2021.

[35] California Air Resources Board (ARB). 2020. Out-of-State Greenhouse Gas Emissions from Loss, Release, and Flaring of Natural Gas Imported to California. Website: https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2018/ab_2195_out_of_state_natural_gas_emissions.pdf#:~:text=Approximately%2090%20percent%20of%20the%20natural%20gas%20used,as%20CO%202%20as%20a%20product%20of%20combustion. Accessed: February 10, 2021.

[36] United States Energy Information Administration (EIA). 2021. Natural Gas Gross Withdrawals and Production. Website: https://www.eia.gov/dnav/ng/ng_prod_sum_a_EPG0_VGM_mmcf_a.htm Accessed February 10, 2021.

[37] United States Energy Information Administration (EIA). 2020d. Table F33: Total Energy Consumption, Price, and Expenditure Estimates, 2018. May 29. Website: https://www.eia.gov/state/seds/sep_fuel/html/pdf/fuel_te.pdf. Accessed March 16, 2021.

[38] United States Energy Information Administration (EIA). 2020. Table F16: Total Petroleum Consumption Estimates, 2018. April 24. Website: https://www.eia.gov/state/seds/sep_fuel/html/pdf/fuel_use_pa.pdf. Accessed March 16, 2021.

[39] United States Energy Information Administration (EIA). 2020. Table F18: Natural Gas Consumption Estimates, 2018. January 3. Website: https://www.eia.gov/state/seds/seds-data-fuel.php?sid=CA#NaturalGas. Accessed March 16, 2021.

[40] California Energy Commission (CEC). 2019. 2010-2018 CEC-A15 Results and Analysis. Website: https://www.energy.ca.gov/data-reports/energy-almanac/transportation-energy/california-retail-fuel-outlet-annual-reporting. Accessed March 16, 2021.

[41] California Energy Commission (CEC). 2020. 2010-2019 CEC-A15 Results and Analysis. Website: https://www.energy.ca.gov/data-reports/energy-almanac/transportation-energy/california-retail-fuel-outlet-annual-reporting. Accessed January 28, 2021.

4.2.2 - Electricity

California

According to the CEC, California consumed approximately 277,704 GWh in 2019, down almost 3 percent from 2018.[42]

Orange County

The smallest scale at which electricity consumption information is readily available is the county level. Therefore, electricity consumption in Orange County is used herein to characterize the City's existing electricity consumption. According to the CEC, County consumed approximately 19459.51 GWh in 2019.[43]

4.2.3 - Natural Gas

California

In 2018, California consumed a total of 12,666 million United States therms of natural gas, or approximately 1,266 trillion BTU,[44] with approximately 28.8 percent going directly to electricity generation. According to the CEC's Energy Consumption Database, residential natural gas demand accounted for approximately 34.7 percent of California's total natural gas demand while non-residential natural gas demand accounted for approximately 65.3 percent).[45]

Orange County

The smallest scale at which natural gas consumption information is available is the county level; therefore, natural gas consumption in Orange County is used herein to characterize the City's existing natural gas consumption. According to the CEC, Orange county consumed approximately 623 million therms of gas in 2019.[46]

4.3 - Regulatory Environment

Federal

Energy Independence and Security Act

The Energy Policy Act of 2005 created the Renewable Fuel Standard program. The Energy Independence and Security Act of 2007 expanded this program by:

- Expanding the Renewable Fuel Standard program to include diesel in addition to gasoline;

[42] California Energy Commission (CEC). 2021. 2019 Total System Electric Generation. Website: https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2019-total-system-electric-generation. Accessed February 11. 2021.
[43] California Energy Commission (CEC). Electricity Consumption by County. Website: https://ecdms.energy.ca.gov/elecbycounty.aspx. Accessed February 11, 2021.
[44] California Energy Commission (CEC). 2020. "Gas Consumption by County." Website: https://ecdms.energy.ca.gov/gasbycounty.aspx. Accessed January 28, 2021.
[45] California Energy Commission (CEC). 2018. "Gas Consumption by County." Website: https://ecdms.energy.ca.gov/gasbycounty.aspx. Accessed March 15, 2021.
[46] California Energy Commission (CEC). 2021. Gas Consumption by County. Website: http://www.ecdms.energy.ca.gov/gasbycounty.aspx. Accessed February 10, 2021.

- Increasing the volume of renewable fuel required to be blended into transportation fuel from 9 billion gallons in 2008 to 36 billion gallons by 2022;
- Establishing new categories of renewable fuel, and setting separate volume requirements for each one; and
- Requiring the EPA to apply life-cycle GHG performance threshold standards to ensure that each category of renewable fuel emits fewer GHGs than the petroleum fuel it replaces.

This expanded Renewable Fuel Standard program lays the foundation for achieving substantial reductions of GHG emissions from the use of renewable fuels, reducing the use of imported petroleum, and encouraging the development and expansion of the nation's renewable fuels sector.

Signed on December 19, 2007, by President George W. Bush, the Energy Independence and Security Act of 2007 aims to:

- Move the United States toward greater energy independence and security;
- Increase the production of clean renewable fuels;
- Protect consumers;
- Increase the efficiency of products, buildings, and vehicles;
- Promote research on and deploy GHG capture and storage options;
- Improve the energy performance of the Federal Government; and
- Increase United States energy security, develop renewable fuel production, and improve vehicle fuel economy.

The Energy Independence and Security Act reinforces the energy reduction goals for federal agencies put forth in Executive Order 13423, as well as introduces more aggressive requirements. The three key provisions enacted are the Corporate Average Fuel Economy Standards, the Renewable Fuel Standard, and the appliance/lighting efficiency standards.

The EPA is committed to developing, implementing, and revising both regulations and voluntary programs under the following subtitles in the Act, among others:

- Increased Corporate Average Fuel Economy Standards;
- Federal Vehicle Fleets;
- Renewable Fuel Standard;
- Biofuels Infrastructure; and
- Carbon Capture and Sequestration.

Energy Policy and Conservation Act

Enacted in 1975, the Energy Policy and Conservation Act established fuel economy standards for new light-duty vehicles sold in the United States. The law placed responsibility on the NHTSA, a part of the United States Department of Transportation, for establishing and regularly updating vehicle standards. The EPA administers the Corporate Average Fuel Economy (CAFE) program, which determines vehicle manufacturers' compliance with existing fuel economy standards. In 2012, the USEPA and NHTSA established final passenger car and light truck CAFE standards for model years

2017-2021, which will require in model year 2021, on average, a combined fleet-wide fuel economy of 40.3-41.0 mpg.

Energy Star Program

In 1992, the EPA introduced Energy Star© as a voluntary labeling program designed to identify and promote energy-efficient products to reduce GHG emissions. The program applies to major household appliances, lighting, computers, and building components such as windows, doors, roofs, and heating and cooling systems. Under this program, appliances that meet specification for maximum energy use established under the program are certified to display the Energy Star© label. In 1996, the EPA joined with the Energy Department to expand the program, which now also includes qualifying commercial and industrial buildings, as well as homes.

4.3.1 - California

California Assembly Bill 1493: Pavley Regulations and Fuel Efficiency Standards

As previously noted, the EPA recently rescinded California's waiver for its GHG and zero-emission California AB 1493: Pavley Regulations and Fuel Efficiency Standards. However, these regulations are still in effect at the time of this writing.

California AB 1493, enacted on July 22, 2002, required the ARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light-duty trucks. Implementation of the regulation was delayed by lawsuits filed by automakers and by the EPA's denial of an implementation waiver. The EPA subsequently granted the requested waiver in 2009, which was upheld by the United States District Court for the District of Columbia in 2011.

The standards phase in during the 2009 through 2016 model years. When fully phased in, the near-term (2009–2012) standards will result in an approximately 22-percent reduction compared with the 2002 fleet, and the mid-term (2013–2016) standards will result in about a 30-percent reduction. Several technologies stand out as providing significant reductions in emissions at favorable costs. These include discrete variable valve lift or camless valve actuation to optimize valve operation rather than relying on fixed valve timing and lift as has historically been done; turbocharging to boost power and allow for engine downsizing; improved multi-speed transmissions; and improved air conditioning systems that operate optimally, leak less, and/or use an alternative refrigerant.

The second phase of the implementation for the Pavley Bill was incorporated into Amendments to the LEV Program referred to as LEV III or the Advanced Clean Cars program. The Advanced Clean Car program combines the control of smog-causing pollutants and GHG emissions into a single coordinated package of requirements for model years 2017 through 2025. The regulation will reduce GHGs from new cars by 34 percent from 2016 levels by 2025. The new rules will reduce pollutants from gasoline and diesel-powered cars and deliver increasing numbers of zero-emission technologies, such as full battery-electric cars, newly emerging plug-in hybrid electric vehicles and hydrogen fuel cell cars. The regulations will also ensure adequate fueling infrastructure is available for the increasing numbers of hydrogen fuel cell vehicles planned for deployment in California (ARB 2012).

California Senate Bill 1078: Renewable Electricity Standards

On September 12, 2002, Governor Gray Davis signed Senate Bill (SB) 1078, requiring California to generate 20 percent of its electricity from renewable energy by 2017. SB 107 changed the due date to 2010 instead of 2017. On November 17, 2008, Governor Arnold Schwarzenegger signed Executive Order S-14-08, which established a Renewable Portfolio Standard (RPS) target for California, requiring that all retail sellers of electricity serve 33 percent of their load with renewable energy by 2020. Governor Schwarzenegger also directed the ARB (Executive Order S-21-09) to adopt a regulation by July 31, 2010, requiring the State's load-serving utilities to meet a 33 percent renewable energy target by 2020. The ARB Board approved the Renewable Electricity Standard on September 23, 2010 by Resolution 10-23.

California Senate Bill 100: California Renewable Energy Portfolio Standard Program

Approved by Governor Brown on September 10, 2018, Senate Bill (SB) 100 amends the State's RPS program from 33 percent of electricity generation from renewable sources by 2020 and 50 percent by 2030 to greater requirements of renewable and carbon-free electricity generation for retail sales of electricity in California. Below are the amended RPS benchmark years and portfolio standards.

- By 2020, 33 percent of electricity generation from renewable sources.
- By 2026, 50 percent of electricity generation from renewable sources.
- By 2030, 60 percent of electricity generation from renewable sources.
- By 2050, 100 percent of electricity generation from carbon-free sources.

Assembly Bill 2076: Reducing Dependence on Petroleum

Pursuant to AB 2076 (Chapter 936, Statutes of 2000), the CEC and the ARB prepared and adopted a joint-agency report, *Reducing California's Petroleum Dependence,* in 2003. Included in this report are recommendations to increase the use of alternative fuels to 20 percent of on-road transportation fuel use by 2020 and 30 percent by 2030, significantly increase the efficiency of motor vehicles, and reduce per capita VMT. One of the performance-based goals of AB 2076 is to reduce petroleum demand to 15 percent below 2003 demand. Furthermore, in response to the CEC's 2003 and 2005 *Integrated Energy Policy Reports*, the Governor directed the CEC to take the lead in developing a long-term plan to increase alternative fuel use.

California SB 350: Clean Energy and Pollution Reduction Act

In 2015, the State legislature approved, and the Governor signed SB 350 that reaffirms California's commitment to reducing its GHG emissions and addressing climate change. Key provisions include an increase in the RPS, higher energy efficiency requirements for buildings, initial strategies towards a regional electricity grid, and improved infrastructure for electric vehicle charging stations. Provisions for a 50 percent reduction in the use of petroleum Statewide were removed from the Bill due to opposition and concern that it would prevent the Bill's passage. Specifically, SB 350 requires the following to reduce Statewide GHG emissions:

- Increase the amount of electricity procured from renewable energy sources from 33 percent to 50 percent by 2030, with interim targets of 40 percent by 2024, and 25 percent by 2027.

- Double the energy efficiency in existing buildings by 2030. This target will be achieved through the California Public Utility Commission, the CEC, and local publicly owned utilities.
- Reorganize the Independent System Operator (ISO) to develop more regional electrify transmission markets and to improve accessibility in these markets, which will facilitate the growth of renewable energy markets in the western United States.[47]

Assembly Bill 1007: State Alternative Fuels Plan

AB 1007 (Chapter 371, Statutes of 2005) required the CEC to prepare a plan to increase the use of alternative fuels in California. The CEC prepared the State Alternative Fuels Plan in partnership with the ARB and in consultation with other federal, state, and local agencies. The State Alternative Fuels Plan presents strategies and actions California must take to increase the use of alternative non-petroleum fuels in a manner that minimizes costs to California and maximizes the economic benefits of in-state production. The State Alternative Fuels Plan assessed various alternative fuels and developed fuel portfolios to meet California's goals to reduce petroleum consumption, increase alternative fuels use, reduce GHG emissions, and increase in-state production of biofuels without causing a significant degradation of public health and environmental quality.

Executive Order S-06-06: Bioenergy Action Plan

Executive Order (EO) S-06-06, April 25, 2006, establishes targets for the use and production of biofuels and biopower, and directs state agencies to work together to advance biomass programs in California while providing environmental protection and mitigation. The EO establishes the following target to increase the production and use of bioenergy, including ethanol and biodiesel fuels made from renewable resources: produce a minimum of 20 percent of its biofuels in California by 2010, 40 percent by 2020, and 75 percent by 2050. Executive Order S-06-06 also calls for the state to meet a target for use of biomass electricity. The 2011 Bioenergy Action Plan identifies those barriers and recommends actions to address them so that the state can meet its clean energy, waste reduction, and climate protection goals. The 2012 Bioenergy Action Plan updates the 2011 Plan and provides a more detailed action plan to achieve the following goals:

- Increase environmentally and economically sustainable energy production from organic waste;
- Encourage development of diverse bioenergy technologies that increase local electricity generation, combined heat and power facilities, renewable natural gas, and renewable liquid fuels for transportation and fuel cell applications;
- Create jobs and stimulate economic development, especially in rural regions of the state; and
- Reduce fire danger, improve air and water quality, and reduce waste.

California Code of Regulations Title 20: Appliance Efficiency Regulations

California Code of Regulations, Title 20: Division 2, Chapter 4, Article 4, Sections 1601-1608: Appliance Efficiency Regulations regulates the sale of appliances in California. The Appliance

[47] California Legislative Information (California Leginfo). 2015. Senate Bill 350 Clean Energy and Pollution Reduction Act of 2015. Website: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB350. Accessed March 16, 2021.

Efficiency Regulations include standards for both federally regulated appliances and non-federally regulated appliances. Twenty-three categories of appliances are included in the scope of these regulations. The standards within these regulations apply to appliances that are sold or offered for sale in California, except those sold wholesale in California for final retail sale outside the State and those designed and sold exclusively for use in recreational vehicles or other mobile equipment.[48]

California Code of Regulations Title 24: Energy Efficiency Standards

California Code of Regulations Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings, was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions. The 2019 Building Energy Efficiency Standards went into effect on January 1, 2020.[49]

California Code of Regulations Title 24: California Green Building Standards Code

California Code of Regulations Title 24, Part 11, is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went in effect January 1, 2011. The code is updated on a regular basis, with the most recent update consisting of the 2019 CALGreen that became effective January 1, 2020. Local jurisdictions are permitted to adopt more stringent requirements, as California law provides methods for local enhancements. The code recognizes that many jurisdictions have developed existing construction and demolition ordinance and defers to them as the ruling guidance if they provide a minimum 50 percent diversion requirement. The code also provides exemptions for areas not served by construction and demolition recycling infrastructure. The California Building Code provides the minimum standard that buildings need to meet in order to be certified for occupancy and is enforced by the local building or planning department with jurisdiction over the building or residence location.

California Energy Plan

The CEC is responsible for preparing the California Energy Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The 2008 California Energy Plan calls for the state to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies several strategies, including assistance to public agencies and fleet operators in implementing incentive programs for ZEVs and addressing their infrastructure needs, as well as encouragement of urban designs that reduce VMT and accommodate pedestrian and bicycle access.

[48] Bay Area Air Quality Management District (BAAQMD). 2017. CEQA Air Quality Guidelines. May. Website: http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en. Accessed March 2, 2021.

[49] California Energy Commission (CEC). 2021. 2019 Building Energy Efficiency Standards. Website: https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2019-building-energy-efficiency. Accessed March 2, 2021.

Integrated Energy Policy Report

Senate Bill 1389 (Chapter 568, Statutes of 2002) required the CEC to conduct assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices. The CEC uses these assessments and forecasts to develop energy policies that conserve resources, protect the environment, ensure energy reliability, enhance the state's economy, and protect public health and safety. The most recent assessment, the 2018 Integrated Energy Policy Report, contains two volumes. Volume I highlights the implementation of California's innovative policies and the role they have played in establishing a clean energy economy. Volume II, scheduled for completion in February 2019, will provide more detail on several key energy issues and will encompass new analyses, as well as significant opportunities for public participation.

4.3.2 - Regional

South Coast Air Quality Management District

CEQA Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning

The SCAQMD prepared this guidance document as a reference for cities and counties within AQMD's jurisdiction. It provides suggested policies that local governments can use to prevent or reduce potential air pollution impacts and protect public health in their General Plans or through local planning. The objective of the guidance document is to facilitate stronger collaboration between local governments and the AQMD to reduce community exposure to source-specific and cumulative air pollution impacts.[50] Suggested energy policies include:

Goal 5 **Reduction in air pollution resulting from greater energy efficiency and conservation, and the use of renewable resources.**

Objective 5.1 Increase energy efficiency of city facilities and private developments.

Policies

Policy AQ 5.1.1 Utilize source reduction, recycling and other appropriate measures, to reduce the amount of solid waste disposed in landfills.

Policy AQ 5.1.2 Develop incentives that encourage the use of energy conservation strategies by private and public developments.

Policy AQ 5.1.3 Promote energy-efficient design features, including appropriate site orientation, use of lighter color roofing and building materials, and use of deciduous shade trees and windbreak trees to reduce fuel consumption for heating and cooling. AQ 5.1.4 Promote or provide incentives for "Green Building" programs that go beyond the requirements of Title 24 of the California Administrative Code and encourage energy efficient design elements as appropriate to achieve "green building" status.

[50] South Coast Air Quality Management District (SCAQMD). 2005. Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning. Website: https://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/complete-guidance-document.pdf?sfvrsn=4 Accessed February 17, 2021.

Policy AQ 5.1.5 Promote the use of automated time clocks or occupant sensors to control central heating and air conditioning.

Policy AQ 5.1.6 Utilize all available renewable energy sources to reduce fuel consumption and demand on the power grid.

Policy: AQ 5.1.7 Replace vehicles in the local government fleet with the most fuel-efficient vehicles that are commercially available.

4.3.3 - Local

City of Anaheim

General Plan

The City of Anaheim's General Plan, adopted in 2003 and revised several times since, includes the following applicable goals and implementing policies relevant to improving air quality.

Green Element

Goal 12.1 **Continue to be a county leader in the use of electric and alternative fuel vehicles.**

Goal 17.1 **Encourage building and site design standards that reduce energy costs.**

Policy

Policy 1 Encourage designs that incorporate solar and wind exposure features such as daylighting design, natural ventilation, space planning and thermal massing.

Public Services and Facilities Element

Goal 3.1 **Generate electricity in a manner that is reliable, cost-effective, and sustainable.**

Policies

Policy 1 Coordinate with Southern California Edison and other suppliers regarding electricity supply and distribution to provide a continual source of reliable and efficient energy.

Policy 2 Ensure that adequate electricity capacity exists for planned development.

Policy 3 Encourage the development and use of renewable energy resources.

Goal 8.1 **Coordinate with private utilities to provide adequate natural gas and communications infrastructure to existing and new development in a manner compatible with the surrounding community.**

Policies

Policy 1 Coordinate with private utilities to provide Anaheim residents with highspeed, high-capacity information systems and adequate natural gas infrastructure.

Policy 2 Coordinate with private utilities on site design and land use compatibility issues.

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SECTION 5: MODELING PARAMETERS AND ASSUMPTIONS

5.1 - Model Selection and Guidance

Regional air pollutant emissions derive from on-site and off-site construction and operational activities. Air pollutant emissions can be estimated by using emission factors and a level of activity. Emission factors represent the emission rate of a pollutant over a given time or activity; for example, grams of NO_X emitted per vehicle mile traveled or grams of NO_X emitted per horsepower-hour of equipment operation. The activity factor is a measure of how active a piece of equipment is and can be represented as the amount of material processed, elapsed time that a piece of equipment is in operation, horsepower of a piece of equipment used, the amount of fuel consumed in a given amount of time, or vehicle miles traveled per day. The ARB has published emission factors for on-road mobile vehicles/trucks in the EMission FACtors (EMFAC) mobile source emissions model and emission factors for off-road equipment and vehicles in the OFFROAD emissions model. An air emissions model (or calculator) combines the emission factors and the levels of activity and outputs the emissions for the various pieces of equipment.

The California Emissions Estimator Model (CalEEMod) was developed in cooperation with the SCAQMD and other air districts throughout the state. The California Emissions Estimator Model (CalEEMod) is designed as a uniform platform for government agencies, land-use planners, and environmental professionals to quantify potential criteria pollutant and GHG emissions associated with construction and operation from a variety of land uses. The current version of CalEEMod, Version 2016.3.2, uses emission factors from the ARB OFFROAD2014 and EMFAC2014 emission models.

The emissions models used in this analysis are summarized as follows:

- Construction emissions: CalEEMod, Version 2016.3.2
- Operational emissions: CalEEMod, Version 2016.3.2

5.1.1 - Construction

Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation, and prevailing weather conditions. Construction emissions result from on-site and off-site activities. On-site emissions principally consist of exhaust emissions from the activity levels of heavy-duty construction equipment, motor vehicle operation, and fugitive dust (mainly PM_{10}) from disturbed soil. Additionally, paving operations and the application of architectural coatings would release reactive organic gas (ROG) emissions. Off-site emissions are caused by motor vehicle exhaust from delivery vehicles, worker traffic, and road dust (PM_{10} and $PM_{2.5}$).

Construction Schedule and Activities

Construction activities would include demolition of the existing paved surfaces and structures, site preparation, grading, building construction, architectural coatings, and paving. For each construction activity, the construction equipment types, operating hours, and numbers represent the average

equipment activity over the duration of the activity. A conceptual construction schedule is provided in Table 6 for each construction activity. The applicant anticipates that construction the proposed project would begin in August 2021 and end in May 2023. The construction schedule used in the analysis represents a reasonable "worst-case" analysis scenario since emission factors for construction equipment decrease as the analysis year increases, due to improvements in technology, equipment turn-over, and compliance with more stringent regulatory requirements. Therefore, construction emissions would decrease if the construction schedule moved to later years.

Table 7 presents the construction equipment inventory along with hours of operation per day, horsepower, and load factor. Where project-specific information was not available or unknown, default assumptions contained in CalEEMod were used to complete emissions modeling. The activity for construction equipment is based on the horsepower and load factors of the equipment. In general, the horsepower is the power of an engine—the greater the horsepower, the greater the power. The load factor is the average power of a given piece of equipment while in operation compared with its maximum rated horsepower. A load factor of 1.0 indicates that a piece of equipment continually operates at its maximum operating capacity. This analysis uses the CalEEMod default load factors for all off-road equipment.

The duration of construction activity and associated equipment represent a reasonable approximation of the expected construction fleet as required by the CEQA Guidelines. Appendix A provides the full construction emissions modeling parameters and assumptions.

Table 6: Conceptual Construction Schedule

Construction Phase	Construction Schedule		Working Days[1]
	Start Date	End Date	
Demolition	8/1/2021	8/15/2021	10
Site Preparation	8/16/2021	8/31/2021	12
Grading	9/1/2021	12/31/2021	88
Building Construction	10/1/2021	12/31/2022	326
Paving	6/1/2022	4/30/2023	238
Architectural Coating	6/1/2022	4/30/2023	238

Note:
[1] It was assumed that construction would occur 5 days a week.
Source: CalEEMod Output (Appendix A).

Table 7: Project Construction Equipment Assumptions

Phase Name	Equipment	Quantity	Hours per day	Horsepower	Load Factor
Demolition	Concrete/industrial saws	1	8	81	0.72
	Excavator	1	8	158	0.38
	Rubber Tired Dozer	1	8	247	0.40

Phase Name	Equipment	Quantity	Hours per day	Horsepower	Load Factor
Site Preparation	Excavators	1	8	158	0.38
	Rubber Tired Dozers	1	8	247	0.4
	Tractors/Loaders/Backhoes	1	8	97	0.37
Grading	Excavators	1	8	158	0.38
	Graders	1	8	187	0.41
	Rubber Tired Dozers	1	8	247	0.4
	Scrapers	1	8	367	0.48
	Tractors/Loaders/Backhoes	1	8	97	0.37
Building Construction	Cement and Mortar Mixers	1	8	9	0.56
	Cranes	1	7	231	0.29
	Forklifts	2	8	89	0.2
	Generator Sets	1	8	84	0.74
	Pumps	1	8	84	0.74
	Tractors/Loaders/Backhoes	1	7	97	0.37
	Welders	1	8	46	0.45
Paving	Pavers	2	8	130	0.42
	Paving Equipment	2	8	132	0.36
	Rollers	2	8	80	0.38
Architectural Coating	Air Compressors	1	6	78	0.48
Source: CalEEMod Output (Appendix A).					

Construction Off-site Trips

A summary of the construction-related vehicle trips is shown in Table 8. CalEEMod defaults were used for construction trips, trip lengths, and vehicle fleets. During grading, it is expected that the proposed project would not require export of material to an off-site location based on information provided by the project applicant. Haul trips associated with the demolition and removal of buildings and any associated hardscape are accounted for in the demolition phase. Note that the total number of off-site construction vehicle trips would not necessarily occur on the same day, since the various construction activities would vary each day and during the construction time period.

Table 8: Construction Off-site Trips

Construction Activity	Worker (Trips per day)	Vendor (Trips per day)	Haul (Total Trips)
Demolition	8	0	21
Site Preparation	8	0	0
Grading	13	0	0

Construction Activity	Worker (Trips per day)	Vendor (Trips per day)	Haul (Total Trips)
Building Construction	186	45	0
Paving	15	0	0
Architectural Coating	37	0	0
Source: CalEEMod Output (Appendix A).			

Fugitive Dust

During grading activities, fugitive dust can be generated from the movement of dirt on the project site. CalEEMod estimates dust from dozers moving dirt around, dust from graders or scrapers leveling the land, and loading or unloading dirt into haul trucks. Every project within the SCAQMD's jurisdiction is required to comply with the requirements of SCAQMD Rule 403 (Fugitive Dust). SCAQMD Rule 403 requires fugitive dust generating activities follow best available control measures to reduce emissions of fugitive dust. As shown in Table 9, per SCAQMD guidance, the Rule 403 measures are accounted for in CalEEMod through selection of the appropriate mitigation measures in CalEEMod. CalEEMod categorizes these measures as "mitigation," even though they are technically not mitigation but are required by rule.

Table 9: Best Available Control Measures

Best Available Control Measure	Associated Measure in CalEEMod
Clearing and Grubbing	
02-1 Maintain stability of soil through pre-watering of site prior to clearing and grubbing. 02-2 Stabilize soil during clearing and grubbing activities. 02-3 Stabilize soil immediately after clearing and grubbing activities.	Water exposed surfaces three times per day Twelve percent moisture content on unpaved roads
Earth Moving Activities	
08-1 Pre-apply water to depth of proposed cuts 08-2 Re-apply water as necessary to maintain soils in a damp condition and to ensure that visible emissions do not exceed 100 feet in any direction	Water exposed surfaces three times per day
08-3 Stabilize soils once earth-moving activities are complete	
Import/Export of Bulk Materials	
09-1 Stabilize material while loading to reduce fugitive dust emissions.	Water exposed surfaces three times per day
09-3 Stabilize material while transporting to reduce fugitive dust emissions. 09-4 Stabilize material while unloading to reduce fugitive dust emissions.	Water exposed surfaces three times per day Twelve percent moisture content on unpaved roads

Best Available Control Measure	Associated Measure in CalEEMod
Landscaping	
10-1 Stabilize soils, materials, slopes	Water exposed surfaces three times per day
Staging Areas	
13-1 Stabilize staging areas during use by limiting vehicle speeds to 15 mph.	Reduce speed on unpaved roads to 15 mph.
Traffic Areas for Construction Activities	
15-1 Stabilize all off-road traffic and parking areas.	Water exposed surfaces three times per day Twelve percent moisture content on unpaved roads
Source of Best Available Control Measures: South Coast Air Quality Management District (SCAQMD). 2005. Rule 403—Fugitive Dust. Amended June 3, 2005. Website: https://www.aqmd.gov/home/rules-compliance/compliance/rule-403-dust-control-information. Accessed March 16, 2021. Source of associated CalEEMod measures: CalEEMod Output (Appendix A).	

5.1.2 - Operation

Operational emissions are those emissions that occur during the operation of a project. The major sources are summarized below.

Motor Vehicles

Motor vehicle emissions refer to exhaust and road dust emissions from the motor vehicle traffic that would travel to and from and within the project site each day. The regional emissions from the proposed project's mobile sources were estimated using CalEEMod. Trip generation rates and VMT for the project were provided in the Draft Traffic Impact Study, produced by Iteris and dated January 12, 2021. Table 10 presents the forecasted daily trip generation rates and VMT that were used in estimating the project's long-term operational mobile-source emissions.

Table 10: Average Daily Trip Generation

Land Use	Daily Trips per Dwelling Unit	Total Daily Trips
Townhomes	5.44	4,624
Source: Iteris 2021. Project at 110-229 West Midway Drive Traffic Impact Study Draft. January 12, 2021.		

Other Emission Sources

Area Sources

Area-source emissions include occasional architectural coating activities for repainting and maintenance of the proposed buildings. CalEEMod assumes that repainting occurs at a rate of ten percent of the total proposed buildings per year. Therefore, on average, it is assumed that the buildings are fully repainted every 10 years.

Other area-source emissions include consumer products that involve solvents that emit ROGs during their product use. CalEEMod includes default consumer product use rates based on the building square footage.

Lastly, CalEEMod includes area-source emission calculations for landscape maintenance equipment. CalEEMod default emission factors for landscape maintenance equipment were used in this analysis.

Indirect Emissions

CalEEMod contains calculations to estimate indirect GHG emissions. Indirect emissions are emissions where the location of consumption or activity is different from where the actual emissions are generated. For example, electricity would be consumed at the project site; however, the emissions associated with producing that electricity are generated off-site at a power plant.

CalEEMod includes calculations for indirect GHG emissions for electricity consumption, water consumption, and solid waste disposal. For water consumption, CalEEMod calculates the embedded energy (e.g., treatment, conveyance, distribution) associated with providing each gallon of potable water to the project. For solid waste disposal, CalEEMod calculates the GHG emissions generated as solid waste generated by the project decomposes in a landfill.

For electricity-related emissions, CalEEMod contains default electricity intensity factors for various utilities throughout California. For the purposes of the proposed project, the APU emission factor was selected to quantify electricity emissions. The default CalEEMod emission factors for APU were modified to reflect compliance with the Renewable Electricity standard as follows:

- Carbon dioxide: 1,034 pound per megawatt hour (lb/MWh)
- Methane: 0.029 lb/MWh
- Nitrous oxide: 0.006 lb/MWh

5.2 - Emissions Model Selection—Localized Assessment

Whereas the regional estimation of emissions quantifies the project's emissions throughout the region, the estimation of the proposed project's local construction and operational emissions focuses on emissions that the proposed project would generate on the project site.

5.2.1 - Localized Assessment—Construction

The proposed project's localized construction emissions would consist of those emissions generated from on-site construction activities including site preparation, grading, building construction, paving, and architectural coating. The localized construction emissions would result in exhaust emissions from operation of off-road construction equipment and generation of fugitive dust from earth-moving activities. CalEEMod provides emissions outputs that separate on- and off-site construction emissions. For the purposes of localized emissions screening analysis, only on-site emissions were used to compare with SCAQMD's localized significant thresholds (LSTs).

5.2.2 - Localized Assessment—Operation

The project's operational emissions occur from a variety of sources described above; however, most long-term operational emissions occur off-site as mobile-source emissions. The localized assessment methodology limits analyzed emissions to those generated from on-site activities. Therefore, only on-site operational emissions were used to compare with SCAQMD's operational LSTs. A trip length of 0.1 mile was used in the modeling input assumptions to account for on-site emissions from mobile sources based on the measured on-site trip length, which provides for a reasonably worst-case scenario.

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SECTION 6: AIR QUALITY IMPACT ANALYSIS

This section calculates the expected emissions from the construction and operation of the project as a requisite for assessing the regulatory significance of project emissions on a regional and local level.

6.1 - CEQA Guidelines

The CEQA Guidelines define a significant effect on the environment as "a substantial, or potentially substantial, adverse change in the environment." To determine if a project would have a significant impact on air quality, the type, level, and impact of emissions generated by the project must be evaluated.

6.1.1 - Thresholds of Significance

The City of Anaheim relies on the SCAQMD for the following air quality significance thresholds. A potentially significant impact would occur if the proposed project would:

a) Conflict with or obstruct implementation of the applicable air quality plan.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation.

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors).

d) Expose the public (especially schools, day care centers, hospitals, retirement homes, convalescence facilities, and residences) to substantial pollutant concentrations.

e) Create objectionable odors affecting a substantial number of people.

The SCAQMD has developed daily regional and localized thresholds of significance to evaluate construction and operational emissions within its jurisdiction to address CEQA Guidelines. Established emissions thresholds were based on attainment status of the air basin relative to air quality standards for specific criteria pollutants. Because concentration standards were set at a level that protects public health with an adequate margin of safety, these emissions thresholds are considered conservative and would overstate an individual project's contribution related to air quality and health risks.

Regional thresholds presented in Table 11 would have significant adverse impacts on the air quality in the Air Basin. Therefore, projects within the Air Basin with construction or operational emissions in excess of any of the thresholds in Table 11 would have a significant adverse impact on the air quality in the Air Basin.

Table 11: SCAQMD Regional Thresholds

Pollutant	Construction (lbs/day)	Operational (lbs/day)
Volatile organic compounds (VOC), also known as reactive organic gases (ROG)	75	55
Nitrogen oxides (NO_X)	100	55
Carbon Monoxide (CO)	550	550
Sulfur Oxides (SOx)	150	150
Particulate Matter < 10 microns (PM_{10})	150	150
Particulate Matter < 2.5 microns ($PM_{2.5}$)	55	55

lbs = pounds
Source: SCAQMD 2019.

Localized Air Quality Significance Thresholds

The SCAQMD recommends that all air quality analyses include a localized assessment of both construction and operational emissions on nearby sensitive receptors. The SCAQMD has developed LSTs to be implemented at the discretion of local public agencies acting as a lead agency pursuant to CEQA. LSTs represent maximum mass emissions from a project site that would not result in pollutant concentrations that exceed NAAQS or CAAQS. LSTs are based on ambient concentrations of that pollutant within the SRA where a project is located, distance to nearest sensitive receptor, and size of the project site, all of which are the primary factors that influence pollutant concentrations.

The SCAQMD provided the Final Localized Significance Threshold Methodology (dated June 2003, revised 2009) for guidance. The LST Methodology assists lead agencies in analyzing localized air quality impacts, particularly CO, NO_X, PM_{10}, and $PM_{2.5}$. The SCAQMD provides LST mass rate look-up tables for projects with active construction areas that are less than or equal to 5 acres. These LST look-up values are provided to be used a as screening tool for identifying whether a more detailed analysis is needed for localized impacts. The appropriate LSTs can be determined based on the project's SRA, size, and distance to nearest sensitive receptor. The appropriate SRA for the LSTs is Central Orange County (SRA 17) since this area includes the project site. LSTs apply to CO, NO_2, PM_{10}, and $PM_{2.5}$. LSTs were obtained for sensitive receptors located 25 meters from the source area based on the project's proximity to existing sensitive receptors.

Table 12 shows the LSTs for NO_2, CO, PM_{10}, and $PM_{2.5}$ for both construction and operational activities for with sensitive receptors being 25 meters away. If a project exceeds an applicable LST, then the SCAQMD recommends that project-specific air quality modeling be performed.

Table 12: SCAQMD Local Air Quality Screening Thresholds

Activity	Allowable Emissions (pounds/day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Construction				
Construction (5-acre site)	183	1,253	13	7
Operation				
Operation (5-acre site)	183	1,253	3	2

Notes:
Source: SCAQMD Mass Rate Look-Up Tables for sites in SRA 17 for sensitive receptors located 25 meters (82 feet) from the project site.

6.2 - Impact Analysis

6.2.1 - Consistency with Air Quality Management Plan

Impact AIR-1: **The proposed project would not conflict with or obstruct implementation of the applicable air quality plan.**

Impact Analysis

The 2016 AQMP was released in March 2017. The 2016 AQMP evaluates integrated strategies and control measures to meet the NAAQS, as well as to explore new and innovative methods to reach its goals. Some of these approaches include utilizing a strategy with fair-share reductions at the federal, state, and local levels. To evaluate whether or not a project conflicts with, or obstructs the implementation of, the applicable air quality plan (2016 AQMP for the SoCAB), the SCAQMD CEQA Air Quality Handbook states that there are two key indicators. The indicators identified by the criteria are discussed below.

1. Indicator: Whether the project would not result in 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 or the interim emission reductions specified in the AQMP.

   Project applicability: applicable and assessed below.

2. Indicator: Whether the project would be inconsistent with the population, housing, and employment growth assumptions utilized in preparation of the air quality plan.

   Project applicability: applicable and assessed below.

Considering the recommended criteria in the SCAQMD's CEQA Handbook, this analysis uses the following criteria to address this potential impact:

- Step 1: Project's contribution to air quality violations (SCAQMD's first indictor)
- Step 2: Assumptions in AQMP (SCAQMD's second indicator)
- Step 3: Compliance with applicable emission control measures in the AQMPs

Step 1: Project's Contribution to Air Quality Violations

According to the SCAQMD, a project is consistent with the AQMP if the project would not result in 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 or the interim emission reductions specified in the AQMP. As shown in the discussion of Impact AIR-2 and Impact AIR-4, the proposed project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation or expose sensitive receptors to substantial pollutant concentrations with standard conditions incorporated.

If a project's emissions exceed the SCAQMD regional thresholds for NO_X, VOC, PM_{10}, or $PM_{2.5}$, it follows that the emissions could cumulatively contribute to an exceedance of a pollutant for which the basin is in nonattainment (ozone, NO_2, PM_{10}, $PM_{2.5}$) at a monitoring station in the basin. An exceedance of a nonattainment pollutant at a monitoring station would not be consistent with the goals of the AQMP—to achieve attainment of pollutants. As discussed in Impact AIR-3, the proposed project would not exceed the regional significance thresholds. Therefore, the proposed project would be consistent with the AQMP. The proposed project meets this criterion, and impacts would be less than significant.

Step 2: Consistency with Assumptions in AQMP

The development of emission burdens used in AQMPs to demonstrate compliance with ambient air quality standards is based, in part, on land use patterns contained within local general plans. Therefore, it is reasonable to conclude that if a project is consistent with the applicable general plan land use designation, and if the general plan was adopted prior to the applicable AQMP, then the growth of VMT and/or population generated by the project would be consistent with the growth in VMT and population assumed within the AQMP.

In order to be consistent with the growth assumptions in the AQMP, the project must be consistent with the City of Anaheim 2004 General Plan (General Plan), the SCAG's Growth Management Chapter of the Regional Comprehensive Plan and Guide, and SCAG's 2016 Regional Transportation Plan (RTP).

The site is subject to a Residential Opportunity Overlay Zone, which permits medium density residential land uses such as the proposed project. Opportunity Zones are intended to spur economic development and job creation, which the proposed project by providing housing for workers near one of Anaheim's largest employers. Therefore, the proposed project would not exceed the AQMP assumptions for the project site and is found to be consistent with the AQMP for the second criterion. Therefore, a less than significant impact will occur in relation to implementation of the AQMP.

Step 3: Air Quality Plan Control Measures

The proposed project would also comply with all applicable rules and regulations of the AQMP. Because of the nature of the proposed project, which includes grading activities, SCAQMD 403 applies. Rule 403 governs emissions of fugitive dust during construction and operation activities. The rule requires that fugitive dust be controlled with best available control measures so that the

presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source. In addition, SCAQMD Rule 403 requires implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off site. Compliance with this rule is achieved through application of standard BMPs, such as application of water or chemical stabilizers to disturbed soils, covering haul vehicles, restricting vehicle speeds on unpaved roads to 15 mph, sweeping loose dirt from paved site access roadways, cessation of construction activity when winds exceed 25 mph, and establishing a permanent ground cover on finished sites. The proposed project's compliance with SCAQMD Rule 403 would result in consistency with the applicable AQMP control measures. Additionally, construction of the proposed project would comply with Mitigation Measure (MM) 5.2-1 which would further reduce emissions during construction. As such, emissions of fugitive dust during construction would be minimal.

Accordingly, the proposed project would comply with the applicable SCAQMD rules discussed in Section 2.3.2 above. As such, the proposed project would not conflict with or obstruct implementation of the applicable air quality plans, and the impact would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

6.2.2 - Potential for Air Quality Standard Violation

Impact AIR-2:	**The proposed project would not violate an air quality standard or contribute substantially to an existing or projected air quality violation.**

Impact Analysis

This impact relates to localized criteria pollutant impacts. LSTs were developed in recognition of the fact that criteria pollutants such as CO, NO_X, and PM_{10} and $PM_{2.5}$ in particular, can have local impacts at nearby sensitive receptors as well as regional impacts. LSTs represent the maximum emissions from a project that would not cause or contribute to an exceedance of the most stringent applicable state or federal ambient air quality standard. Particulate matter emissions (PM_{10}) are of concern during construction because of the potential to emit fugitive dust during earth-disturbing activities. In addition, SCAQMD has set LSTs for project construction emissions. Because SCAQMD's LSTs for construction include a threshold for PM_{10}, fugitive dust emissions impacts are assessed through the LST analysis. CO emissions are of concern during project operation because operational CO hotspots are related to increases in on-road vehicle congestion. Each is discussed separately below. NO_2 impacts are also of concern because of the health impacts of NO_2 air quality and NO_2's participation in the formation of atmospheric ozone.

Localized Significance Thresholds

The SCAQMD Governing Board adopted a methodology for calculating localized air quality impacts through LSTs. The SCAQMD has subdivided the SoCAB into 36 separate Source Receptor Areas (SRAs) where emissions can originate or where receptors could be impacted from emission sources located in other SRAs. To facilitate the localized assessment process, the SCAQMD provides a series of look-

up tables that contain LSTs for each SRA within the basin. The proposed project is located within SRA 17, Central Orange County.

In addition to the dependence on geographic location within the SCAQMD (e.g., the SRA), the localized thresholds also depend on the distance to the impacted receptor from the source of emissions. The nearest sensitive receptors are the residences immediately to the south of the project, which are within 25 meters of the project boundary.

CalEEMod Version 2016.3.2 was used to estimate construction emissions. The emissions analysis incorporates required regulatory compliance, such as SCAQMD Rule 403. Note that because of the way CalEEMod is constructed, compliance with SCAQMD Rule 403 is reflected as mitigation in the output, although compliance with Rule 403 is mandatory and not considered mitigation under CEQA.

The localized assessment methodology limits the emissions in the analysis to those generated from on-site activities. The on-site emissions during construction are compared with the LSTs and summarized in Table 13. As shown therein, the construction of the proposed project would not exceed the SCAQMD's construction LSTs.

Table 13: Construction Localized Significance Analysis

Activity	On-site Emissions (pounds per day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Demolition	16.2	11.0	1.0	0.8
Site Preparation	15.0	9.6	3.5	2.2
Grading + Construction	48.1	33.8	5.0	3.5
Construction + Paving + Architectural Coating	27.5	31.7	1.5	1.3
Maximum Daily On-site Emissions	**48.1**	**33.8**	**5.0**	**3.5**
Localized Significance Threshold	183	1,253	13	7
Exceeds Threshold?	**No**	**No**	**No**	**No**

Notes:
NO_X = oxides of nitrogen
CO = carbon monoxide
PM_X = particulate matter
Credit for Rule 403 Fugitive Dust has been taken in the estimation of PM_{10} and $PM_{2.5}$ emissions
Source: Appendix A.

The on-site emissions during operation are compared with the LSTs and summarized in Table 14 below. As described above, the LST Methodology recommends that only on-site emissions are evaluated using LSTs. Most of the project's mobile-source emissions would occur on the local and regional roadway network away from the project, and only-on-site mobile source emissions need to be included in this analysis. A trip length of 0.1 mile was used in the modeling input assumptions to

estimate on-site emissions from mobile sources. As shown in Table 14, emissions during operation do not exceed the LSTs even including off-site mobile emissions.

Table 14: Operational Localized Significance Analysis

Emissions Source	Pounds per Day[1]			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Area	0.1	12.9	0.1	0.1
Energy	0.5	0.2	0.0	0.0
Mobile	1.9	2.6	0.1	0.0
Maximum Daily On-site Operational Emissions	**2.5**	**15.7**	**0.2**	**0.1**
Localized Significance Thresholds (5-acres)	**183**	**1,253**	**3**	**2**
Exceeds Any Threshold?	**No**	**No**	**No**	**No**

Notes:
NO_X = oxides of nitrogen
CO = carbon monoxide
PM_X = particulate matter
Source of Emissions: Appendix A.
Source of thresholds: SCAQMD Mass Rate Look-Up Tables for a 5-acre site in SRA 17 for sensitive receptors located 25 meters (82 feet) from the project site.

The localized analyses use thresholds that represent the maximum project emissions that would not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard. If the project results in emissions that do not exceed the LSTs, it follows that those emissions would not cause or contribute to a local exceedance of the appropriate ambient air quality standard. As shown in Table 13, the localized construction analysis demonstrates that the proposed project would not exceed the LSTs for NO_2, CO, PM_{10}, or $PM_{2.5.}$ Further, as shown in Table 14, on-site project operational emissions would not exceed the operational LSTs for NO_2, CO, PM_{10}, or $PM_{2.5}$. Therefore, the proposed project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation during construction or operations.

Level of Significance Before Mitigation

Less than significant impact.

6.2.3 - Cumulative Impacts

Impact AIR-3: **The proposed project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).**

Impact Analysis

This impact is related to regional criteria pollutant impacts. The nonattainment regional pollutants of concern are ozone, PM_{10}, and $PM_{2.5}$. Ozone is not emitted directly into the air, but is a regional pollutant formed by a photochemical reaction in the atmosphere. Ozone precursors, VOC, and NO_X react in the atmosphere in the presence of sunlight to form ozone. Therefore, the SCAQMD does not have a recommended ozone threshold, but has regional thresholds of significance for VOC and NO_X.

Emissions from projects in the SoCAB can potentially contribute to the existing emission burden and possibly affect the attainment and maintenance of ambient air quality standards. Therefore, the SCAQMD has established regional significance thresholds applicable to project construction and operational emissions. Projects within the SoCAB with regional emissions in excess of any of the applicable regional thresholds below are considered to have a significant regional air quality impact. Project-generated construction and operational emissions were estimated using CalEEMod Version 2016.3.2. Emissions model output is included as Appendix A to this report.

Construction Emissions

The construction activities associated with the project include demolition, site preparation, grading, building construction, paving, and architectural coating. The proposed project would be constructed over approximately 1.5 years, beginning as early as August 2021. CalEEMod construction phase lengths were based on information provided by the client. Where information was not provided, the appropriate CalEEMod defaults were utilized.

The proposed project would be required to adhere to standard SCAQMD regulations, such as implementing SCAQMD Rule 403 as discussed above, which would reduce fugitive dust emissions. Table 15 summarizes construction-generated emissions with standard conditions incorporated. For the assumptions used in generating the emissions, please refer to Appendix A.

The information shown in Table 15 indicates that the SCAQMD regional emission thresholds would not be exceeded for construction emissions. Therefore, the short-term construction emissions are considered to have a less than significant regional impact.

Table 15: Regional Construction Air Pollutant Emissions by Activity

Activity	Mass Daily Emissions (pounds per day)					
	NO_X	VOC	CO	SO_X	PM_{10}	$PM_{2.5}$
Demolition	16.7	1.7	11.4	0.0	1.5	0.8
Site Preparation	15.0	1.5	9.8	0.0	3.5	2.2
Grading + Construction	52.8	5.6	41.0	0.1	7.5	4.3

Activity	Mass Daily Emissions (pounds per day)					
	NO_X	VOC	CO	SO_X	PM_{10}	$PM_{2.5}$
Construction + Paving + Architectural Coating	28.0	10.5	38.5	0.1	4.0	2.1
Maximum Daily Emissions	52.8	10.5	41.0	0.1	7.5	4.3
SCAQMD Air Quality Significance Thresholds	100	75	550	150	150	55
Exceeds Threshold?	No	No	No	No	No	No

Notes:
NO_X = oxides of nitrogen; VOC = volatile organic compounds; CO = carbon monoxide; SO_x= sulfur oxides
PM_{10} = particulate matter with an aerodynamic resistance diameter of 10 micrometers or less
$PM_{2.5}$ = particulate matter with an aerodynamic resistance diameter of 2.5 micrometers.
Credit for Rule 403 Fugitive Dust has been taken in the estimation of PM_{10} and $PM_{2.5}$ emissions.
Source of emissions: Appendix A. Emissions totals may vary slightly due to rounding.

Operational Regional Emissions

CalEEMod was used to estimate operational emissions that would occur with the proposed land uses. Operational emissions are generated based on area, energy, and mobile sources. Area sources would include activities such as landscape maintenance, consumer product usage, and occasional application of architectural coatings. Energy sources would include electricity usage and natural gas combustion for space and water heating. Mobile sources would include vehicle trips associated with vehicles accessing the project site. Mobile trip characteristics are based on the Project at 110-229 West Midway Drive Traffic Impact Study.

Operational emissions were estimated for the summer and winter seasons. The maximum operational emissions between the summer and winter seasons, as derived from CalEEMod, are shown in Table 16. Outputs for both seasons are found in Appendix A.

The information shown in Table 16 indicates that the SCAQMD regional emission thresholds would not be exceeded for operational emissions. Therefore, the long-term operational emissions are considered to have a less than significant regional impact.

Table 16: Operational Emissions

Emissions Source	Pounds per Day[1]					
	VOC	NO_X	CO	SO_x	PM_{10}	$PM_{2.5}$
Area	5.7	0.1	12.9	0.0	0.1	0.1
Energy	0.1	0.5	0.2	0.0	0.0	0.0
Mobile	1.2	4.2	16.5	0.1	6.3	1.7
Total	**7.0**	**4.8**	**29.6**	**0.1**	**6.4**	**1.8**

Emissions Source	Pounds per Day[1]					
	VOC	NO_X	CO	SO_x	PM_{10}	$PM_{2.5}$
SCAQMD Air Quality Significance Thresholds	*55*	55	550	150	150	55
Exceeds Significance Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Note:
NO_X = oxides of nitrogen; VOC = volatile organic compounds; CO = carbon monoxide; SO_x= sulfur oxides
PM_{10} = particulate matter with an aerodynamic resistance diameter of 10 micrometers or less
$PM_{2.5}$ = particulate matter with an aerodynamic resistance diameter of 2.5 micrometers.
[1] For each source, the maximum emissions between summer and winter are shown.
Source: CalEEMod and FirstCarbon Solutions, see Appendix A. Emissions may vary slightly due to rounding.

Conclusion

The SCAQMD does not recommend quantified analysis of cumulative construction or operational emissions, nor does it provide separate methodologies or thresholds of significance to be used to assess cumulative construction or operational impacts. However, if an individual development project generates operational emissions that exceed the SCAQMD recommended daily thresholds, project-specific impacts would also cause a cumulative considerable increase in emissions for those pollutants for which the Air Basin is in nonattainment.

As indicated in Table 15 and Table 16 above, the proposed project would not exceed SCAQMD thresholds during construction or operation. Therefore, the proposed project's impacts would be considered less than significant.

Level of Significance Before Mitigation

Less than significant impact.

6.2.4 - Sensitive Receptors

Impact AIR-4: **The proposed project would not expose sensitive receptors to substantial pollutant concentrations.**

Impact Analysis

This discussion addresses whether the proposed project would expose sensitive receptors to naturally occurring asbestos, asbestos from building demolition, construction-generated localized criteria pollutant impacts, construction-generated DPM, construction or operational-related TACs, or operational CO hotspots.

Sensitive Receptors

Those who are sensitive to air pollution include children, the elderly, and persons with preexisting respiratory or cardiovascular illness. For purposes of CEQA, the SCAQMD considers a sensitive receptor to be a location where a sensitive individual could remain for 24 hours, such as residences, hospitals, or convalescent facilities. Commercial and industrial facilities are not included in the definition because employees do not typically remain on-site for 24 hours. However, when assessing

the impact of pollutants with 1-hour or 8-hour standards (such as nitrogen dioxide and carbon monoxide), commercial and/or industrial facilities would be considered sensitive receptors for those purposes.

The nearest sensitive receptors are the residences located approximately 25 meters south of the project site.

Naturally Occurring Asbestos

Asbestos is a fibrous mineral which is both naturally occurring in ultramafic rock (a rock type commonly found in California), and used as a processed component of building materials. Because asbestos has been proven to cause a number of disabling and fatal diseases, such as asbestosis and lung cancer, it is strictly regulated either based on its natural widespread occurrence, or in its use as a building material. In addition, the ARB approved an ATCM for construction, grading, quarrying and surface mining operations to minimize emissions of naturally occurring asbestos. The regulation requires application of BMPs to control fugitive dust in areas known to have naturally occurring asbestos and requires notification to the local air district prior to commencement of ground-disturbing activities.

The California Division of Mines and Geology (CDMG) has a published guide for generally identifying areas that are likely to contain NOA. The CDMG map indicates NOA are not known to occur within the project area. Therefore, disturbance of naturally occurring asbestos during project construction is not a concern for the proposed project. The proposed project would result in no impact from exposure of sensitive receptors to naturally occurring asbestos.

Asbestos-Containing Materials (ACM)

In the initial Asbestos National Emission Standards for Hazardous Air Pollutants rule promulgated in 1973, a distinction was made between building materials that would readily release asbestos fibers when damaged or disturbed (friable) and those materials that were unlikely to result in significant fiber release (non-friable). The EPA has since determined that, severely damaged, otherwise non-friable materials can release significant amounts of asbestos fibers. Asbestos has been banned from many building materials under the Toxic Substances Control Act, the CAA, and the Consumer Product Safety Act. However, most uses of asbestos for building material are not banned. Any buildings to be demolished that might contain asbestos would be evaluated and properly contained and remediated by qualified technicians. Therefore, the proposed project would not conflict with SCAQMD, federal, and State regulations regarding asbestos limitations. As such, this impact with respect to asbestos exposure would be less than significant.

Construction: Localized Construction Impacts

As shown in Impact AIR-2 above, the proposed project would not exceed the localized significance thresholds for construction-generated criteria pollutants. Therefore, the proposed project would not expose receptors to substantial criteria pollutant concentrations from construction activities. Impacts would be less than significant.

Construction: Diesel Particulate Matter

The proposed project would generate diesel exhaust, a source of DPM, during project construction. Diesel particulates are typically 2.5 microns ($PM_{2.5}$). On-site emissions of both diesel particulate matter occur during construction from the operation of heavy-duty construction equipment and from vendor trucks that operate on project sites.

Project activities that would generate diesel particulate matter emissions are short-term in nature. Moreover, the current methodological protocols required by SCAQMD and ARB when studying the health risk posed by diesel particulate matter assume the following: (1) 24-hour constant exposure; (2) 350 days a year; (3) for a continuous period lasting 30 years. Therefore, considering the dispersion of the emissions and the short construction time frame, exposure to diesel particulate matter is anticipated to be less than significant.

Operation: Toxic Air Pollutants

The proposed project would not include any substantial sources of toxic air contaminants. Therefore, a less than significant impact would occur.

Operation: CO Hotspot

As shown in Impact AIR-2 above, the proposed project would not create a localized CO hotspot. Therefore, the proposed project would not expose receptors to substantial CO concentrations from operational activities.

Conclusion

The proposed project would not expose receptors to substantial quantities or significant concentrations of asbestos from demolition or soils disturbance, construction-generated localized criteria pollutant concentrations, construction-generated diesel particulate matter, operational TACs, or CO hotspots. Therefore, the proposed project would result in a less than significant impact.

Level of Significance Before Mitigation

Less than significant impact.

6.2.5 - Objectionable Odors

Impact AIR-5:	**The proposed project would not create objectionable odors affecting a substantial number of people.**

Impact Analysis

Odors can cause a variety of responses. The impact of an odor is dependent on interacting factors such as frequency (how often), intensity (strength), duration (in time), offensiveness (unpleasantness), location, and sensory perception. While offensive odors rarely cause any physical harm, they still can be very unpleasant, leading to considerable distress and often generating citizen complaints to local governments and regulatory agencies. Odor-related symptoms reported in several studies include nervousness, headache, sleeplessness, fatigue, dizziness, nausea, loss of

appetite, stomachache, sinus congestion, eye irritation, nose irritation, runny nose, sore throat, cough, and asthma exacerbation.[51]

The SCAQMD's role is to protect the public's health from air pollution by overseeing and enforcing regulations.[52] The SCAQMD's resolution activity for odor compliance is mandated under California Health and Safety Code Section 41700 and falls under SCAQMD Rule 402. This rule on Public Nuisance Regulation states: "A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property."

The SCAQMD does not provide a suggested screening distance for a variety of odor-generating land uses and operations. However, the San Joaquin Valley Air Pollution Control District (Valley Air District) does have a screening distance for odor sources. Those distances are used as a guide to assess whether nearby facilities could be sources of significant odors. Projects that would site a new receptor farther than the applicable screening distances from an existing odor source would not likely have a significant impact. These screening distances by type of odor generator are listed in Table 17.

Table 17: Screening Levels for Potential Odor Sources

Odor Generator	Screening Distance
Wastewater Treatment Facilities	2 miles
Sanitary Landfill	1 mile
Transfer Station	1 mile
Composting Facility	1 mile
Petroleum Refinery	2 miles
Asphalt Batch Plant	1 mile
Chemical Manufacturing	1 mile
Fiberglass Manufacturing	1 mile
Painting/Coating Operations (e.g., auto body shop)	1 mile
Food Processing Facility	1 mile
Feed Lot/Dairy	1 mile
Rendering Plant	1 mile
Source: San Joaquin Valley Air Pollution Control District (Valley Air District). 2015. Guidance for Assessing and Mitigated Air Quality Impacts. February 19.	

[51] South Coast Air Quality Management District (SCAQMD). 2007. Odor Detection, Mitigation and Control Technology Forum and Roundtable Discussion. 2007. Website: www.aqmd.gov/tao/conferencesworkshops/OdorForum/OdorForumSummary.pdf.
[52] Ibid.

Construction-related Odors

Potential sources that may emit odors during construction activities include exhaust from diesel construction equipment. However, because of the temporary nature of these emissions, intermittent nature of construction activities, and highly diffusive properties of diesel PM exhaust, nearby receptors would not be affected by diesel exhaust odors associated with project construction. Odors from these sources would be localized and generally confined to the immediate area surrounding the proposed project site. The proposed project would utilize typical construction techniques, and odors would be typical of most construction-sites and temporary in nature. Impacts would be less than significant.

Operational-related Odors

The proposed project includes construction and development of residences, parking spaces, and associated landscaping. Land uses that are typically identified as sources of objectionable odors include landfills, transfer stations, sewage treatment plants, wastewater pump stations, composting facilities, feed lots, coffee roasters, asphalt batch plants, and rendering plants. The proposed project would not engage in any of these activities and would not be considered an odor generator as identified in Table 17. Therefore, the proposed project would not be considered a generator of objectionable odors during operations. Minor sources of odors, such as exhaust from mobile sources, are not typically associated with numerous odor complaints, but are known to have temporary and less concentrated odors. In summary, the project's long-term operational activities would not have any substantial odor sources that would expose nearby receptors. Considering the low intensity of potential odor emissions, the proposed project's operational activities would not expose receptors to objectionable odor emissions. Impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

SECTION 7: GREENHOUSE GAS IMPACT ANALYSIS

7.1 - CEQA Guidelines

CEQA Guidelines define a significant effect on the environment as "a substantial, or potentially substantial, adverse change in the environment." To determine if a project would have a significant impact on GHGs, the type, level, and impact of emissions generated by the project must be evaluated.

The following GHG significance thresholds are contained in Appendix G of the CEQA Guidelines, which were amendments adopted into the Guidelines on March 18, 2010, pursuant to SB 97. A significant impact would occur if the proposed project would:

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

7.1.1 - Thresholds of Significance for this Project

SCAQMD GHG Thresholds

The project site is within the SoCAB, which is under the jurisdiction of the SCAQMD. The SCAQMD formed a working group to identify GHG emissions thresholds for land use projects that could be used by local lead agencies in the air basin in 2008. The working group developed several different options that are contained in the SCAQMD Draft Guidance Document—Interim CEQA GHG Significance Threshold (Interim GHG Thresholds) that could be applied by lead agencies. The working group has not provided additional guidance since release of the interim guidance in 2008. The SCAQMD Board has not approved the thresholds; however, the Guidance Document provides substantial evidence supporting the approaches to significance of GHG emissions that can be considered by the lead agency in adopting its own threshold. The current interim thresholds consist of the following tiered approach:

- Tier 1 consists of evaluating whether or not the project qualifies for any applicable exemption under CEQA.
- Tier 2 consists of determining whether the project is consistent with a GHG reduction plan. If a project is consistent with a qualifying local GHG reduction plan, it does not have significant GHG emissions.
- Tier 3 consists of screening values, which the lead agency can choose, but must be consistent with all projects within its jurisdiction. A project's construction emissions are averaged over 30 years and are added to the project's operational emissions. If a project's emissions are below one of the following screening thresholds, then the project is less than significant:
  - All land use types: 3,000 $MTCO_2e$ per year

- Based on land use type: residential: 3,500 MT CO_2e per year; commercial: 1,400 MT CO_2e per year; or mixed use: 3,000 MT CO_2e per year

- Tier 4 has the following options:
  - Option 1: Reduce BAU emissions by a certain percentage; this percentage is currently undefined.
  - Option 2: Early implementation of applicable AB 32 Scoping Plan measures
  - Option 3, 2020 target for service population (SP), which includes residents and employees: 4.8 MT CO_2e/SP/year for projects and 6.6 MT CO_2e/SP/year for plans
  - Option 3, 2035 target: 3.0 MT CO_2e/SP/year for projects and 4.1 MT CO_2e/SP/year for plans
- Tier 5 involves mitigation offsets to achieve target significance threshold.

The SCAQMD provided substantial evidence in support of its threshold approach. The SCAQMD discusses its draft thresholds in the following excerpt:[53]

> The overarching policy objective with regard to establishing a GHG significance threshold for the purposes of analyzing GHG impacts pursuant to CEQA is to establish a performance standard or target GHG reduction objective that will ultimately contribute to reducing GHG emissions to stabilize climate change. Full implementation of the Governor's Executive Order S-3-05 would reduce GHG emissions 80 percent below 1990 levels or 90 percent below current levels by 2050. It is anticipated that achieving the Executive Order's objective would contribute to worldwide efforts to cap GHG concentrations at 450 ppm, thus, stabilizing global climate.
>
> As described below, staff's recommended interim GHG significance threshold proposal uses a tiered approach to determining significance. Tier 3, which is expected to be the primary tier by which the AQMD will determine significance for projects where it is the lead agency, uses the Executive Order S-3-05 goal as the basis for deriving the screening level. Specifically, the Tier 3 screening level for stationary sources is based on an emission capture rate of 90 percent for all new or modified projects. A 90 percent emission capture rate means that 90 percent of total emissions from all new or modified stationary source projects would be subject to some type of CEQA analysis, including a negative declaration, a mitigated negative declaration, or an environmental impact.

In summary, the SCAQMD's draft threshold uses the Executive Order S-3-05 goal as the basis for the Tier 3 screening level. Achieving the Executive Order's objective would contribute to worldwide efforts to cap CO_2 concentrations at 450 parts per million (ppm), thus stabilizing global climate. In 2010, the SCAQMD Tier 3 threshold was expanded to include non-industrial projects, as explained in the minutes from the most recent working group meeting.[54]

[53] South Coast Air Quality Management District (SCAQMD). 2008. Draft Guidance Document—Interim CEQA Greenhouse (GHG) Significance Threshold Document. Website: http://www.aqmd.gov /hb/attachments/2008/December/081231.exe.

[54] South Coast Air Quality Management District (SCAQMD). 2010. Greenhouse Gas CEQA Threshold Stakeholder Working Group Meeting #15. September 28. Website: www.aqmd.gov/ceqa /handbook/GHG/2010/sept28mtg/ghgmtg15-web.pdf.

To determine whether the proposed project would have a significant impact with respect to the generation of GHG emissions, this analysis utilizes the SCAQMD's draft local agency threshold for residential uses of 3,500 MT CO_2e per year. The second CEQA Checklist question would be evaluated by assessing the project's consistency with the ARB's adopted 2017 Scoping Plan Update.

7.2 - Impact Analysis

7.2.1 - Greenhouse Gas Inventory

Impact GHG-1: **The proposed project would not generate direct and indirect greenhouse gas emissions that would result in a significant impact on the environment.**

Impact Analysis

Construction Emissions

The proposed project would generate GHG emissions during construction activities resulting from emission sources such as construction equipment, haul trucks, and construction worker vehicles. Although these emissions would be temporary and short-term in nature, they could represent a substantial contribution of GHG emissions. Construction emissions were modeled using CalEEMod version 2016.3.2. Table 18 presents the project's total construction-related GHG emissions and amortized construction emissions.

Table 18: Construction Greenhouse Gas Emissions

Construction Year	Total MT CO_2e per year
2021	344
2022	865
2023	115
Total Emissions	**1,324**
Amortized over 30 years[1]	44

Notes:
MT CO_2e per year = metric tons of carbon dioxide equivalent per year
Unrounded numbers were used in calculations, including reported totals.
[1] Total construction emissions are amortized over the 30-year life of the project and are added to the project's on-going annual operational emissions.
Source: CalEEMod Output (Appendix A).

Operations

Operational or long-term emissions occur over the life of the project. Project operations were modeled for the 2022 operational year, following the completion of construction. Sources for operational emissions are summarized below. Sources for operational GHG emissions include:

- **Motor Vehicles:** These emissions refer to GHG emissions contained in the exhaust from the cars and trucks that would travel to and from the project site.

- **Natural Gas:** These emissions refer to the GHG emissions that occur when natural gas is burned on the project site. Natural gas uses could include heating water, space heating, dryers, stoves, or other uses.
- **Indirect Electricity:** These emissions refer to those generated by off-site power plants to supply electricity required for the project.
- **Area Sources:** These emissions refer to those produced during activities such as landscape maintenance.
- **Water Transport:** These emissions refer to those generated by the electricity required to transport and treat the water to be used on the project site.
- **Waste:** These emissions refer to the GHG emissions produced by decomposing waste generated by the project.

Table 19 presents the proposed project's annual net operational emissions along with the amortized construction emissions.

Table 19: Operational Greenhouse Gas Emissions

Emissions Source	Emissions (MT CO_2e per year)
Proposed Project	
Area	3
Energy	413
Mobile	1,033
Waste	1
Water	110
Subtotal	1,559
Construction (Amortized)	44
Proposed Project Total	**1,603**
Significance Threshold	**3,500**
Project Exceeds Threshold?	**No**
Note: MT CO_2e = metric tons of carbon dioxide equivalent Unrounded results used to calculate totals. Source of emissions: CalEEMod Output (Appendix A).	

As shown in Table 19, the project's unmitigated annual operational plus amortized construction emissions would generate 1,603 MT CO_2e per year, which would be fewer than the 3,500 MT CO_2e per year threshold.

Level of Significance Before Mitigation

Less than significant impact.

7.2.2 - Greenhouse Gas Reduction Plans

Impact GHG-2: **The proposed project would not conflict with any applicable plan, policy or regulation of an agency adopted to reduce the emissions of greenhouse gases.**

Impact Analysis

This impact is addressed by assessing the project's consistency with the ARB's adopted 2017 Scoping Plan Update.

SB 32 2017 Scoping Plan Update

The 2017 Climate Change Scoping Plan Update addressing the SB 32 targets was adopted on December 14, 2017. Table 20 provides an analysis of the project's consistency with the 2017 Scoping Plan Update measures. As shown in Table 20, many of the measures are not applicable to the project, while the project is consistent with strategies that are applicable.

Table 20: Consistency with SB 32 2017 Scoping Plan Update

2017 Scoping Plan Update Reduction Measure	Project Consistency
SB 350 50 percent Renewable Mandate. Utilities subject to the legislation will be required to increase their renewable energy mix from 33 percent in 2020 to 50 percent in 2030.	**Not applicable.** This measure would apply to utilities and not to individual development projects. The proposed project would purchase electricity from a utility subject to the SB 350 Renewable Mandate.
SB 350 Double Building Energy Efficiency by 2030. This is equivalent to a 20 percent reduction from 2014 building energy usage compared to current projected 2030 levels.	**Not applicable**. This measure applies to existing buildings. New structures are required to comply with Title 24 Energy Efficiency Standards that are expected to increase in stringency over time. The proposed project would comply with the applicable Title 24 Energy Efficiency Standards in effect at the time building permits are received.
Low Carbon Fuel Standard. This measure requires fuel providers to meet an 18 percent reduction in carbon content by 2030.	**Not applicable.** This is a Statewide measure that cannot be implemented by a project applicant or lead agency. However, vehicles accessing the project site would benefit from the standards.
Mobile Source Strategy (Cleaner Technology and Fuels Scenario). Vehicle manufacturers will be required to meet existing regulations mandated by the LEV III and Heavy-Duty Vehicle programs. The strategy includes a goal of having 4.2 million ZEVs on the road by 2030 and increasing numbers of ZEV trucks and buses.	**Consistent.** The majority of this measure is not applicable to the proposed project as it targets vehicle manufacturers and fleet operators. However, it also includes a VMT reduction component that would be applicable. Consistency with this measure would be achieved through complying with SB 375 requirements. As the proposed project is subject to SB 375 requirements, it would be consistent with this measure.

2017 Scoping Plan Update Reduction Measure	Project Consistency
Sustainable Freight Action Plan The plan's target is to improve freight system efficiency 25 percent by increasing the value of goods and services produced from the freight sector, relative to the amount of carbon that it produces by 2030. This would be achieved by deploying over 100,000 freight vehicles and equipment capable of zero emission operation and maximize near-zero emission freight vehicles and equipment powered by renewable energy by 2030.	**Not applicable.** This measure applies to owners and operators of trucks and freight operations.
Short-Lived Climate Pollutant (SLCP) Reduction Strategy. The strategy requires the reduction of SLCPs by 40 percent from 2013 levels by 2030 and the reduction of black carbon by 50 percent from 2013 levels by 2030.	**Not applicable.** This measure revolves around ARB's SLCP Reduction Strategy that was released in April 2016 as a result of SB 650. SB 650 required the State to develop a strategy to reduce emissions of SLCPs. The proposed project would not include major sources of black carbon or other SLCPs.
SB 375 Sustainable Communities Strategies. Requires Regional Transportation Plans to include a sustainable communities strategy for reduction of per capita vehicle miles traveled.	**Not applicable.** The proposed project does not include the development of a Regional Transportation Plan.
Post-2020 Cap-and-Trade Program. The Post 2020 Cap-and-Trade Program continues the existing program for another 10 years. The Cap-and-Trade Program applies to large industrial sources such as power plants, refineries, and cement manufacturers.	**Not applicable.** The proposed project is not one targeted by the cap-and-trade system regulations, and, therefore, this measure does not apply to the proposed project.
Natural and Working Lands Action Plan. The ARB is working in coordination with several other agencies at the federal, State, and local levels, stakeholders, and with the public, to develop measures as outlined in the Scoping Plan Update and the governor's Executive Order B-30-15 to reduce GHG emissions and to cultivate net carbon sequestration potential for California's natural and working land.	**Not applicable**. The project site is in a built-up urban area and would not be considered natural or working lands.
Source: California Air Resource Board (ARB). 2017. California's 2017 Climate Change Scoping Plan. November. Website: https://ww3.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf. Accessed January 13, 2021.	

As discussed in Table 20, the proposed project would not conflict with any applicable 2017 Scoping Plan Update reduction measures. As shown in Impact GHG-1, the project's combined amortized construction and annual operational GHG emissions would not exceed the applicable threshold of 3,500 MT CO_2e per year. Considering this information, the proposed project would not conflict with any applicable plan, policy, or regulation of an agency adopted to reduce GHG emissions. Therefore, impacts are considered less than significant.

Summary

As presented in Table 19, the project is consistent with the applicable strategies and would not conflict with the recommendations of AB 32 in achieving a statewide reduction in GHG emissions. Considering this information, the proposed plan would not significantly hinder or delay the State's ability to meet the reduction targets contained in AB 32 or conflict with implementation of the Scoping Plan. In summary, the proposed plan would not conflict with any applicable plan, policy, or regulation adopted to reduce the emissions of GHGs. Considering this information, project would not conflict with any applicable plan, policy or regulation of an agency adopted to reduce the emissions of GHGs.

Level of Significance Before Mitigation

Less than significant impact.

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SECTION 8: ENERGY IMPACT ANALYSIS

This section evaluates the possible impacts related to energy that result from implementation of the proposed project. Information in this section is based on project-specific energy calculation outputs included in Appendix A.

8.1 - CEQA Guidelines

According to the CEQA Guidelines Appendix G, to determine whether impacts related to energy are significant environmental effects, the following questions are analyzed and evaluated.

Would the project:

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

b) Conflict with or obstruct a State or local plan for renewable energy or energy efficiency?

8.2 - Impact Analysis

8.2.1 - Project Energy Impact

Impact ENER-1:	**The proposed project would not result in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.**

Impact Analysis

A significant impact would occur if the proposed project would result in the inefficient, wasteful, or unnecessary use of energy.

Construction

During construction activities, the proposed project would result in energy consumption through the combustion of fossil fuels in construction vehicles, worker commute vehicles, and construction equipment, and the use of electricity for temporary lighting and electric equipment use. It is not anticipated that natural gas would be consumed as part of project construction. Fossil fuels used for construction vehicles and other energy-consuming equipment would be used during site preparation, grading, paving, and building construction. The types of equipment could include gasoline- and diesel-powered construction and transportation equipment, including trucks, tractors, loaders, backhoes, excavators, graders, bulldozers, rollers, forklifts, and cranes.

Based on the CalEEMod estimations within the modeling output files used to estimate emissions associated with the proposed project, construction equipment would consume approximately 58,116 gallons of diesel fuel (Appendix A). Construction vehicle trips, including haul and vendor truck trips and worker vehicle trips, would consume an estimated 9,144 gallons of gasoline and diesel fuel (Appendix A). Limitations on idling of vehicles and equipment and requirements that equipment be

properly maintained would result in subsequent fuel savings. California Code of Regulations, Title 13, Sections 2449 and 2485, limit idling from both on-road and off-road diesel-powered equipment and are enforced by the ARB. Additionally, given the cost of fuel, contractors and owners have a strong financial incentive to avoid wasteful, inefficient, and unnecessary consumption of energy during construction.

Operation

The proposed project would consume energy as part of building operations and transportation activities. Project energy consumption is summarized in Table 21.

Table 21: Project Net Annual Operational Energy Requirements

Energy Category	Annual Consumption
Electricity	60,654 kWh/year
Natural Gas	1,782,680 kBTU/year
Vehicle Fuel (Gasoline and Diesel)	113,234 gallons/year
Notes: kWh = kilowatt-hour kBTU = kilo-British Thermal Unit Source: CalEEMod Output (Appendix A).	

Operation of the proposed project would consume an estimated 60,654 kWh of electricity and an estimated 1,782,680 kBTU of natural gas on an annual basis. The proposed project's buildings would be designed and constructed in accordance with the latest adopted energy efficiency standards, which are based on the State's Building Energy Efficiency Standards. These are widely regarded as the most advanced building energy efficiency standards and compliance would ensure that building energy consumption would not be wasteful, inefficient, or unnecessary.

Project-related vehicle trips would consume an estimated 113,234 gallons of gasoline and diesel annually. Regional access to the project site is provided via US Interstate 5, which borders the project site. Additionally, the project is an urban infill development sited near exiting public transportation and amenities. Thus, transportation fuel consumption would not be wasteful, inefficient, or unnecessary. Impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

8.2.2 - Energy Plan Consistency

Impact ENER-2: **The proposed project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency.**

Impact Analysis

The proposed project would be served with electricity provided by APU. In 2019, APU obtained 31 percent of its electricity from renewable energy sources. APU created a Greenhouse Gas Reduction Plan (Plan) in 2015 which provides a roadmap for meeting the RPS. According to the 2020 version of the Plan APU met the 33 percent renewables requirement in 2020. APU is also on track to meet the 60 percent renewables target for 2030, as required. The proposed buildings would also be designed in accordance with Title 24, California's Energy Efficiency Standards for Nonresidential Buildings. These standards include minimum energy efficiency requirements related to building envelope, mechanical systems (e.g., heating, ventilation, and air conditioning [HVAC] and water heating systems), and indoor and outdoor lighting. The incorporation of the Title 24 standards into the design of the proposed project would ensure that the proposed project would not result in the use of energy in a wasteful manner. The project is also an urban infill project, located close to existing public transportation, shops and other amenities, and Interstate 5. Vehicle trips and overall VMT would therefore be minimized, with a consequent relative reduction in vehicle fuel consumption.

The proposed project would comply with existing State energy standards and be sited in a manner promoting fuel efficiency. The proposed project would also follow MM 5.2-2 through 5.2-6, as well as MM 5.2-8 through 5.2-12, which would reduce VMT and energy use. As such, the proposed project would not conflict with State or local renewable or energy efficiency objectives. Impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

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Appendix A:
CalEEMod Emission Summary

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Appendix A: Air Quality Supporting Information

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CalEEMod Notes

Note 1. CO2 Intensity Factor adjusted to reflect compliance with Renewable Electricity standard requiring 33% renewable electricity minimum in utility portfolio.

Note 2. Land uses and sizes are drawn from project Site Plans and client-provided information. Land uses represent the following:

Residential > Condo/Townhouse High Rise = The proposed 156 3-story townhouses.

Parking > Parking Lot = 97 parking spaces in open parking areas.

Parking > Other Asphalt Surfaces = internal roads and driveways.

Parking > Other Non-Asphalt Surfaces = common area open spaces.

Note 3. According to client-provided information, project construction would begin 8/1/21 and finish by 5/1/23. CalEEMod default construction activities and duration were adjusted to reflect this. Client also provided information regarding equipment used for each building activity and CalEEMod assumptions were modified to reflect the client data.

Note 4. For a conservative estimate, the entire 6.4-acre site is assumed to be graded. No material is expected to be imported or exported during grading.

Note 5. Existing various small structures with an estimated total area of 4,670 square feet to be demolished and removed.

Note 6. Iteris, Inc produced a traffic study for the proposed project that lists the weekday trip rate for the proposed project as 5.44 trips per du, based on ITE 10th Edition trip eneratoin rates for Multifamiliy Housing (Mid-Rise) (ITE code 221). CalEEMod default trip rates were modified to match this study.

Note 7. SCAQMD Rule 403 requirements were applied to this project. This includes watering exposed areas at minimum three times per day and limiting construction vehicle speeds to 15 miles per hour on unpaved roads.

Note 8. The proposed project is located approximately 800 feet from two existing transit bus stops and provides 36 dwelling units on a 1.87-acre project site, resulting in approximately 19.3 dwelling units per acre.

Note 9. .

Note 10. The proposed project would not include any woodstoves or fireplaces.

Note 11. The annual waste generation rate per dwelling unit was adjusted to match the 2006 residential sector generation rate found on the California Department of Resources Recycling and Recovery's (CalRecycle) website. The waste generation rate found therein is 12.23 pounds per household per day. This equals 4,463.95 pounds per household per year, or 2.23 tons per household per year.

Source: California Department of Resources Recycling and Recovery (CalRecycle). 2006. Estimated Solid Waste Generation Rates, Residential Sector Generation Rates. Website: https://www2.calrecycle.ca.gov/WasteCharacterization/General/Rates. Accessed June 8, 2020.

Note 12. According to project information provided by the project applicant, each dwelling unit would include solar panel electricity generation in compliance with the California Building Code. According to the California Code of Regulations, Title 24, Part 6, Subchapter 8 – Low-Rise Residential Building – Performance and Prescriptive Compliance Approaches, "[a]ll low-rise residential buildings shall have a photovoltaic (PV) system meeting the minimum qualification requirements as specified in Joint Appendix JA11, with annual electrical output equal or greater than the dwelling's annual electrical usage as determined by Equation 150.1-C:"

Equation 150.1-C Annual Photovoltaic Electrical Output

$$kW_{PV} = (CFA \times A)/1{,}000 + (NDwell \times B)$$

Where:

kW_{PV} = kWdc size of the PV system

CFA = conditioned floor area

NDwell = number of dwelling units

A = Adjustment factor from Table 150.1-C

B = Dwelling adjustment factor from Table 150.1-C

As the project is located in climate zone 4, the A adjustment factor mentioned above is identified as 0.586 and the B adjustment factor mentioned above is identified as 1.21. The conditioned floor area is drawn from the project site plans.

Therefore:

$$kW_{PV} = (36{,}000 \times 0.586)/1{,}000 + (36 \times 1.21) = 64.656$$

While this accounts for the entire project's kW PV system, it does not provide the annual production rate that would be generated by this size of system. Therefore, the total kW PV system was reduced to a per-dwelling-unit kW PV system to determine the expected annual production rate. 64.656 kW PV divided by 36 dwelling units results in an average 1.8 kW PV system per dwelling unit.

According to TheEcoExperts.com, a 2 kW PV system has an average annual production rate of 1,750 kWh/year. The below equation proportionally applies the same average annual production rate to the calculated 1.8 kW system per each dwelling unit.

$$(1.8/2) * 1{,}750 \text{ kWh/year} = 1{,}575 \text{ kWh/year}$$

Therefore, the proposed project is expected to result in an average on-site electricity generation rate of 1,925 kWh per dwelling unit per year. The following equation converts this to total annual on-site electricity generation.

$$1{,}575 \text{ kWh/year} * 36 \text{ Residences} = 56{,}700 \text{ kWh/year}$$

Source: TheEcoExperts. 2020. “Solar Panel Output.” Website: http://www.theecoexperts.com/solar-panel-output/. Accessed June 24, 2020.

Note 13. According to client-provided information, the project would comply with the Sunnyvale Climate Action Plan policy to reduce potable indoor water consumption by 30% and outdoor landscaping water use by 40%.

Note 14. For the 2030 operational model, the CO2 intensity factor was calculated by taking the following steps:

Step 1: Identify PG&E’s 2017 CO2 intensity factor of 210 lbs/MWh (from PG&E’s 2019 Corporate Responsibility and Sustainability Report) and PG&E’s 2017 Renewables Portfolio Standards (RPS) power mix of 33 percent of retail electricity generation from renewable sources (from PG&E’s 2018 Corporate Responsibility and Sustainability Report).

Step 2: Identify the Statewide 2030 RPS goal: 50 percent of retail electricity generation from renewable sources.

Step 3: Extrapolate the RPS power mix to CO2 intensity factor from 2017 to 2030.

First, (210/0.67 = 313.4328) Then, (313.4328*0.5 = 156.7164)

Therefore, PG&E’s anticipated 2030 CO2 intensity factor would be 156.72 lbs/MWh.

Please note, this is only meant as a relative estimate of PG&E’s 2030 CO2 intensity factor as it relies on PG&E’s 2030 non-renewable energy generation mix to stay proportionally equal to its non-renewable energy generation mix in 2017. This is not probable as market availability and cost of resources such as natural gas and diesel are likely to change; however, it is reasonable to assume that overall reductions in PG&E’s CO2 intensity factor would occur by 2030 when compared to 2017.

Note 15. Existing land uses include commercial space totaling approximately 21,500 square feet, which hosted multiple types of tenants. The remaining space was dedicated to parking.

Typical Construction Trailer

Orange County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	0.72	1000sqft	0.02	720.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	10			**Operational Year**	2023
Utility Company	Anaheim Public Utilities				
CO2 Intensity (lb/MWhr)	1543.28	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Land Use - Upper range of typical single-wide mobile office trailer = 720 square feet.

Off-road Equipment - Zeroed out construction equipment

Off-road Equipment - Zeroed out construction equipment

Off-road Equipment - Zero construction equipment.

Off-road Equipment - Zeroed out construction equipment

Off-road Equipment - Zeroed out construction equipment

Off-road Equipment - Zeroed out construction equipment

Trips and VMT - No construction.

Architectural Coating - No construction.

Vehicle Trips - No vehicle trips.

Water And Wastewater - No water use.

Table Name	Column Name	Default Value	New Value

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					
2021	0.8326	7.9850	7.8729	0.0130	0.8645	0.4475	1.2726	0.4434	0.4117	0.8327	0.0000	1,252.6532	1,252.6532	0.3568	0.0000	1,258.0555
2022	1.5394	7.0258	7.5450	0.0131	0.2012	0.3719	0.4986	0.0534	0.3422	0.3422	0.0000	1,218.2008	1,218.2008	0.3570	0.0000	1,225.8360
Maximum	**1.5394**	**7.9850**	**7.8729**	**0.0131**	**0.8645**	**0.4475**	**1.2726**	**0.4434**	**0.4117**	**0.8327**	**0.0000**	**1,252.6532**	**1,252.6532**	**0.3570**	**0.0000**	**1,258.0555**

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					
2021	0.8326	7.9850	7.8729	0.0130	0.8645	0.4475	1.2726	0.4434	0.4117	0.8327	0.0000	1,252.6532	1,252.6532	0.3568	0.0000	1,258.0555
2022	1.5394	7.0258	7.5450	0.0131	0.2012	0.3719	0.4986	0.0534	0.3422	0.3422	0.0000	1,218.2008	1,218.2008	0.3570	0.0000	1,225.8360
Maximum	**1.5394**	**7.9850**	**7.8729**	**0.0131**	**0.8645**	**0.4475**	**1.2726**	**0.4434**	**0.4117**	**0.8327**	**0.0000**	**1,252.6532**	**1,252.6532**	**0.3570**	**0.0000**	**1,258.0555**

	ROG	NOx	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	8/1/2021	8/13/2021	5	10	

2	Site Preparation	Site Preparation	8/14/2021	8/16/2021	5	1	
3	Grading	Grading	8/17/2021	8/18/2021	5	2	
4	Building Construction	Building Construction	8/19/2021	1/5/2022	5	100	
5	Paving	Paving	1/6/2022	1/12/2022	5	5	
6	Architectural Coating	Architectural Coating	1/13/2022	1/19/2022	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 1,080; Non-Residential Outdoor: 360; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7965	7.2530	7.5691	0.0120		0.4073	0.4073		0.3886	0.3886		1,147.4338	1,147.4338	0.2138		1,152.7797
Total	**0.7965**	**7.2530**	**7.5691**	**0.0120**		**0.4073**	**0.4073**		**0.3886**	**0.3886**		**1,147.4338**	**1,147.4338**	**0.2138**		**1,152.7797**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0361	0.0218	0.3037	1.0600e-003	0.1118	7.2000e-004	0.1125	0.0296	6.7000e-004	0.0303		105.2194	105.2194	2.2500e-003		105.2758
Total	**0.0361**	**0.0218**	**0.3037**	**1.0600e-003**	**0.1118**	**7.2000e-004**	**0.1125**	**0.0296**	**6.7000e-004**	**0.0303**		**105.2194**	**105.2194**	**2.2500e-003**		**105.2758**

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	0.7965	7.2530	7.5691	0.0120		0.4073	0.4073		0.3886	0.3886	0.0000	1,147.4338	1,147.4338	0.2138		1,152.7797
Total	**0.7965**	**7.2530**	**7.5691**	**0.0120**		**0.4073**	**0.4073**		**0.3886**	**0.3886**	**0.0000**	**1,147.4338**	**1,147.4338**	**0.2138**		**1,152.7797**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0361	0.0218	0.3037	1.0600e-003	0.1118	7.2000e-004	0.1125	0.0296	6.7000e-004	0.0303		105.2194	105.2194	2.2500e-003		105.2758
Total	**0.0361**	**0.0218**	**0.3037**	**1.0600e-003**	**0.1118**	**7.2000e-004**	**0.1125**	**0.0296**	**6.7000e-004**	**0.0303**		**105.2194**	**105.2194**	**2.2500e-003**		**105.2758**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.6403	7.8204	4.0274	9.7300e-003		0.2995	0.2995		0.2755	0.2755		942.5842	942.5842	0.3049		950.2055
Total	**0.6403**	**7.8204**	**4.0274**	**9.7300e-003**	**0.5303**	**0.2995**	**0.8297**	**0.0573**	**0.2755**	**0.3328**		**942.5842**	**942.5842**	**0.3049**		**950.2055**

Unmitigated Construction Off-Site

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

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0181	0.0109	0.1519	5.3000e-004	0.0559	3.6000e-004	0.0563	0.0148	3.3000e-004	0.0152		52.6097	52.6097	1.1300e-003		52.6379
Total	**0.0181**	**0.0109**	**0.1519**	**5.3000e-004**	**0.0559**	**3.6000e-004**	**0.0563**	**0.0148**	**3.3000e-004**	**0.0152**		**52.6097**	**52.6097**	**1.1300e-003**		**52.6379**

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					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.6403	7.8204	4.0274	9.7300e-003		0.2995	0.2995		0.2755	0.2755	0.0000	942.5842	942.5842	0.3049		950.2055
Total	**0.6403**	**7.8204**	**4.0274**	**9.7300e-003**	**0.5303**	**0.2995**	**0.8297**	**0.0573**	**0.2755**	**0.3328**	**0.0000**	**942.5842**	**942.5842**	**0.3049**		**950.2055**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0181	0.0109	0.1519	5.3000e-004	0.0559	3.6000e-004	0.0563	0.0148	3.3000e-004	0.0152		52.6097	52.6097	1.1300e-003		52.6379
Total	**0.0181**	**0.0109**	**0.1519**	**5.3000e-004**	**0.0559**	**3.6000e-004**	**0.0563**	**0.0148**	**3.3000e-004**	**0.0152**		**52.6097**	**52.6097**	**1.1300e-003**		**52.6379**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000

Off-Road	0.7965	7.2530	7.5691	0.0120		0.4073	0.4073		0.3886	0.3886		1,147.4338	1,147.4338	0.2138		1,152.7797
Total	**0.7965**	**7.2530**	**7.5691**	**0.0120**	**0.7528**	**0.4073**	**1.1601**	**0.4138**	**0.3886**	**0.8024**		**1,147.4338**	**1,147.4338**	**0.2138**		**1,152.7797**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0361	0.0218	0.3037	1.0600e-003	0.1118	7.2000e-004	0.1125	0.0296	6.7000e-004	0.0303		105.2194	105.2194	2.2500e-003		105.2758
Total	**0.0361**	**0.0218**	**0.3037**	**1.0600e-003**	**0.1118**	**7.2000e-004**	**0.1125**	**0.0296**	**6.7000e-004**	**0.0303**		**105.2194**	**105.2194**	**2.2500e-003**		**105.2758**

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					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	0.7965	7.2530	7.5691	0.0120		0.4073	0.4073		0.3886	0.3886	0.0000	1,147.4338	1,147.4338	0.2138		1,152.7797
Total	**0.7965**	**7.2530**	**7.5691**	**0.0120**	**0.7528**	**0.4073**	**1.1601**	**0.4138**	**0.3886**	**0.8024**	**0.0000**	**1,147.4338**	**1,147.4338**	**0.2138**		**1,152.7797**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0361	0.0218	0.3037	1.0600e-003	0.1118	7.2000e-004	0.1125	0.0296	6.7000e-004	0.0303		105.2194	105.2194	2.2500e-003		105.2758

Total	**0.0361**	**0.0218**	**0.3037**	**1.0600e-003**	**0.1118**	**7.2000e-004**	**0.1125**	**0.0296**	**6.7000e-004**	**0.0303**		**105.2194**	**105.2194**	**2.2500e-003**		**105.2758**

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	0.7750	7.9850	7.2637	0.0114		0.4475	0.4475		0.4117	0.4117		1,103.2158	1,103.2158	0.3568		1,112.1358
Total	**0.7750**	**7.9850**	**7.2637**	**0.0114**		**0.4475**	**0.4475**		**0.4117**	**0.4117**		**1,103.2158**	**1,103.2158**	**0.3568**		**1,112.1358**

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.7750	7.9850	7.2637	0.0114		0.4475	0.4475		0.4117	0.4117	0.0000	1,103.2158	1,103.2158	0.3568		1,112.1358
Total	**0.7750**	**7.9850**	**7.2637**	**0.0114**		**0.4475**	**0.4475**		**0.4117**	**0.4117**	**0.0000**	**1,103.2158**	**1,103.2158**	**0.3568**		**1,112.1358**

Mitigated Construction Off-Site

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

Category	lb/day											lb/day				
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	0.6863	7.0258	7.1527	0.0114		0.3719	0.3719		0.3422	0.3422		1,103.9393	1,103.9393	0.3570		1,112.8652
Total	**0.6863**	**7.0258**	**7.1527**	**0.0114**		**0.3719**	**0.3719**		**0.3422**	**0.3422**		**1,103.9393**	**1,103.9393**	**0.3570**		**1,112.8652**

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.6863	7.0258	7.1527	0.0114		0.3719	0.3719		0.3422	0.3422	0.0000	1,103.9393	1,103.9393	0.3570		1,112.8652
Total	**0.6863**	**7.0258**	**7.1527**	**0.0114**		**0.3719**	**0.3719**		**0.3422**	**0.3422**	**0.0000**	**1,103.9393**	**1,103.9393**	**0.3570**		**1,112.8652**

Mitigated Construction Off-Site

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

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6469	5.9174	7.0348	0.0113		0.2961	0.2961		0.2758	0.2758		1,035.8246	1,035.8246	0.3017		1,043.3677
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6469**	**5.9174**	**7.0348**	**0.0113**		**0.2961**	**0.2961**		**0.2758**	**0.2758**		**1,035.8246**	**1,035.8246**	**0.3017**		**1,043.3677**

Unmitigated Construction Off-Site

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

Worker	0.0614	0.0356	0.5103	1.8300e-003	0.2012	1.2800e-003	0.2025	0.0534	1.1800e-003	0.0545		182.3762	182.3762	3.6800e-003		182.4683
Total	**0.0614**	**0.0356**	**0.5103**	**1.8300e-003**	**0.2012**	**1.2800e-003**	**0.2025**	**0.0534**	**1.1800e-003**	**0.0545**		**182.3762**	**182.3762**	**3.6800e-003**		**182.4683**

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	0.6469	5.9174	7.0348	0.0113		0.2961	0.2961		0.2758	0.2758	0.0000	1,035.8246	1,035.8246	0.3017		1,043.3677
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6469**	**5.9174**	**7.0348**	**0.0113**		**0.2961**	**0.2961**		**0.2758**	**0.2758**	**0.0000**	**1,035.8246**	**1,035.8246**	**0.3017**		**1,043.3677**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0614	0.0356	0.5103	1.8300e-003	0.2012	1.2800e-003	0.2025	0.0534	1.1800e-003	0.0545		182.3762	182.3762	3.6800e-003		182.4683
Total	**0.0614**	**0.0356**	**0.5103**	**1.8300e-003**	**0.2012**	**1.2800e-003**	**0.2025**	**0.0534**	**1.1800e-003**	**0.0545**		**182.3762**	**182.3762**	**3.6800e-003**		**182.4683**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1.3349					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062

Total	**1.5394**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	1.3349					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**1.5394**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

Mitigated Construction Off-Site

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

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	7.0000e-005	6.7000e-004	5.6000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.8053	0.8053	2.0000e-005	1.0000e-005	0.8101
NaturalGas Unmitigated	7.0000e-005	6.7000e-004	5.6000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.8053	0.8053	2.0000e-005	1.0000e-005	0.8101

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					
General Office Building	6.84493	7.0000e-005	6.7000e-004	5.6000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.8053	0.8053	2.0000e-005	1.0000e-005	0.8101
Total		**7.0000e-005**	**6.7000e-004**	**5.6000e-004**	**0.0000**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**		**0.8053**	**0.8053**	**2.0000e-005**	**1.0000e-005**	**0.8101**

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					
General Office Building	0.00684493	7.0000e-005	6.7000e-004	5.6000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.8053	0.8053	2.0000e-005	1.0000e-005	0.8101
Total		**7.0000e-005**	**6.7000e-004**	**5.6000e-004**	**0.0000**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**		**0.8053**	**0.8053**	**2.0000e-005**	**1.0000e-005**	**0.8101**

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	0.0161	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		1.6000e-004	1.6000e-004	0.0000		1.7000e-004
Unmitigated	0.0161	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		1.6000e-004	1.6000e-004	0.0000		1.7000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.8300e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0143					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		1.6000e-004	1.6000e-004	0.0000		1.7000e-004
Total	**0.0161**	**0.0000**	**7.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.6000e-004**	**1.6000e-004**	**0.0000**		**1.7000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.8300e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0143					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		1.6000e-004	1.6000e-004	0.0000		1.7000e-004
Total	**0.0161**	**0.0000**	**7.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.6000e-004**	**1.6000e-004**	**0.0000**		**1.7000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Legacy Anaheim Project
Orange County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	2.12	Acre	2.12	92,347.20	0
Other Non-Asphalt Surfaces	43.21	1000sqft	0.99	43,206.00	0
Parking Lot	97.00	Space	0.87	38,800.00	0
Condo/Townhouse High Rise	156.00	Dwelling Unit	2.42	244,680.00	446

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2023
Utility Company	Anaheim Public Utilities				
CO2 Intensity (lb/MWhr)	1034	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - See CalEEMod note 1.

Land Use - See CalEEMod note 2.

Construction Phase - See CalEEMod note 3.

Off-road Equipment - See CalEEMod note 3.

Off-road Equipment - See CalEEMod note 3.

Off-road Equipment - See CalEEMod note 3.

Off-road Equipment - See CalEEMod note 3.

Demolition - See CalEEMod note 5.

Grading - See CalEEMod note 4.

Vehicle Trips - See CalEEMod note 6.

Woodstoves - See CalEEMod note 10.

Solid Waste - See CalEEMod note 11.

Construction Off-road Equipment Mitigation - See CalEEMod note 7.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterExposedAreaPM10PercentReduction	61	55
tblConstDustMitigation	WaterExposedAreaPM25PercentReduction	61	55
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	10.00
tblConstructionPhase	NumDays	10.00	12.00
tblConstructionPhase	NumDays	20.00	88.00
tblConstructionPhase	NumDays	230.00	326.00
tblConstructionPhase	NumDays	20.00	238.00
tblConstructionPhase	NumDays	20.00	238.00
tblFireplaces	FireplaceDayYear	25.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	132.60	0.00
tblFireplaces	NumberNoFireplace	15.60	0.00
tblFireplaces	NumberWood	7.80	0.00
tblGrading	AcresOfGrading	132.00	6.40
tblLandUse	LandUseSquareFeet	43,210.00	43,206.00
tblLandUse	LandUseSquareFeet	156,000.00	244,680.00
tblLandUse	LotAcreage	2.44	2.42
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00

tblProjectCharacteristics	CO2IntensityFactor	1543.28	1034
tblSolidWaste	SolidWasteGenerationRate	71.76	2.23
tblVehicleTrips	ST_TR	4.31	5.57
tblVehicleTrips	SU_TR	3.43	4.46
tblVehicleTrips	WD_TR	4.18	5.44
tblWoodstoves	NumberCatalytic	7.80	0.00
tblWoodstoves	NumberNoncatalytic	7.80	0.00
tblWoodstoves	WoodstoveDayYear	25.00	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					
2021	0.2334	2.2694	1.6666	3.8600e-003	0.3910	0.0976	0.4886	0.1888	0.0910	0.2798	0.0000	342.1759	342.1759	0.0706	0.0000	343.9417
2022	0.9458	3.4939	4.1523	9.6700e-003	0.3459	0.1504	0.4963	0.0927	0.1429	0.2356	0.0000	862.2776	862.2776	0.1177	0.0000	865.2198
2023	0.3428	0.4930	0.7519	1.3000e-003	0.0243	0.0249	0.0491	6.4400e-003	0.0231	0.0295	0.0000	114.7352	114.7352	0.0285	0.0000	115.4486
Maximum	**0.9458**	**3.4939**	**4.1523**	**9.6700e-003**	**0.3910**	**0.1504**	**0.4963**	**0.1888**	**0.1429**	**0.2798**	**0.0000**	**862.2776**	**862.2776**	**0.1177**	**0.0000**	**865.2198**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.2334	2.2694	1.6666	3.8600e-003	0.2222	0.0976	0.3198	0.0974	0.0910	0.1884	0.0000	342.1756	342.1756	0.0706	0.0000	343.9414
2022	0.9458	3.4939	4.1523	9.6700e-003	0.3459	0.1504	0.4963	0.0927	0.1429	0.2356	0.0000	862.2770	862.2770	0.1177	0.0000	865.2192
2023	0.3428	0.4930	0.7519	1.3000e-003	0.0243	0.0249	0.0491	6.4400e-003	0.0231	0.0295	0.0000	114.7351	114.7351	0.0285	0.0000	115.4485

Maximum	**0.9458**	**3.4939**	**4.1523**	**9.6700e-003**	**0.3459**	**0.1504**	**0.4963**	**0.0974**	**0.1429**	**0.2356**	**0.0000**	**862.2770**	**862.2770**	**0.1177**	**0.0000**	**865.2192**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**22.17**	**0.00**	**16.32**	**31.75**	**0.00**	**16.78**	**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	**8-1-2021**	**10-31-2021**	1.2114	1.2114
2	**11-1-2021**	**1-31-2022**	1.5174	1.5174
3	**2-1-2022**	**4-30-2022**	0.6950	0.6950
4	**5-1-2022**	**7-31-2022**	1.1689	1.1689
5	**8-1-2022**	**10-31-2022**	1.4007	1.4007
6	**11-1-2022**	**1-31-2023**	1.1488	1.1488
7	**2-1-2023**	**4-30-2023**	0.6253	0.6253
		Highest	1.5174	1.5174

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	1.0230	0.0186	1.6110	9.0000e-005		8.9100e-003	8.9100e-003		8.9100e-003	8.9100e-003	0.0000	2.6314	2.6314	2.5400e-003	0.0000	2.6949
Energy	9.6100e-003	0.0821	0.0350	5.2000e-004		6.6400e-003	6.6400e-003		6.6400e-003	6.6400e-003	0.0000	411.3562	411.3562	0.0107	3.5800e-003	412.6901
Mobile	0.1979	0.7558	2.7775	0.0112	1.0754	7.6900e-003	1.0831	0.2880	7.1400e-003	0.2951	0.0000	1,032.4429	1,032.4429	0.0409	0.0000	1,033.4645
Waste						0.0000	0.0000		0.0000	0.0000	0.4527	0.0000	0.4527	0.0268	0.0000	1.1215
Water						0.0000	0.0000		0.0000	0.0000	3.2246	95.4613	98.6859	0.3339	8.3700e-003	109.5282
Total	**1.2306**	**0.8565**	**4.4234**	**0.0118**	**1.0754**	**0.0232**	**1.0987**	**0.2880**	**0.0227**	**0.3107**	**3.6773**	**1,541.8918**	**1,545.5691**	**0.4147**	**0.0120**	**1,559.4991**

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	1.0230	0.0186	1.6110	9.0000e-005		8.9100e-003	8.9100e-003		8.9100e-003	8.9100e-003	0.0000	2.6314	2.6314	2.5400e-003	0.0000	2.6949
Energy	9.6100e-003	0.0821	0.0350	5.2000e-004		6.6400e-003	6.6400e-003		6.6400e-003	6.6400e-003	0.0000	411.3562	411.3562	0.0107	3.5800e-003	412.6901
Mobile	0.1979	0.7558	2.7775	0.0112	1.0754	7.6900e-003	1.0831	0.2880	7.1400e-003	0.2951	0.0000	1,032.4429	1,032.4429	0.0409	0.0000	1,033.4645
Waste						0.0000	0.0000		0.0000	0.0000	0.4527	0.0000	0.4527	0.0268	0.0000	1.1215
Water						0.0000	0.0000		0.0000	0.0000	3.2246	95.4613	98.6859	0.3339	8.3700e-003	109.5282
Total	**1.2306**	**0.8565**	**4.4234**	**0.0118**	**1.0754**	**0.0232**	**1.0987**	**0.2880**	**0.0227**	**0.3107**	**3.6773**	**1,541.8918**	**1,545.5691**	**0.4147**	**0.0120**	**1,559.4991**

	ROG	NOx	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	8/1/2021	8/15/2021	5	10	
2	Site Preparation	Site Preparation	8/16/2021	8/31/2021	5	12	
3	Grading	Grading	9/1/2021	12/31/2021	5	88	
4	Building Construction	Building Construction	10/1/2021	12/31/2022	5	326	
5	Paving	Paving	6/1/2022	4/30/2023	5	238	
6	Architectural Coating	Architectural Coating	6/1/2022	4/30/2023	5	238	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 6.4

Acres of Paving: 3.98

Residential Indoor: 495,477; Residential Outdoor: 165,159; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	1	8.00	158	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Excavators	1	8.00	158	0.38
Site Preparation	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	1	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cement and Mortar Mixers	1	8.00	9	0.56
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	2	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Pumps	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	3	8.00	0.00	21.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	186.00	45.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	37.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.3000e-003	0.0000	2.3000e-003	3.5000e-004	0.0000	3.5000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.3000e-003	0.0808	0.0549	1.0000e-004		4.0500e-003	4.0500e-003		3.8000e-003	3.8000e-003	0.0000	8.7099	8.7099	2.1000e-003	0.0000	8.7625
Total	**8.3000e-003**	**0.0808**	**0.0549**	**1.0000e-004**	**2.3000e-003**	**4.0500e-003**	**6.3500e-003**	**3.5000e-004**	**3.8000e-003**	**4.1500e-003**	**0.0000**	**8.7099**	**8.7099**	**2.1000e-003**	**0.0000**	**8.7625**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	8.0000e-005	2.7500e-003	7.5000e-004	1.0000e-005	1.8000e-004	1.0000e-005	1.9000e-004	5.0000e-005	1.0000e-005	6.0000e-005	0.0000	0.7975	0.7975	8.0000e-005	0.0000	0.7996
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5000e-004	1.0000e-004	1.1500e-003	0.0000	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3669	0.3669	1.0000e-005	0.0000	0.3671
Total	**2.3000e-004**	**2.8500e-003**	**1.9000e-003**	**1.0000e-005**	**6.2000e-004**	**1.0000e-005**	**6.3000e-004**	**1.7000e-004**	**1.0000e-005**	**1.8000e-004**	**0.0000**	**1.1644**	**1.1644**	**9.0000e-005**	**0.0000**	**1.1667**

Mitigated Construction On-Site

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

Category	tons/yr										MT/yr					
Fugitive Dust					1.0300e-003	0.0000	1.0300e-003	1.6000e-004	0.0000	1.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.3000e-003	0.0808	0.0549	1.0000e-004		4.0500e-003	4.0500e-003		3.8000e-003	3.8000e-003	0.0000	8.7099	8.7099	2.1000e-003	0.0000	8.7625
Total	**8.3000e-003**	**0.0808**	**0.0549**	**1.0000e-004**	**1.0300e-003**	**4.0500e-003**	**5.0800e-003**	**1.6000e-004**	**3.8000e-003**	**3.9600e-003**	**0.0000**	**8.7099**	**8.7099**	**2.1000e-003**	**0.0000**	**8.7625**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	8.0000e-005	2.7500e-003	7.5000e-004	1.0000e-005	1.8000e-004	1.0000e-005	1.9000e-004	5.0000e-005	1.0000e-005	6.0000e-005	0.0000	0.7975	0.7975	8.0000e-005	0.0000	0.7996
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5000e-004	1.0000e-004	1.1500e-003	0.0000	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3669	0.3669	1.0000e-005	0.0000	0.3671
Total	**2.3000e-004**	**2.8500e-003**	**1.9000e-003**	**1.0000e-005**	**6.2000e-004**	**1.0000e-005**	**6.3000e-004**	**1.7000e-004**	**1.0000e-005**	**1.8000e-004**	**0.0000**	**1.1644**	**1.1644**	**9.0000e-005**	**0.0000**	**1.1667**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0361	0.0000	0.0361	0.0199	0.0000	0.0199	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.7800e-003	0.0901	0.0574	1.0000e-004		4.4900e-003	4.4900e-003		4.1300e-003	4.1300e-003	0.0000	8.8638	8.8638	2.8700e-003	0.0000	8.9355
Total	**8.7800e-003**	**0.0901**	**0.0574**	**1.0000e-004**	**0.0361**	**4.4900e-003**	**0.0406**	**0.0199**	**4.1300e-003**	**0.0240**	**0.0000**	**8.8638**	**8.8638**	**2.8700e-003**	**0.0000**	**8.9355**

Unmitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8000e-004	1.2000e-004	1.3800e-003	0.0000	5.3000e-004	0.0000	5.3000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4403	0.4403	1.0000e-005	0.0000	0.4405
Total	**1.8000e-004**	**1.2000e-004**	**1.3800e-003**	**0.0000**	**5.3000e-004**	**0.0000**	**5.3000e-004**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**0.4403**	**0.4403**	**1.0000e-005**	**0.0000**	**0.4405**

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					0.0163	0.0000	0.0163	8.9400e-003	0.0000	8.9400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.7800e-003	0.0901	0.0574	1.0000e-004		4.4900e-003	4.4900e-003		4.1300e-003	4.1300e-003	0.0000	8.8638	8.8638	2.8700e-003	0.0000	8.9355
Total	**8.7800e-003**	**0.0901**	**0.0574**	**1.0000e-004**	**0.0163**	**4.4900e-003**	**0.0208**	**8.9400e-003**	**4.1300e-003**	**0.0131**	**0.0000**	**8.8638**	**8.8638**	**2.8700e-003**	**0.0000**	**8.9355**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8000e-004	1.2000e-004	1.3800e-003	0.0000	5.3000e-004	0.0000	5.3000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4403	0.4403	1.0000e-005	0.0000	0.4405
Total	**1.8000e-004**	**1.2000e-004**	**1.3800e-003**	**0.0000**	**5.3000e-004**	**0.0000**	**5.3000e-004**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**0.4403**	**0.4403**	**1.0000e-005**	**0.0000**	**0.4405**

3.4 Grading - 2021

Unmitigated Construction On-Site

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

Fugitive Dust					0.2684	0.0000	0.2684	0.1460	0.0000	0.1460	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1252	1.3925	0.8070	1.7000e-003		0.0595	0.0595		0.0548	0.0548	0.0000	149.2081	149.2081	0.0483	0.0000	150.4145
Total	**0.1252**	**1.3925**	**0.8070**	**1.7000e-003**	**0.2684**	**0.0595**	**0.3279**	**0.1460**	**0.0548**	**0.2008**	**0.0000**	**149.2081**	**149.2081**	**0.0483**	**0.0000**	**150.4145**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1000e-003	1.4100e-003	0.0164	6.0000e-005	6.2800e-003	4.0000e-005	6.3200e-003	1.6700e-003	4.0000e-005	1.7100e-003	0.0000	5.2463	5.2463	1.1000e-004	0.0000	5.2491
Total	**2.1000e-003**	**1.4100e-003**	**0.0164**	**6.0000e-005**	**6.2800e-003**	**4.0000e-005**	**6.3200e-003**	**1.6700e-003**	**4.0000e-005**	**1.7100e-003**	**0.0000**	**5.2463**	**5.2463**	**1.1000e-004**	**0.0000**	**5.2491**

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					0.1208	0.0000	0.1208	0.0657	0.0000	0.0657	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1252	1.3925	0.8070	1.7000e-003		0.0595	0.0595		0.0548	0.0548	0.0000	149.2079	149.2079	0.0483	0.0000	150.4143
Total	**0.1252**	**1.3925**	**0.8070**	**1.7000e-003**	**0.1208**	**0.0595**	**0.1803**	**0.0657**	**0.0548**	**0.1205**	**0.0000**	**149.2079**	**149.2079**	**0.0483**	**0.0000**	**150.4143**

Mitigated Construction Off-Site

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

Worker	2.1000e-003	1.4100e-003	0.0164	6.0000e-005	6.2800e-003	4.0000e-005	6.3200e-003	1.6700e-003	4.0000e-005	1.7100e-003	0.0000	5.2463	5.2463	1.1000e-004	0.0000	5.2491
Total	**2.1000e-003**	**1.4100e-003**	**0.0164**	**6.0000e-005**	**6.2800e-003**	**4.0000e-005**	**6.3200e-003**	**1.6700e-003**	**4.0000e-005**	**1.7100e-003**	**0.0000**	**5.2463**	**5.2463**	**1.1000e-004**	**0.0000**	**5.2491**

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	0.0621	0.5450	0.5115	9.0000e-004		0.0288	0.0288		0.0276	0.0276	0.0000	76.4088	76.4088	0.0131	0.0000	76.7359
Total	**0.0621**	**0.5450**	**0.5115**	**9.0000e-004**		**0.0288**	**0.0288**		**0.0276**	**0.0276**	**0.0000**	**76.4088**	**76.4088**	**0.0131**	**0.0000**	**76.7359**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.0500e-003	0.1415	0.0397	3.6000e-004	9.3500e-003	2.9000e-004	9.6400e-003	2.7000e-003	2.8000e-004	2.9800e-003	0.0000	35.8373	35.8373	2.9000e-003	0.0000	35.9098
Worker	0.0225	0.0151	0.1763	6.2000e-004	0.0674	4.4000e-004	0.0678	0.0179	4.1000e-004	0.0183	0.0000	56.2971	56.2971	1.2100e-003	0.0000	56.3272
Total	**0.0265**	**0.1566**	**0.2160**	**9.8000e-004**	**0.0767**	**7.3000e-004**	**0.0775**	**0.0206**	**6.9000e-004**	**0.0213**	**0.0000**	**92.1344**	**92.1344**	**4.1100e-003**	**0.0000**	**92.2370**

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	0.0621	0.5449	0.5115	9.0000e-004		0.0288	0.0288		0.0276	0.0276	0.0000	76.4087	76.4087	0.0131	0.0000	76.7358
Total	**0.0621**	**0.5449**	**0.5115**	**9.0000e-004**		**0.0288**	**0.0288**		**0.0276**	**0.0276**	**0.0000**	**76.4087**	**76.4087**	**0.0131**	**0.0000**	**76.7358**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.0500e-003	0.1415	0.0397	3.6000e-004	9.3500e-003	2.9000e-004	9.6400e-003	2.7000e-003	2.8000e-004	2.9800e-003	0.0000	35.8373	35.8373	2.9000e-003	0.0000	35.9098
Worker	0.0225	0.0151	0.1763	6.2000e-004	0.0674	4.4000e-004	0.0678	0.0179	4.1000e-004	0.0183	0.0000	56.2971	56.2971	1.2100e-003	0.0000	56.3272
Total	**0.0265**	**0.1566**	**0.2160**	**9.8000e-004**	**0.0767**	**7.3000e-004**	**0.0775**	**0.0206**	**6.9000e-004**	**0.0213**	**0.0000**	**92.1344**	**92.1344**	**4.1100e-003**	**0.0000**	**92.2370**

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	0.2230	1.9455	1.9934	3.5400e-003		0.0977	0.0977		0.0938	0.0938	0.0000	301.0485	301.0485	0.0508	0.0000	302.3180
Total	**0.2230**	**1.9455**	**1.9934**	**3.5400e-003**		**0.0977**	**0.0977**		**0.0938**	**0.0938**	**0.0000**	**301.0485**	**301.0485**	**0.0508**	**0.0000**	**302.3180**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0150	0.5267	0.1507	1.4100e-003	0.0368	1.0100e-003	0.0378	0.0106	9.6000e-004	0.0116	0.0000	139.7851	139.7851	0.0111	0.0000	140.0616
Worker	0.0838	0.0540	0.6476	2.3600e-003	0.2655	1.7200e-003	0.2672	0.0705	1.5800e-003	0.0721	0.0000	213.5658	213.5658	4.3100e-003	0.0000	213.6736
Total	**0.0988**	**0.5807**	**0.7983**	**3.7700e-003**	**0.3023**	**2.7300e-003**	**0.3050**	**0.0811**	**2.5400e-003**	**0.0837**	**0.0000**	**353.3509**	**353.3509**	**0.0154**	**0.0000**	**353.7352**

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	0.2230	1.9455	1.9934	3.5400e-003		0.0977	0.0977		0.0938	0.0938	0.0000	301.0481	301.0481	0.0508	0.0000	302.3177
Total	**0.2230**	**1.9455**	**1.9934**	**3.5400e-003**		**0.0977**	**0.0977**		**0.0938**	**0.0938**	**0.0000**	**301.0481**	**301.0481**	**0.0508**	**0.0000**	**302.3177**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0150	0.5267	0.1507	1.4100e-003	0.0368	1.0100e-003	0.0378	0.0106	9.6000e-004	0.0116	0.0000	139.7851	139.7851	0.0111	0.0000	140.0616
Worker	0.0838	0.0540	0.6476	2.3600e-003	0.2655	1.7200e-003	0.2672	0.0705	1.5800e-003	0.0721	0.0000	213.5658	213.5658	4.3100e-003	0.0000	213.6736
Total	**0.0988**	**0.5807**	**0.7983**	**3.7700e-003**	**0.3023**	**2.7300e-003**	**0.3050**	**0.0811**	**2.5400e-003**	**0.0837**	**0.0000**	**353.3509**	**353.3509**	**0.0154**	**0.0000**	**353.7352**

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0844	0.8511	1.1154	1.7400e-003		0.0434	0.0434		0.0400	0.0400	0.0000	153.2108	153.2108	0.0496	0.0000	154.4496
Paving	2.5200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0869**	**0.8511**	**1.1154**	**1.7400e-003**		**0.0434**	**0.0434**		**0.0400**	**0.0400**	**0.0000**	**153.2108**	**153.2108**	**0.0496**	**0.0000**	**154.4496**

Unmitigated Construction Off-Site

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

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.9800e-003	2.5600e-003	0.0307	1.1000e-004	0.0126	8.0000e-005	0.0127	3.3500e-003	7.0000e-005	3.4200e-003	0.0000	10.1351	10.1351	2.0000e-004	0.0000	10.1402
Total	**3.9800e-003**	**2.5600e-003**	**0.0307**	**1.1000e-004**	**0.0126**	**8.0000e-005**	**0.0127**	**3.3500e-003**	**7.0000e-005**	**3.4200e-003**	**0.0000**	**10.1351**	**10.1351**	**2.0000e-004**	**0.0000**	**10.1402**

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	0.0844	0.8511	1.1154	1.7400e-003		0.0434	0.0434		0.0400	0.0400	0.0000	153.2106	153.2106	0.0496	0.0000	154.4494
Paving	2.5200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0869**	**0.8511**	**1.1154**	**1.7400e-003**		**0.0434**	**0.0434**		**0.0400**	**0.0400**	**0.0000**	**153.2106**	**153.2106**	**0.0496**	**0.0000**	**154.4494**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.9800e-003	2.5600e-003	0.0307	1.1000e-004	0.0126	8.0000e-005	0.0127	3.3500e-003	7.0000e-005	3.4200e-003	0.0000	10.1351	10.1351	2.0000e-004	0.0000	10.1402
Total	**3.9800e-003**	**2.5600e-003**	**0.0307**	**1.1000e-004**	**0.0126**	**8.0000e-005**	**0.0127**	**3.3500e-003**	**7.0000e-005**	**3.4200e-003**	**0.0000**	**10.1351**	**10.1351**	**2.0000e-004**	**0.0000**	**10.1402**

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	0.0439	0.4332	0.6198	9.7000e-004		0.0217	0.0217		0.0200	0.0200	0.0000	85.1142	85.1142	0.0275	0.0000	85.8024

Paving	1.4000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0453**	**0.4332**	**0.6198**	**9.7000e-004**		**0.0217**	**0.0217**		**0.0200**	**0.0200**	**0.0000**	**85.1142**	**85.1142**	**0.0275**	**0.0000**	**85.8024**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1000e-003	1.2900e-003	0.0159	6.0000e-005	7.0000e-003	4.0000e-005	7.0400e-003	1.8600e-003	4.0000e-005	1.9000e-003	0.0000	5.4144	5.4144	1.0000e-004	0.0000	5.4169
Total	**2.1000e-003**	**1.2900e-003**	**0.0159**	**6.0000e-005**	**7.0000e-003**	**4.0000e-005**	**7.0400e-003**	**1.8600e-003**	**4.0000e-005**	**1.9000e-003**	**0.0000**	**5.4144**	**5.4144**	**1.0000e-004**	**0.0000**	**5.4169**

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	0.0439	0.4331	0.6198	9.7000e-004		0.0217	0.0217		0.0200	0.0200	0.0000	85.1141	85.1141	0.0275	0.0000	85.8023
Paving	1.4000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0453**	**0.4331**	**0.6198**	**9.7000e-004**		**0.0217**	**0.0217**		**0.0200**	**0.0200**	**0.0000**	**85.1141**	**85.1141**	**0.0275**	**0.0000**	**85.8023**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1000e-003	1.2900e-003	0.0159	6.0000e-005	7.0000e-003	4.0000e-005	7.0400e-003	1.8600e-003	4.0000e-005	1.9000e-003	0.0000	5.4144	5.4144	1.0000e-004	0.0000	5.4169

Total	**2.1000e-003**	**1.2900e-003**	**0.0159**	**6.0000e-005**	**7.0000e-003**	**4.0000e-005**	**7.0400e-003**	**1.8600e-003**	**4.0000e-005**	**1.9000e-003**	**0.0000**	**5.4144**	**5.4144**	**1.0000e-004**	**0.0000**	**5.4169**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.5077					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0157	0.1078	0.1387	2.3000e-004		6.2500e-003	6.2500e-003		6.2500e-003	6.2500e-003	0.0000	19.5324	19.5324	1.2700e-003	0.0000	19.5642
Total	**0.5234**	**0.1078**	**0.1387**	**2.3000e-004**		**6.2500e-003**	**6.2500e-003**		**6.2500e-003**	**6.2500e-003**	**0.0000**	**19.5324**	**19.5324**	**1.2700e-003**	**0.0000**	**19.5642**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.8100e-003	6.3200e-003	0.0758	2.8000e-004	0.0311	2.0000e-004	0.0313	8.2500e-003	1.8000e-004	8.4400e-003	0.0000	24.9999	24.9999	5.0000e-004	0.0000	25.0125
Total	**9.8100e-003**	**6.3200e-003**	**0.0758**	**2.8000e-004**	**0.0311**	**2.0000e-004**	**0.0313**	**8.2500e-003**	**1.8000e-004**	**8.4400e-003**	**0.0000**	**24.9999**	**24.9999**	**5.0000e-004**	**0.0000**	**25.0125**

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	0.5077					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0157	0.1078	0.1387	2.3000e-004		6.2500e-003	6.2500e-003		6.2500e-003	6.2500e-003	0.0000	19.5324	19.5324	1.2700e-003	0.0000	19.5642
Total	**0.5234**	**0.1078**	**0.1387**	**2.3000e-004**		**6.2500e-003**	**6.2500e-003**		**6.2500e-003**	**6.2500e-003**	**0.0000**	**19.5324**	**19.5324**	**1.2700e-003**	**0.0000**	**19.5642**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.8100e-003	6.3200e-003	0.0758	2.8000e-004	0.0311	2.0000e-004	0.0313	8.2500e-003	1.8000e-004	8.4400e-003	0.0000	24.9999	24.9999	5.0000e-004	0.0000	25.0125
Total	**9.8100e-003**	**6.3200e-003**	**0.0758**	**2.8000e-004**	**0.0311**	**2.0000e-004**	**0.0313**	**8.2500e-003**	**1.8000e-004**	**8.4400e-003**	**0.0000**	**24.9999**	**24.9999**	**5.0000e-004**	**0.0000**	**25.0125**

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	0.2821					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.1500e-003	0.0554	0.0770	1.3000e-004		3.0100e-003	3.0100e-003		3.0100e-003	3.0100e-003	0.0000	10.8513	10.8513	6.5000e-004	0.0000	10.8676
Total	**0.2902**	**0.0554**	**0.0770**	**1.3000e-004**		**3.0100e-003**	**3.0100e-003**		**3.0100e-003**	**3.0100e-003**	**0.0000**	**10.8513**	**10.8513**	**6.5000e-004**	**0.0000**	**10.8676**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.1700e-003	3.1900e-003	0.0392	1.5000e-004	0.0173	1.1000e-004	0.0174	4.5800e-003	1.0000e-004	4.6900e-003	0.0000	13.3554	13.3554	2.5000e-004	0.0000	13.3617
Total	**5.1700e-003**	**3.1900e-003**	**0.0392**	**1.5000e-004**	**0.0173**	**1.1000e-004**	**0.0174**	**4.5800e-003**	**1.0000e-004**	**4.6900e-003**	**0.0000**	**13.3554**	**13.3554**	**2.5000e-004**	**0.0000**	**13.3617**

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	0.2821					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.1500e-003	0.0554	0.0770	1.3000e-004		3.0100e-003	3.0100e-003		3.0100e-003	3.0100e-003	0.0000	10.8513	10.8513	6.5000e-004	0.0000	10.8676
Total	**0.2902**	**0.0554**	**0.0770**	**1.3000e-004**		**3.0100e-003**	**3.0100e-003**		**3.0100e-003**	**3.0100e-003**	**0.0000**	**10.8513**	**10.8513**	**6.5000e-004**	**0.0000**	**10.8676**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.1700e-003	3.1900e-003	0.0392	1.5000e-004	0.0173	1.1000e-004	0.0174	4.5800e-003	1.0000e-004	4.6900e-003	0.0000	13.3554	13.3554	2.5000e-004	0.0000	13.3617
Total	**5.1700e-003**	**3.1900e-003**	**0.0392**	**1.5000e-004**	**0.0173**	**1.1000e-004**	**0.0174**	**4.5800e-003**	**1.0000e-004**	**4.6900e-003**	**0.0000**	**13.3554**	**13.3554**	**2.5000e-004**	**0.0000**	**13.3617**

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	0.1979	0.7558	2.7775	0.0112	1.0754	7.6900e-003	1.0831	0.2880	7.1400e-003	0.2951	0.0000	1,032.4429	1,032.4429	0.0409	0.0000	1,033.4645
Unmitigated	0.1979	0.7558	2.7775	0.0112	1.0754	7.6900e-003	1.0831	0.2880	7.1400e-003	0.2951	0.0000	1,032.4429	1,032.4429	0.0409	0.0000	1,033.4645

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse High Rise	848.64	868.92	695.76	2,835,201	2,835,201
Other Asphalt Surfaces	0.00	0.00	0.00		

Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	848.64	868.92	695.76	2,835,201	2,835,201

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse High Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Condo/Townhouse High Rise	0.563406	0.043070	0.209298	0.109958	0.015015	0.005784	0.026182	0.017546	0.001775	0.001524	0.004941	0.000598	0.000904
Other Asphalt Surfaces	0.563406	0.043070	0.209298	0.109958	0.015015	0.005784	0.026182	0.017546	0.001775	0.001524	0.004941	0.000598	0.000904
Other Non-Asphalt Surfaces	0.563406	0.043070	0.209298	0.109958	0.015015	0.005784	0.026182	0.017546	0.001775	0.001524	0.004941	0.000598	0.000904
Parking Lot	0.563406	0.043070	0.209298	0.109958	0.015015	0.005784	0.026182	0.017546	0.001775	0.001524	0.004941	0.000598	0.000904

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	316.2254	316.2254	8.8700e-003	1.8300e-003	316.9940
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	316.2254	316.2254	8.8700e-003	1.8300e-003	316.9940
NaturalGas Mitigated	9.6100e-003	0.0821	0.0350	5.2000e-004		6.6400e-003	6.6400e-003		6.6400e-003	6.6400e-003	0.0000	95.1308	95.1308	1.8200e-003	1.7400e-003	95.6961
NaturalGas Unmitigated	9.6100e-003	0.0821	0.0350	5.2000e-004		6.6400e-003	6.6400e-003		6.6400e-003	6.6400e-003	0.0000	95.1308	95.1308	1.8200e-003	1.7400e-003	95.6961

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Condo/Townhouse High Rise	1.78268e+006	9.6100e-003	0.0821	0.0350	5.2000e-004		6.6400e-003	6.6400e-003		6.6400e-003	6.6400e-003	0.0000	95.1308	95.1308	1.8200e-003	1.7400e-003	95.6961
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**9.6100e-003**	**0.0821**	**0.0350**	**5.2000e-004**		**6.6400e-003**	**6.6400e-003**		**6.6400e-003**	**6.6400e-003**	**0.0000**	**95.1308**	**95.1308**	**1.8200e-003**	**1.7400e-003**	**95.6961**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Condo/Townhouse High Rise	1.78268e+006	9.6100e-003	0.0821	0.0350	5.2000e-004		6.6400e-003	6.6400e-003		6.6400e-003	6.6400e-003	0.0000	95.1308	95.1308	1.8200e-003	1.7400e-003	95.6961
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**9.6100e-003**	**0.0821**	**0.0350**	**5.2000e-004**		**6.6400e-003**	**6.6400e-003**		**6.6400e-003**	**6.6400e-003**	**0.0000**	**95.1308**	**95.1308**	**1.8200e-003**	**1.7400e-003**	**95.6961**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse High Rise	660654	309.8562	8.6900e-003	1.8000e-003	310.6093
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000

Parking Lot	13580	6.3692	1.8000e-004	4.0000e-005	6.3847
Total		**316.2254**	**8.8700e-003**	**1.8400e-003**	**316.9940**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse High Rise	660654	309.8562	8.6900e-003	1.8000e-003	310.6093
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	13580	6.3692	1.8000e-004	4.0000e-005	6.3847
Total		**316.2254**	**8.8700e-003**	**1.8400e-003**	**316.9940**

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	1.0230	0.0186	1.6110	9.0000e-005		8.9100e-003	8.9100e-003		8.9100e-003	8.9100e-003	0.0000	2.6314	2.6314	2.5400e-003	0.0000	2.6949
Unmitigated	1.0230	0.0186	1.6110	9.0000e-005		8.9100e-003	8.9100e-003		8.9100e-003	8.9100e-003	0.0000	2.6314	2.6314	2.5400e-003	0.0000	2.6949

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	0.0790					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.8954					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0487	0.0186	1.6110	9.0000e-005		8.9100e-003	8.9100e-003		8.9100e-003	8.9100e-003	0.0000	2.6314	2.6314	2.5400e-003	0.0000	2.6949
Total	**1.0231**	**0.0186**	**1.6110**	**9.0000e-005**		**8.9100e-003**	**8.9100e-003**		**8.9100e-003**	**8.9100e-003**	**0.0000**	**2.6314**	**2.6314**	**2.5400e-003**	**0.0000**	**2.6949**

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	0.0790					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.8954					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0487	0.0186	1.6110	9.0000e-005		8.9100e-003	8.9100e-003		8.9100e-003	8.9100e-003	0.0000	2.6314	2.6314	2.5400e-003	0.0000	2.6949
Total	**1.0231**	**0.0186**	**1.6110**	**9.0000e-005**		**8.9100e-003**	**8.9100e-003**		**8.9100e-003**	**8.9100e-003**	**0.0000**	**2.6314**	**2.6314**	**2.5400e-003**	**0.0000**	**2.6949**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	98.6859	0.3339	8.3700e-003	109.5282
Unmitigated	98.6859	0.3339	8.3700e-003	109.5282

7.2 Water by Land Use

Unmitigated

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

Condo/Townhouse High Rise	10.164 / 6.40776	98.6859	0.3339	8.3700e-003	109.5282
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**98.6859**	**0.3339**	**8.3700e-003**	**109.5282**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse High Rise	10.164 / 6.40776	98.6859	0.3339	8.3700e-003	109.5282
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**98.6859**	**0.3339**	**8.3700e-003**	**109.5282**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.4527	0.0268	0.0000	1.1215
Unmitigated	0.4527	0.0268	0.0000	1.1215

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse High Rise	2.23	0.4527	0.0268	0.0000	1.1215
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**0.4527**	**0.0268**	**0.0000**	**1.1215**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse High Rise	2.23	0.4527	0.0268	0.0000	1.1215
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**0.4527**	**0.0268**	**0.0000**	**1.1215**

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

Legacy Anaheim Project
Orange County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	2.12	Acre	2.12	92,347.20	0
Other Non-Asphalt Surfaces	43.21	1000sqft	0.99	43,206.00	0
Parking Lot	97.00	Space	0.87	38,800.00	0
Condo/Townhouse High Rise	156.00	Dwelling Unit	2.42	244,680.00	446

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2023
Utility Company	Anaheim Public Utilities				
CO2 Intensity (lb/MWhr)	1034	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - See CalEEMod note 1.

Land Use - See CalEEMod note 2.

Construction Phase - See CalEEMod note 3.

Off-road Equipment - See CalEEMod note 3.

Off-road Equipment - See CalEEMod note 3.

Off-road Equipment - See CalEEMod note 3.

Off-road Equipment - See CalEEMod note 3.

Demolition - See CalEEMod note 5.

Grading - See CalEEMod note 4.

Vehicle Trips - See CalEEMod note 6.

Woodstoves - See CalEEMod note 10.

Solid Waste - See CalEEMod note 11.

Construction Off-road Equipment Mitigation - See CalEEMod note 7.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterExposedAreaPM10PercentReduction	61	55
tblConstDustMitigation	WaterExposedAreaPM25PercentReduction	61	55
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	10.00
tblConstructionPhase	NumDays	10.00	12.00
tblConstructionPhase	NumDays	20.00	88.00
tblConstructionPhase	NumDays	230.00	326.00
tblConstructionPhase	NumDays	20.00	238.00
tblConstructionPhase	NumDays	20.00	238.00
tblFireplaces	FireplaceDayYear	25.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	132.60	0.00
tblFireplaces	NumberNoFireplace	15.60	0.00
tblFireplaces	NumberWood	7.80	0.00
tblGrading	AcresOfGrading	132.00	6.40
tblLandUse	LandUseSquareFeet	43,210.00	43,206.00
tblLandUse	LandUseSquareFeet	156,000.00	244,680.00
tblLandUse	LotAcreage	2.44	2.42
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00

tblProjectCharacteristics	CO2IntensityFactor	1543.28	1034
tblSolidWaste	SolidWasteGenerationRate	71.76	2.23
tblVehicleTrips	ST_TR	4.31	5.57
tblVehicleTrips	SU_TR	3.43	4.46
tblVehicleTrips	WD_TR	4.18	5.44
tblWoodstoves	NumberCatalytic	7.80	0.00
tblWoodstoves	NumberNoncatalytic	7.80	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

Year	lb/day										lb/day					
2021	5.5666	52.8176	41.0318	0.0979	8.6111	2.2471	10.8582	3.9912	2.1024	6.0936	0.0000	9,593.7824	9,593.7824	1.7857	0.0000	9,638.4251
2022	10.6167	31.9636	39.5799	0.0882	2.9478	1.4256	4.3733	0.7883	1.3488	2.1371	0.0000	8,650.8995	8,650.8995	1.3035	0.0000	8,683.4874
2023	8.0619	11.5881	17.7700	0.0308	0.5812	0.5846	1.1659	0.1542	0.5435	0.6977	0.0000	2,995.6419	2,995.6419	0.7405	0.0000	3,014.1536
Maximum	**10.6167**	**52.8176**	**41.0318**	**0.0979**	**8.6111**	**2.2471**	**10.8582**	**3.9912**	**2.1024**	**6.0936**	**0.0000**	**9,593.7824**	**9,593.7824**	**1.7857**	**0.0000**	**9,638.4251**

Mitigated Construction

Year	lb/day										lb/day					
2022	10.6167	31.9636	39.5799	0.0882	2.9478	1.4256	4.3733	0.7883	1.3488	2.1371	0.0000	8,650.8995	8,650.8995	1.3035	0.0000	8,683.4874
2023	8.0619	11.5881	17.7700	0.0308	0.5812	0.5846	1.1659	0.1542	0.5435	0.6977	0.0000	2,995.6419	2,995.6419	0.7405	0.0000	3,014.1536
Maximum	**10.6167**	**52.8176**	**41.0318**	**0.0979**	**5.2565**	**2.2471**	**7.5037**	**2.1660**	**2.1024**	**4.2684**	**0.0000**	**9,593.7824**	**9,593.7824**	**1.7857**	**0.0000**	**9,638.4251**

	ROG	NOx	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**	**27.63**	**0.00**	**20.46**	**37.00**	**0.00**	**20.44**	**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
Area	5.7283	0.1485	12.8876	6.8000e-004		0.0713	0.0713		0.0713	0.0713	0.0000	23.2053	23.2053	0.0224	0.0000	23.7645
Energy	0.0527	0.4501	0.1915	2.8700e-003		0.0364	0.0364		0.0364	0.0364		574.5959	574.5959	0.0110	0.0105	578.0104
Total	**6.9751**	**4.7556**	**29.6202**	**0.0701**	**6.2990**	**0.1519**	**6.4509**	**1.6844**	**0.1487**	**1.8332**	**0.0000**	**7,364.7726**	**7,364.7726**	**0.2943**	**0.0105**	**7,375.2697**

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	5.7283	0.1485	12.8876	6.8000e-004		0.0713	0.0713		0.0713	0.0713	0.0000	23.2053	23.2053	0.0224	0.0000	23.7645
Energy	0.0527	0.4501	0.1915	2.8700e-003		0.0364	0.0364		0.0364	0.0364		574.5959	574.5959	0.0110	0.0105	578.0104
Total	**6.9751**	**4.7556**	**29.6202**	**0.0701**	**6.2990**	**0.1519**	**6.4509**	**1.6844**	**0.1487**	**1.8332**	**0.0000**	**7,364.7726**	**7,364.7726**	**0.2943**	**0.0105**	**7,375.2697**

	ROG	NOx	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	8/1/2021	8/15/2021	5	10	
2	Site Preparation	Site Preparation	8/16/2021	8/31/2021	5	12	
3	Grading	Grading	9/1/2021	12/31/2021	5	88	
4	Building Construction	Building Construction	10/1/2021	12/31/2022	5	326	

5	Paving	Paving	6/1/2022	4/30/2023	5	238	
6	Architectural Coating	Architectural Coating	6/1/2022	4/30/2023	5	238	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 6.4

Acres of Paving: 3.98

Residential Indoor: 495,477; Residential Outdoor: 165,159; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	1	8.00	158	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Excavators	1	8.00	158	0.38
Site Preparation	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	1	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cement and Mortar Mixers	1	8.00	9	0.56
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	2	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Pumps	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38

Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	3	8.00	0.00	21.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	186.00	45.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	37.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.4597	0.0000	0.4597	0.0696	0.0000	0.0696			0.0000			0.0000
Off-Road	1.6604	16.1626	10.9836	0.0200		0.8100	0.8100		0.7591	0.7591		1,920.2088	1,920.2088	0.4638		1,931.8031
Total	**1.6604**	**16.1626**	**10.9836**	**0.0200**	**0.4597**	**0.8100**	**1.2697**	**0.0696**	**0.7591**	**0.8287**		**1,920.2088**	**1,920.2088**	**0.4638**		**1,931.8031**

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	0.0151	0.5339	0.1467	1.5800e-003	0.0366	1.6800e-003	0.0382	0.0100	1.6000e-003	0.0116		176.9497	176.9497	0.0184		177.4084
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0289	0.0175	0.2430	8.4000e-004	0.0894	5.8000e-004	0.0900	0.0237	5.3000e-004	0.0243		84.1755	84.1755	1.8000e-003		84.2206
Total	**0.0440**	**0.5513**	**0.3896**	**2.4200e-003**	**0.1260**	**2.2600e-003**	**0.1282**	**0.0337**	**2.1300e-003**	**0.0359**		**261.1253**	**261.1253**	**0.0202**		**261.6290**

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					0.2069	0.0000	0.2069	0.0313	0.0000	0.0313			0.0000			0.0000
Off-Road	1.6604	16.1626	10.9836	0.0200		0.8100	0.8100		0.7591	0.7591	0.0000	1,920.2088	1,920.2088	0.4638		1,931.8030
Total	**1.6604**	**16.1626**	**10.9836**	**0.0200**	**0.2069**	**0.8100**	**1.0169**	**0.0313**	**0.7591**	**0.7904**	**0.0000**	**1,920.2088**	**1,920.2088**	**0.4638**		**1,931.8030**

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	0.0151	0.5339	0.1467	1.5800e-003	0.0366	1.6800e-003	0.0382	0.0100	1.6000e-003	0.0116		176.9497	176.9497	0.0184		177.4084
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0289	0.0175	0.2430	8.4000e-004	0.0894	5.8000e-004	0.0900	0.0237	5.3000e-004	0.0243		84.1755	84.1755	1.8000e-003		84.2206
Total	**0.0440**	**0.5513**	**0.3896**	**2.4200e-003**	**0.1260**	**2.2600e-003**	**0.1282**	**0.0337**	**2.1300e-003**	**0.0359**		**261.1253**	**261.1253**	**0.0202**		**261.6290**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

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

Fugitive Dust					6.0221	0.0000	6.0221	3.3102	0.0000	3.3102			0.0000			0.0000
Off-Road	1.4628	15.0205	9.5698	0.0168		0.7487	0.7487		0.6888	0.6888		1,628.4442	1,628.4442	0.5267		1,641.6110
Total	**1.4628**	**15.0205**	**9.5698**	**0.0168**	**6.0221**	**0.7487**	**6.7708**	**3.3102**	**0.6888**	**3.9990**		**1,628.4442**	**1,628.4442**	**0.5267**		**1,641.6110**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0289	0.0175	0.2430	8.4000e-004	0.0894	5.8000e-004	0.0900	0.0237	5.3000e-004	0.0243		84.1755	84.1755	1.8000e-003		84.2206
Total	**0.0289**	**0.0175**	**0.2430**	**8.4000e-004**	**0.0894**	**5.8000e-004**	**0.0900**	**0.0237**	**5.3000e-004**	**0.0243**		**84.1755**	**84.1755**	**1.8000e-003**		**84.2206**

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					2.7099	0.0000	2.7099	1.4896	0.0000	1.4896			0.0000			0.0000
Off-Road	1.4628	15.0205	9.5698	0.0168		0.7487	0.7487		0.6888	0.6888	0.0000	1,628.4442	1,628.4442	0.5267		1,641.6110
Total	**1.4628**	**15.0205**	**9.5698**	**0.0168**	**2.7099**	**0.7487**	**3.4586**	**1.4896**	**0.6888**	**2.1784**	**0.0000**	**1,628.4442**	**1,628.4442**	**0.5267**		**1,641.6110**

Mitigated Construction Off-Site

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

Worker	0.0289	0.0175	0.2430	8.4000e-004	0.0894	5.8000e-004	0.0900	0.0237	5.3000e-004	0.0243		84.1755	84.1755	1.8000e-003		84.2206
Total	**0.0289**	**0.0175**	**0.2430**	**8.4000e-004**	**0.0894**	**5.8000e-004**	**0.0900**	**0.0237**	**5.3000e-004**	**0.0243**		**84.1755**	**84.1755**	**1.8000e-003**		**84.2206**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0992	0.0000	6.0992	3.3186	0.0000	3.3186			0.0000			0.0000
Off-Road	2.8453	31.6479	18.3417	0.0386		1.3527	1.3527		1.2445	1.2445		3,738.0399	3,738.0399	1.2090		3,768.2638
Total	**2.8453**	**31.6479**	**18.3417**	**0.0386**	**6.0992**	**1.3527**	**7.4520**	**3.3186**	**1.2445**	**4.5631**		**3,738.0399**	**3,738.0399**	**1.2090**		**3,768.2638**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0469	0.0284	0.3949	1.3700e-003	0.1453	9.4000e-004	0.1463	0.0385	8.7000e-004	0.0394		136.7852	136.7852	2.9300e-003		136.8585
Total	**0.0469**	**0.0284**	**0.3949**	**1.3700e-003**	**0.1453**	**9.4000e-004**	**0.1463**	**0.0385**	**8.7000e-004**	**0.0394**		**136.7852**	**136.7852**	**2.9300e-003**		**136.8585**

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					2.7447	0.0000	2.7447	1.4934	0.0000	1.4934			0.0000			0.0000
Off-Road	2.8453	31.6479	18.3417	0.0386		1.3527	1.3527		1.2445	1.2445	0.0000	3,738.0399	3,738.0399	1.2090		3,768.2638

Total	**2.8453**	**31.6479**	**18.3417**	**0.0386**	**2.7447**	**1.3527**	**4.0974**	**1.4934**	**1.2445**	**2.7379**	**0.0000**	**3,738.0399**	**3,738.0399**	**1.2090**		**3,768.2638**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0469	0.0284	0.3949	1.3700e-003	0.1453	9.4000e-004	0.1463	0.0385	8.7000e-004	0.0394		136.7852	136.7852	2.9300e-003		136.8585
Total	**0.0469**	**0.0284**	**0.3949**	**1.3700e-003**	**0.1453**	**9.4000e-004**	**0.1463**	**0.0385**	**8.7000e-004**	**0.0394**		**136.7852**	**136.7852**	**2.9300e-003**		**136.8585**

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	1.8831	16.5135	15.5009	0.0272		0.8712	0.8712		0.8362	0.8362		2,552.3099	2,552.3099	0.4371		2,563.2365
Total	**1.8831**	**16.5135**	**15.5009**	**0.0272**		**0.8712**	**0.8712**		**0.8362**	**0.8362**		**2,552.3099**	**2,552.3099**	**0.4371**		**2,563.2365**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1201	4.2216	1.1449	0.0111	0.2875	8.7700e-003	0.2963	0.0827	8.3900e-003	0.0911		1,209.5663	1,209.5663	0.0949		1,211.9374
Worker	0.6713	0.4062	5.6494	0.0196	2.0790	0.0135	2.0925	0.5514	0.0124	0.5638		1,957.0811	1,957.0811	0.0419		1,958.1289
Total	**0.7914**	**4.6279**	**6.7943**	**0.0307**	**2.3666**	**0.0222**	**2.3888**	**0.6341**	**0.0208**	**0.6549**		**3,166.6474**	**3,166.6474**	**0.1368**		**3,170.0663**

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	1.8831	16.5135	15.5009	0.0272		0.8712	0.8712		0.8362	0.8362	0.0000	2,552.3099	2,552.3099	0.4371		2,563.2365
Total	**1.8831**	**16.5135**	**15.5009**	**0.0272**		**0.8712**	**0.8712**		**0.8362**	**0.8362**	**0.0000**	**2,552.3099**	**2,552.3099**	**0.4371**		**2,563.2365**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1201	4.2216	1.1449	0.0111	0.2875	8.7700e-003	0.2963	0.0827	8.3900e-003	0.0911		1,209.5663	1,209.5663	0.0949		1,211.9374
Worker	0.6713	0.4062	5.6494	0.0196	2.0790	0.0135	2.0925	0.5514	0.0124	0.5638		1,957.0811	1,957.0811	0.0419		1,958.1289
Total	**0.7914**	**4.6279**	**6.7943**	**0.0307**	**2.3666**	**0.0222**	**2.3888**	**0.6341**	**0.0208**	**0.6549**		**3,166.6474**	**3,166.6474**	**0.1368**		**3,170.0663**

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	1.7151	14.9654	15.3336	0.0273		0.7514	0.7514		0.7218	0.7218		2,552.6855	2,552.6855	0.4306		2,563.4507
Total	**1.7151**	**14.9654**	**15.3336**	**0.0273**		**0.7514**	**0.7514**		**0.7218**	**0.7218**		**2,552.6855**	**2,552.6855**	**0.4306**		**2,563.4507**

Unmitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1129	3.9940	1.1055	0.0110	0.2875	7.6300e-003	0.2951	0.0827	7.3000e-003	0.0900		1,197.6868	1,197.6868	0.0919		1,199.9837
Worker	0.6345	0.3680	5.2727	0.0189	2.0790	0.0132	2.0922	0.5514	0.0122	0.5635		1,884.5543	1,884.5543	0.0381		1,885.5059
Total	**0.7474**	**4.3620**	**6.3782**	**0.0299**	**2.3665**	**0.0208**	**2.3874**	**0.6341**	**0.0195**	**0.6536**		**3,082.2410**	**3,082.2410**	**0.1299**		**3,085.4895**

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	1.7151	14.9654	15.3336	0.0273		0.7514	0.7514		0.7218	0.7218	0.0000	2,552.6855	2,552.6855	0.4306		2,563.4507
Total	**1.7151**	**14.9654**	**15.3336**	**0.0273**		**0.7514**	**0.7514**		**0.7218**	**0.7218**	**0.0000**	**2,552.6855**	**2,552.6855**	**0.4306**		**2,563.4507**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1129	3.9940	1.1055	0.0110	0.2875	7.6300e-003	0.2951	0.0827	7.3000e-003	0.0900		1,197.6868	1,197.6868	0.0919		1,199.9837
Worker	0.6345	0.3680	5.2727	0.0189	2.0790	0.0132	2.0922	0.5514	0.0122	0.5635		1,884.5543	1,884.5543	0.0381		1,885.5059
Total	**0.7474**	**4.3620**	**6.3782**	**0.0299**	**2.3665**	**0.0208**	**2.3874**	**0.6341**	**0.0195**	**0.6536**		**3,082.2410**	**3,082.2410**	**0.1299**		**3,085.4895**

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225		2,207.6603	2,207.6603	0.7140		2,225.5104

Paving	0.0329					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1357**	**11.1249**	**14.5805**	**0.0228**		**0.5679**	**0.5679**		**0.5225**	**0.5225**		**2,207.6603**	**2,207.6603**	**0.7140**		**2,225.5104**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0512	0.0297	0.4252	1.5200e-003	0.1677	1.0600e-003	0.1687	0.0445	9.8000e-004	0.0455		151.9802	151.9802	3.0700e-003		152.0569
Total	**0.0512**	**0.0297**	**0.4252**	**1.5200e-003**	**0.1677**	**1.0600e-003**	**0.1687**	**0.0445**	**9.8000e-004**	**0.0455**		**151.9802**	**151.9802**	**3.0700e-003**		**152.0569**

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	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225	0.0000	2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.0329					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1357**	**11.1249**	**14.5805**	**0.0228**		**0.5679**	**0.5679**		**0.5225**	**0.5225**	**0.0000**	**2,207.6603**	**2,207.6603**	**0.7140**		**2,225.5104**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0512	0.0297	0.4252	1.5200e-003	0.1677	1.0600e-003	0.1687	0.0445	9.8000e-004	0.0455		151.9802	151.9802	3.0700e-003		152.0569

Total	**0.0512**	**0.0297**	**0.4252**	**1.5200e-003**	**0.1677**	**1.0600e-003**	**0.1687**	**0.0445**	**9.8000e-004**	**0.0455**		**151.9802**	**151.9802**	**3.0700e-003**		**152.0569**

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	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.0329					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0657**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**		**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0485	0.0270	0.3966	1.4600e-003	0.1677	1.0500e-003	0.1687	0.0445	9.6000e-004	0.0454		146.1374	146.1374	2.7800e-003		146.2070
Total	**0.0485**	**0.0270**	**0.3966**	**1.4600e-003**	**0.1677**	**1.0500e-003**	**0.1687**	**0.0445**	**9.6000e-004**	**0.0454**		**146.1374**	**146.1374**	**2.7800e-003**		**146.2070**

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	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.0329					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0657**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**	**0.0000**	**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0485	0.0270	0.3966	1.4600e-003	0.1677	1.0500e-003	0.1687	0.0445	9.6000e-004	0.0454		146.1374	146.1374	2.7800e-003		146.2070
Total	**0.0485**	**0.0270**	**0.3966**	**1.4600e-003**	**0.1677**	**1.0500e-003**	**0.1687**	**0.0445**	**9.6000e-004**	**0.0454**		**146.1374**	**146.1374**	**2.7800e-003**		**146.2070**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	6.6366					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**6.8411**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1262	0.0732	1.0489	3.7600e-003	0.4136	2.6300e-003	0.4162	0.1097	2.4200e-003	0.1121		374.8845	374.8845	7.5700e-003		375.0738
Total	**0.1262**	**0.0732**	**1.0489**	**3.7600e-003**	**0.4136**	**2.6300e-003**	**0.4162**	**0.1097**	**2.4200e-003**	**0.1121**		**374.8845**	**374.8845**	**7.5700e-003**		**375.0738**

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	6.6366					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**6.8411**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1262	0.0732	1.0489	3.7600e-003	0.4136	2.6300e-003	0.4162	0.1097	2.4200e-003	0.1121		374.8845	374.8845	7.5700e-003		375.0738
Total	**0.1262**	**0.0732**	**1.0489**	**3.7600e-003**	**0.4136**	**2.6300e-003**	**0.4162**	**0.1097**	**2.4200e-003**	**0.1121**		**374.8845**	**374.8845**	**7.5700e-003**		**375.0738**

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	6.6366					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**6.8283**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

Unmitigated Construction Off-Site

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

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1195	0.0665	0.9782	3.6100e-003	0.4136	2.5800e-003	0.4162	0.1097	2.3800e-003	0.1121		360.4723	360.4723	6.8700e-003		360.6440
Total	**0.1195**	**0.0665**	**0.9782**	**3.6100e-003**	**0.4136**	**2.5800e-003**	**0.4162**	**0.1097**	**2.3800e-003**	**0.1121**		**360.4723**	**360.4723**	**6.8700e-003**		**360.6440**

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	6.6366					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**6.8283**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1195	0.0665	0.9782	3.6100e-003	0.4136	2.5800e-003	0.4162	0.1097	2.3800e-003	0.1121		360.4723	360.4723	6.8700e-003		360.6440
Total	**0.1195**	**0.0665**	**0.9782**	**3.6100e-003**	**0.4136**	**2.5800e-003**	**0.4162**	**0.1097**	**2.3800e-003**	**0.1121**		**360.4723**	**360.4723**	**6.8700e-003**		**360.6440**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

Category	lb/day										lb/day				
Mitigated	1.1941	4.1570	16.5411	0.0666	6.2990	0.0442	6.3432	1.6844	0.0411	1.7255	6,766.9714	6,766.9714	0.2609		6,773.4948
Unmitigated	1.1941	4.1570	16.5411	0.0666	6.2990	0.0442	6.3432	1.6844	0.0411	1.7255	6,766.9714	6,766.9714	0.2609		6,773.4948

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse High Rise	848.64	868.92	695.76	2,835,201	2,835,201
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	848.64	868.92	695.76	2,835,201	2,835,201

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse High Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Condo/Townhouse High Rise	0.563406	0.043070	0.209298	0.109958	0.015015	0.005784	0.026182	0.017546	0.001775	0.001524	0.004941	0.000598	0.000904
Other Asphalt Surfaces	0.563406	0.043070	0.209298	0.109958	0.015015	0.005784	0.026182	0.017546	0.001775	0.001524	0.004941	0.000598	0.000904
Other Non-Asphalt Surfaces	0.563406	0.043070	0.209298	0.109958	0.015015	0.005784	0.026182	0.017546	0.001775	0.001524	0.004941	0.000598	0.000904
Parking Lot	0.563406	0.043070	0.209298	0.109958	0.015015	0.005784	0.026182	0.017546	0.001775	0.001524	0.004941	0.000598	0.000904

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

Category	lb/day										lb/day					
NaturalGas Mitigated	0.0527	0.4501	0.1915	2.8700e-003		0.0364	0.0364		0.0364	0.0364		574.5959	574.5959	0.0110	0.0105	578.0104
NaturalGas Unmitigated	0.0527	0.4501	0.1915	2.8700e-003		0.0364	0.0364		0.0364	0.0364		574.5959	574.5959	0.0110	0.0105	578.0104

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Condo/Townhouse High Rise	4884.07	0.0527	0.4501	0.1915	2.8700e-003		0.0364	0.0364		0.0364	0.0364		574.5959	574.5959	0.0110	0.0105	578.0104
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0527**	**0.4501**	**0.1915**	**2.8700e-003**		**0.0364**	**0.0364**		**0.0364**	**0.0364**		**574.5959**	**574.5959**	**0.0110**	**0.0105**	**578.0104**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Condo/Townhouse High Rise	4.88407	0.0527	0.4501	0.1915	2.8700e-003		0.0364	0.0364		0.0364	0.0364		574.5959	574.5959	0.0110	0.0105	578.0104
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0527**	**0.4501**	**0.1915**	**2.8700e-003**		**0.0364**	**0.0364**		**0.0364**	**0.0364**		**574.5959**	**574.5959**	**0.0110**	**0.0105**	**578.0104**

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	5.7283	0.1485	12.8876	6.8000e-004		0.0713	0.0713		0.0713	0.0713	0.0000	23.2053	23.2053	0.0224	0.0000	23.7645
Unmitigated	5.7283	0.1485	12.8876	6.8000e-004		0.0713	0.0713		0.0713	0.0713	0.0000	23.2053	23.2053	0.0224	0.0000	23.7645

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	0.4327					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.9064					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.3892	0.1485	12.8876	6.8000e-004		0.0713	0.0713		0.0713	0.0713		23.2053	23.2053	0.0224		23.7645
Total	**5.7283**	**0.1485**	**12.8876**	**6.8000e-004**		**0.0713**	**0.0713**		**0.0713**	**0.0713**	**0.0000**	**23.2053**	**23.2053**	**0.0224**	**0.0000**	**23.7645**

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	0.4327					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.9064					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.3892	0.1485	12.8876	6.8000e-004		0.0713	0.0713		0.0713	0.0713		23.2053	23.2053	0.0224		23.7645
Total	**5.7283**	**0.1485**	**12.8876**	**6.8000e-004**		**0.0713**	**0.0713**		**0.0713**	**0.0713**	**0.0000**	**23.2053**	**23.2053**	**0.0224**	**0.0000**	**23.7645**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Legacy Anaheim Project

Orange County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	2.12	Acre	2.12	92,347.20	0
Other Non-Asphalt Surfaces	43.21	1000sqft	0.99	43,206.00	0
Parking Lot	97.00	Space	0.87	38,800.00	0
Condo/Townhouse High Rise	156.00	Dwelling Unit	2.42	244,680.00	446

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2023
Utility Company	Anaheim Public Utilities				
CO2 Intensity (lb/MWhr)	1034	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - See CalEEMod note 1.

Land Use - See CalEEMod note 2.

Construction Phase - See CalEEMod note 3.

Off-road Equipment - See CalEEMod note 3.

Off-road Equipment - See CalEEMod note 3.

Off-road Equipment - See CalEEMod note 3.

Off-road Equipment - See CalEEMod note 3.

Demolition - See CalEEMod note 5.

Grading - See CalEEMod note 4.

Vehicle Trips - See CalEEMod note 6.

Woodstoves - See CalEEMod note 10.

Solid Waste - See CalEEMod note 11.

Construction Off-road Equipment Mitigation - See CalEEMod note 7.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterExposedAreaPM10PercentReduction	61	55
tblConstDustMitigation	WaterExposedAreaPM25PercentReduction	61	55
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	10.00
tblConstructionPhase	NumDays	10.00	12.00
tblConstructionPhase	NumDays	20.00	88.00
tblConstructionPhase	NumDays	230.00	326.00
tblConstructionPhase	NumDays	20.00	238.00
tblConstructionPhase	NumDays	20.00	238.00
tblFireplaces	FireplaceDayYear	25.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	132.60	0.00
tblFireplaces	NumberNoFireplace	15.60	0.00
tblFireplaces	NumberWood	7.80	0.00
tblGrading	AcresOfGrading	132.00	6.40
tblLandUse	LandUseSquareFeet	43,210.00	43,206.00
tblLandUse	LandUseSquareFeet	156,000.00	244,680.00
tblLandUse	LotAcreage	2.44	2.42
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00

tblProjectCharacteristics	CO2IntensityFactor	1543.28	1034
tblSolidWaste	SolidWasteGenerationRate	71.76	2.23
tblVehicleTrips	ST_TR	4.31	5.57
tblVehicleTrips	SU_TR	3.43	4.46
tblVehicleTrips	WD_TR	4.18	5.44
tblWoodstoves	NumberCatalytic	7.80	0.00
tblWoodstoves	NumberNoncatalytic	7.80	0.00
tblWoodstoves	WoodstoveDayYear	25.00	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					
2021	5.6675	52.8506	40.6760	0.0965	8.6111	2.2475	10.8585	3.9912	2.1027	6.0939	0.0000	9,451.9064	9,451.9064	1.7879	0.0000	9,496.6049
2022	10.7320	31.9979	39.1548	0.0866	2.9478	1.4258	4.3736	0.7883	1.3491	2.1373	0.0000	8,492.3151	8,492.3151	1.3052	0.0000	8,524.9445
2023	8.0852	11.5973	17.6599	0.0306	0.5812	0.5846	1.1659	0.1542	0.5435	0.6977	0.0000	2,968.5546	2,968.5546	0.7399	0.0000	2,987.0529
Maximum	**10.7320**	**52.8506**	**40.6760**	**0.0965**	**8.6111**	**2.2475**	**10.8585**	**3.9912**	**2.1027**	**6.0939**	**0.0000**	**9,451.9064**	**9,451.9064**	**1.7879**	**0.0000**	**9,496.6049**

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					
2021	5.6675	52.8506	40.6760	0.0965	5.2565	2.2475	7.5040	2.1660	2.1027	4.2687	0.0000	9,451.9064	9,451.9064	1.7879	0.0000	9,496.6049
2022	10.7320	31.9979	39.1548	0.0866	2.9478	1.4258	4.3736	0.7883	1.3491	2.1373	0.0000	8,492.3151	8,492.3151	1.3052	0.0000	8,524.9445
2023	8.0852	11.5973	17.6599	0.0306	0.5812	0.5846	1.1659	0.1542	0.5435	0.6977	0.0000	2,968.5546	2,968.5546	0.7399	0.0000	2,987.0529

Maximum	**10.7320**	**52.8506**	**40.6760**	**0.0965**	**5.2565**	**2.2475**	**7.5040**	**2.1660**	**2.1027**	**4.2687**	**0.0000**	**9,451.9064**	**9,451.9064**	**1.7879**	**0.0000**	**9,496.6049**

	ROG	NOx	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**	**27.63**	**0.00**	**20.46**	**37.00**	**0.00**	**20.44**	**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	5.7283	0.1485	12.8876	6.8000e-004		0.0713	0.0713		0.0713	0.0713	0.0000	23.2053	23.2053	0.0224	0.0000	23.7645
Energy	0.0527	0.4501	0.1915	2.8700e-003		0.0364	0.0364		0.0364	0.0364		574.5959	574.5959	0.0110	0.0105	578.0104
Mobile	1.1719	4.2801	15.7512	0.0636	6.2990	0.0444	6.3434	1.6844	0.0412	1.7256		6,470.5707	6,470.5707	0.2597		6,477.0643
Total	**6.9529**	**4.8787**	**28.8303**	**0.0672**	**6.2990**	**0.1521**	**6.4511**	**1.6844**	**0.1489**	**1.8333**	**0.0000**	**7,068.3719**	**7,068.3719**	**0.2931**	**0.0105**	**7,078.8392**

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	5.7283	0.1485	12.8876	6.8000e-004		0.0713	0.0713		0.0713	0.0713	0.0000	23.2053	23.2053	0.0224	0.0000	23.7645
Energy	0.0527	0.4501	0.1915	2.8700e-003		0.0364	0.0364		0.0364	0.0364		574.5959	574.5959	0.0110	0.0105	578.0104
Mobile	1.1719	4.2801	15.7512	0.0636	6.2990	0.0444	6.3434	1.6844	0.0412	1.7256		6,470.5707	6,470.5707	0.2597		6,477.0643
Total	**6.9529**	**4.8787**	**28.8303**	**0.0672**	**6.2990**	**0.1521**	**6.4511**	**1.6844**	**0.1489**	**1.8333**	**0.0000**	**7,068.3719**	**7,068.3719**	**0.2931**	**0.0105**	**7,078.8392**

	ROG	NOx	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	8/1/2021	8/15/2021	5	10	
2	Site Preparation	Site Preparation	8/16/2021	8/31/2021	5	12	
3	Grading	Grading	9/1/2021	12/31/2021	5	88	
4	Building Construction	Building Construction	10/1/2021	12/31/2022	5	326	
5	Paving	Paving	6/1/2022	4/30/2023	5	238	
6	Architectural Coating	Architectural Coating	6/1/2022	4/30/2023	5	238	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 6.4

Acres of Paving: 3.98

Residential Indoor: 495,477; Residential Outdoor: 165,159; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	1	8.00	158	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Excavators	1	8.00	158	0.38
Site Preparation	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	1	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cement and Mortar Mixers	1	8.00	9	0.56
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	2	8.00	89	0.20

Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Pumps	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	3	8.00	0.00	21.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	186.00	45.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	37.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.4597	0.0000	0.4597	0.0696	0.0000	0.0696			0.0000			0.0000
Off-Road	1.6604	16.1626	10.9836	0.0200		0.8100	0.8100		0.7591	0.7591		1,920.2088	1,920.2088	0.4638		1,931.8031

Total	**1.6604**	**16.1626**	**10.9836**	**0.0200**	**0.4597**	**0.8100**	**1.2697**	**0.0696**	**0.7591**	**0.8287**		**1,920.2088**	**1,920.2088**	**0.4638**		**1,931.8031**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0155	0.5402	0.1540	1.5600e-003	0.0366	1.7100e-003	0.0383	0.0100	1.6300e-003	0.0116		174.2686	174.2686	0.0188		174.7375
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0327	0.0192	0.2242	8.0000e-004	0.0894	5.8000e-004	0.0900	0.0237	5.3000e-004	0.0243		79.6666	79.6666	1.7100e-003		79.7092
Total	**0.0482**	**0.5594**	**0.3782**	**2.3600e-003**	**0.1260**	**2.2900e-003**	**0.1283**	**0.0337**	**2.1600e-003**	**0.0359**		**253.9352**	**253.9352**	**0.0205**		**254.4467**

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					0.2069	0.0000	0.2069	0.0313	0.0000	0.0313			0.0000			0.0000
Off-Road	1.6604	16.1626	10.9836	0.0200		0.8100	0.8100		0.7591	0.7591	0.0000	1,920.2088	1,920.2088	0.4638		1,931.8030
Total	**1.6604**	**16.1626**	**10.9836**	**0.0200**	**0.2069**	**0.8100**	**1.0169**	**0.0313**	**0.7591**	**0.7904**	**0.0000**	**1,920.2088**	**1,920.2088**	**0.4638**		**1,931.8030**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0155	0.5402	0.1540	1.5600e-003	0.0366	1.7100e-003	0.0383	0.0100	1.6300e-003	0.0116		174.2686	174.2686	0.0188		174.7375
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0327	0.0192	0.2242	8.0000e-004	0.0894	5.8000e-004	0.0900	0.0237	5.3000e-004	0.0243		79.6666	79.6666	1.7100e-003		79.7092
Total	**0.0482**	**0.5594**	**0.3782**	**2.3600e-003**	**0.1260**	**2.2900e-003**	**0.1283**	**0.0337**	**2.1600e-003**	**0.0359**		**253.9352**	**253.9352**	**0.0205**		**254.4467**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0221	0.0000	6.0221	3.3102	0.0000	3.3102			0.0000			0.0000
Off-Road	1.4628	15.0205	9.5698	0.0168		0.7487	0.7487		0.6888	0.6888		1,628.4442	1,628.4442	0.5267		1,641.6110
Total	**1.4628**	**15.0205**	**9.5698**	**0.0168**	**6.0221**	**0.7487**	**6.7708**	**3.3102**	**0.6888**	**3.9990**		**1,628.4442**	**1,628.4442**	**0.5267**		**1,641.6110**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0327	0.0192	0.2242	8.0000e-004	0.0894	5.8000e-004	0.0900	0.0237	5.3000e-004	0.0243		79.6666	79.6666	1.7100e-003		79.7092
Total	**0.0327**	**0.0192**	**0.2242**	**8.0000e-004**	**0.0894**	**5.8000e-004**	**0.0900**	**0.0237**	**5.3000e-004**	**0.0243**		**79.6666**	**79.6666**	**1.7100e-003**		**79.7092**

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					2.7099	0.0000	2.7099	1.4896	0.0000	1.4896			0.0000			0.0000
Off-Road	1.4628	15.0205	9.5698	0.0168		0.7487	0.7487		0.6888	0.6888	0.0000	1,628.4442	1,628.4442	0.5267		1,641.6110
Total	**1.4628**	**15.0205**	**9.5698**	**0.0168**	**2.7099**	**0.7487**	**3.4586**	**1.4896**	**0.6888**	**2.1784**	**0.0000**	**1,628.4442**	**1,628.4442**	**0.5267**		**1,641.6110**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0327	0.0192	0.2242	8.0000e-004	0.0894	5.8000e-004	0.0900	0.0237	5.3000e-004	0.0243		79.6666	79.6666	1.7100e-003		79.7092
Total	**0.0327**	**0.0192**	**0.2242**	**8.0000e-004**	**0.0894**	**5.8000e-004**	**0.0900**	**0.0237**	**5.3000e-004**	**0.0243**		**79.6666**	**79.6666**	**1.7100e-003**		**79.7092**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0992	0.0000	6.0992	3.3186	0.0000	3.3186			0.0000			0.0000
Off-Road	2.8453	31.6479	18.3417	0.0386		1.3527	1.3527		1.2445	1.2445		3,738.0399	3,738.0399	1.2090		3,768.2638
Total	**2.8453**	**31.6479**	**18.3417**	**0.0386**	**6.0992**	**1.3527**	**7.4520**	**3.3186**	**1.2445**	**4.5631**		**3,738.0399**	**3,738.0399**	**1.2090**		**3,768.2638**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0531	0.0312	0.3644	1.3000e-003	0.1453	9.4000e-004	0.1463	0.0385	8.7000e-004	0.0394		129.4582	129.4582	2.7700e-003		129.5275
Total	**0.0531**	**0.0312**	**0.3644**	**1.3000e-003**	**0.1453**	**9.4000e-004**	**0.1463**	**0.0385**	**8.7000e-004**	**0.0394**		**129.4582**	**129.4582**	**2.7700e-003**		**129.5275**

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					2.7447	0.0000	2.7447	1.4934	0.0000	1.4934			0.0000			0.0000
Off-Road	2.8453	31.6479	18.3417	0.0386		1.3527	1.3527		1.2445	1.2445	0.0000	3,738.0399	3,738.0399	1.2090		3,768.2638
Total	**2.8453**	**31.6479**	**18.3417**	**0.0386**	**2.7447**	**1.3527**	**4.0974**	**1.4934**	**1.2445**	**2.7379**	**0.0000**	**3,738.0399**	**3,738.0399**	**1.2090**		**3,768.2638**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0531	0.0312	0.3644	1.3000e-003	0.1453	9.4000e-004	0.1463	0.0385	8.7000e-004	0.0394		129.4582	129.4582	2.7700e-003		129.5275
Total	**0.0531**	**0.0312**	**0.3644**	**1.3000e-003**	**0.1453**	**9.4000e-004**	**0.1463**	**0.0385**	**8.7000e-004**	**0.0394**		**129.4582**	**129.4582**	**2.7700e-003**		**129.5275**

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	1.8831	16.5135	15.5009	0.0272		0.8712	0.8712		0.8362	0.8362		2,552.3099	2,552.3099	0.4371		2,563.2365
Total	**1.8831**	**16.5135**	**15.5009**	**0.0272**		**0.8712**	**0.8712**		**0.8362**	**0.8362**		**2,552.3099**	**2,552.3099**	**0.4371**		**2,563.2365**

Unmitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1260	4.2117	1.2561	0.0108	0.2875	9.1000e-003	0.2966	0.0827	8.7000e-003	0.0914		1,179.8505	1,179.8505	0.0995		1,182.3376
Worker	0.7601	0.4464	5.2130	0.0186	2.0790	0.0135	2.0925	0.5514	0.0124	0.5638		1,852.2479	1,852.2479	0.0397		1,853.2395
Total	**0.8861**	**4.6580**	**6.4691**	**0.0294**	**2.3666**	**0.0226**	**2.3891**	**0.6341**	**0.0211**	**0.6552**		**3,032.0984**	**3,032.0984**	**0.1391**		**3,035.5771**

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	1.8831	16.5135	15.5009	0.0272		0.8712	0.8712		0.8362	0.8362	0.0000	2,552.3099	2,552.3099	0.4371		2,563.2365
Total	**1.8831**	**16.5135**	**15.5009**	**0.0272**		**0.8712**	**0.8712**		**0.8362**	**0.8362**	**0.0000**	**2,552.3099**	**2,552.3099**	**0.4371**		**2,563.2365**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1260	4.2117	1.2561	0.0108	0.2875	9.1000e-003	0.2966	0.0827	8.7000e-003	0.0914		1,179.8505	1,179.8505	0.0995		1,182.3376
Worker	0.7601	0.4464	5.2130	0.0186	2.0790	0.0135	2.0925	0.5514	0.0124	0.5638		1,852.2479	1,852.2479	0.0397		1,853.2395
Total	**0.8861**	**4.6580**	**6.4691**	**0.0294**	**2.3666**	**0.0226**	**2.3891**	**0.6341**	**0.0211**	**0.6552**		**3,032.0984**	**3,032.0984**	**0.1391**		**3,035.5771**

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	1.7151	14.9654	15.3336	0.0273		0.7514	0.7514		0.7218	0.7218		2,552.6855	2,552.6855	0.4306		2,563.4507

Total	**1.7151**	**14.9654**	**15.3336**	**0.0273**		**0.7514**	**0.7514**		**0.7218**	**0.7218**		**2,552.6855**	**2,552.6855**	**0.4306**		**2,563.4507**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1185	3.9818	1.2111	0.0107	0.2875	7.9200e-003	0.2954	0.0827	7.5800e-003	0.0903		1,168.1518	1,168.1518	0.0962		1,170.5564
Worker	0.7202	0.4043	4.8579	0.0179	2.0790	0.0132	2.0922	0.5514	0.0122	0.5635		1,783.7005	1,783.7005	0.0360		1,784.6004
Total	**0.8387**	**4.3862**	**6.0690**	**0.0286**	**2.3665**	**0.0211**	**2.3877**	**0.6341**	**0.0197**	**0.6538**		**2,951.8523**	**2,951.8523**	**0.1322**		**2,955.1568**

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	1.7151	14.9654	15.3336	0.0273		0.7514	0.7514		0.7218	0.7218	0.0000	2,552.6855	2,552.6855	0.4306		2,563.4507
Total	**1.7151**	**14.9654**	**15.3336**	**0.0273**		**0.7514**	**0.7514**		**0.7218**	**0.7218**	**0.0000**	**2,552.6855**	**2,552.6855**	**0.4306**		**2,563.4507**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1185	3.9818	1.2111	0.0107	0.2875	7.9200e-003	0.2954	0.0827	7.5800e-003	0.0903		1,168.1518	1,168.1518	0.0962		1,170.5564
Worker	0.7202	0.4043	4.8579	0.0179	2.0790	0.0132	2.0922	0.5514	0.0122	0.5635		1,783.7005	1,783.7005	0.0360		1,784.6004
Total	**0.8387**	**4.3862**	**6.0690**	**0.0286**	**2.3665**	**0.0211**	**2.3877**	**0.6341**	**0.0197**	**0.6538**		**2,951.8523**	**2,951.8523**	**0.1322**		**2,955.1568**

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225		2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.0329					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1357**	**11.1249**	**14.5805**	**0.0228**		**0.5679**	**0.5679**		**0.5225**	**0.5225**		**2,207.6603**	**2,207.6603**	**0.7140**		**2,225.5104**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0581	0.0326	0.3918	1.4400e-003	0.1677	1.0600e-003	0.1687	0.0445	9.8000e-004	0.0455		143.8468	143.8468	2.9000e-003		143.9194
Total	**0.0581**	**0.0326**	**0.3918**	**1.4400e-003**	**0.1677**	**1.0600e-003**	**0.1687**	**0.0445**	**9.8000e-004**	**0.0455**		**143.8468**	**143.8468**	**2.9000e-003**		**143.9194**

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	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225	0.0000	2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.0329					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1357**	**11.1249**	**14.5805**	**0.0228**		**0.5679**	**0.5679**		**0.5225**	**0.5225**	**0.0000**	**2,207.6603**	**2,207.6603**	**0.7140**		**2,225.5104**

Mitigated Construction Off-Site

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

Category	lb/day											lb/day				
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0581	0.0326	0.3918	1.4400e-003	0.1677	1.0600e-003	0.1687	0.0445	9.8000e-004	0.0455		143.8468	143.8468	2.9000e-003		143.9194
Total	**0.0581**	**0.0326**	**0.3918**	**1.4400e-003**	**0.1677**	**1.0600e-003**	**0.1687**	**0.0445**	**9.8000e-004**	**0.0455**		**143.8468**	**143.8468**	**2.9000e-003**		**143.9194**

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	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.0329					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0657**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**		**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0552	0.0296	0.3648	1.3900e-003	0.1677	1.0500e-003	0.1687	0.0445	9.6000e-004	0.0454		138.3238	138.3238	2.6300e-003		138.3895
Total	**0.0552**	**0.0296**	**0.3648**	**1.3900e-003**	**0.1677**	**1.0500e-003**	**0.1687**	**0.0445**	**9.6000e-004**	**0.0454**		**138.3238**	**138.3238**	**2.6300e-003**		**138.3895**

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	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.0329					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0657**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**	**0.0000**	**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0552	0.0296	0.3648	1.3900e-003	0.1677	1.0500e-003	0.1687	0.0445	9.6000e-004	0.0454		138.3238	138.3238	2.6300e-003		138.3895
Total	**0.0552**	**0.0296**	**0.3648**	**1.3900e-003**	**0.1677**	**1.0500e-003**	**0.1687**	**0.0445**	**9.6000e-004**	**0.0454**		**138.3238**	**138.3238**	**2.6300e-003**		**138.3895**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	6.6366					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**6.8411**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

Unmitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1433	0.0804	0.9664	3.5600e-003	0.4136	2.6300e-003	0.4162	0.1097	2.4200e-003	0.1121		354.8222	354.8222	7.1600e-003		355.0012
Total	**0.1433**	**0.0804**	**0.9664**	**3.5600e-003**	**0.4136**	**2.6300e-003**	**0.4162**	**0.1097**	**2.4200e-003**	**0.1121**		**354.8222**	**354.8222**	**7.1600e-003**		**355.0012**

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	6.6366					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**6.8411**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1433	0.0804	0.9664	3.5600e-003	0.4136	2.6300e-003	0.4162	0.1097	2.4200e-003	0.1121		354.8222	354.8222	7.1600e-003		355.0012
Total	**0.1433**	**0.0804**	**0.9664**	**3.5600e-003**	**0.4136**	**2.6300e-003**	**0.4162**	**0.1097**	**2.4200e-003**	**0.1121**		**354.8222**	**354.8222**	**7.1600e-003**		**355.0012**

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	6.6366					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**6.8283**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1361	0.0730	0.8998	3.4200e-003	0.4136	2.5800e-003	0.4162	0.1097	2.3800e-003	0.1121		341.1986	341.1986	6.4900e-003		341.3608
Total	**0.1361**	**0.0730**	**0.8998**	**3.4200e-003**	**0.4136**	**2.5800e-003**	**0.4162**	**0.1097**	**2.3800e-003**	**0.1121**		**341.1986**	**341.1986**	**6.4900e-003**		**341.3608**

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	6.6366					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**6.8283**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

Mitigated Construction Off-Site

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

Worker	0.1361	0.0730	0.8998	3.4200e-003	0.4136	2.5800e-003	0.4162	0.1097	2.3800e-003	0.1121		341.1986	341.1986	6.4900e-003		341.3608
Total	**0.1361**	**0.0730**	**0.8998**	**3.4200e-003**	**0.4136**	**2.5800e-003**	**0.4162**	**0.1097**	**2.3800e-003**	**0.1121**		**341.1986**	**341.1986**	**6.4900e-003**		**341.3608**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.1719	4.2801	15.7512	0.0636	6.2990	0.0444	6.3434	1.6844	0.0412	1.7256		6,470.5707	6,470.5707	0.2597		6,477.0643
Unmitigated	1.1719	4.2801	15.7512	0.0636	6.2990	0.0444	6.3434	1.6844	0.0412	1.7256		6,470.5707	6,470.5707	0.2597		6,477.0643

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse High Rise	848.64	868.92	695.76	2,835,201	2,835,201
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	848.64	868.92	695.76	2,835,201	2,835,201

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse High Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Condo/Townhouse High Rise	0.563406	0.043070	0.209298	0.109958	0.015015	0.005784	0.026182	0.017546	0.001775	0.001524	0.004941	0.000598	0.000904
Other Asphalt Surfaces	0.563406	0.043070	0.209298	0.109958	0.015015	0.005784	0.026182	0.017546	0.001775	0.001524	0.004941	0.000598	0.000904
Other Non-Asphalt Surfaces	0.563406	0.043070	0.209298	0.109958	0.015015	0.005784	0.026182	0.017546	0.001775	0.001524	0.004941	0.000598	0.000904

Parking Lot	0.563406	0.043070	0.209298	0.109958	0.015015	0.005784	0.026182	0.017546	0.001775	0.001524	0.004941	0.000598	0.000904

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0527	0.4501	0.1915	2.8700e-003		0.0364	0.0364		0.0364	0.0364		574.5959	574.5959	0.0110	0.0105	578.0104
NaturalGas Unmitigated	0.0527	0.4501	0.1915	2.8700e-003		0.0364	0.0364		0.0364	0.0364		574.5959	574.5959	0.0110	0.0105	578.0104

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Condo/Townhouse High Rise	4884.07	0.0527	0.4501	0.1915	2.8700e-003		0.0364	0.0364		0.0364	0.0364		574.5959	574.5959	0.0110	0.0105	578.0104
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0527**	**0.4501**	**0.1915**	**2.8700e-003**		**0.0364**	**0.0364**		**0.0364**	**0.0364**		**574.5959**	**574.5959**	**0.0110**	**0.0105**	**578.0104**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Condo/Townhouse High Rise	4.88407	0.0527	0.4501	0.1915	2.8700e-003		0.0364	0.0364		0.0364	0.0364		574.5959	574.5959	0.0110	0.0105	578.0104
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0527**	**0.4501**	**0.1915**	**2.8700e-003**		**0.0364**	**0.0364**		**0.0364**	**0.0364**		**574.5959**	**574.5959**	**0.0110**	**0.0105**	**578.0104**

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	5.7283	0.1485	12.8876	6.8000e-004		0.0713	0.0713		0.0713	0.0713	0.0000	23.2053	23.2053	0.0224	0.0000	23.7645
Unmitigated	5.7283	0.1485	12.8876	6.8000e-004		0.0713	0.0713		0.0713	0.0713	0.0000	23.2053	23.2053	0.0224	0.0000	23.7645

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	0.4327					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.9064					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.3892	0.1485	12.8876	6.8000e-004		0.0713	0.0713		0.0713	0.0713		23.2053	23.2053	0.0224		23.7645
Total	**5.7283**	**0.1485**	**12.8876**	**6.8000e-004**		**0.0713**	**0.0713**		**0.0713**	**0.0713**	**0.0000**	**23.2053**	**23.2053**	**0.0224**	**0.0000**	**23.7645**

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	0.4327					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Consumer Products	4.9064					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.3892	0.1485	12.8876	6.8000e-004		0.0713	0.0713		0.0713	0.0713		23.2053	23.2053	0.0224		23.7645
Total	**5.7283**	**0.1485**	**12.8876**	**6.8000e-004**		**0.0713**	**0.0713**		**0.0713**	**0.0713**	**0.0000**	**23.2053**	**23.2053**	**0.0224**	**0.0000**	**23.7645**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Legacy Anaheim LST

Orange County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	2.12	Acre	2.12	92,347.20	0
Other Non-Asphalt Surfaces	43.21	1000sqft	0.99	43,206.00	0
Parking Lot	97.00	Space	0.87	38,800.00	0
Condo/Townhouse High Rise	156.00	Dwelling Unit	2.42	244,680.00	446

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2023
Utility Company	Anaheim Public Utilities				
CO2 Intensity (lb/MWhr)	1034	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - See CalEEMod note 1.

Land Use - See CalEEMod note 2.

Construction Phase - See CalEEMod note 3.

Off-road Equipment - See CalEEMod note 3.

Off-road Equipment - See CalEEMod note 3.

Off-road Equipment - See CalEEMod note 3.

Off-road Equipment - See CalEEMod note 3.

Demolition - See CalEEMod note 5.

Grading - See CalEEMod note 4.

Vehicle Trips - Trip length set to 0.1 miles to reflect on-site traffic only.

Woodstoves - See CalEEMod note 10.

Solid Waste - See CalEEMod note 11.

Construction Off-road Equipment Mitigation - See CalEEMod note 7.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterExposedAreaPM10PercentReduction	61	55
tblConstDustMitigation	WaterExposedAreaPM25PercentReduction	61	55
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	10.00
tblConstructionPhase	NumDays	10.00	12.00
tblConstructionPhase	NumDays	20.00	88.00
tblConstructionPhase	NumDays	230.00	326.00
tblConstructionPhase	NumDays	20.00	238.00
tblConstructionPhase	NumDays	20.00	238.00
tblFireplaces	FireplaceDayYear	25.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	132.60	0.00
tblFireplaces	NumberNoFireplace	15.60	0.00
tblFireplaces	NumberWood	7.80	0.00
tblGrading	AcresOfGrading	132.00	6.40
tblLandUse	LandUseSquareFeet	43,210.00	43,206.00
tblLandUse	LandUseSquareFeet	156,000.00	244,680.00
tblLandUse	LotAcreage	2.44	2.42
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblProjectCharacteristics	CO2IntensityFactor	1543.28	1034
tblSolidWaste	SolidWasteGenerationRate	71.76	2.23
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	HO_TL	8.70	0.10
tblVehicleTrips	HO_TTP	40.60	0.00
tblVehicleTrips	HS_TL	5.90	0.10
tblVehicleTrips	HS_TTP	19.20	0.00
tblVehicleTrips	HW_TL	14.70	0.10
tblVehicleTrips	HW_TTP	40.20	100.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	ST_TR	4.31	5.57
tblVehicleTrips	SU_TR	3.43	4.46
tblVehicleTrips	WD_TR	4.18	5.44
tblWoodstoves	NumberCatalytic	7.80	0.00
tblWoodstoves	NumberNoncatalytic	7.80	0.00
tblWoodstoves	WoodstoveDayYear	25.00	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					
2021	0.2334	2.2694	1.6666	3.8600e-003	0.3910	0.0976	0.4886	0.1888	0.0910	0.2798	0.0000	342.1759	342.1759	0.0706	0.0000	343.9417
2022	0.9458	3.4939	4.1523	9.6700e-003	0.3459	0.1504	0.4963	0.0927	0.1429	0.2356	0.0000	862.2776	862.2776	0.1177	0.0000	865.2198
2023	0.3428	0.4930	0.7519	1.3000e-003	0.0243	0.0249	0.0491	6.4400e-003	0.0231	0.0295	0.0000	114.7352	114.7352	0.0285	0.0000	115.4486
Maximum	**0.9458**	**3.4939**	**4.1523**	**9.6700e-003**	**0.3910**	**0.1504**	**0.4963**	**0.1888**	**0.1429**	**0.2798**	**0.0000**	**862.2776**	**862.2776**	**0.1177**	**0.0000**	**865.2198**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.2334	2.2694	1.6666	3.8600e-003	0.2222	0.0976	0.3198	0.0974	0.0910	0.1884	0.0000	342.1756	342.1756	0.0706	0.0000	343.9414
2022	0.9458	3.4939	4.1523	9.6700e-003	0.3459	0.1504	0.4963	0.0927	0.1429	0.2356	0.0000	862.2770	862.2770	0.1177	0.0000	865.2192
2023	0.3428	0.4930	0.7519	1.3000e-003	0.0243	0.0249	0.0491	6.4400e-003	0.0231	0.0295	0.0000	114.7351	114.7351	0.0285	0.0000	115.4485
Maximum	**0.9458**	**3.4939**	**4.1523**	**9.6700e-003**	**0.3459**	**0.1504**	**0.4963**	**0.0974**	**0.1429**	**0.2356**	**0.0000**	**862.2770**	**862.2770**	**0.1177**	**0.0000**	**865.2192**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**22.17**	**0.00**	**16.32**	**31.75**	**0.00**	**16.78**	**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	**8-1-2021**	**10-31-2021**	1.2114	1.2114
2	**11-1-2021**	**1-31-2022**	1.5174	1.5174
3	**2-1-2022**	**4-30-2022**	0.6950	0.6950
4	**5-1-2022**	**7-31-2022**	1.1689	1.1689
5	**8-1-2022**	**10-31-2022**	1.4007	1.4007
6	**11-1-2022**	**1-31-2023**	1.1488	1.1488
7	**2-1-2023**	**4-30-2023**	0.6253	0.6253
		Highest	1.5174	1.5174

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	1.0230	0.0186	1.6110	9.0000e-005		8.9100e-003	8.9100e-003		8.9100e-003	8.9100e-003	0.0000	2.6314	2.6314	2.5400e-003	0.0000	2.6949
Energy	9.6100e-003	0.0821	0.0350	5.2000e-004		6.6400e-003	6.6400e-003		6.6400e-003	6.6400e-003	0.0000	411.3562	411.3562	0.0107	3.5800e-003	412.6901

Mobile	0.1146	0.3356	0.5143	5.5000e-004	0.0115	8.8000e-004	0.0123	3.0700e-003	8.1000e-004	3.8800e-003	0.0000	51.6444	51.6444	5.7900e-003	0.0000	51.7893
Waste						0.0000	0.0000		0.0000	0.0000	0.4527	0.0000	0.4527	0.0268	0.0000	1.1215
Water						0.0000	0.0000		0.0000	0.0000	3.2246	95.4613	98.6859	0.3339	8.3700e-003	109.5282
Total	**1.1472**	**0.4363**	**2.1602**	**1.1600e-003**	**0.0115**	**0.0164**	**0.0279**	**3.0700e-003**	**0.0164**	**0.0194**	**3.6773**	**561.0934**	**564.7707**	**0.3796**	**0.0120**	**577.8239**

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	1.0230	0.0186	1.6110	9.0000e-005		8.9100e-003	8.9100e-003		8.9100e-003	8.9100e-003	0.0000	2.6314	2.6314	2.5400e-003	0.0000	2.6949
Energy	9.6100e-003	0.0821	0.0350	5.2000e-004		6.6400e-003	6.6400e-003		6.6400e-003	6.6400e-003	0.0000	411.3562	411.3562	0.0107	3.5800e-003	412.6901
Mobile	0.1146	0.3356	0.5143	5.5000e-004	0.0115	8.8000e-004	0.0123	3.0700e-003	8.1000e-004	3.8800e-003	0.0000	51.6444	51.6444	5.7900e-003	0.0000	51.7893
Waste						0.0000	0.0000		0.0000	0.0000	0.4527	0.0000	0.4527	0.0268	0.0000	1.1215
Water						0.0000	0.0000		0.0000	0.0000	3.2246	95.4613	98.6859	0.3339	8.3700e-003	109.5282
Total	**1.1472**	**0.4363**	**2.1602**	**1.1600e-003**	**0.0115**	**0.0164**	**0.0279**	**3.0700e-003**	**0.0164**	**0.0194**	**3.6773**	**561.0934**	**564.7707**	**0.3796**	**0.0120**	**577.8239**

	ROG	NOx	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	8/1/2021	8/15/2021	5	10	
2	Site Preparation	Site Preparation	8/16/2021	8/31/2021	5	12	
3	Grading	Grading	9/1/2021	12/31/2021	5	88	
4	Building Construction	Building Construction	10/1/2021	12/31/2022	5	326	

5	Paving	Paving	6/1/2022	4/30/2023	5	238	
6	Architectural Coating	Architectural Coating	6/1/2022	4/30/2023	5	238	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 6.4

Acres of Paving: 3.98

Residential Indoor: 495,477; Residential Outdoor: 165,159; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	1	8.00	158	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Excavators	1	8.00	158	0.38
Site Preparation	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	1	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cement and Mortar Mixers	1	8.00	9	0.56
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	2	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Pumps	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38

Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	3	8.00	0.00	21.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	186.00	45.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	37.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.3000e-003	0.0000	2.3000e-003	3.5000e-004	0.0000	3.5000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.3000e-003	0.0808	0.0549	1.0000e-004		4.0500e-003	4.0500e-003		3.8000e-003	3.8000e-003	0.0000	8.7099	8.7099	2.1000e-003	0.0000	8.7625
Total	**8.3000e-003**	**0.0808**	**0.0549**	**1.0000e-004**	**2.3000e-003**	**4.0500e-003**	**6.3500e-003**	**3.5000e-004**	**3.8000e-003**	**4.1500e-003**	**0.0000**	**8.7099**	**8.7099**	**2.1000e-003**	**0.0000**	**8.7625**

Unmitigated Construction Off-Site

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

Hauling	8.0000e-005	2.7500e-003	7.5000e-004	1.0000e-005	1.8000e-004	1.0000e-005	1.9000e-004	5.0000e-005	1.0000e-005	6.0000e-005	0.0000	0.7975	0.7975	8.0000e-005	0.0000	0.7996
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5000e-004	1.0000e-004	1.1500e-003	0.0000	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3669	0.3669	1.0000e-005	0.0000	0.3671
Total	**2.3000e-004**	**2.8500e-003**	**1.9000e-003**	**1.0000e-005**	**6.2000e-004**	**1.0000e-005**	**6.3000e-004**	**1.7000e-004**	**1.0000e-005**	**1.8000e-004**	**0.0000**	**1.1644**	**1.1644**	**9.0000e-005**	**0.0000**	**1.1667**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.0300e-003	0.0000	1.0300e-003	1.6000e-004	0.0000	1.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.3000e-003	0.0808	0.0549	1.0000e-004		4.0500e-003	4.0500e-003		3.8000e-003	3.8000e-003	0.0000	8.7099	8.7099	2.1000e-003	0.0000	8.7625
Total	**8.3000e-003**	**0.0808**	**0.0549**	**1.0000e-004**	**1.0300e-003**	**4.0500e-003**	**5.0800e-003**	**1.6000e-004**	**3.8000e-003**	**3.9600e-003**	**0.0000**	**8.7099**	**8.7099**	**2.1000e-003**	**0.0000**	**8.7625**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	8.0000e-005	2.7500e-003	7.5000e-004	1.0000e-005	1.8000e-004	1.0000e-005	1.9000e-004	5.0000e-005	1.0000e-005	6.0000e-005	0.0000	0.7975	0.7975	8.0000e-005	0.0000	0.7996
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5000e-004	1.0000e-004	1.1500e-003	0.0000	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3669	0.3669	1.0000e-005	0.0000	0.3671
Total	**2.3000e-004**	**2.8500e-003**	**1.9000e-003**	**1.0000e-005**	**6.2000e-004**	**1.0000e-005**	**6.3000e-004**	**1.7000e-004**	**1.0000e-005**	**1.8000e-004**	**0.0000**	**1.1644**	**1.1644**	**9.0000e-005**	**0.0000**	**1.1667**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

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

Fugitive Dust					0.0361	0.0000	0.0361	0.0199	0.0000	0.0199	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.7800e-003	0.0901	0.0574	1.0000e-004		4.4900e-003	4.4900e-003		4.1300e-003	4.1300e-003	0.0000	8.8638	8.8638	2.8700e-003	0.0000	8.9355
Total	**8.7800e-003**	**0.0901**	**0.0574**	**1.0000e-004**	**0.0361**	**4.4900e-003**	**0.0406**	**0.0199**	**4.1300e-003**	**0.0240**	**0.0000**	**8.8638**	**8.8638**	**2.8700e-003**	**0.0000**	**8.9355**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8000e-004	1.2000e-004	1.3800e-003	0.0000	5.3000e-004	0.0000	5.3000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4403	0.4403	1.0000e-005	0.0000	0.4405
Total	**1.8000e-004**	**1.2000e-004**	**1.3800e-003**	**0.0000**	**5.3000e-004**	**0.0000**	**5.3000e-004**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**0.4403**	**0.4403**	**1.0000e-005**	**0.0000**	**0.4405**

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					0.0163	0.0000	0.0163	8.9400e-003	0.0000	8.9400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.7800e-003	0.0901	0.0574	1.0000e-004		4.4900e-003	4.4900e-003		4.1300e-003	4.1300e-003	0.0000	8.8638	8.8638	2.8700e-003	0.0000	8.9355
Total	**8.7800e-003**	**0.0901**	**0.0574**	**1.0000e-004**	**0.0163**	**4.4900e-003**	**0.0208**	**8.9400e-003**	**4.1300e-003**	**0.0131**	**0.0000**	**8.8638**	**8.8638**	**2.8700e-003**	**0.0000**	**8.9355**

Mitigated Construction Off-Site

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

Worker	1.8000e-004	1.2000e-004	1.3800e-003	0.0000	5.3000e-004	0.0000	5.3000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4403	0.4403	1.0000e-005	0.0000	0.4405
Total	**1.8000e-004**	**1.2000e-004**	**1.3800e-003**	**0.0000**	**5.3000e-004**	**0.0000**	**5.3000e-004**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**0.4403**	**0.4403**	**1.0000e-005**	**0.0000**	**0.4405**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2684	0.0000	0.2684	0.1460	0.0000	0.1460	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1252	1.3925	0.8070	1.7000e-003		0.0595	0.0595		0.0548	0.0548	0.0000	149.2081	149.2081	0.0483	0.0000	150.4145
Total	**0.1252**	**1.3925**	**0.8070**	**1.7000e-003**	**0.2684**	**0.0595**	**0.3279**	**0.1460**	**0.0548**	**0.2008**	**0.0000**	**149.2081**	**149.2081**	**0.0483**	**0.0000**	**150.4145**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1000e-003	1.4100e-003	0.0164	6.0000e-005	6.2800e-003	4.0000e-005	6.3200e-003	1.6700e-003	4.0000e-005	1.7100e-003	0.0000	5.2463	5.2463	1.1000e-004	0.0000	5.2491
Total	**2.1000e-003**	**1.4100e-003**	**0.0164**	**6.0000e-005**	**6.2800e-003**	**4.0000e-005**	**6.3200e-003**	**1.6700e-003**	**4.0000e-005**	**1.7100e-003**	**0.0000**	**5.2463**	**5.2463**	**1.1000e-004**	**0.0000**	**5.2491**

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					0.1208	0.0000	0.1208	0.0657	0.0000	0.0657	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1252	1.3925	0.8070	1.7000e-003		0.0595	0.0595		0.0548	0.0548	0.0000	149.2079	149.2079	0.0483	0.0000	150.4143

Total	**0.1252**	**1.3925**	**0.8070**	**1.7000e-003**	**0.1208**	**0.0595**	**0.1803**	**0.0657**	**0.0548**	**0.1205**	**0.0000**	**149.2079**	**149.2079**	**0.0483**	**0.0000**	**150.4143**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1000e-003	1.4100e-003	0.0164	6.0000e-005	6.2800e-003	4.0000e-005	6.3200e-003	1.6700e-003	4.0000e-005	1.7100e-003	0.0000	5.2463	5.2463	1.1000e-004	0.0000	5.2491
Total	**2.1000e-003**	**1.4100e-003**	**0.0164**	**6.0000e-005**	**6.2800e-003**	**4.0000e-005**	**6.3200e-003**	**1.6700e-003**	**4.0000e-005**	**1.7100e-003**	**0.0000**	**5.2463**	**5.2463**	**1.1000e-004**	**0.0000**	**5.2491**

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	0.0621	0.5450	0.5115	9.0000e-004		0.0288	0.0288		0.0276	0.0276	0.0000	76.4088	76.4088	0.0131	0.0000	76.7359
Total	**0.0621**	**0.5450**	**0.5115**	**9.0000e-004**		**0.0288**	**0.0288**		**0.0276**	**0.0276**	**0.0000**	**76.4088**	**76.4088**	**0.0131**	**0.0000**	**76.7359**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.0500e-003	0.1415	0.0397	3.6000e-004	9.3500e-003	2.9000e-004	9.6400e-003	2.7000e-003	2.8000e-004	2.9800e-003	0.0000	35.8373	35.8373	2.9000e-003	0.0000	35.9098
Worker	0.0225	0.0151	0.1763	6.2000e-004	0.0674	4.4000e-004	0.0678	0.0179	4.1000e-004	0.0183	0.0000	56.2971	56.2971	1.2100e-003	0.0000	56.3272
Total	**0.0265**	**0.1566**	**0.2160**	**9.8000e-004**	**0.0767**	**7.3000e-004**	**0.0775**	**0.0206**	**6.9000e-004**	**0.0213**	**0.0000**	**92.1344**	**92.1344**	**4.1100e-003**	**0.0000**	**92.2370**

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	0.0621	0.5449	0.5115	9.0000e-004		0.0288	0.0288		0.0276	0.0276	0.0000	76.4087	76.4087	0.0131	0.0000	76.7358
Total	**0.0621**	**0.5449**	**0.5115**	**9.0000e-004**		**0.0288**	**0.0288**		**0.0276**	**0.0276**	**0.0000**	**76.4087**	**76.4087**	**0.0131**	**0.0000**	**76.7358**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.0500e-003	0.1415	0.0397	3.6000e-004	9.3500e-003	2.9000e-004	9.6400e-003	2.7000e-003	2.8000e-004	2.9800e-003	0.0000	35.8373	35.8373	2.9000e-003	0.0000	35.9098
Worker	0.0225	0.0151	0.1763	6.2000e-004	0.0674	4.4000e-004	0.0678	0.0179	4.1000e-004	0.0183	0.0000	56.2971	56.2971	1.2100e-003	0.0000	56.3272
Total	**0.0265**	**0.1566**	**0.2160**	**9.8000e-004**	**0.0767**	**7.3000e-004**	**0.0775**	**0.0206**	**6.9000e-004**	**0.0213**	**0.0000**	**92.1344**	**92.1344**	**4.1100e-003**	**0.0000**	**92.2370**

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	0.2230	1.9455	1.9934	3.5400e-003		0.0977	0.0977		0.0938	0.0938	0.0000	301.0485	301.0485	0.0508	0.0000	302.3180
Total	**0.2230**	**1.9455**	**1.9934**	**3.5400e-003**		**0.0977**	**0.0977**		**0.0938**	**0.0938**	**0.0000**	**301.0485**	**301.0485**	**0.0508**	**0.0000**	**302.3180**

Unmitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0150	0.5267	0.1507	1.4100e-003	0.0368	1.0100e-003	0.0378	0.0106	9.6000e-004	0.0116	0.0000	139.7851	139.7851	0.0111	0.0000	140.0616
Worker	0.0838	0.0540	0.6476	2.3600e-003	0.2655	1.7200e-003	0.2672	0.0705	1.5800e-003	0.0721	0.0000	213.5658	213.5658	4.3100e-003	0.0000	213.6736
Total	**0.0988**	**0.5807**	**0.7983**	**3.7700e-003**	**0.3023**	**2.7300e-003**	**0.3050**	**0.0811**	**2.5400e-003**	**0.0837**	**0.0000**	**353.3509**	**353.3509**	**0.0154**	**0.0000**	**353.7352**

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	0.2230	1.9455	1.9934	3.5400e-003		0.0977	0.0977		0.0938	0.0938	0.0000	301.0481	301.0481	0.0508	0.0000	302.3177
Total	**0.2230**	**1.9455**	**1.9934**	**3.5400e-003**		**0.0977**	**0.0977**		**0.0938**	**0.0938**	**0.0000**	**301.0481**	**301.0481**	**0.0508**	**0.0000**	**302.3177**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0150	0.5267	0.1507	1.4100e-003	0.0368	1.0100e-003	0.0378	0.0106	9.6000e-004	0.0116	0.0000	139.7851	139.7851	0.0111	0.0000	140.0616
Worker	0.0838	0.0540	0.6476	2.3600e-003	0.2655	1.7200e-003	0.2672	0.0705	1.5800e-003	0.0721	0.0000	213.5658	213.5658	4.3100e-003	0.0000	213.6736
Total	**0.0988**	**0.5807**	**0.7983**	**3.7700e-003**	**0.3023**	**2.7300e-003**	**0.3050**	**0.0811**	**2.5400e-003**	**0.0837**	**0.0000**	**353.3509**	**353.3509**	**0.0154**	**0.0000**	**353.7352**

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0844	0.8511	1.1154	1.7400e-003		0.0434	0.0434		0.0400	0.0400	0.0000	153.2108	153.2108	0.0496	0.0000	154.4496

Paving	2.5200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0869**	**0.8511**	**1.1154**	**1.7400e-003**		**0.0434**	**0.0434**		**0.0400**	**0.0400**	**0.0000**	**153.2108**	**153.2108**	**0.0496**	**0.0000**	**154.4496**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.9800e-003	2.5600e-003	0.0307	1.1000e-004	0.0126	8.0000e-005	0.0127	3.3500e-003	7.0000e-005	3.4200e-003	0.0000	10.1351	10.1351	2.0000e-004	0.0000	10.1402
Total	**3.9800e-003**	**2.5600e-003**	**0.0307**	**1.1000e-004**	**0.0126**	**8.0000e-005**	**0.0127**	**3.3500e-003**	**7.0000e-005**	**3.4200e-003**	**0.0000**	**10.1351**	**10.1351**	**2.0000e-004**	**0.0000**	**10.1402**

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	0.0844	0.8511	1.1154	1.7400e-003		0.0434	0.0434		0.0400	0.0400	0.0000	153.2106	153.2106	0.0496	0.0000	154.4494
Paving	2.5200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0869**	**0.8511**	**1.1154**	**1.7400e-003**		**0.0434**	**0.0434**		**0.0400**	**0.0400**	**0.0000**	**153.2106**	**153.2106**	**0.0496**	**0.0000**	**154.4494**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.9800e-003	2.5600e-003	0.0307	1.1000e-004	0.0126	8.0000e-005	0.0127	3.3500e-003	7.0000e-005	3.4200e-003	0.0000	10.1351	10.1351	2.0000e-004	0.0000	10.1402

Total	**3.9800e-003**	**2.5600e-003**	**0.0307**	**1.1000e-004**	**0.0126**	**8.0000e-005**	**0.0127**	**3.3500e-003**	**7.0000e-005**	**3.4200e-003**	**0.0000**	**10.1351**	**10.1351**	**2.0000e-004**	**0.0000**	**10.1402**

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	0.0439	0.4332	0.6198	9.7000e-004		0.0217	0.0217		0.0200	0.0200	0.0000	85.1142	85.1142	0.0275	0.0000	85.8024
Paving	1.4000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0453**	**0.4332**	**0.6198**	**9.7000e-004**		**0.0217**	**0.0217**		**0.0200**	**0.0200**	**0.0000**	**85.1142**	**85.1142**	**0.0275**	**0.0000**	**85.8024**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1000e-003	1.2900e-003	0.0159	6.0000e-005	7.0000e-003	4.0000e-005	7.0400e-003	1.8600e-003	4.0000e-005	1.9000e-003	0.0000	5.4144	5.4144	1.0000e-004	0.0000	5.4169
Total	**2.1000e-003**	**1.2900e-003**	**0.0159**	**6.0000e-005**	**7.0000e-003**	**4.0000e-005**	**7.0400e-003**	**1.8600e-003**	**4.0000e-005**	**1.9000e-003**	**0.0000**	**5.4144**	**5.4144**	**1.0000e-004**	**0.0000**	**5.4169**

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	0.0439	0.4331	0.6198	9.7000e-004		0.0217	0.0217		0.0200	0.0200	0.0000	85.1141	85.1141	0.0275	0.0000	85.8023
Paving	1.4000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0453**	**0.4331**	**0.6198**	**9.7000e-004**		**0.0217**	**0.0217**		**0.0200**	**0.0200**	**0.0000**	**85.1141**	**85.1141**	**0.0275**	**0.0000**	**85.8023**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1000e-003	1.2900e-003	0.0159	6.0000e-005	7.0000e-003	4.0000e-005	7.0400e-003	1.8600e-003	4.0000e-005	1.9000e-003	0.0000	5.4144	5.4144	1.0000e-004	0.0000	5.4169
Total	**2.1000e-003**	**1.2900e-003**	**0.0159**	**6.0000e-005**	**7.0000e-003**	**4.0000e-005**	**7.0400e-003**	**1.8600e-003**	**4.0000e-005**	**1.9000e-003**	**0.0000**	**5.4144**	**5.4144**	**1.0000e-004**	**0.0000**	**5.4169**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.5077					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0157	0.1078	0.1387	2.3000e-004		6.2500e-003	6.2500e-003		6.2500e-003	6.2500e-003	0.0000	19.5324	19.5324	1.2700e-003	0.0000	19.5642
Total	**0.5234**	**0.1078**	**0.1387**	**2.3000e-004**		**6.2500e-003**	**6.2500e-003**		**6.2500e-003**	**6.2500e-003**	**0.0000**	**19.5324**	**19.5324**	**1.2700e-003**	**0.0000**	**19.5642**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.8100e-003	6.3200e-003	0.0758	2.8000e-004	0.0311	2.0000e-004	0.0313	8.2500e-003	1.8000e-004	8.4400e-003	0.0000	24.9999	24.9999	5.0000e-004	0.0000	25.0125
Total	**9.8100e-003**	**6.3200e-003**	**0.0758**	**2.8000e-004**	**0.0311**	**2.0000e-004**	**0.0313**	**8.2500e-003**	**1.8000e-004**	**8.4400e-003**	**0.0000**	**24.9999**	**24.9999**	**5.0000e-004**	**0.0000**	**25.0125**

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	0.5077					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0157	0.1078	0.1387	2.3000e-004		6.2500e-003	6.2500e-003		6.2500e-003	6.2500e-003	0.0000	19.5324	19.5324	1.2700e-003	0.0000	19.5642
Total	**0.5234**	**0.1078**	**0.1387**	**2.3000e-004**		**6.2500e-003**	**6.2500e-003**		**6.2500e-003**	**6.2500e-003**	**0.0000**	**19.5324**	**19.5324**	**1.2700e-003**	**0.0000**	**19.5642**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.8100e-003	6.3200e-003	0.0758	2.8000e-004	0.0311	2.0000e-004	0.0313	8.2500e-003	1.8000e-004	8.4400e-003	0.0000	24.9999	24.9999	5.0000e-004	0.0000	25.0125
Total	**9.8100e-003**	**6.3200e-003**	**0.0758**	**2.8000e-004**	**0.0311**	**2.0000e-004**	**0.0313**	**8.2500e-003**	**1.8000e-004**	**8.4400e-003**	**0.0000**	**24.9999**	**24.9999**	**5.0000e-004**	**0.0000**	**25.0125**

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	0.2821					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.1500e-003	0.0554	0.0770	1.3000e-004		3.0100e-003	3.0100e-003		3.0100e-003	3.0100e-003	0.0000	10.8513	10.8513	6.5000e-004	0.0000	10.8676
Total	**0.2902**	**0.0554**	**0.0770**	**1.3000e-004**		**3.0100e-003**	**3.0100e-003**		**3.0100e-003**	**3.0100e-003**	**0.0000**	**10.8513**	**10.8513**	**6.5000e-004**	**0.0000**	**10.8676**

Unmitigated Construction Off-Site

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

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.1700e-003	3.1900e-003	0.0392	1.5000e-004	0.0173	1.1000e-004	0.0174	4.5800e-003	1.0000e-004	4.6900e-003	0.0000	13.3554	13.3554	2.5000e-004	0.0000	13.3617
Total	**5.1700e-003**	**3.1900e-003**	**0.0392**	**1.5000e-004**	**0.0173**	**1.1000e-004**	**0.0174**	**4.5800e-003**	**1.0000e-004**	**4.6900e-003**	**0.0000**	**13.3554**	**13.3554**	**2.5000e-004**	**0.0000**	**13.3617**

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	0.2821					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.1500e-003	0.0554	0.0770	1.3000e-004		3.0100e-003	3.0100e-003		3.0100e-003	3.0100e-003	0.0000	10.8513	10.8513	6.5000e-004	0.0000	10.8676
Total	**0.2902**	**0.0554**	**0.0770**	**1.3000e-004**		**3.0100e-003**	**3.0100e-003**		**3.0100e-003**	**3.0100e-003**	**0.0000**	**10.8513**	**10.8513**	**6.5000e-004**	**0.0000**	**10.8676**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.1700e-003	3.1900e-003	0.0392	1.5000e-004	0.0173	1.1000e-004	0.0174	4.5800e-003	1.0000e-004	4.6900e-003	0.0000	13.3554	13.3554	2.5000e-004	0.0000	13.3617
Total	**5.1700e-003**	**3.1900e-003**	**0.0392**	**1.5000e-004**	**0.0173**	**1.1000e-004**	**0.0174**	**4.5800e-003**	**1.0000e-004**	**4.6900e-003**	**0.0000**	**13.3554**	**13.3554**	**2.5000e-004**	**0.0000**	**13.3617**

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	0.1146	0.3356	0.5143	5.5000e-004	0.0115	8.8000e-004	0.0123	3.0700e-003	8.1000e-004	3.8800e-003	0.0000	51.6444	51.6444	5.7900e-003	0.0000	51.7893
Unmitigated	0.1146	0.3356	0.5143	5.5000e-004	0.0115	8.8000e-004	0.0123	3.0700e-003	8.1000e-004	3.8800e-003	0.0000	51.6444	51.6444	5.7900e-003	0.0000	51.7893

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse High Rise	848.64	868.92	695.76	30,201	30,201
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	848.64	868.92	695.76	30,201	30,201

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-[illegible]	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse High Rise	0.10	0.10	0.10	100.00	0.00	0.00	100	0	0
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Condo/Townhouse High Rise	0.563406	0.043070	0.209298	0.109958	0.015015	0.005784	0.026182	0.017546	0.001775	0.001524	0.004941	0.000598	0.000904
Other Asphalt Surfaces	0.563406	0.043070	0.209298	0.109958	0.015015	0.005784	0.026182	0.017546	0.001775	0.001524	0.004941	0.000598	0.000904
Other Non-Asphalt Surfaces	0.563406	0.043070	0.209298	0.109958	0.015015	0.005784	0.026182	0.017546	0.001775	0.001524	0.004941	0.000598	0.000904
Parking Lot	0.563406	0.043070	0.209298	0.109958	0.015015	0.005784	0.026182	0.017546	0.001775	0.001524	0.004941	0.000598	0.000904

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	316.2254	316.2254	8.8700e-003	1.8300e-003	316.9940
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	316.2254	316.2254	8.8700e-003	1.8300e-003	316.9940
NaturalGas Mitigated	9.6100e-003	0.0821	0.0350	5.2000e-004		6.6400e-003	6.6400e-003		6.6400e-003	6.6400e-003	0.0000	95.1308	95.1308	1.8200e-003	1.7400e-003	95.6961
NaturalGas Unmitigated	9.6100e-003	0.0821	0.0350	5.2000e-004		6.6400e-003	6.6400e-003		6.6400e-003	6.6400e-003	0.0000	95.1308	95.1308	1.8200e-003	1.7400e-003	95.6961

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Condo/Townhouse High Rise	1.78268e+006	9.6100e-003	0.0821	0.0350	5.2000e-004		6.6400e-003	6.6400e-003		6.6400e-003	6.6400e-003	0.0000	95.1308	95.1308	1.8200e-003	1.7400e-003	95.6961
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**9.6100e-003**	**0.0821**	**0.0350**	**5.2000e-004**		**6.6400e-003**	**6.6400e-003**		**6.6400e-003**	**6.6400e-003**	**0.0000**	**95.1308**	**95.1308**	**1.8200e-003**	**1.7400e-003**	**95.6961**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Condo/Townhouse High Rise	1.78268e+006	9.6100e-003	0.0821	0.0350	5.2000e-004		6.6400e-003	6.6400e-003		6.6400e-003	6.6400e-003	0.0000	95.1308	95.1308	1.8200e-003	1.7400e-003	95.6961
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**9.6100e-003**	**0.0821**	**0.0350**	**5.2000e-004**		**6.6400e-003**	**6.6400e-003**		**6.6400e-003**	**6.6400e-003**	**0.0000**	**95.1308**	**95.1308**	**1.8200e-003**	**1.7400e-003**	**95.6961**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse High Rise	660654	309.8562	8.6900e-003	1.8000e-003	310.6093
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	13580	6.3692	1.8000e-004	4.0000e-005	6.3847
Total		**316.2254**	**8.8700e-003**	**1.8400e-003**	**316.9940**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse High Rise	660654	309.8562	8.6900e-003	1.8000e-003	310.6093
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	13580	6.3692	1.8000e-004	4.0000e-005	6.3847
Total		**316.2254**	**8.8700e-003**	**1.8400e-003**	**316.9940**

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	1.0230	0.0186	1.6110	9.0000e-005		8.9100e-003	8.9100e-003		8.9100e-003	8.9100e-003	0.0000	2.6314	2.6314	2.5400e-003	0.0000	2.6949

Unmitigated	1.0230	0.0186	1.6110	9.0000e-005		8.9100e-003	8.9100e-003		8.9100e-003	8.9100e-003	0.0000	2.6314	2.6314	2.5400e-003	0.0000	2.6949

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	0.0790					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.8954					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0487	0.0186	1.6110	9.0000e-005		8.9100e-003	8.9100e-003		8.9100e-003	8.9100e-003	0.0000	2.6314	2.6314	2.5400e-003	0.0000	2.6949
Total	**1.0231**	**0.0186**	**1.6110**	**9.0000e-005**		**8.9100e-003**	**8.9100e-003**		**8.9100e-003**	**8.9100e-003**	**0.0000**	**2.6314**	**2.6314**	**2.5400e-003**	**0.0000**	**2.6949**

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	0.0790					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.8954					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0487	0.0186	1.6110	9.0000e-005		8.9100e-003	8.9100e-003		8.9100e-003	8.9100e-003	0.0000	2.6314	2.6314	2.5400e-003	0.0000	2.6949
Total	**1.0231**	**0.0186**	**1.6110**	**9.0000e-005**		**8.9100e-003**	**8.9100e-003**		**8.9100e-003**	**8.9100e-003**	**0.0000**	**2.6314**	**2.6314**	**2.5400e-003**	**0.0000**	**2.6949**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e

Category	MT/yr			
Mitigated	98.6859	0.3339	8.3700e-003	109.5282
Unmitigated	98.6859	0.3339	8.3700e-003	109.5282

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse High Rise	10.164 / 6.40776	98.6859	0.3339	8.3700e-003	109.5282
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**98.6859**	**0.3339**	**8.3700e-003**	**109.5282**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse High Rise	10.164 / 6.40776	98.6859	0.3339	8.3700e-003	109.5282
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**98.6859**	**0.3339**	**8.3700e-003**	**109.5282**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.4527	0.0268	0.0000	1.1215
Unmitigated	0.4527	0.0268	0.0000	1.1215

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse High Rise	2.23	0.4527	0.0268	0.0000	1.1215
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**0.4527**	**0.0268**	**0.0000**	**1.1215**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse High Rise	2.23	0.4527	0.0268	0.0000	1.1215
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000

Total		**0.4527**	**0.0268**	**0.0000**	**1.1215**

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

Legacy Anaheim LST

Orange County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	2.12	Acre	2.12	92,347.20	0
Other Non-Asphalt Surfaces	43.21	1000sqft	0.99	43,206.00	0
Parking Lot	97.00	Space	0.87	38,800.00	0
Condo/Townhouse High Rise	156.00	Dwelling Unit	2.42	244,680.00	446

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2023
Utility Company	Anaheim Public Utilities				
CO2 Intensity (lb/MWhr)	1034	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - See CalEEMod note 1.

Land Use - See CalEEMod note 2.

Construction Phase - See CalEEMod note 3.

Off-road Equipment - See CalEEMod note 3.

Off-road Equipment - See CalEEMod note 3.

Off-road Equipment - See CalEEMod note 3.

Off-road Equipment - See CalEEMod note 3.

Demolition - See CalEEMod note 5.

Grading - See CalEEMod note 4.

Vehicle Trips - Trip length set to 0.1 miles to reflect on-site traffic only.

Woodstoves - See CalEEMod note 10.

Solid Waste - See CalEEMod note 11.

Construction Off-road Equipment Mitigation - See CalEEMod note 7.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterExposedAreaPM10PercentReduction	61	55
tblConstDustMitigation	WaterExposedAreaPM25PercentReduction	61	55
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	10.00
tblConstructionPhase	NumDays	10.00	12.00
tblConstructionPhase	NumDays	20.00	88.00
tblConstructionPhase	NumDays	230.00	326.00
tblConstructionPhase	NumDays	20.00	238.00
tblConstructionPhase	NumDays	20.00	238.00
tblFireplaces	FireplaceDayYear	25.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	132.60	0.00
tblFireplaces	NumberNoFireplace	15.60	0.00
tblFireplaces	NumberWood	7.80	0.00
tblGrading	AcresOfGrading	132.00	6.40
tblLandUse	LandUseSquareFeet	43,210.00	43,206.00
tblLandUse	LandUseSquareFeet	156,000.00	244,680.00
tblLandUse	LotAcreage	2.44	2.42
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00

tblProjectCharacteristics	CO2IntensityFactor	1543.28	1034
tblSolidWaste	SolidWasteGenerationRate	71.76	2.23
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	HO_TL	8.70	0.10
tblVehicleTrips	HO_TTP	40.60	0.00
tblVehicleTrips	HS_TL	5.90	0.10
tblVehicleTrips	HS_TTP	19.20	0.00
tblVehicleTrips	HW_TL	14.70	0.10
tblVehicleTrips	HW_TTP	40.20	100.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	ST_TR	4.31	5.57
tblVehicleTrips	SU_TR	3.43	4.46
tblVehicleTrips	WD_TR	4.18	5.44
tblWoodstoves	NumberCatalytic	7.80	0.00
tblWoodstoves	NumberNoncatalytic	7.80	0.00
tblWoodstoves	WoodstoveDayYear	25.00	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					
2021	5.5666	52.8176	41.0318	0.0979	8.6111	2.2471	10.8582	3.9912	2.1024	6.0936	0.0000	9,593.7824	9,593.7824	1.7857	0.0000	9,638.4251
2022	10.6167	31.9636	39.5799	0.0882	2.9478	1.4256	4.3733	0.7883	1.3488	2.1371	0.0000	8,650.8995	8,650.8995	1.3035	0.0000	8,683.4874
2023	8.0619	11.5881	17.7700	0.0308	0.5812	0.5846	1.1659	0.1542	0.5435	0.6977	0.0000	2,995.6419	2,995.6419	0.7405	0.0000	3,014.1536
Maximum	**10.6167**	**52.8176**	**41.0318**	**0.0979**	**8.6111**	**2.2471**	**10.8582**	**3.9912**	**2.1024**	**6.0936**	**0.0000**	**9,593.7824**	**9,593.7824**	**1.7857**	**0.0000**	**9,638.4251**

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					
2021	5.5666	52.8176	41.0318	0.0979	5.2565	2.2471	7.5037	2.1660	2.1024	4.2684	0.0000	9,593.7824	9,593.7824	1.7857	0.0000	9,638.4251
2022	10.6167	31.9636	39.5799	0.0882	2.9478	1.4256	4.3733	0.7883	1.3488	2.1371	0.0000	8,650.8995	8,650.8995	1.3035	0.0000	8,683.4874
2023	8.0619	11.5881	17.7700	0.0308	0.5812	0.5846	1.1659	0.1542	0.5435	0.6977	0.0000	2,995.6419	2,995.6419	0.7405	0.0000	3,014.1536
Maximum	**10.6167**	**52.8176**	**41.0318**	**0.0979**	**5.2565**	**2.2471**	**7.5037**	**2.1660**	**2.1024**	**4.2684**	**0.0000**	**9,593.7824**	**9,593.7824**	**1.7857**	**0.0000**	**9,638.4251**

	ROG	NOx	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**	**27.63**	**0.00**	**20.46**	**37.00**	**0.00**	**20.44**	**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	5.7283	0.1485	12.8876	6.8000e-004		0.0713	0.0713		0.0713	0.0713	0.0000	23.2053	23.2053	0.0224	0.0000	23.7645
Energy	0.0527	0.4501	0.1915	2.8700e-003		0.0364	0.0364		0.0364	0.0364		574.5959	574.5959	0.0110	0.0105	578.0104
Mobile	0.7082	1.9324	2.6348	3.2600e-003	0.0671	4.9900e-003	0.0721	0.0179	4.6100e-003	0.0226		338.3425	338.3425	0.0345		339.2061
Total	**6.4892**	**2.5311**	**15.7139**	**6.8100e-003**	**0.0671**	**0.1127**	**0.1798**	**0.0179**	**0.1123**	**0.1302**	**0.0000**	**936.1437**	**936.1437**	**0.0679**	**0.0105**	**940.9810**

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	5.7283	0.1485	12.8876	6.8000e-004		0.0713	0.0713		0.0713	0.0713	0.0000	23.2053	23.2053	0.0224	0.0000	23.7645

Energy	0.0527	0.4501	0.1915	2.8700e-003		0.0364	0.0364		0.0364	0.0364		574.5959	574.5959	0.0110	0.0105	578.0104
Mobile	0.7082	1.9324	2.6348	3.2600e-003	0.0671	4.9900e-003	0.0721	0.0179	4.6100e-003	0.0226		338.3425	338.3425	0.0345		339.2061
Total	**6.4892**	**2.5311**	**15.7139**	**6.8100e-003**	**0.0671**	**0.1127**	**0.1798**	**0.0179**	**0.1123**	**0.1302**	**0.0000**	**936.1437**	**936.1437**	**0.0679**	**0.0105**	**940.9810**

	ROG	NOx	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	8/1/2021	8/15/2021	5	10	
2	Site Preparation	Site Preparation	8/16/2021	8/31/2021	5	12	
3	Grading	Grading	9/1/2021	12/31/2021	5	88	
4	Building Construction	Building Construction	10/1/2021	12/31/2022	5	326	
5	Paving	Paving	6/1/2022	4/30/2023	5	238	
6	Architectural Coating	Architectural Coating	6/1/2022	4/30/2023	5	238	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 6.4

Acres of Paving: 3.98

Residential Indoor: 495,477; Residential Outdoor: 165,159; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	1	8.00	158	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Excavators	1	8.00	158	0.38
Site Preparation	Rubber Tired Dozers	1	8.00	247	0.40

Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	1	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cement and Mortar Mixers	1	8.00	9	0.56
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	2	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Pumps	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	3	8.00	0.00	21.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	186.00	45.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	37.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.4597	0.0000	0.4597	0.0696	0.0000	0.0696			0.0000			0.0000
Off-Road	1.6604	16.1626	10.9836	0.0200		0.8100	0.8100		0.7591	0.7591		1,920.2088	1,920.2088	0.4638		1,931.8031
Total	**1.6604**	**16.1626**	**10.9836**	**0.0200**	**0.4597**	**0.8100**	**1.2697**	**0.0696**	**0.7591**	**0.8287**		**1,920.2088**	**1,920.2088**	**0.4638**		**1,931.8031**

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	0.0151	0.5339	0.1467	1.5800e-003	0.0366	1.6800e-003	0.0382	0.0100	1.6000e-003	0.0116		176.9497	176.9497	0.0184		177.4084
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0289	0.0175	0.2430	8.4000e-004	0.0894	5.8000e-004	0.0900	0.0237	5.3000e-004	0.0243		84.1755	84.1755	1.8000e-003		84.2206
Total	**0.0440**	**0.5513**	**0.3896**	**2.4200e-003**	**0.1260**	**2.2600e-003**	**0.1282**	**0.0337**	**2.1300e-003**	**0.0359**		**261.1253**	**261.1253**	**0.0202**		**261.6290**

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					0.2069	0.0000	0.2069	0.0313	0.0000	0.0313			0.0000			0.0000
Off-Road	1.6604	16.1626	10.9836	0.0200		0.8100	0.8100		0.7591	0.7591	0.0000	1,920.2088	1,920.2088	0.4638		1,931.8030
Total	**1.6604**	**16.1626**	**10.9836**	**0.0200**	**0.2069**	**0.8100**	**1.0169**	**0.0313**	**0.7591**	**0.7904**	**0.0000**	**1,920.2088**	**1,920.2088**	**0.4638**		**1,931.8030**

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	0.0151	0.5339	0.1467	1.5800e-003	0.0366	1.6800e-003	0.0382	0.0100	1.6000e-003	0.0116		176.9497	176.9497	0.0184		177.4084
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0289	0.0175	0.2430	8.4000e-004	0.0894	5.8000e-004	0.0900	0.0237	5.3000e-004	0.0243		84.1755	84.1755	1.8000e-003		84.2206
Total	**0.0440**	**0.5513**	**0.3896**	**2.4200e-003**	**0.1260**	**2.2600e-003**	**0.1282**	**0.0337**	**2.1300e-003**	**0.0359**		**261.1253**	**261.1253**	**0.0202**		**261.6290**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0221	0.0000	6.0221	3.3102	0.0000	3.3102			0.0000			0.0000
Off-Road	1.4628	15.0205	9.5698	0.0168		0.7487	0.7487		0.6888	0.6888		1,628.4442	1,628.4442	0.5267		1,641.6110
Total	**1.4628**	**15.0205**	**9.5698**	**0.0168**	**6.0221**	**0.7487**	**6.7708**	**3.3102**	**0.6888**	**3.9990**		**1,628.4442**	**1,628.4442**	**0.5267**		**1,641.6110**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0289	0.0175	0.2430	8.4000e-004	0.0894	5.8000e-004	0.0900	0.0237	5.3000e-004	0.0243		84.1755	84.1755	1.8000e-003		84.2206
Total	**0.0289**	**0.0175**	**0.2430**	**8.4000e-004**	**0.0894**	**5.8000e-004**	**0.0900**	**0.0237**	**5.3000e-004**	**0.0243**		**84.1755**	**84.1755**	**1.8000e-003**		**84.2206**

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					2.7099	0.0000	2.7099	1.4896	0.0000	1.4896			0.0000			0.0000
Off-Road	1.4628	15.0205	9.5698	0.0168		0.7487	0.7487		0.6888	0.6888	0.0000	1,628.4442	1,628.4442	0.5267		1,641.6110
Total	**1.4628**	**15.0205**	**9.5698**	**0.0168**	**2.7099**	**0.7487**	**3.4586**	**1.4896**	**0.6888**	**2.1784**	**0.0000**	**1,628.4442**	**1,628.4442**	**0.5267**		**1,641.6110**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0289	0.0175	0.2430	8.4000e-004	0.0894	5.8000e-004	0.0900	0.0237	5.3000e-004	0.0243		84.1755	84.1755	1.8000e-003		84.2206
Total	**0.0289**	**0.0175**	**0.2430**	**8.4000e-004**	**0.0894**	**5.8000e-004**	**0.0900**	**0.0237**	**5.3000e-004**	**0.0243**		**84.1755**	**84.1755**	**1.8000e-003**		**84.2206**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0992	0.0000	6.0992	3.3186	0.0000	3.3186			0.0000			0.0000
Off-Road	2.8453	31.6479	18.3417	0.0386		1.3527	1.3527		1.2445	1.2445		3,738.0399	3,738.0399	1.2090		3,768.2638
Total	**2.8453**	**31.6479**	**18.3417**	**0.0386**	**6.0992**	**1.3527**	**7.4520**	**3.3186**	**1.2445**	**4.5631**		**3,738.0399**	**3,738.0399**	**1.2090**		**3,768.2638**

Unmitigated Construction Off-Site

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

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0469	0.0284	0.3949	1.3700e-003	0.1453	9.4000e-004	0.1463	0.0385	8.7000e-004	0.0394		136.7852	136.7852	2.9300e-003		136.8585
Total	**0.0469**	**0.0284**	**0.3949**	**1.3700e-003**	**0.1453**	**9.4000e-004**	**0.1463**	**0.0385**	**8.7000e-004**	**0.0394**		**136.7852**	**136.7852**	**2.9300e-003**		**136.8585**

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					2.7447	0.0000	2.7447	1.4934	0.0000	1.4934			0.0000			0.0000
Off-Road	2.8453	31.6479	18.3417	0.0386		1.3527	1.3527		1.2445	1.2445	0.0000	3,738.0399	3,738.0399	1.2090		3,768.2638
Total	**2.8453**	**31.6479**	**18.3417**	**0.0386**	**2.7447**	**1.3527**	**4.0974**	**1.4934**	**1.2445**	**2.7379**	**0.0000**	**3,738.0399**	**3,738.0399**	**1.2090**		**3,768.2638**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0469	0.0284	0.3949	1.3700e-003	0.1453	9.4000e-004	0.1463	0.0385	8.7000e-004	0.0394		136.7852	136.7852	2.9300e-003		136.8585
Total	**0.0469**	**0.0284**	**0.3949**	**1.3700e-003**	**0.1453**	**9.4000e-004**	**0.1463**	**0.0385**	**8.7000e-004**	**0.0394**		**136.7852**	**136.7852**	**2.9300e-003**		**136.8585**

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	1.8831	16.5135	15.5009	0.0272		0.8712	0.8712		0.8362	0.8362		2,552.3099	2,552.3099	0.4371		2,563.2365
Total	**1.8831**	**16.5135**	**15.5009**	**0.0272**		**0.8712**	**0.8712**		**0.8362**	**0.8362**		**2,552.3099**	**2,552.3099**	**0.4371**		**2,563.2365**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1201	4.2216	1.1449	0.0111	0.2875	8.7700e-003	0.2963	0.0827	8.3900e-003	0.0911		1,209.5663	1,209.5663	0.0949		1,211.9374
Worker	0.6713	0.4062	5.6494	0.0196	2.0790	0.0135	2.0925	0.5514	0.0124	0.5638		1,957.0811	1,957.0811	0.0419		1,958.1289
Total	**0.7914**	**4.6279**	**6.7943**	**0.0307**	**2.3666**	**0.0222**	**2.3888**	**0.6341**	**0.0208**	**0.6549**		**3,166.6474**	**3,166.6474**	**0.1368**		**3,170.0663**

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	1.8831	16.5135	15.5009	0.0272		0.8712	0.8712		0.8362	0.8362	0.0000	2,552.3099	2,552.3099	0.4371		2,563.2365
Total	**1.8831**	**16.5135**	**15.5009**	**0.0272**		**0.8712**	**0.8712**		**0.8362**	**0.8362**	**0.0000**	**2,552.3099**	**2,552.3099**	**0.4371**		**2,563.2365**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1201	4.2216	1.1449	0.0111	0.2875	8.7700e-003	0.2963	0.0827	8.3900e-003	0.0911		1,209.5663	1,209.5663	0.0949		1,211.9374
Worker	0.6713	0.4062	5.6494	0.0196	2.0790	0.0135	2.0925	0.5514	0.0124	0.5638		1,957.0811	1,957.0811	0.0419		1,958.1289

Total	**0.7914**	**4.6279**	**6.7943**	**0.0307**	**2.3666**	**0.0222**	**2.3888**	**0.6341**	**0.0208**	**0.6549**		**3,166.6474**	**3,166.6474**	**0.1368**		**3,170.0663**

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	1.7151	14.9654	15.3336	0.0273		0.7514	0.7514		0.7218	0.7218		2,552.6855	2,552.6855	0.4306		2,563.4507
Total	**1.7151**	**14.9654**	**15.3336**	**0.0273**		**0.7514**	**0.7514**		**0.7218**	**0.7218**		**2,552.6855**	**2,552.6855**	**0.4306**		**2,563.4507**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1129	3.9940	1.1055	0.0110	0.2875	7.6300e-003	0.2951	0.0827	7.3000e-003	0.0900		1,197.6868	1,197.6868	0.0919		1,199.9837
Worker	0.6345	0.3680	5.2727	0.0189	2.0790	0.0132	2.0922	0.5514	0.0122	0.5635		1,884.5543	1,884.5543	0.0381		1,885.5059
Total	**0.7474**	**4.3620**	**6.3782**	**0.0299**	**2.3665**	**0.0208**	**2.3874**	**0.6341**	**0.0195**	**0.6536**		**3,082.2410**	**3,082.2410**	**0.1299**		**3,085.4895**

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	1.7151	14.9654	15.3336	0.0273		0.7514	0.7514		0.7218	0.7218	0.0000	2,552.6855	2,552.6855	0.4306		2,563.4507
Total	**1.7151**	**14.9654**	**15.3336**	**0.0273**		**0.7514**	**0.7514**		**0.7218**	**0.7218**	**0.0000**	**2,552.6855**	**2,552.6855**	**0.4306**		**2,563.4507**

Mitigated Construction Off-Site

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

Category	lb/day											lb/day				
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1129	3.9940	1.1055	0.0110	0.2875	7.6300e-003	0.2951	0.0827	7.3000e-003	0.0900		1,197.6868	1,197.6868	0.0919		1,199.9837
Worker	0.6345	0.3680	5.2727	0.0189	2.0790	0.0132	2.0922	0.5514	0.0122	0.5635		1,884.5543	1,884.5543	0.0381		1,885.5059
Total	**0.7474**	**4.3620**	**6.3782**	**0.0299**	**2.3665**	**0.0208**	**2.3874**	**0.6341**	**0.0195**	**0.6536**		**3,082.2410**	**3,082.2410**	**0.1299**		**3,085.4895**

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225		2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.0329					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1357**	**11.1249**	**14.5805**	**0.0228**		**0.5679**	**0.5679**		**0.5225**	**0.5225**		**2,207.6603**	**2,207.6603**	**0.7140**		**2,225.5104**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0512	0.0297	0.4252	1.5200e-003	0.1677	1.0600e-003	0.1687	0.0445	9.8000e-004	0.0455		151.9802	151.9802	3.0700e-003		152.0569
Total	**0.0512**	**0.0297**	**0.4252**	**1.5200e-003**	**0.1677**	**1.0600e-003**	**0.1687**	**0.0445**	**9.8000e-004**	**0.0455**		**151.9802**	**151.9802**	**3.0700e-003**		**152.0569**

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	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225	0.0000	2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.0329					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1357**	**11.1249**	**14.5805**	**0.0228**		**0.5679**	**0.5679**		**0.5225**	**0.5225**	**0.0000**	**2,207.6603**	**2,207.6603**	**0.7140**		**2,225.5104**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0512	0.0297	0.4252	1.5200e-003	0.1677	1.0600e-003	0.1687	0.0445	9.8000e-004	0.0455		151.9802	151.9802	3.0700e-003		152.0569
Total	**0.0512**	**0.0297**	**0.4252**	**1.5200e-003**	**0.1677**	**1.0600e-003**	**0.1687**	**0.0445**	**9.8000e-004**	**0.0455**		**151.9802**	**151.9802**	**3.0700e-003**		**152.0569**

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	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.0329					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0657**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**		**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

Unmitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0485	0.0270	0.3966	1.4600e-003	0.1677	1.0500e-003	0.1687	0.0445	9.6000e-004	0.0454		146.1374	146.1374	2.7800e-003		146.2070
Total	**0.0485**	**0.0270**	**0.3966**	**1.4600e-003**	**0.1677**	**1.0500e-003**	**0.1687**	**0.0445**	**9.6000e-004**	**0.0454**		**146.1374**	**146.1374**	**2.7800e-003**		**146.2070**

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	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.0329					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0657**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**	**0.0000**	**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0485	0.0270	0.3966	1.4600e-003	0.1677	1.0500e-003	0.1687	0.0445	9.6000e-004	0.0454		146.1374	146.1374	2.7800e-003		146.2070
Total	**0.0485**	**0.0270**	**0.3966**	**1.4600e-003**	**0.1677**	**1.0500e-003**	**0.1687**	**0.0445**	**9.6000e-004**	**0.0454**		**146.1374**	**146.1374**	**2.7800e-003**		**146.2070**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

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

Archit. Coating	6.6366					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**6.8411**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1262	0.0732	1.0489	3.7600e-003	0.4136	2.6300e-003	0.4162	0.1097	2.4200e-003	0.1121		374.8845	374.8845	7.5700e-003		375.0738
Total	**0.1262**	**0.0732**	**1.0489**	**3.7600e-003**	**0.4136**	**2.6300e-003**	**0.4162**	**0.1097**	**2.4200e-003**	**0.1121**		**374.8845**	**374.8845**	**7.5700e-003**		**375.0738**

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	6.6366					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**6.8411**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

Mitigated Construction Off-Site

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

Worker	0.1262	0.0732	1.0489	3.7600e-003	0.4136	2.6300e-003	0.4162	0.1097	2.4200e-003	0.1121		374.8845	374.8845	7.5700e-003		375.0738
Total	**0.1262**	**0.0732**	**1.0489**	**3.7600e-003**	**0.4136**	**2.6300e-003**	**0.4162**	**0.1097**	**2.4200e-003**	**0.1121**		**374.8845**	**374.8845**	**7.5700e-003**		**375.0738**

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	6.6366					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**6.8283**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1195	0.0665	0.9782	3.6100e-003	0.4136	2.5800e-003	0.4162	0.1097	2.3800e-003	0.1121		360.4723	360.4723	6.8700e-003		360.6440
Total	**0.1195**	**0.0665**	**0.9782**	**3.6100e-003**	**0.4136**	**2.5800e-003**	**0.4162**	**0.1097**	**2.3800e-003**	**0.1121**		**360.4723**	**360.4723**	**6.8700e-003**		**360.6440**

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	6.6366					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690

Total	**6.8283**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1195	0.0665	0.9782	3.6100e-003	0.4136	2.5800e-003	0.4162	0.1097	2.3800e-003	0.1121		360.4723	360.4723	6.8700e-003		360.6440
Total	**0.1195**	**0.0665**	**0.9782**	**3.6100e-003**	**0.4136**	**2.5800e-003**	**0.4162**	**0.1097**	**2.3800e-003**	**0.1121**		**360.4723**	**360.4723**	**6.8700e-003**		**360.6440**

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	0.7082	1.9324	2.6348	3.2600e-003	0.0671	4.9900e-003	0.0721	0.0179	4.6100e-003	0.0226		338.3425	338.3425	0.0345		339.2061
Unmitigated	0.7082	1.9324	2.6348	3.2600e-003	0.0671	4.9900e-003	0.0721	0.0179	4.6100e-003	0.0226		338.3425	338.3425	0.0345		339.2061

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse High Rise	848.64	868.92	695.76	30,201	30,201
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	848.64	868.92	695.76	30,201	30,201

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by

Condo/Townhouse High Rise	0.10	0.10	0.10	100.00	0.00	0.00	100	0	0
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Condo/Townhouse High Rise	0.563406	0.043070	0.209298	0.109958	0.015015	0.005784	0.026182	0.017546	0.001775	0.001524	0.004941	0.000598	0.000904
Other Asphalt Surfaces	0.563406	0.043070	0.209298	0.109958	0.015015	0.005784	0.026182	0.017546	0.001775	0.001524	0.004941	0.000598	0.000904
Other Non-Asphalt Surfaces	0.563406	0.043070	0.209298	0.109958	0.015015	0.005784	0.026182	0.017546	0.001775	0.001524	0.004941	0.000598	0.000904
Parking Lot	0.563406	0.043070	0.209298	0.109958	0.015015	0.005784	0.026182	0.017546	0.001775	0.001524	0.004941	0.000598	0.000904

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0527	0.4501	0.1915	2.8700e-003		0.0364	0.0364		0.0364	0.0364		574.5959	574.5959	0.0110	0.0105	578.0104
NaturalGas Unmitigated	0.0527	0.4501	0.1915	2.8700e-003		0.0364	0.0364		0.0364	0.0364		574.5959	574.5959	0.0110	0.0105	578.0104

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Condo/Townhouse High Rise	4884.07	0.0527	0.4501	0.1915	2.8700e-003		0.0364	0.0364		0.0364	0.0364		574.5959	574.5959	0.0110	0.0105	578.0104
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Total		**0.0527**	**0.4501**	**0.1915**	**2.8700e-003**		**0.0364**	**0.0364**		**0.0364**	**0.0364**		**574.5959**	**574.5959**	**0.0110**	**0.0105**	**578.0104**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Condo/Townhouse High Rise	4.88407	0.0527	0.4501	0.1915	2.8700e-003		0.0364	0.0364		0.0364	0.0364		574.5959	574.5959	0.0110	0.0105	578.0104
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0527**	**0.4501**	**0.1915**	**2.8700e-003**		**0.0364**	**0.0364**		**0.0364**	**0.0364**		**574.5959**	**574.5959**	**0.0110**	**0.0105**	**578.0104**

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	5.7283	0.1485	12.8876	6.8000e-004		0.0713	0.0713		0.0713	0.0713	0.0000	23.2053	23.2053	0.0224	0.0000	23.7645
Unmitigated	5.7283	0.1485	12.8876	6.8000e-004		0.0713	0.0713		0.0713	0.0713	0.0000	23.2053	23.2053	0.0224	0.0000	23.7645

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	0.4327					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.9064					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Landscaping	0.3892	0.1485	12.8876	6.8000e-004		0.0713	0.0713		0.0713	0.0713		23.2053	23.2053	0.0224		23.7645
Total	**5.7283**	**0.1485**	**12.8876**	**6.8000e-004**		**0.0713**	**0.0713**		**0.0713**	**0.0713**	**0.0000**	**23.2053**	**23.2053**	**0.0224**	**0.0000**	**23.7645**

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	0.4327					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.9064					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.3892	0.1485	12.8876	6.8000e-004		0.0713	0.0713		0.0713	0.0713		23.2053	23.2053	0.0224		23.7645
Total	**5.7283**	**0.1485**	**12.8876**	**6.8000e-004**		**0.0713**	**0.0713**		**0.0713**	**0.0713**	**0.0000**	**23.2053**	**23.2053**	**0.0224**	**0.0000**	**23.7645**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Legacy Anaheim LST

Orange County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	2.12	Acre	2.12	92,347.20	0
Other Non-Asphalt Surfaces	43.21	1000sqft	0.99	43,206.00	0
Parking Lot	97.00	Space	0.87	38,800.00	0
Condo/Townhouse High Rise	156.00	Dwelling Unit	2.42	244,680.00	446

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2023
Utility Company	Anaheim Public Utilities				
CO2 Intensity (lb/MWhr)	1034	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - See CalEEMod note 1.

Land Use - See CalEEMod note 2.

Construction Phase - See CalEEMod note 3.

Off-road Equipment - See CalEEMod note 3.

Off-road Equipment - See CalEEMod note 3.

Off-road Equipment - See CalEEMod note 3.

Off-road Equipment - See CalEEMod note 3.

Demolition - See CalEEMod note 5.

Grading - See CalEEMod note 4.

Vehicle Trips - Trip length set to 0.1 miles to reflect on-site traffic only.

Woodstoves - See CalEEMod note 10.

Solid Waste - See CalEEMod note 11.

Construction Off-road Equipment Mitigation - See CalEEMod note 7.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterExposedAreaPM10PercentReduction	61	55
tblConstDustMitigation	WaterExposedAreaPM25PercentReduction	61	55
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	10.00
tblConstructionPhase	NumDays	10.00	12.00
tblConstructionPhase	NumDays	20.00	88.00
tblConstructionPhase	NumDays	230.00	326.00
tblConstructionPhase	NumDays	20.00	238.00
tblConstructionPhase	NumDays	20.00	238.00
tblFireplaces	FireplaceDayYear	25.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	132.60	0.00
tblFireplaces	NumberNoFireplace	15.60	0.00
tblFireplaces	NumberWood	7.80	0.00
tblGrading	AcresOfGrading	132.00	6.40
tblLandUse	LandUseSquareFeet	43,210.00	43,206.00
tblLandUse	LandUseSquareFeet	156,000.00	244,680.00
tblLandUse	LotAcreage	2.44	2.42
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00

tblProjectCharacteristics	CO2IntensityFactor	1543.28	1034
tblSolidWaste	SolidWasteGenerationRate	71.76	2.23
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	HO_TL	8.70	0.10
tblVehicleTrips	HO_TTP	40.60	0.00
tblVehicleTrips	HS_TL	5.90	0.10
tblVehicleTrips	HS_TTP	19.20	0.00
tblVehicleTrips	HW_TL	14.70	0.10
tblVehicleTrips	HW_TTP	40.20	100.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	ST_TR	4.31	5.57
tblVehicleTrips	SU_TR	3.43	4.46
tblVehicleTrips	WD_TR	4.18	5.44
tblWoodstoves	NumberCatalytic	7.80	0.00
tblWoodstoves	NumberNoncatalytic	7.80	0.00
tblWoodstoves	WoodstoveDayYear	25.00	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					
2021	5.6675	52.8506	40.6760	0.0965	8.6111	2.2475	10.8585	3.9912	2.1027	6.0939	0.0000	9,451.9064	9,451.9064	1.7879	0.0000	9,496.6049
2022	10.7320	31.9979	39.1548	0.0866	2.9478	1.4258	4.3736	0.7883	1.3491	2.1373	0.0000	8,492.3151	8,492.3151	1.3052	0.0000	8,524.9445
2023	8.0852	11.5973	17.6599	0.0306	0.5812	0.5846	1.1659	0.1542	0.5435	0.6977	0.0000	2,968.5546	2,968.5546	0.7399	0.0000	2,987.0529
Maximum	**10.7320**	**52.8506**	**40.6760**	**0.0965**	**8.6111**	**2.2475**	**10.8585**	**3.9912**	**2.1027**	**6.0939**	**0.0000**	**9,451.9064**	**9,451.9064**	**1.7879**	**0.0000**	**9,496.6049**

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					
2021	5.6675	52.8506	40.6760	0.0965	5.2565	2.2475	7.5040	2.1660	2.1027	4.2687	0.0000	9,451.9064	9,451.9064	1.7879	0.0000	9,496.6049
2022	10.7320	31.9979	39.1548	0.0866	2.9478	1.4258	4.3736	0.7883	1.3491	2.1373	0.0000	8,492.3151	8,492.3151	1.3052	0.0000	8,524.9445
2023	8.0852	11.5973	17.6599	0.0306	0.5812	0.5846	1.1659	0.1542	0.5435	0.6977	0.0000	2,968.5546	2,968.5546	0.7399	0.0000	2,987.0529
Maximum	**10.7320**	**52.8506**	**40.6760**	**0.0965**	**5.2565**	**2.2475**	**7.5040**	**2.1660**	**2.1027**	**4.2687**	**0.0000**	**9,451.9064**	**9,451.9064**	**1.7879**	**0.0000**	**9,496.6049**

	ROG	NOx	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**	**27.63**	**0.00**	**20.46**	**37.00**	**0.00**	**20.44**	**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	5.7283	0.1485	12.8876	6.8000e-004		0.0713	0.0713		0.0713	0.0713	0.0000	23.2053	23.2053	0.0224	0.0000	23.7645
Energy	0.0527	0.4501	0.1915	2.8700e-003		0.0364	0.0364		0.0364	0.0364		574.5959	574.5959	0.0110	0.0105	578.0104
Mobile	0.6955	1.9145	3.0510	3.0600e-003	0.0671	5.1500e-003	0.0722	0.0179	4.7600e-003	0.0227		315.8235	315.8235	0.0384		316.7830
Total	**6.4765**	**2.5131**	**16.1301**	**6.6100e-003**	**0.0671**	**0.1128**	**0.1799**	**0.0179**	**0.1125**	**0.1304**	**0.0000**	**913.6247**	**913.6247**	**0.0718**	**0.0105**	**918.5579**

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	5.7283	0.1485	12.8876	6.8000e-004		0.0713	0.0713		0.0713	0.0713	0.0000	23.2053	23.2053	0.0224	0.0000	23.7645
Energy	0.0527	0.4501	0.1915	2.8700e-003		0.0364	0.0364		0.0364	0.0364		574.5959	574.5959	0.0110	0.0105	578.0104

Mobile	0.6955	1.9145	3.0510	3.0600e-003	0.0671	5.1500e-003	0.0722	0.0179	4.7600e-003	0.0227		315.8235	315.8235	0.0384		316.7830
Total	**6.4765**	**2.5131**	**16.1301**	**6.6100e-003**	**0.0671**	**0.1128**	**0.1799**	**0.0179**	**0.1125**	**0.1304**	**0.0000**	**913.6247**	**913.6247**	**0.0718**	**0.0105**	**918.5579**

	ROG	NOx	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	8/1/2021	8/15/2021	5	10	
2	Site Preparation	Site Preparation	8/16/2021	8/31/2021	5	12	
3	Grading	Grading	9/1/2021	12/31/2021	5	88	
4	Building Construction	Building Construction	10/1/2021	12/31/2022	5	326	
5	Paving	Paving	6/1/2022	4/30/2023	5	238	
6	Architectural Coating	Architectural Coating	6/1/2022	4/30/2023	5	238	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 6.4

Acres of Paving: 3.98

Residential Indoor: 495,477; Residential Outdoor: 165,159; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	1	8.00	158	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Excavators	1	8.00	158	0.38
Site Preparation	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38

Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	1	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cement and Mortar Mixers	1	8.00	9	0.56
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	2	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Pumps	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	3	8.00	0.00	21.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	186.00	45.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	37.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.4597	0.0000	0.4597	0.0696	0.0000	0.0696			0.0000			0.0000
Off-Road	1.6604	16.1626	10.9836	0.0200		0.8100	0.8100		0.7591	0.7591		1,920.2088	1,920.2088	0.4638		1,931.8031
Total	**1.6604**	**16.1626**	**10.9836**	**0.0200**	**0.4597**	**0.8100**	**1.2697**	**0.0696**	**0.7591**	**0.8287**		**1,920.2088**	**1,920.2088**	**0.4638**		**1,931.8031**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0155	0.5402	0.1540	1.5600e-003	0.0366	1.7100e-003	0.0383	0.0100	1.6300e-003	0.0116		174.2686	174.2686	0.0188		174.7375
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0327	0.0192	0.2242	8.0000e-004	0.0894	5.8000e-004	0.0900	0.0237	5.3000e-004	0.0243		79.6666	79.6666	1.7100e-003		79.7092
Total	**0.0482**	**0.5594**	**0.3782**	**2.3600e-003**	**0.1260**	**2.2900e-003**	**0.1283**	**0.0337**	**2.1600e-003**	**0.0359**		**253.9352**	**253.9352**	**0.0205**		**254.4467**

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					0.2069	0.0000	0.2069	0.0313	0.0000	0.0313			0.0000			0.0000
Off-Road	1.6604	16.1626	10.9836	0.0200		0.8100	0.8100		0.7591	0.7591	0.0000	1,920.2088	1,920.2088	0.4638		1,931.8030
Total	**1.6604**	**16.1626**	**10.9836**	**0.0200**	**0.2069**	**0.8100**	**1.0169**	**0.0313**	**0.7591**	**0.7904**	**0.0000**	**1,920.2088**	**1,920.2088**	**0.4638**		**1,931.8030**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0155	0.5402	0.1540	1.5600e-003	0.0366	1.7100e-003	0.0383	0.0100	1.6300e-003	0.0116		174.2686	174.2686	0.0188		174.7375
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0327	0.0192	0.2242	8.0000e-004	0.0894	5.8000e-004	0.0900	0.0237	5.3000e-004	0.0243		79.6666	79.6666	1.7100e-003		79.7092
Total	**0.0482**	**0.5594**	**0.3782**	**2.3600e-003**	**0.1260**	**2.2900e-003**	**0.1283**	**0.0337**	**2.1600e-003**	**0.0359**		**253.9352**	**253.9352**	**0.0205**		**254.4467**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0221	0.0000	6.0221	3.3102	0.0000	3.3102			0.0000			0.0000
Off-Road	1.4628	15.0205	9.5698	0.0168		0.7487	0.7487		0.6888	0.6888		1,628.4442	1,628.4442	0.5267		1,641.6110
Total	**1.4628**	**15.0205**	**9.5698**	**0.0168**	**6.0221**	**0.7487**	**6.7708**	**3.3102**	**0.6888**	**3.9990**		**1,628.4442**	**1,628.4442**	**0.5267**		**1,641.6110**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0327	0.0192	0.2242	8.0000e-004	0.0894	5.8000e-004	0.0900	0.0237	5.3000e-004	0.0243		79.6666	79.6666	1.7100e-003		79.7092
Total	**0.0327**	**0.0192**	**0.2242**	**8.0000e-004**	**0.0894**	**5.8000e-004**	**0.0900**	**0.0237**	**5.3000e-004**	**0.0243**		**79.6666**	**79.6666**	**1.7100e-003**		**79.7092**

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					2.7099	0.0000	2.7099	1.4896	0.0000	1.4896			0.0000			0.0000
Off-Road	1.4628	15.0205	9.5698	0.0168		0.7487	0.7487		0.6888	0.6888	0.0000	1,628.4442	1,628.4442	0.5267		1,641.6110
Total	**1.4628**	**15.0205**	**9.5698**	**0.0168**	**2.7099**	**0.7487**	**3.4586**	**1.4896**	**0.6888**	**2.1784**	**0.0000**	**1,628.4442**	**1,628.4442**	**0.5267**		**1,641.6110**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0327	0.0192	0.2242	8.0000e-004	0.0894	5.8000e-004	0.0900	0.0237	5.3000e-004	0.0243		79.6666	79.6666	1.7100e-003		79.7092
Total	**0.0327**	**0.0192**	**0.2242**	**8.0000e-004**	**0.0894**	**5.8000e-004**	**0.0900**	**0.0237**	**5.3000e-004**	**0.0243**		**79.6666**	**79.6666**	**1.7100e-003**		**79.7092**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0992	0.0000	6.0992	3.3186	0.0000	3.3186			0.0000			0.0000
Off-Road	2.8453	31.6479	18.3417	0.0386		1.3527	1.3527		1.2445	1.2445		3,738.0399	3,738.0399	1.2090		3,768.2638
Total	**2.8453**	**31.6479**	**18.3417**	**0.0386**	**6.0992**	**1.3527**	**7.4520**	**3.3186**	**1.2445**	**4.5631**		**3,738.0399**	**3,738.0399**	**1.2090**		**3,768.2638**

Unmitigated Construction Off-Site

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

Category	lb/day											lb/day				
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0531	0.0312	0.3644	1.3000e-003	0.1453	9.4000e-004	0.1463	0.0385	8.7000e-004	0.0394		129.4582	129.4582	2.7700e-003		129.5275
Total	**0.0531**	**0.0312**	**0.3644**	**1.3000e-003**	**0.1453**	**9.4000e-004**	**0.1463**	**0.0385**	**8.7000e-004**	**0.0394**		**129.4582**	**129.4582**	**2.7700e-003**		**129.5275**

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					2.7447	0.0000	2.7447	1.4934	0.0000	1.4934			0.0000			0.0000
Off-Road	2.8453	31.6479	18.3417	0.0386		1.3527	1.3527		1.2445	1.2445	0.0000	3,738.0399	3,738.0399	1.2090		3,768.2638
Total	**2.8453**	**31.6479**	**18.3417**	**0.0386**	**2.7447**	**1.3527**	**4.0974**	**1.4934**	**1.2445**	**2.7379**	**0.0000**	**3,738.0399**	**3,738.0399**	**1.2090**		**3,768.2638**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0531	0.0312	0.3644	1.3000e-003	0.1453	9.4000e-004	0.1463	0.0385	8.7000e-004	0.0394		129.4582	129.4582	2.7700e-003		129.5275
Total	**0.0531**	**0.0312**	**0.3644**	**1.3000e-003**	**0.1453**	**9.4000e-004**	**0.1463**	**0.0385**	**8.7000e-004**	**0.0394**		**129.4582**	**129.4582**	**2.7700e-003**		**129.5275**

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	1.8831	16.5135	15.5009	0.0272		0.8712	0.8712		0.8362	0.8362		2,552.3099	2,552.3099	0.4371		2,563.2365
Total	**1.8831**	**16.5135**	**15.5009**	**0.0272**		**0.8712**	**0.8712**		**0.8362**	**0.8362**		**2,552.3099**	**2,552.3099**	**0.4371**		**2,563.2365**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1260	4.2117	1.2561	0.0108	0.2875	9.1000e-003	0.2966	0.0827	8.7000e-003	0.0914		1,179.8505	1,179.8505	0.0995		1,182.3376
Worker	0.7601	0.4464	5.2130	0.0186	2.0790	0.0135	2.0925	0.5514	0.0124	0.5638		1,852.2479	1,852.2479	0.0397		1,853.2395
Total	**0.8861**	**4.6580**	**6.4691**	**0.0294**	**2.3666**	**0.0226**	**2.3891**	**0.6341**	**0.0211**	**0.6552**		**3,032.0984**	**3,032.0984**	**0.1391**		**3,035.5771**

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	1.8831	16.5135	15.5009	0.0272		0.8712	0.8712		0.8362	0.8362	0.0000	2,552.3099	2,552.3099	0.4371		2,563.2365
Total	**1.8831**	**16.5135**	**15.5009**	**0.0272**		**0.8712**	**0.8712**		**0.8362**	**0.8362**	**0.0000**	**2,552.3099**	**2,552.3099**	**0.4371**		**2,563.2365**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1260	4.2117	1.2561	0.0108	0.2875	9.1000e-003	0.2966	0.0827	8.7000e-003	0.0914		1,179.8505	1,179.8505	0.0995		1,182.3376
Worker	0.7601	0.4464	5.2130	0.0186	2.0790	0.0135	2.0925	0.5514	0.0124	0.5638		1,852.2479	1,852.2479	0.0397		1,853.2395

Total	**0.8861**	**4.6580**	**6.4691**	**0.0294**	**2.3666**	**0.0226**	**2.3891**	**0.6341**	**0.0211**	**0.6552**		**3,032.0984**	**3,032.0984**	**0.1391**		**3,035.5771**

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	1.7151	14.9654	15.3336	0.0273		0.7514	0.7514		0.7218	0.7218		2,552.6855	2,552.6855	0.4306		2,563.4507
Total	**1.7151**	**14.9654**	**15.3336**	**0.0273**		**0.7514**	**0.7514**		**0.7218**	**0.7218**		**2,552.6855**	**2,552.6855**	**0.4306**		**2,563.4507**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1185	3.9818	1.2111	0.0107	0.2875	7.9200e-003	0.2954	0.0827	7.5800e-003	0.0903		1,168.1518	1,168.1518	0.0962		1,170.5564
Worker	0.7202	0.4043	4.8579	0.0179	2.0790	0.0132	2.0922	0.5514	0.0122	0.5635		1,783.7005	1,783.7005	0.0360		1,784.6004
Total	**0.8387**	**4.3862**	**6.0690**	**0.0286**	**2.3665**	**0.0211**	**2.3877**	**0.6341**	**0.0197**	**0.6538**		**2,951.8523**	**2,951.8523**	**0.1322**		**2,955.1568**

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	1.7151	14.9654	15.3336	0.0273		0.7514	0.7514		0.7218	0.7218	0.0000	2,552.6855	2,552.6855	0.4306		2,563.4507
Total	**1.7151**	**14.9654**	**15.3336**	**0.0273**		**0.7514**	**0.7514**		**0.7218**	**0.7218**	**0.0000**	**2,552.6855**	**2,552.6855**	**0.4306**		**2,563.4507**

Mitigated Construction Off-Site

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

Category	lb/day											lb/day				
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1185	3.9818	1.2111	0.0107	0.2875	7.9200e-003	0.2954	0.0827	7.5800e-003	0.0903		1,168.1518	1,168.1518	0.0962		1,170.5564
Worker	0.7202	0.4043	4.8579	0.0179	2.0790	0.0132	2.0922	0.5514	0.0122	0.5635		1,783.7005	1,783.7005	0.0360		1,784.6004
Total	**0.8387**	**4.3862**	**6.0690**	**0.0286**	**2.3665**	**0.0211**	**2.3877**	**0.6341**	**0.0197**	**0.6538**		**2,951.8523**	**2,951.8523**	**0.1322**		**2,955.1568**

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225		2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.0329					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1357**	**11.1249**	**14.5805**	**0.0228**		**0.5679**	**0.5679**		**0.5225**	**0.5225**		**2,207.6603**	**2,207.6603**	**0.7140**		**2,225.5104**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0581	0.0326	0.3918	1.4400e-003	0.1677	1.0600e-003	0.1687	0.0445	9.8000e-004	0.0455		143.8468	143.8468	2.9000e-003		143.9194
Total	**0.0581**	**0.0326**	**0.3918**	**1.4400e-003**	**0.1677**	**1.0600e-003**	**0.1687**	**0.0445**	**9.8000e-004**	**0.0455**		**143.8468**	**143.8468**	**2.9000e-003**		**143.9194**

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	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225	0.0000	2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.0329					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1357**	**11.1249**	**14.5805**	**0.0228**		**0.5679**	**0.5679**		**0.5225**	**0.5225**	**0.0000**	**2,207.6603**	**2,207.6603**	**0.7140**		**2,225.5104**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0581	0.0326	0.3918	1.4400e-003	0.1677	1.0600e-003	0.1687	0.0445	9.8000e-004	0.0455		143.8468	143.8468	2.9000e-003		143.9194
Total	**0.0581**	**0.0326**	**0.3918**	**1.4400e-003**	**0.1677**	**1.0600e-003**	**0.1687**	**0.0445**	**9.8000e-004**	**0.0455**		**143.8468**	**143.8468**	**2.9000e-003**		**143.9194**

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	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.0329					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0657**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**		**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

Unmitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0552	0.0296	0.3648	1.3900e-003	0.1677	1.0500e-003	0.1687	0.0445	9.6000e-004	0.0454		138.3238	138.3238	2.6300e-003		138.3895
Total	**0.0552**	**0.0296**	**0.3648**	**1.3900e-003**	**0.1677**	**1.0500e-003**	**0.1687**	**0.0445**	**9.6000e-004**	**0.0454**		**138.3238**	**138.3238**	**2.6300e-003**		**138.3895**

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	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.0329					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0657**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**	**0.0000**	**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0552	0.0296	0.3648	1.3900e-003	0.1677	1.0500e-003	0.1687	0.0445	9.6000e-004	0.0454		138.3238	138.3238	2.6300e-003		138.3895
Total	**0.0552**	**0.0296**	**0.3648**	**1.3900e-003**	**0.1677**	**1.0500e-003**	**0.1687**	**0.0445**	**9.6000e-004**	**0.0454**		**138.3238**	**138.3238**	**2.6300e-003**		**138.3895**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

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

Archit. Coating	6.6366					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**6.8411**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1433	0.0804	0.9664	3.5600e-003	0.4136	2.6300e-003	0.4162	0.1097	2.4200e-003	0.1121		354.8222	354.8222	7.1600e-003		355.0012
Total	**0.1433**	**0.0804**	**0.9664**	**3.5600e-003**	**0.4136**	**2.6300e-003**	**0.4162**	**0.1097**	**2.4200e-003**	**0.1121**		**354.8222**	**354.8222**	**7.1600e-003**		**355.0012**

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	6.6366					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**6.8411**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

Mitigated Construction Off-Site

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

Worker	0.1433	0.0804	0.9664	3.5600e-003	0.4136	2.6300e-003	0.4162	0.1097	2.4200e-003	0.1121		354.8222	354.8222	7.1600e-003		355.0012
Total	**0.1433**	**0.0804**	**0.9664**	**3.5600e-003**	**0.4136**	**2.6300e-003**	**0.4162**	**0.1097**	**2.4200e-003**	**0.1121**		**354.8222**	**354.8222**	**7.1600e-003**		**355.0012**

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	6.6366					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**6.8283**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1361	0.0730	0.8998	3.4200e-003	0.4136	2.5800e-003	0.4162	0.1097	2.3800e-003	0.1121		341.1986	341.1986	6.4900e-003		341.3608
Total	**0.1361**	**0.0730**	**0.8998**	**3.4200e-003**	**0.4136**	**2.5800e-003**	**0.4162**	**0.1097**	**2.3800e-003**	**0.1121**		**341.1986**	**341.1986**	**6.4900e-003**		**341.3608**

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	6.6366					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690

Total	**6.8283**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1361	0.0730	0.8998	3.4200e-003	0.4136	2.5800e-003	0.4162	0.1097	2.3800e-003	0.1121		341.1986	341.1986	6.4900e-003		341.3608
Total	**0.1361**	**0.0730**	**0.8998**	**3.4200e-003**	**0.4136**	**2.5800e-003**	**0.4162**	**0.1097**	**2.3800e-003**	**0.1121**		**341.1986**	**341.1986**	**6.4900e-003**		**341.3608**

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	0.6955	1.9145	3.0510	3.0600e-003	0.0671	5.1500e-003	0.0722	0.0179	4.7600e-003	0.0227		315.8235	315.8235	0.0384		316.7830
Unmitigated	0.6955	1.9145	3.0510	3.0600e-003	0.0671	5.1500e-003	0.0722	0.0179	4.7600e-003	0.0227		315.8235	315.8235	0.0384		316.7830

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse High Rise	848.64	868.92	695.76	30,201	30,201
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	848.64	868.92	695.76	30,201	30,201

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by

Condo/Townhouse High Rise	0.10	0.10	0.10	100.00	0.00	0.00	100	0	0
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Condo/Townhouse High Rise	0.563406	0.043070	0.209298	0.109958	0.015015	0.005784	0.026182	0.017546	0.001775	0.001524	0.004941	0.000598	0.000904
Other Asphalt Surfaces	0.563406	0.043070	0.209298	0.109958	0.015015	0.005784	0.026182	0.017546	0.001775	0.001524	0.004941	0.000598	0.000904
Other Non-Asphalt Surfaces	0.563406	0.043070	0.209298	0.109958	0.015015	0.005784	0.026182	0.017546	0.001775	0.001524	0.004941	0.000598	0.000904
Parking Lot	0.563406	0.043070	0.209298	0.109958	0.015015	0.005784	0.026182	0.017546	0.001775	0.001524	0.004941	0.000598	0.000904

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0527	0.4501	0.1915	2.8700e-003		0.0364	0.0364		0.0364	0.0364		574.5959	574.5959	0.0110	0.0105	578.0104
NaturalGas Unmitigated	0.0527	0.4501	0.1915	2.8700e-003		0.0364	0.0364		0.0364	0.0364		574.5959	574.5959	0.0110	0.0105	578.0104

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Condo/Townhouse High Rise	4884.07	0.0527	0.4501	0.1915	2.8700e-003		0.0364	0.0364		0.0364	0.0364		574.5959	574.5959	0.0110	0.0105	578.0104
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Total		**0.0527**	**0.4501**	**0.1915**	**2.8700e-003**		**0.0364**	**0.0364**		**0.0364**	**0.0364**		**574.5959**	**574.5959**	**0.0110**	**0.0105**	**578.0104**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Condo/Townhouse High Rise	4.88407	0.0527	0.4501	0.1915	2.8700e-003		0.0364	0.0364		0.0364	0.0364		574.5959	574.5959	0.0110	0.0105	578.0104
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0527**	**0.4501**	**0.1915**	**2.8700e-003**		**0.0364**	**0.0364**		**0.0364**	**0.0364**		**574.5959**	**574.5959**	**0.0110**	**0.0105**	**578.0104**

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	5.7283	0.1485	12.8876	6.8000e-004		0.0713	0.0713		0.0713	0.0713	0.0000	23.2053	23.2053	0.0224	0.0000	23.7645
Unmitigated	5.7283	0.1485	12.8876	6.8000e-004		0.0713	0.0713		0.0713	0.0713	0.0000	23.2053	23.2053	0.0224	0.0000	23.7645

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	0.4327					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.9064					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Landscaping	0.3892	0.1485	12.8876	6.8000e-004		0.0713	0.0713		0.0713	0.0713		23.2053	23.2053	0.0224		23.7645
Total	**5.7283**	**0.1485**	**12.8876**	**6.8000e-004**		**0.0713**	**0.0713**		**0.0713**	**0.0713**	**0.0000**	**23.2053**	**23.2053**	**0.0224**	**0.0000**	**23.7645**

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	0.4327					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.9064					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.3892	0.1485	12.8876	6.8000e-004		0.0713	0.0713		0.0713	0.0713		23.2053	23.2053	0.0224		23.7645
Total	**5.7283**	**0.1485**	**12.8876**	**6.8000e-004**		**0.0713**	**0.0713**		**0.0713**	**0.0713**	**0.0000**	**23.2053**	**23.2053**	**0.0224**	**0.0000**	**23.7645**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Anaheim Legacy Project Energy Use Summary

Summary of Energy Use During Construction		(Annually)
Construction vehicle fuel	9,144	gallons (gasoline, diesel)
Construction equipment fuel	58,116	gallons (diesel)
Total construction fuel	67,260	gallons (gasoline, diesel)
Construction office electricity	11,962	kilowatt hours

Summary of Energy Use During Operations		(Annually)
Operation vehicle fuel	113,234	gallons (gasoline, diesel)
Operation natural gas	1,782,680	kilo-British Thermal Units
Operation electricity	660,654	kilowatt hours

Construction Vehicle Fuel Calculations

California Air Resource Board (ARB). 2021. EMFAC2021 Web Database. Website: https://arb.ca.gov/emfac/emissions-inventory/e8886ef5f608fced1b46d4dcec986174077c5235. Accessed February 24, 2021.

VMT = Vehicle Miles Traveled
FE = Fuel Economy

Source: EMFAC2021 (v1.0.0) Emission Rates
Region Type: County
Region: Orange
Calendar Year: 2021
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX and DIURN

										Calculations	
Region	CalYr	VehClass	MdlYr	Speed	Fuel	Population	VMT (mi/day)	Trips	Fuel_Consumption (1000 gallons/day)	FE (mi/gallon)	VMT*FE
Orange	2021	HHDT	Aggregate	Aggregate	Gasoline	12.897613	666.7832283	258.0554	3.402122	0.195990405	130.6831147
Orange	2021	HHDT	Aggregate	Aggregate	Diesel	10124.46	1206298.16	140713.1	676.9798	1.781881955	2149480.923
Orange	2021	LDA	Aggregate	Aggregate	Gasoline	1098889.8	42599826.69	5139771	1146.491	37.15671973	1582869821
Orange	2021	LDA	Aggregate	Aggregate	Diesel	3962.0012	126669.3208	17174.18	9.387545	13.49333869	1709192.047
Orange	2021	LDT1	Aggregate	Aggregate	Gasoline	102523.45	3577318.473	456678	95.92807	37.29167471	133404196.8
Orange	2021	LDT1	Aggregate	Aggregate	Diesel	42.589475	678.5450332	128.1372	0.078226	8.674162924	5885.81017
Orange	2021	LDT2	Aggregate	Aggregate	Gasoline	503142.93	19959930.23	2366576	526.3102	37.92427058	756965794.9
Orange	2021	LDT2	Aggregate	Aggregate	Diesel	1846.123	79445.67731	8963.886	0.742015	107.067485	8506048.864
Orange	2021	LHDT1	Aggregate	Aggregate	Gasoline	41441.978	1595265.594	617423.7	47.0025	33.94001684	54143341.11
Orange	2021	LHDT1	Aggregate	Aggregate	Diesel	18981.088	775995.3009	238758.2	29.24166	26.53731684	20592833.16
Orange	2021	LHDT2	Aggregate	Aggregate	Gasoline	6812.7983	251543.6671	101500.5	10.59292	23.7463873	5973253.342
Orange	2021	LHDT2	Aggregate	Aggregate	Diesel	7682.2488	316850.7942	96633.03	12.56975	25.20740161	7986985.218
Orange	2021	MHDT	Aggregate	Aggregate	Gasoline	7844.6826	437283.6243	156956.4	15.82028	27.64070234	12086826.5
Orange	2021	MHDT	Aggregate	Aggregate	Diesel	26339.581	1127012.459	331438.1	124.1842	9.075326198	10228005.69

Worker
Sum of VMT*FE (Column BI) 2483460939
Total VMT 66343868.93
Weighted Average FE 37.4331642

Vendor
Sum of VMT*FE (Column BI) 113160856.6
Total VMT 5710916.382
Weighted Average FE 19.81483339

Haul
Sum of VMT*FE (Column BI) 2149611.606
Total VMT 1206964.943
Weighted Average FE 1.781005835

Anaheim Legacy Project Construction Assumptions

On-site Construction
Source: AQ/GHG Appendix, CalEEMod Output
Legacy Anaheim Project
Date: 2/19/2021 6:29 PM AM

Construction Schedule	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days
	Demolition	Demolition	8/1/2021	8/15/2021	5	10
	Site Preparation	Site Preparation	8/16/2021	8/31/2021	5	12
	Grading	Grading	9/1/2021	12/31/2021	5	88
	Building Construction	Building Construction	10/1/2021	12/31/2022	5	326
	Paving	Paving	6/1/2022	4/30/2023	5	238
	Architectural Coating	Architectural Coating	6/1/2022	4/30/2023	5	238

Trips and VMT	Phase Name	Trips per Day			Total Trips					Trips per Phase			VMT per Phase			Fuel Consumption (gallons)		
		Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Vendor Vel	Num Days	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trips	Vendor Trips	Hauling Trips	Worker Trips	Vendor Trips	Hauling Trips
	Demolition	8	0	21	14.7	6.9	20	HDT_Mix	10	80	0	21	1,176	0	420	31.42	0.00	11.79
	Site Preparation	8	0	0	14.7	6.9	20	HDT_Mix	12	96	0	0	1,411	0	0	37.70	0.00	0.00
	Grading	10	0	0	14.7	6.9	20	HDT_Mix	88	880	0	0	12,936	0	0	345.58	0.00	0.00
	Building Construction	38	15	0	14.7	6.9	20	HDT_Mix	326	12,388	4,890	0	182,104	33,741	0	4,864.77	1,702.82	0.00
	Paving	15	0	0	14.7	6.9	20		238	3,570	0	0	52,479	0	0	1,401.94	0.00	0.00
	Architectural Coating	8	0	0	14.7	6.9	20	HDT_Mix	238	1,904	0	0	27,989	0	0	747.70	0.00	0.00

On-site Total Construction VMT (miles)
312,256

On-Site Total Fuel Consumption (gallons)
9,144

Construction Equipment Fuel Calculation

On-site

Source: AQ/GHG Appendix, CalEEMod Output

Legacy Anaheim Project

Date: 2/19/2021 6:29 PM AM

Construction Schedule	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days
	Demolition	Demolition	8/1/2021	8/15/2021	5	10
	Site Preparation	Site Preparation	8/16/2021	8/31/2021	5	12
	Grading	Grading	9/1/2021	12/31/2021	5	88
	Building Construction	Building Construction	10/1/2021	12/31/2022	5	326
	Paving	Paving	6/1/2022	4/30/2023	5	238
	Architectural Coating	Architectural Coating	6/1/2022	4/30/2023	5	238

Construction Equipment	Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor	Number of Days	HP Hours	Diesel Fuel Usage
	Demolition	Concrete/Industrial Saws	1	8	81	0.73	10		
	Demolition	Excavators	1	8	158	0.38	10		
	Demolition	Rubber Tired Dozers	1	8	247	0.4	10		
	Site Preparation	Excavators	1	8	158	0.38	12	5,763.84	288.19
	Site Preparation	Rubber Tired Dozers	1	8	247	0.4	12	9,484.80	474.24
	Site Preparation	Tractors/Loaders/Backhoes	1	8	97	0.37	12	3,445.44	172.27
	Grading	Excavators	1	8	158	0.38	88	42,268.16	2,113.41
	Grading	Graders	1	8	187	0.41	88	53,975.68	2,698.78
	Grading	Rubber Tired Dozers	1	8	247	0.4	88		
	Grading	Scrapers	1	8	367	0.48	88		
	Grading	Tractors/Loaders/Backhoes	1	8	97	0.37	88	25,266.56	1,263.33
	Building Construction	Cement and Mortar Mixers	1	8	9	0.56	326	13,144.32	657.22
	Building Construction	Cranes	1	7	231	0.29	326	152,871.18	7,643.56
	Building Construction	Forklifts	2	8	89	0.2	326		
	Building Construction	Generator Sets	1	8	84	0.74	326		
	Building Construction	Pumps	1	8	84	0.74	326	162,113.28	8,105.66
	Building Construction	Tractors/Loaders/Backhoes	1	7	97	0.37	326	81,900.98	4,095.05
	Building Construction	Welders	1	8	46	0.45	326	53,985.60	2,699.28
	Paving	Pavers	2	8	130	0.42	238	207,916.80	10,395.84
	Paving	Paving Equipment	2	8	132	0.36	238	180,956.16	9,047.81
	Paving	Rollers	2	8	80	0.38	238	115,763.20	5,788.16
	Architectural Coating	Air Compressors	1	6	78	0.48	238	53,464.32	2,673.22
						Construction Equipment Fuel Consumption			**58,116.02 gallons**

Notes:

Equipment assumptions are provided in the CalEEMod output files.

Fuel usage estimate of 0.05 gallons of diesel fuel per horsepower-hour is from the SCAQMD CEQA Air Quality Handbook, Table A9-3E.

South Coast Air Quality Management District. 1993. Air Quality Handbook, Table A9-3E.

Website: http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook. Accessed October 30, 2020.

Construction Office Electricity Calculation

Energy Appendix: CalEEMod Typical Construction Trailer
Typical Construction Trailer - Orange County, Annual
Date: 2/25/2021 4:45 PM

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	6854.4	4.7982	9.0000e-005	2.0000e-005	4.8060
Total		**4.7982**	**9.0000e-005**	**2.0000e-005**	**4.8060**

kWh/yr = kilowatt hours per year

Energy by Land Use - Electricity

Annual	6,854	kWh/yr
Total Over Construction	**11,962**	**kWh**

Total Construction Schedule	
Start	8/1/2021
End	4/30/2023
Total Calendar Days	637
Years	1.75

Proposed Operation Fuel Calculation

California Air Resource Board (ARB). 2021. EMFAC2021 Web Database. Website: https://arb.ca.gov/emfac/emissions-inventory/e8886ef5f608fced1b46d4dcec986174077c5235. Accessed February 24, 2021.

Source: EMFAC2021 (v1.0.0) Emissions Inventory
Region Type: County
Region: Orange
Calendar Year: 2023
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

VMT = Vehicle Miles Traveled
FE = Fuel Economy

Given *Calculations*

Region	CalYr	VehClass	MdlYr	Speed	Fuel	Population	VMT	Fuel Consumption	FE	VMT*FE
Orange	2023	HHDT	Aggregate	Aggregate	Gasoline	8.73145324	606.548947	0.147681734	4.107136	2491.178932
Orange	2023	HHDT	Aggregate	Aggregate	Diesel	10709.4061	1247785.03	210.5374829	5.926665	7395203.298
Orange	2023	LDA	Aggregate	Aggregate	Gasoline	1076181.79	42528216.7	1452.688975	29.27551	1245035411
Orange	2023	LDA	Aggregate	Aggregate	Diesel	3514.16086	107965.264	2.546148122	42.40337	4578091.152
Orange	2023	LDT1	Aggregate	Aggregate	Gasoline	99223.5878	3533281	143.4582617	24.62933	87022347.11
Orange	2023	LDT1	Aggregate	Aggregate	Diesel	34.7592936	542.0339	0.022735583	23.84077	12922.50785
Orange	2023	LDT2	Aggregate	Aggregate	Gasoline	516653.786	20968860.1	887.7184413	23.62107	495306927.3
Orange	2023	LDT2	Aggregate	Aggregate	Diesel	2003.36011	85234.509	2.721634991	31.31739	2669322.502
Orange	2023	LHDT1	Aggregate	Aggregate	Gasoline	41394.6754	1651744.12	120.8754881	13.66484	22570817.88
Orange	2023	LHDT1	Aggregate	Aggregate	Diesel	20789.3886	883471.714	43.06538705	20.51466	18124120.6
Orange	2023	LHDT2	Aggregate	Aggregate	Gasoline	6757.48349	254111.74	21.15949111	12.00935	3051716.901
Orange	2023	LHDT2	Aggregate	Aggregate	Diesel	8706.57113	371136.298	21.5367426	17.2327	6395681.75
Orange	2023	MCY	Aggregate	Aggregate	Gasoline	49410.9576	315261.49	7.641775	41.25501	13006115.32
Orange	2023	MDV	Aggregate	Aggregate	Gasoline	323460.558	12520789.9	650.0021614	19.26269	241184089.4
Orange	2023	MDV	Aggregate	Aggregate	Diesel	4630.54352	185304.767	7.858423577	23.5804	4369560.422
Orange	2023	MH	Aggregate	Aggregate	Gasoline	6246.54237	60121.111	12.27338692	4.898494	294502.8953
Orange	2023	MH	Aggregate	Aggregate	Diesel	2943.82634	29796.9549	2.935881151	10.14924	302416.3706
Orange	2023	MHDT	Aggregate	Aggregate	Gasoline	7581.40063	413802.285	80.40931741	5.146198	2129508.581
Orange	2023	MHDT	Aggregate	Aggregate	Diesel	27021.4106	1147551.63	128.4836639	8.931498	10249355.42
Orange	2023	OBUS	Aggregate	Aggregate	Gasoline	876.902797	37020.1996	7.203304301	5.139336	190259.2367
Orange	2023	OBUS	Aggregate	Aggregate	Diesel	461.089842	36373.6374	5.100718524	7.131081	259383.3574
Orange	2023	SBUS	Aggregate	Aggregate	Gasoline	661.944776	29787.084	3.359332103	8.866966	264121.0647
Orange	2023	SBUS	Aggregate	Aggregate	Diesel	854.090122	17539.3485	2.386738295	7.348668	128890.8579
Orange	2023	UBUS	Aggregate	Aggregate	Gasoline	255.104896	42087.5335	3.656133365	11.51149	484490.1143

	Vehicles	
Sum of VMT*FE	**2165027746**	
Total VMT	**86468390.96**	
Weighted Average FE	**25.03837208**	**miles/gallon**

Total VMT
Source: AQ/GHG Appendix, CalEEMod Output
Legacy Anaheim Project
Date: 2/19/2021 6:29 PM AM

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse High Rise	848.64	868.92	695.76	2,835,201	2,835,201
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	848.64	868.92	695.76	2,835,201	2,835,201

	Annual VMT (miles)	Fuel Consumption	
Total VMT	2,835,201	**113,234**	**gallons per year**

Operation Natural Gas Use

Source: AQ/GHG Appendix, CalEEMod Output
Legacy Anaheim Project
Date: 2/19/2021 6:29 PM AM

kBTU/yr = kilo-British Thermal Units/year
CF = cubic feet

	Natural Gas Use
Condo/Townhouse Highrise	1782680
Parking and Landscaping	0

Total **1,782,680 kBTU/yr**

Land Use	NaturalGas Use kBTU/yr	ROG	NOx	CO	SO2
Condo/Townhouse High Rise	1.78268e+006	9.6100e-003	0.0821	0.0350	5.2000e-004
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**9.6100e-003**	**0.0821**	**0.0350**	**5.2000e-004**

Operation Electricity Use

Source: AQ/GHG Appendix, CalEEMod Output

Legacy Anaheim Project

Date: 2/19/2021 6:29 PM AM

Project Electricity Use

kWh/yr = kilowatt hours per year

Land Use	Electricity Use (kWh/yr)
Automobile Care Center	660654
Other Asphalt Surfaces	0

Total **660,654 kWh/yr**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse High Rise	660654	309.8562	8.6900e-003	1.8000e-003	310.6093
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	13580	6.3692	1.8000e-004	4.0000e-005	6.3847
Total		**316.2254**	**8.8700e-003**	**1.8400e-003**	**316.9940**

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